ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire

Edited by László Borhy, Kata Dévai, Linda Dobosi, and Csilla Sáró

DISSERTATIONES ARCHAEOLOGICAE
ex Instituto Archaeologico
Universitatis de Rolando Eötvös nominatae



DissArch

Supplementum 5 | 2026

Dissertationes Archaeologicae
ex Instituto Archaeologico
Universitatis de Rolando Eötvös nominatae

Supplementum 5

Editor-in-chief
Dávid Bartus

Editorial board
László Bartosiewicz (Stockholm University, Stockholm, Sweden)
Ondřej Chvojka (University of South Bohemia, České Budějovice, Czech Republic)
Alexandra Anders (Eötvös Loránd University, Budapest, Hungary)
Miroslava Daňová (University of Trnava, Trnava, Slovakia)
Mario Gavranović (Austrian Arhaeological Institute AAS, Vienna, Austria)
Hajnalka Herold (University of Exeter, Exeter, United Kingdom)
Tomáš König (Comenius University, Bratislava, Slovakia)
Tina Milavec (University of Ljubljana, Ljubljana, Slovenia)
Gábor V. Szabó (Eötvös Loránd University, Budapest, Hungary)
Tivadar Vida (Eötvös Loránd University, Budapest, Hungary)

Technical editor
Gábor Váczi

Proofreading
Katalin Sebők

Cover picture
Flaminiu Taloș

Aviable online at https://ojs.elte.hu/dissarch
Contact: dissarch@btk.elte.hu
Support: vaczi.gabor@btk.elte.hu

ISSN 2064-4574 (online)

Publisher
Lénárt Darázs

The journal is supported by the ELTE Journal Development Fund of Eötvös Loránd University.
© Author(s) and ELTE Eötvös Loránd University
This is an open-access journal distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire

Budapest, 23–25 May 2025



Edited by
László Borhy – Kata Dévai – Linda Dobosi – Csilla Sáró

Budapest, 2026

Contents

László Borhy 9

Foreword

László Borhy 13

Aspects of romanisation in Pannonia: Introduction and remarks

József Beszédes 21

Integration? Romanisation? Tomb of an auxiliary soldier of Celtic origin

Sorin Ilie Cociș – Vlad-Andrei Lăzărescu 39

Fashion in Roman Dacia: Local production of anchor brooches – the hinged fastening variant

Illés János Darvas-Tanács 51

Coins of a 2019 field survey from the legionary camp of Brigetio (Komárom/Szőny, Hungary)

Charlotte Defer 69

Prestigious Roman homes built in Aeduan territory: The example of the peristyle houses at Bibracte (Mont-Beuvray, France)

Kata Dévai 79

Trends in the use of glass vessels and its ritual connotations at the Iseum Savariense

Linda Dobosi – Tamás Szabadváry 93

Three Roman game boards from Pannonia in the collection of the Hungarian National Museum

Damjan Donev 109

Transformations along the western part of the Via Egnatia in Roman Antiquity

Rachele Dubbini – Barbara Bramanti – Jessica Mongillo – Giulia De Palma 143

Hybrid population in the city of Rome: Funerary customs and practices from the Via Appia Antica 39 burial complex

Evgeniy Gorokhovskiy – Oksana Gopkalo 165

Once again about 'Sarmatian'-type *fibulae* (Almgren Group VII, Form 210 and similar) in the Chernyakhiv culture

Lavinia Grumeza 237

Roman bead workshops at Tibiscum: Twenty years after

Irena Lazar 251

Development and changes in Roman glassmaking during the 1st century AD as reflected in the Roman road station Romula (Ribnica near Brežice, Slovenia)

Mia Leljak – Tino Leleković 289

Roman glass from Ban Josip Jelačić Square in Osijek

Francisco Marco Simón 305

Archaeology and the *interpretatio* of an ancient Iberian sanctuary: From El Cerro de los Santos to Ad Palem

Pierre Mazille – Camille Bossavit 317

Copper alloys in Gaul under the Roman conquest: The *Celtic Brass Coins* project

Dorothea Mildová 327

Sacrificial places in funerary contexts of Roman Thrace: Character and meaning of ritual places in grave contexts of Roman Thrace—evidence from the Yambol region

Zsolt Mráv – Réka Neményi 359

Archaeological excavation of a new Roman-period wagon grave and its adjacent horse burial at Belvárdgyula (Baranya County, Hungary) in 2021: Interim research report

Dimitar Nikolovski 385

ANNI BONI in Stobi: Gold glass in funerary context

Rita Helga Olasz 397

Was there a doctor in Brigetio?

Coriolan Horațiu Opreanu – Vlad-Andrei Lăzărescu 423

Getting to know each other: Examining trade across the Roman *limes* at Porolissum (Moigrad, Romania)

Simone Pastor 441

Romanisation: An evolving historical concept

Laurențiu Radu 453

Callatis: A Greek city in the Roman Empire

Csilla Sáró 465

For old times' sake…: Dress accessories from a north-east Pannonian grave

Hedvika Sedláčková – Dana Rohanová – Pavel Fojtík – Miroslav Popelka – Jaroslav Peška 483

Bohemia and Moravia in the Migration Period — Contacts reflected through glass vessels: A preliminary report on form groups

Katarina Šmid 525

The iconography of the Seasons in Poetovio stone reliefs and its connections to other artistic centres

Eszter Soós – Jan Jílek – Klara De Decker – Viktória Mozgai – Bernadett Bajnóczi 537

Selected Roman bronze vessels from the early Roman period cemetery in Vinár-Cseralja, northern Pannonia

F. Zsófia Sörös 559

New results from the Tihany-Óvár *oppidum*, Hungary: Finds from the so-called 'cellar'

Ádám Szabó 597

The phenomenon of altars named in their inscriptions and an altar with an additional function

Csaba Szabó – Ernő Szabó – Radu Ota 611

The cult of Roman Mithras in Apulum: Glocality of Roman religion in an urban context

Dániel Szabó 657

Becoming Roman? Tracing Mediterranean influences in the archaeological finds of the Hungarian excavations from the monumental complex of the "Grandes Forges" *insula* at Bibracte

Lőrinc Timár 669

The '*basilica*' of Bibracte: A derivative or prototype of Vitruvius' *basilica*?

Pedro Trapero Fernández – André Carneiro 687

Wine and power in Roman Lusitania: Production, epigraphy and the inland economy of the Alentejo

Kristina Turkalj – Elena Perković Gjurašin – Andrej Janeš 705

Painted glass from Osor

Tatiana Votroubeková 713

Continuity and change: The romanisation of Southern Etruria

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 9–12. 10.17204/dissarch.suppl.5.2026.9

Foreword

László Borhy
HUN-REN–ELTE Research Group for Interdisciplinary Archaeology, Hungarian Research Network – Eötvös Loránd University, Budapest, Hungary
borhy.laszlo@btk.elte.hu

This volume presents a selection of papers delivered at the international conference *Acculturation, Romanization, Roman Civilization: International Conference on the Phenomena and Processes of Integration into the Roman Empire*, held in Budapest between 23 and 25 May 2025. The conference was organised by the HUN-REN–ELTE Research Group for Interdisciplinary Archaeology and the Department of Classical and Roman Archaeology of the Eötvös Loránd University, bringing together a wide range of scholars working on the cultural, social, and economic dynamics of the Roman world, with a particular focus on the mechanisms and manifestations of integration within the Empire.

The thematic framework of the conference was deliberately centred on the complex and much-debated concepts of acculturation and Romanisation. Rather than treating these as fixed or uniform processes, the contributions approached them as historically contingent, regionally diverse, and materially embedded phenomena. Through case studies spanning Pannonia and the Danubian provinces, as well as other parts of the Roman Empire, the papers explore how local communities, material practices, and social structures interacted with, adapted to, and reshaped Roman cultural models.

The programme reflected this focus through a series of thematic sessions addressing key domains of Roman provincial life, including settlement structures, burial practices, material culture (with particular emphasis on glass and small finds), economic networks, mobility, and identity formation. Together, these contributions highlight the plurality of pathways through which integration into the Roman Empire was negotiated and experienced.

With the present conference and volume, the organisers also aim to establish a long-term scholarly platform by developing ARRC into a recurring international conference series dedicated to the study of cultural interaction and integration in the Roman world. These questions—central to the contributions collected here—also frame the broader historical and interpretative perspective outlined in the following pages.

The conceptual foundations of both the conference and the present volume are closely linked to the long-term research activities of the HUN-REN–ELTE Interdisciplinary Archaeological Research Group.

In 1995, the MTA–ELTE Interdisciplinary Archaeological Research Group was established, financed by the Hungarian Academy of Sciences and hosted by Eötvös Loránd University, under the leadership of academician Miklós Szabó (1940–2023). In the first years, the research group primarily conducted studies related to the Celtic excavations carried out at the site of Bibracte (today: Mont Beuvray) in France by the Department of Classical and Roman Provincial Archaeology of the ELTE Institute of Archaeological Sciences, founded in 1995. Excavations conducted during the following years brought to light, above the Celtic buildings, not only. A Roman *domus* with a *peristylium* but also a monumental *basilica* in the phase preceding it, which may have served as a model for Vitruvius himself. This discovery opened a new direction for research.

This shift marked the beginning of a more explicitly problem-oriented approach, in which processes later described as Romanisation and acculturation became central research questions.

From 1992 onwards, the excavations and epigraphic research I conducted in Brigetio (Komárom/Szőny) have set a new direction, namely the analysis of the processes of integration of the two geographically distinct regions into the Roman Empire, processes that may have taken place independently but are likely comparable. Both Gaul and Pannonia gradually became part of the Roman Empire at the end of the late Republic and the dawn of the early Imperial period. Gaul was conquered by Julius Caesar, who himself recounted the history of the campaigns—including the capture of Bibracte—in his work *Commentarii belli Gallici*, while the integration of the Pannonian tribes and the region then called Illyricum, bordered by the Danube River (Danubius), was initiated by his adopted son and heir, Augustus, and is recorded in the compilation beginning with *Index rerum a se gestarum*, commonly known as the *Monumentum Ancyranum*.

Seeing the results of parallel research, as well as the similarities and differences in the processes of Romanisation, the idea emerged that the group, which has by now grown into the HUN-REN–ELTE Interdisciplinary Archaeological Research Group, should review, in an international context, as many aspects as possible of the complex process that research used to call sometimes Romanisation, also referring to it sometimes as acculturation (primarily today), sometimes—obviously reflecting on the name of the *Imperium Romanum* and its military conquests—as imperial expansion, and sometimes—using a misleading but not entirely dismissible term, based on 15th–16th-century analogies and the names of cities with layouts resembling military camps, established by settled veterans—as colonisation. We can call it whatever we like, but there is no doubt that it is a multifaceted, nuanced, complex concept and process, through which—via acculturation and the culmination of processes related to Romanisation—territories that became part of the Roman civilisation in one way or another (mostly, however, through military conquest) became part of the Roman Empire.

In this context, the conference itself can be understood as a direct extension of these long-term research questions into an international scholarly dialogue. In the following, this complex phenomenon is approached through a combination of historical, administrative, and material perspectives.

The volume *ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire* is hoped to be the first in a long and regularly recurring series of events, during which we will repeatedly review the phenomena and processes of integration into the Roman Empire in as broad a spatial and temporal perspective as possible. As Simone Pastor states in the volume, it is necessary to move beyond the previous understanding, which held that "the concept of 'Romanisation' used to describe the submission of a conquered society and territory to the forms of organisation desired by Rome" or that "(The) Roman imperialism had to be analysed in a 'civilising' perspective, while others, with more critical tones, focused their attention on its violent matrix". A new approach is needed: "to understand the phenomenon of Romanisation it is necessary to conceive a complex process of mutual acculturation regulated by bidirectional relations between centre and periphery."

This volume aims to meet this requirement, in which—naturally—special emphasis is given to Bibracte and Gaul, as well as Brigetio and Pannonia. There is no intent to solve or define the process in a single concept, but room is given to all those approaches that, alongside the concepts mentioned above, see integration into the Roman Empire as a consequence of military campaigns or within the framework of mediation, direct influence, or cultural interaction. This process also has socio-historical implications: the military, slaves, and freedmen played a role in it, but equally important was the involvement of women; besides, alongside the veneration of the traditional pantheon, the adoption of Roman gods and the alignment with their own gods also mattered. However, the studies touch on many other aspects as well. For example, they consider the appearance of brass—copper alloyed with zinc and with a golden shine—in Gallic coinage (and other fields of Gallic metallurgy) to be clearly linked to the Romans.

At the same time, these approaches underline that integration into the Roman Empire cannot be understood as a uniform or unidirectional process.

We do not limit the analysis of processes in either space or time: the studies span Greek- and Latin-speaking provinces from the Black Sea through the Mediterranean, all the way to the North Sea and the Atlantic Ocean, across river routes (Danubius, Savus, Dravus, Rhenus) and land roads (limes roads, Via Augusta, Via Egnatia, Amber Road). They cover, alongside the two focus areas (Gaul and Pannonia), Dacia, Thrace, Macedonia, Moesia Inferior and Moesia Superior, Noricum, Hispania, and Britannia, and repeatedly look to the peoples living outside the Roman Empire who were in continuous interaction with the Romans, such as the Iranian-origin Sarmatians and the Germanic Marcomanni and Quadi. Its temporal scope is not limited either, as the process did not end with the early Imperial period but accompanied the centuries of the Roman Empire, since the influence and memory of Romanised populations and their culture remained traceable up to the early Middle Ages.

This broad geographical and chronological scope reinforces the need to approach Romanisation as a flexible and context-dependent phenomenon.

Certain groups of materials and objects accompany the process of acculturation: special emphasis is placed on glassware, ceramics that preserve local traditions but gradually follow Roman patterns, attire, and jewellery. In many regions, not only stone carving and sculpture appear with the Romans, but also the custom of erecting tombstones with inscriptions—mostly in Latin.

These material expressions provide particularly valuable insights into the everyday manifestations of cultural interaction.

With the arrival of the Romans, settlements also transformed: although part of the rural population of indigenous origin continued to live in villages, the Romans organised these settlements in a Roman way, and if the inhabitants did not live on *villa* estates, they were divided into *vici*, which in fortunate cases can even be seen on aerial photographs. Some became residents of settlements with urban status—in *municipia* established at the centres of former tribal territories—while others resided in colonies founded following the model of the Roman *castra*, through the settlement *(deductio)* of retired soldiers *(veterani)*. Military land surveyors *(agrimensores)* did not leave the former tribal landholding structures untouched either: with the implementation of centuriation *(centuriatio)*, urban territories were also surveyed and divided.

These transformations are not merely structural: they reflect deeper social and administrative changes.

Construction techniques, house types, and the range of building materials also changed. In the centre of the Heduus territory in Gaul—far from the Mediterranean, north of the Alps—the terraced houses of the La Tène population (built of adobe and loosely bound mortar, sometimes with wooden structures) were replaced by real Roman *domus* with *peristylia*. Urban architecture was regulated by municipal law. In military camps, the *principia* and the *praetorium* acquired a special, symbolic significance. In the words of Agnieszka Tomasz, "the *praetorium* as a central element of the military infrastructure represented Roman authority and control over the soldiers and the surrounding territory, as embodied in the figure of the commander. (…) We can expect that the construction and decoration of the *praetorium* often relied on local artisans, who adapted Roman techniques and styles into their own work, blending Roman and local cultural elements".

In this sense, architecture offers a particularly clear lens through which processes of cultural transfer and adaptation can be observed.

The studies in this volume are inter-, multi-, and transdisciplinary. In many cases, scientific investigations have been carried out, whether for analysing the chemical composition of glass vessels or for examining Gallic Celtic brass coins using a portable X-Ray Fluorescence (pXRF) device. Traditional methods of cemetery analysis, in fortunate cases supplemented with epigraphic data, are aided by pathological and bioarchaeological analyses. Moreover, as it turns out, archaeology is not untouched by the application of artificial intelligence.

This methodological diversity reflects the interdisciplinary character of current research into the Roman world. The mentioned provinces of the Roman Empire are represented in the volume by researchers from the academies, universities, museums, and institutes of the modern states established in its former territory, including Austria (Vienna, University of Vienna, Department of Ancient History, Papyrology and Epigraphy; Vienna, Austrian Academy of Sciences, Austrian Archaeological Institute; Innsbruck, University of Innsbruck, Institute for Ancient History and Near Eastern Studies), Bulgaria (Bulgarian Academy of Sciences), Croatia (Radoboj, Public Institution for the Management of Protected Natural Areas of the Krapina-Zagorje County; Zagreb, Croatian Academy of Sciences and Arts; Zadar, University of Zadar), the Czech Republic (Prague, Museum of Decorative Arts; Prague, University of Chemistry and Technology; Brno, Institute for Archaeological Heritage (ÚAPP); Brno, Masaryk University; Brno, Masaryk University, Department of Archaeology and Museology; Olomouc, Archaeological Centre Olomouc), France (Dijon, University of Burgundy; Glux-en-Glenne, Bibracte EPCC, European Archaeological Centre; Orléans, Archaeomaterials Research Institute (IRAMAT); Mont Beuvray, Bibracte Museum), Germany (Münster, University of Münster), Greece (Rethymno, Institute for Mediterranean Studies), Italy (Ferrara, University of Ferrara; Rome, Sovrintendenza Capitolina ai Beni Culturali), Montenegro (Cetinje, Centre for Conservation and Archaeology of Montenegro), Poland (Warsaw, University of Warsaw), Republic of North Macedonia (St. Cyril and Methodius University in Skopje, Institute of National History; Stobi, National Institution Stobi), Romania (Cluj-Napoca, Romanian Academy, Institute of Archaeology and History of Art–Dacia; Iaşi, Romanian Academy, Iaşi Branch, Institute of Archaeology; Constanţa, Museum of National History and Archaeology; Bucharest, Institute of Archaeology "Vasile Pârvan"; Târgu Mureş, Mureş County Museum; Callatis, Museum of Archaeology), Serbia (National Institute of the Republic of Serbia, Institute of Archaeology; Novi Sad, University of Novi Sad, Faculty of Philosophy), Slovenia (Koper, University of Primorska, Faculty of Humanities; Slovenska Bistrica (SLO), PJP d.o.o., archaeological research company (Slovenska Bistrica, Slovenia)); Spain (Cádiz, Cádiz University; Zaragoza, University of Zaragoza), Switzerland (University of Basel), and the United Kingdom (Oxford, Oxford Archaeology).

The authors of the volume represent the following Hungarian institutions: ELTE Eötvös Loránd University, Budapest; Department of Classical and Roman Provincial Archaeology, ELTE Eötvös Loránd University, Faculty of Humanities, Budapest; HUN-REN–ELTE Research Group for Interdisciplinary Archaeology, Eötvös Loránd University, Budapest; ELTE Research Centre for the Humanities, Budapest; Pázmány Péter Catholic University, Budapest; University of Szeged, Szeged; Hungarian Academy of Sciences, Budapest; HUN-REN Research Centre for Astronomy and Earth Sciences, Budapest; Aquincum Museum of the Budapest History Museum, Budapest; Hungarian National Museum, Budapest; Savaria Museum, Szombathely.

Acknowledgements

The organisation of the conference would not have been possible without the support of the Eötvös Loránd University.

Supported by the University Excellence Fund of the Eötvös Loránd University, Budapest, Hungary (ELTE), as well as by the Faculty Research Fund of the Faculty of Humanities (ELTE) and the Faculty Grant for the Organisation of International Conferences.

We also thank the ELTE Students' Union for their contribution to the successful realisation of the event.

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 13–20. 10.17204/dissarch.suppl.5.2026.13

Aspects of romanisation in Pannonia

Introduction and remarks

László Borhy

Department of Classical and Roman Provincial Archaeology, ELTE Eötvös Loránd University, Budapest, Hungary

borhy.laszlo@btk.elte.hu

Received 2 March 2026 | Accepted 4 May 2026 | Published 18 November 2026

Abstract: The aim of the study is to provide, as far as possible, an insight into the diversity of the concept collectively referred to as Romanization, as well as into the variation in the related approaches. The study starts from the territory of Pannonia; however, to facilitate understanding of the processes, it uses Gaul as a basis for comparison. The analyses extend spatially from Hispania to the Danube region and chronologically from the 1st century BC to the 3rd century AD. It focuses on the appearance of the Roman administration—which changed indigenous tribal relations—following the Roman conquest, and on the establishment of the Latin language and epigraphic practices, together with the contradictions of the process. Regarding literacy, its scope also covers other regions, such as Gaul and Hispania, while the results include the observation that, by the 3rd century AD, literary culture in Latin had also taken root in Pannonia. Alongside the establishment of Latin linguistic culture and administration, the study considers the development of the urban settlement system and the appearance of amphitheatres, marking the full adoption of Roman culture as the completion—if not the conclusion—of Romanisation and acculturation.

Keywords: tribal system, *civitates peregrinae*, Brigetio, Bibracte, Alesia, Hispania, Germania, Noricum, epigraphic culture, municipalisation, amphitheatres

While stating that this study does not intend to clarify or define the complex concept of 'Romanisation' or acculturation—to which numerous attempts have been made in recent decades[1]—we would like to highlight some aspects that perhaps nuance and demonstrate the diversity of this process not only in our relatively little understood primary study area, Pannonia in the Danube region, which extends across the territory of seven modern states, including Hungary, Austria, Slovenia, Croatia, Bosnia and Herzegovina, Serbia, and Slovakia (Fig. 1), but also in Noricum, Germania, Gaul, and even Hispania.

Usually, extensive commercial connections had already been established before the territory of a later province was occupied by the Romans. In the case of later Noricum, an *emporion* existed outside the Roman Empire, organising the trade in important minerals such as iron, crystal, and gold to Italy already in the late Republican period. Even a town-like Roman settlement, with streets, houses, a *forum*, and temples, was established at Magdalensberg and inhabited by generations of merchants.[2] Other examples include the territory of the later province of Germania, where the construction of a town-like settlement outside the Roman Empire had begun and commercial connections had already existed before the Roman occupation: shipwrecks discovered in the seas between

1 Alföldy 2005.

2 Alföldy 1974, 44–47; Piccotini – Vetters 1990.

✉ Corresponding author

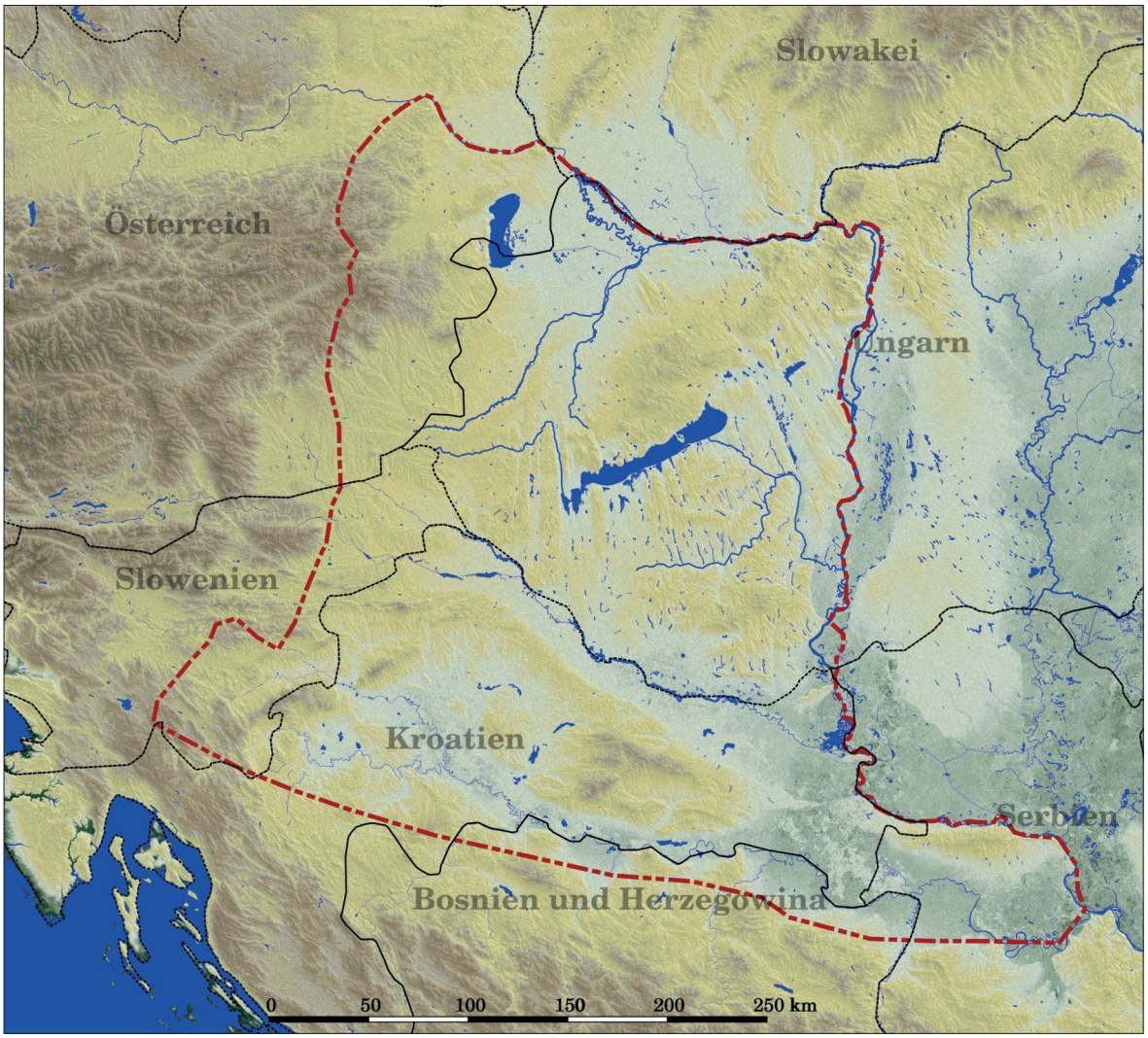


Fig. 1. The territory of Pannonia and modern state borders (map by A. Bödőcs).

the later province and Rome attest to the transport of *plumbum Germanicum*, lead from *Germania libera*.[3] The traded good in the case of Pannonia was amber, which was transported along the so-called Amber Road from the Baltic Sea to Aquileia in northern Italy, founded in 181 BC especially as a destination for the amber trade.[4] These connections, that is, circulation along trade routes in territories outside the Roman Empire, provided great opportunities to acquire multifaceted knowledge of the political structures of different peoples, tribes, and kingdoms, but also of the geographical setting and the condition of certain territories: the extent of routes, rivers, lakes, mountains, or even settlements, tribal centres, and more. This was also the case with the area that later became Pannonia: this territory had come into the *visier* of the Romans centuries before its occupation, and they explored it and collected exact data on its population and tribal structure. They also knew exactly which rivers were navigable, which tribes were located along them, and which other peoples were living there[5] (Figs 2–3).

Theoretically, we know the exact date of the occupation of Pannonia. The story is recorded in the *Res Gestae Divi Augusti*, which is preserved in the so-called *Monumentum Ancyranum* as its

3 Domergue – Long 1995; Genovesi 2018.

4 Hülsen 1895.

5 Plin. *HN*, 3.147–148.

Chapter 30, which says, "Pannonian tribes *(Pannoniorum gentes)* … were subjected to the power of the Roman nation *(Imperio populi Romani subieci)* and extended the borders of Illyricum *(protulique fines Illyrici)* to the bank of the river Danube *(usque ad ripam fluminis Danubi)*". As far as we know from the archaeological record—or, more precisely, from its absence in the interior of the later province of Pannonia—the occupation concerned the southern section of the river Danube between the two other navigable Pannonian rivers, the Dravus and Savus, in the south.[6]

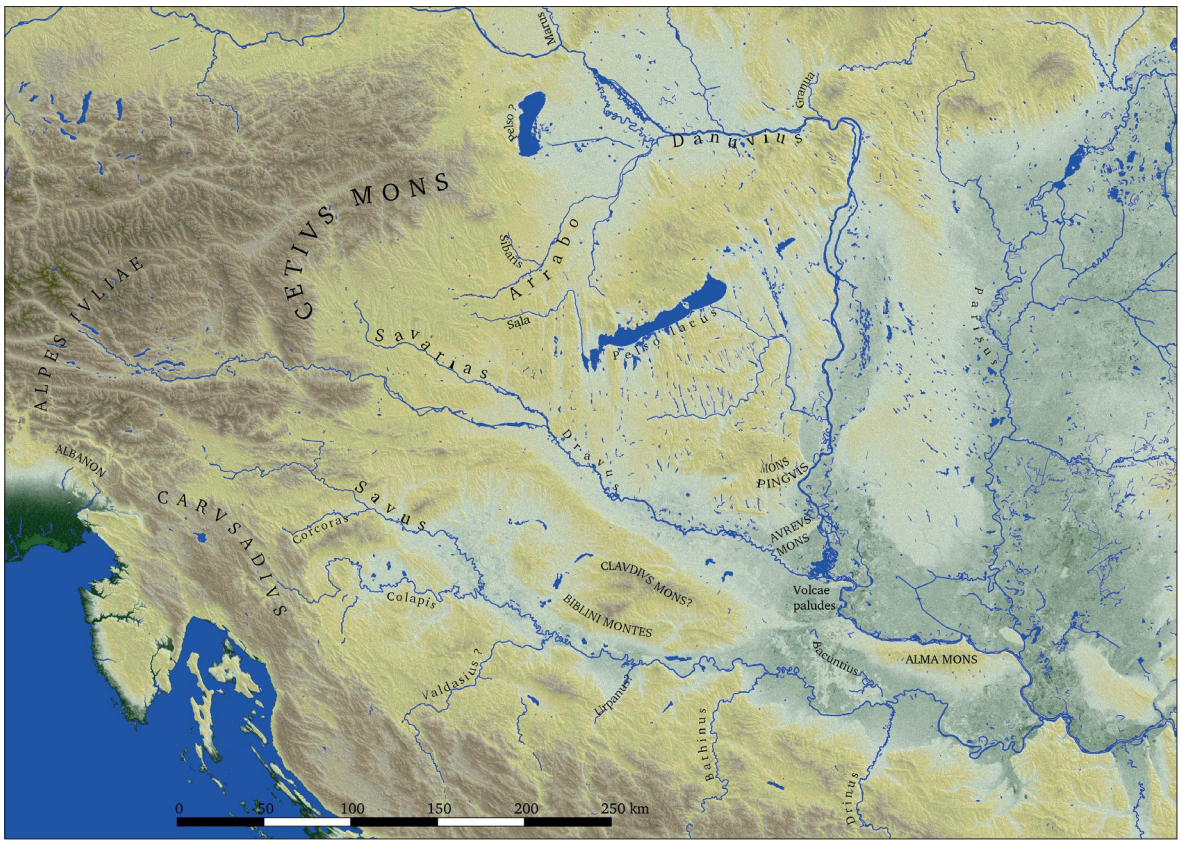


Fig. 2. Rivers and mountains on the territory of Pannonia (map by A. Bödőcs).

The peoples of the newly occupied territories were integrated into Roman administrative units, the so-called *civitates peregrinae*, as attested by the bronze tablet of Caius Baebius Atticus from Siauve.[7] In Susa, where "Italy begins" according to the inscription of the tablet, son of King Donnus, Marcus Iulius Cottius was the prefect of the listed communities *(praefectus ceivitatium quae subscriptae sunt)*.[8]

It was the same in Pannonia: after the Roman occupation, the tribal territories were integrated into Roman administrative units, which remained under military control until the Flavian era *(primuspilus, praefectus cohortis)*.[9] Some inscriptions confirm that, eventually, military control was suspended after some loyal and capable tribal leaders had been granted Roman citizenship *(civitas Romana)* and henceforth led their indigenous communities as *principes*. In this respect, *civitas Azaliorum* is particularly well known: we know of three generations of the local elite there, starting with

6 Borhy 2014, 28–29, Abb. 17.

7 Oriolo – Vitri 1997, 34, Fig. 17.

8 CIL V, 7231, "*Imp(eratori) Caesari Augusto Divi filio Pontifici Maxumo Tribunic(ia) potestae XV Imp(eratori) XIII M(arcus) Iulius regis Donni f(ilius) Cottius praefectus ceivitatium quae subscriptae sunt Segoviorum Segusinorum Belacorum Caturigum / Medullorum Tebaviorum Adanatium Savincatium Ecdiniorum Veaminiorum Venisamorum Iemeriorum Vesubianiorum Quadiatium et ceivitates quae sub eo praefecto fuerunt.*"

9 Mócsy 1962, 604–610.

Talalnus, the father of the tribal prince, followed by his son Iucundus, *princeps Azaliorum*,[10] and his children, a son Asper, who was a cavalryman in an auxiliary unit, the *eques alae I Hispanorum Aurianae* stationed at Aquincum, and a daughter, Solva.[11]



Fig. 3. Indigenous tribes on the territory of Pannonia before the Roman occupation (map by A. Bödőcs).

Lucius Volcacius Primus had an interesting triple, if not quadruple, position: he was the military commander of an auxiliary unit *(praefectus cohortis I Noricorum in Pannonia)* stationed in Arrabona (Győr), the commander of the fluvial border of the Danube *(praefectus ripae Danubi)*, and the *praefectus civitatium duarum Boiorum et Azaliorum*.[12] This accumulation of positions can be explained by the geopolitical situation: fortified tribal centres were located along the northern bank of the fluvial border represented by the Danube, such as the *arx* on Castle Hill in Bratislava,[13] and the 'Öregvár' [Old Castle] in Komárno/Révkomárom, opposite the later legionary fortress of Brigetio, in an area "where the presence of a Celtic population is also attested".[14]

The indigenous female dress—originating in a Norico-Pannonian tradition and surviving, in certain elements, into the Flavian era—is preserved in representations on stone monuments, which can be compared with the archaeological record. One form of Romanisation was the reforging of identity through the donation of Roman citizenship *(civitas Romana)* to auxiliary veterans of indigenous

10 RIU 790 = AE 1937, 138.

11 Lőrincz – Kelemen 1997, Nr. 2; Borhy 2023.

12 CIL IX, 5363: "*L(ucio) Volcacio Q(uinti) f(ilio) / Vel(ina) Primo / praef(ecto) coh(ortis) I Noricor(um) / in Pann(onia) praef(ecto) ripae / Danuvi(i) et civitatium / duar(um) Boior(um) et Azalior(um) / trib(uno) mil(itum) leg(ionis) V / Macedonicae in / Moesia praef(ecto) alae I / Pannonior(um) in Africa / IIviro quinq(uennali) / flamini divorum / omnium p(atrono) c(oloniae) / ex testamento eius / posita / M(arco) Accio Seneca / [- - -] Manlio Planta / IIvir(is) quinq(uennalibus) / l(ocus) d(atus) d(ecreto) d(ecurionum).*"

13 Musilová 2010; Musilová *et al.* 2014.

14 Knoll – Gere 2021, 128–129, Figs 1–2.

origin, who, after 25 years of military service in the fleet of Ravenna *(classis Ravennatis)*, returned home and settled as *cives Romani*. This right was also extended to their wives, who wore traditional indigenous clothes and jewellery and had Roman names completed by a reference to their ethnicity, such as Flavia Usaiu Eravisca.

The Department of Classical and Roman Provincial Archaeology has been involved in the excavation of the centre of the Celtic Haedui tribe at Bibracte (Mont Beuvray) in Bourgogne, central France, for the past 37 years, since 1988. The results are presented in the next section of this volume by my colleagues, Lőrinc Timár and Dániel Szabó, together with our French colleagues from Bibracte. Although extensive areas have been excavated, revealing streets, stone houses, even a Roman *domus* with stone walls and pavements, and a Roman *forum* with a *basilica*,[15] stone monuments and literary finds—Latin inscriptions—are completely absent. There is a single mention of the goddess Bibracte, or rather Bibrax, on a dedication offered by a certain Publius Caprilius Pacatus, a *sevir Augustalis*, found in the 16th century at Autun.[16] By contrast, Gallic-language texts written in Latin letters and Gallic inscriptions written in the Greek alphabet are known from Alesia, at a distance of no more than a dozen kilometres.[17] Literacy using the Iberian alphabet had already been present before the Roman occupation on the Iberian peninsula, on pottery, funerary monuments, and bronze *tesserae hospitales*. One may also mention the mostly undecipherable Vasconic literacy, the Celtiberian alphabet, or texts in the indigenous Lusitanian or Celtiberian language but written in Latin letters.[18] Taken together, this shows that literacy was present—even if, in most cases, we can read the texts but not understand them.

This was not the case in Pannonia. Literacy, the epigraphic habit, the Latin language, and the custom of erecting stone monuments such as tombstones arrived in Pannonia only with the Romans.

The inscription on the tombstone of Solva reflects the aspiration of the indigenous elite to become Roman at any price. How old was this little girl, Solva, when she died?[19] Was she 8, and was her age expressed, following the Latin rule for the number 28 as '*duo-de-triginta*' and for 18, '*duo-de-viginti*', as '*duo-de-decem*'? Or was it a pure misunderstanding of the number 12 in Latin ('*duo + decim*')? We may never know. Her family wanted to become Roman at any price. And Asper, the equestrian auxiliary soldier, was the first in his family—provided he survived a military service of 25 years—to have a chance to receive Roman citizenship, civitas Romana, and become a Roman citizen, a civis Romanus. Expressing and carving the age of the deceased on tombstones was not common practice, and the grammatical rule is complex: despite the fact that Latin expresses '18' as '*duo-de-viginti*', that is, '*two-minus-twenty*', the usual form of the number is 'XVIII', '*ten-eight*'.[20] Therefore, it is hardly surprising that a nearly correct version of the number 18, expressed as '*duodeviginti*' in the form 'XIIX', is known even from Rome, appearing on a tombstone in the collection of the Palazzo Altemps.[21] In the case of Solva's tombstone, one has to take both possibilities into consideration: the inscription can stand either for '8' as '*duo-de-decem*' ('IIX'), expressed in a structure analogous

15 Timár *et al.* 2006.

16 CIL XIII, 2653.

17 Gentil 2021.

18 For more general information, see Simón Cornago 2013; for the epigraphy in Republican Hispania, see Díaz Ariño 2008; for the bronze tablet of Contrebia Belaisca with Iberian script, see Beltrán – Tovar 1982; for the Celtiberian texts written using Latin letters (the Novallas bronze tablet), see Beltrán Lloris *et al.* 2021; for Tartesian, Iberian, Celtiberian, Vasconian, and Lusitanian scripts, see Jordán Cólera 2024.

19 Borhy 2023.

20 RIU 538, Brigetio: *M(arci) Aureli Crhysi (sic!) pueri / innocentissimi / adque iucundissi/mi q(ui) vix(it) ann(is) / p(lus) m(inus) XVIII.*

21 Funerary Altar with 16th Century Inscription – Palazzo Alt… | Flickr (last accessed: 6 May 2026).

to the Latin '*duo-de-quinquaginta*' ('IIL') found on a late Roman building inscription in the same region—as well as '*duo-de-triginta*' ('IIXXX') for '28' and '*duo-de-viginti*' ('IIXX') for '18'—or for the number '12' as a misunderstanding of '*duo-decim*'.

Latin literacy was present in the form of cursive inscriptions on tiles; for example, the introductory words of the *Aeneid* by Virgil were often cited from Antiquity onwards. Caius Iulius Candidianus, who died at Brigetio, was, despite his young age of only 18 years (XVIII again) and 7 months at death, already "highly educated in all liberal arts" *(omnibus artibus liberalibus eruditus).*[22] Greek verses in the style of Anacreon (the so-called *Anakreontea*) were also present on mass-produced glass pendants at Aquincum[23] and Brigetio:[24] ΛΕΓΟΥCIN / ΑΘΕΛΟΥCIN / ΛΕΓΕΤΩCAN / ΟΥΜΕΛΙ ΜΟΙ / CΥΦΙΛΙ ΜΕ / CΥΝΦΕΡΙ COI ("They chatter all over the place. I can't even hear their chatter; You just hold me, it's going to feel good"; "No matter what they say, I don't care about the talk. You should love me, it will be for your own good."). Negatives of love poems to a certain Vitula were even cut into pastry moulds and thus 'copied', sold, and distributed *en masse* by a bakery at Brigetio: *Vitula, / [d]ulcis amor, / [se]mper suspiria / nostri. Quod / peto, si dederis, / munera grata / dabo;* ("My little life, my sweet love, the object of my constant sighs, if you give me what I ask of you, I will give gifts that will be dear to you").[25] Moreover, the first known caricaturistic representation of Ovidius is also known from a roof tile found at Brigetio.[26]

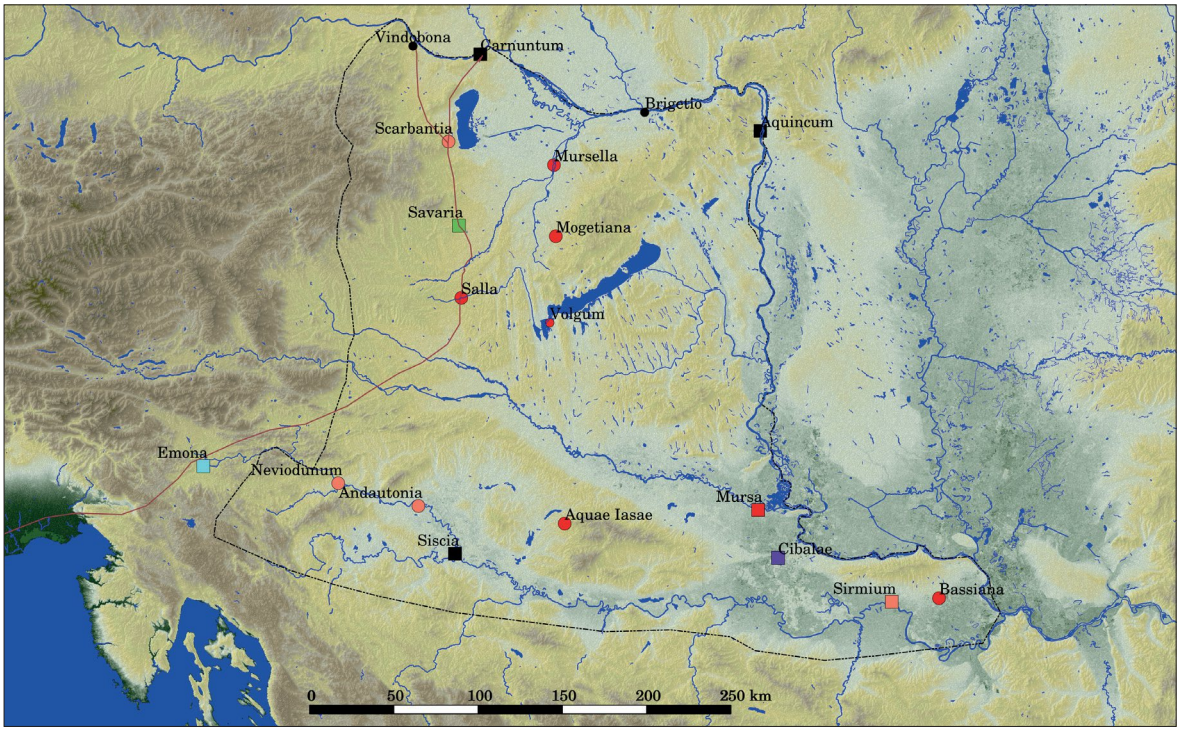


Fig. 4. Roman *municipia* and *coloniae* in Pannonia during the Severan era (map by A. Bödőcs).

Though Roman *coloniae* and *municipia* were established across the southern and western peripheries of Pannonia and the Danubian frontier, as well as inside the province, from the Julio–Claudian to the Severan eras (Fig. 4),[27] it seems that the process of Romanisation was concluded relatively

22 Borhy 2006, 41–42, Kat. 14.

23 Facsády 2009, 117, Kat. 242.

24 Szilágyi 2007, 74.

25 Alföldi 1945, 66, I. t. 1.

26 Bartus – Borhy 2021; Bartus – Borhy 2024.

27 Borhy 2014, 35–45, 66–69.

late, by the end of the 2nd century AD. Representatives of the local Celtic elite received their places in the amphitheatres not only in Lugdunum/Lyon in Gallia, but also in Pannonia—at least in the civilian amphitheatre of Aquincum, where probably six seats were reserved for visitors from the Boii tribe and some for the Eravisci.[28] Belonging to the local tribal elite and visiting Roman amphitheatres is a certain sign of having been Romanised.[29]

Sources

AE: *L'Année Épigraphique: Revue des publications épigraphiques relatives à l'antiquité romaine.* Paris, 1888–.

CIL III: Mommsen, Th. (ed.): *Corpus Inscriptionum Latinarum. Vol. III. Inscriptiones Asiae, provinciarum Europae Graecarum, Illyrici Latinae.* Berlin, 1873.

CIL V: Mommsen, Th. (ed.): *Corpus Inscriptionum Latinarum. Vol. V. Inscriptiones Galliae Cisalpinae Latinae. Partes I–II.* Berlin, 1872–1877.

CIL IX: Mommsen, Th. (ed.): *Corpus Inscriptionum Latinarum. Vol. IX. Inscriptiones Calabriae, Apuliae, Samnii, Sabinorum, Piceni Latinae.* Berlin, 1883.

CIL XIII: Hirschfeld, O. – Zangemeister, C. (eds): *Corpus Inscriptionum Latinarum. Vol. XIII. Inscriptiones trium Galliarum et Germaniarum Latinae.* Berlin, 1899–1907.

Plin. HN: Plinius Maior, *Naturalis historia.*

RIU: Barkóczi, L. et al. (eds): Die römischen Inschriften Ungarns 1–6. Budapest–Bonn, 1972–2001.

References

Alföldi, A. 1945: Új agyagminták és medaillonok Pannóniából és Daciából (Tonmedaillons und runde Kuchenformen aus Pannonien und Dacien). *Folia Archaeologica* 3, 66–71.

Alföldy, G. 1974: *Noricum.* The Provinces of the Roman Empire. Boston–London.

Alföldy, G. 2005: Die Romanisation- Grundbegriff oder Fehlbegriff? Überlegungen zum gegenwärtigen Stand der Erforschung von Integrationsprozessen im Römischen Reich. In: Visy, Zs. (ed.): *Limes XIX. Proceedings of the XIXth International Congress of Roman Frontier Studies. Pécs, Hungary, September 2003.* Pécs, 25–56.

Bartus, D. – Borhy, L. 2021: Ovidius Noster: A caricaturistic portrait of Ovid from Brigetio (Komárom-Szőny, Hungary). In: Liu, Jinyu (ed.): *New Frontiers of Research on Ovid in a Global Context.* Beijing, 439–451.

Bartus, D. – Borhy, L. 2024: A caricaturistic portrait of Ovid from Brigetio (Komárom/Szőny, Hungary). *Archaeologiai Értesítő* 149, 177–186. https://doi.org/10.1556/0208.2024.00086

Beltrán, A. – Tovar, A. 1982: *Contrebia Belaisca (Botorrita, Zaragoza), I: El bronce con alfabeto "ibérico" de Botorrita.* Zaragoza.

Beltrán Lloris, F. – Jordán Cólera, C. – Díaz Ariño, B. – Simón Cornago, I. 2021: The Novallas bronze tablet: An inscription in the Celtiberian language and the Latin alphabet from Spain. *Journal of Roman Archaeology* 34, 713–733. https://doi.org/10.1017/S1047759421000635

Borhy, L. 2006: Brigetio / Komárom-Szőny. In: Bechert, T. – Borhy, L. – Hainzmann, M. (eds): *Legionsadler und Druidenstab. Vom II. Adiutrix-Legionslager zur kaiserlichen Residenz.* Komárom–Linz.

Borhy, L. 2009: *Brigetiói amphitheatrumok?* Budapest.

Borhy, L. 2014: *Die Römer in Ungarn.* Darmstadt.

Borhy, L. 2023: Az egyik VIII, a másik II híján X. Hány éves lehetett a kis Solva? Gondolatok egy pannoniai feliratról. In: Bódiné Beliznai, K. – Gosztonyi, G. (eds): *Jogtörténeti Parerga III: Ünnepi tanulmányok Mezey Barna 70. születésnapja tiszteletére.* Budapest, 57–66.

Díaz Ariño, B. 2008: *Epigrafía latina republicana de Hispania (ELRH).* Instrumenta 29. Barcelona.

28 CIL III, 10493d: *[loca?] Boi(orum) VI E[raviscorum?]*; Borhy 2009, 106–107, no. 6.

29 Pastor 2020.

Domergue, C. – Long, I. 1995: Le "véritable plomb de I. Flavius Verucla" et autres lingots. L'épave 1 de Saintes-Maries-de-la-Mer. *Mélanges de l'École Française de Rome, Antiquité* 107, 801–867. https://doi.org/10.3406/mefr.1995.1908

Facsády, A. R. 2009: *Aquincumi ékszerek – Jewellery in Aquincum.* Az Aquincumi Múzeum gyűjteménye 1. Budapest.

Genovesi, St. 2018: *Il piombo dell'imperatore. Il relitto di Rena Maiore e le miniere del princeps in età augustea.* British Archaeological Reports – International Series 2896. Oxford. https://doi.org/10.30861/9781407314594

Gentil, V. 2021: *Gallo-Romains d'Alésia. Epigraphie et société, Ier siècle av. J.-C.–IIIe siècle ap. J.-C.* Paris.

Hülsen, Ch. 1895: *Aquileia.* Paulys Realencyclopädie der classischen Altertumswissenschaft, Vol. II,1. Berlin, 318–321.

Jordán Cólera, C. 2024: *El legado escrito de los pueblos paleohispánicos (tartesios, iberos, celtíberos, vascones, lusitanos…).* Zaragoza.

Knoll, M. – Gere, M. 2021: Obnova keltských spón z Komárna. *Iuxta Danubium* 17, 128–135.

Lőrincz, B. – Kelemen, M. 1997: Neue römische Inschriften aus Esztergom–Solva. *Klio* 79, 178–193. https://doi.org/10.1524/klio.1997.79.1.178

Mócsy, A. 1962: *Pannonia.* Paulys Realencyclopädie der classischen Altertumswissensachaft, Suppl. IX. Stuttgart, 515–776.

Musilová, M. 2010: Bratislavaer Burg – Arx Boiorum im Lichte der neuesten archäologischen Funde. Archäologische Forschung – Winterreithalle. *ANODOS. Studies of the Ancient World* 10, 187–205.

Musilová, M. – Barta, P. – Herucová, A. 2014: *Bratislavský hrad – Dejiny, výskum a obnova.* Bratislava.

Oriolo, F. – Vitri, S. (eds) 1997: *Museo archeologico Iulium Carnicum. La città romana e il suo territorio nel percorso espositivo.* Comune di Zuglio.

Pastor, S. 2020: *Giochi di potere. I munera dalle origini alla romanizzazione delle province Alpine e Balcanico-Danubiane.* Roma.

Piccotini, G. – Vetters, H. 1990: *Führer durch die Ausgrabungen auf dem Magdalensberg.* Klagenfurt.

Simón Cornago, I. 2013: *Los soportes de la epigrafía paleohispánica: Inscripciones sobre piedra, bronce y cerámica.* Sevilla.

Szilágyi, J. Gy. 2007: Anacreonteum Brigetióból. *Ókor* 8.1–2, 74–77.

Timár, L. – Szabó, M. – Czajlik, Z. 2006: La domus du dernier état de l'îlot du Grandes Forges. In: Guillaumet, J.-P. – Szabó, M. (eds): *Études sur Bibracte – I.* Bibracte 10. Glux-en-Glennes, 13–46.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 21–37. 10.17204/dissarch.suppl.5.2026.21

Integration? Romanisation?

Tomb of an auxiliary soldier of Celtic origin

József Beszédes ✉
Pázmány Péter Catholic University, Budapest, Hungary; Budapest History Museum, Budapest, Hungary
beszedesjozsef@windowslive.com

Received 3 December 2025 | Accepted 7 May 2026 | Published 18 November 2026

Abstract: The article examines the largest burial mound (tumulus) of the Celtic cemetery at Nagytétény, which contained the burial of a discharged auxiliary cavalryman from the late 1st century AD. The veteran's wealth is reflected in the size of the mound, an imported bronze vessel added to his grave, and the commissioning of gravestones—a practice introduced by the Romans in Pannonia. However, these rustic monuments—and the cemetery itself—exhibit distinct local features. The burial reflects both the adoption of Roman funerary customs and the persistence of indigenous Celtic traditions. It highlights the role of Roman military veterans in transmitting new burial practices to local communities.

Keywords: Pannonia, Roman cemetery, urn grave, burial mound *(tumulus)*, local traditions, Romanisation, integration, tombstones

Integration? Romanisation?

In archaeological research, the term 'Romanisation' was long used to describe the process by which the local cultures of indigenous populations in Roman provinces gradually became assimilated into the Roman Empire.[1] However, since the 1970s, this term has faced increasing criticism.[2] The critique is well-founded, as there is no evidence of a violent imposition of Roman culture, state-enforced assimilation, or the forced spread of the Latin language. On the contrary, some local traditions persisted, sometimes remaining distinct, other times merging with various cultural influences of the Roman Empire. The highly complex interactions between cultures in the Roman Empire exhibited significant variation across regions, provinces, and historical periods.[3]

Historical records indicate not only continuity but also the emergence of new local identities. For instance, Tacitus's account from AD 70 describes the Batavian uprising led by Civilis, noting that the citizens of Cologne—comprising both Germanic Ubii and Roman settlers—did not identify themselves strictly as German or Roman, but as *Agrippinenses*.[4]

1 The term 'Romanising' was introduced by Theodor Mommsen to describe the cultural changes that took place in any area after it came under Roman rule (see the case of Gaul in Mommsen 1861, 45). See also Haverfield 1923, 11.

2 Goudineau 1979; Webster 2001 (with extensive further bibliography).

3 For a detailed analysis of local Syrian cultural identity during the Hellenistic and subsequent Roman periods, see Andrade 2013.

4 Tac. *Hist.*, 4.28.1

✉ Corresponding author

Therefore, the term 'Romanisation' does not accurately describe the complex, multi-directional, and regionally diverse cultural, economic, and social processes that took place in the provinces. 'Integration' is more appropriate instead, as it refers to the incorporation of a region into a larger economic, cultural, and political unit without implying a one-directional process.[5] Naturally, the method of integration varied across regions and provinces.



Fig. 1. The location of Nagytétény in Pannonia (after Trajan's province division).

The cemetery at Budapest-Nagytétény (M6 Motorway)

Examining the province of Pannonia, established during the reign of Emperor Claudius, one can see that the process of integration was largely characterised by the introduction of Roman administration, the founding of cities, the presence of the Roman army, and the involvement of indigenous elites in local power.

In the following, I present a case study, a grave from a cremation cemetery excavated in 2005–2006 in Nagytétény on the southern outskirts of Budapest (Figs 1–2). This burial illustrates a possible form of integration and the coexistence of various cultural influences in Pannonia during the early imperial period.[6]

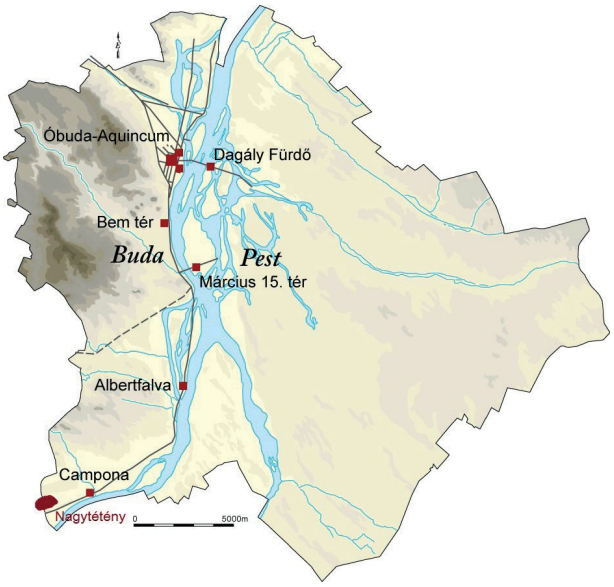


Fig. 2. The location of the Nagytétény cemetery on the present territory of Budapest (with the Roman settlements and military camps).

During the excavation, carried out in connection with the construction of the M6 Motorway, we uncovered nearly 60 cremation graves of an indigenous (Celtic) cemetery dating to the 1st and 2nd centuries AD (Figs 3–5). The cemetery extended for about 200 metres along the limes road that followed the Danube and ran approximately 2.5 kilometres southwest of the auxiliary fort at *Campona* (Nagytétény). However, the cemetery did not belong to this fort, but most likely to a Celtic settlement—to be found—in the valley of the Sulák Stream some 800 metres to the north.[7]

Among the finds from the excavated graves, the overwhelming majority of the grave goods are vessels representing the La Tène D pottery tradition (Figs 6–8); the so-called provincial 'Roman' products (e.g., Samian ware imitations) are represented in much lower proportions, and imported

5 For discussions of the concept of integration, see Muniz Grijalvo – Moreno Soldevila 2023.

6 For the excavation, see Beszédes – Szilas 2006; Beszédes – Szilas 2007.

7 On the question of the settlement, see Beszédes – Szilas 2007, 246.

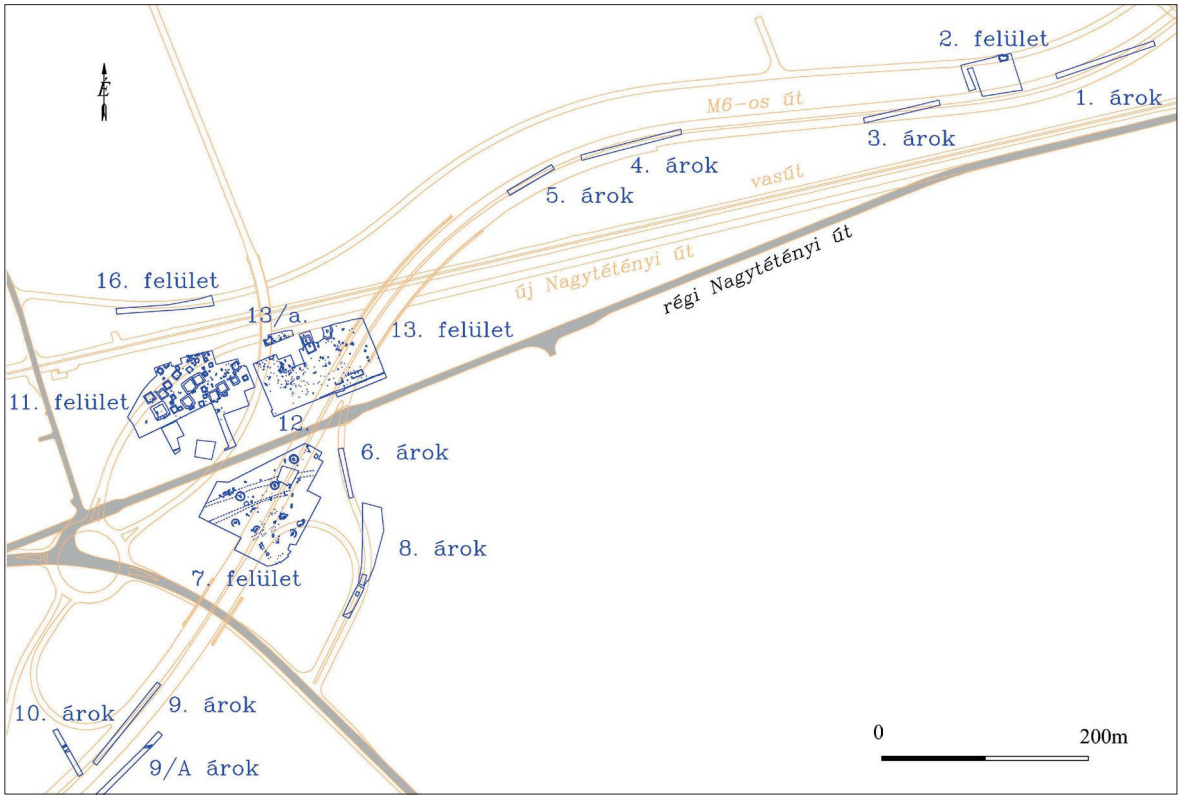


Fig. 3. The general map of the Nagytétény cemetery with the excavated area in 2005–2006.



Fig. 4. The central part of the Nagytétény cemetery with the barrow-ditches.



Fig. 5. Aerial view of the cemetery (photo: G. Rákóczi).

wares occur only sporadically. Only a single item, a Consp. 34 dish with applied ornaments, represents the Samian ware. The total absence of oil lamps indicates the ethnic and socio-economic status of the population that used the cemetery.

Metal finds include primarily brooches (especially strongly profiled fibulae with one knob and winged brooches) characteristic of the Celtic population of the Norico-Pannonian region. In some cases, weapons (swords, shields, spears) were also placed in the graves. Other metal objects, like a bronze ladle, coins, iron knives occur only sporadically in the urns. Some of the metal artefacts, including the weapons, were deliberately damaged as part of the burial ritual (Fig. 9).



Fig. 6. Local handmade urn from Grave 252.



Fig. 7. Local handmade urn with plastic decoration from Grave 610.



Fig. 8. Local handmade urn from Grave 668.









Fig. 9. Deliberately deformed bronze brooch (Norico-Pannonian winged brooch) from the cemetery.

The combined analysis of all grave finds from the Nagytétény cemetery indicates a Celtic burial ground dating to the second half of the 1st and the first half of the 2nd century AD. The abundance of La Tène D pottery, the deliberate destruction of metal objects, and the absence of imported goods and oil lamps all point in this direction.

Many urn graves were framed by mostly rectangular ditches, which likely engirded burial mounds *(tumuli)* (Fig. 5).[8] Graves of the indigenous Celtic population before the Roman occupation were enclosed by rectangular ditch structures,[9] while those in the 1st and 2nd centuries AD, following the establishment of the province, feature both circular and rectangular structures.

In earlier Hungarian literature, ditch-framed graves were often interpreted as graveyards.[10] However, the depth of the ditches and the considerable amount of removed soil contradict this theory. Although Hungarian research remains divided on the issue, I believe that both circular and rectangular ditches were associated with burial mounds *(tumuli)* instead.

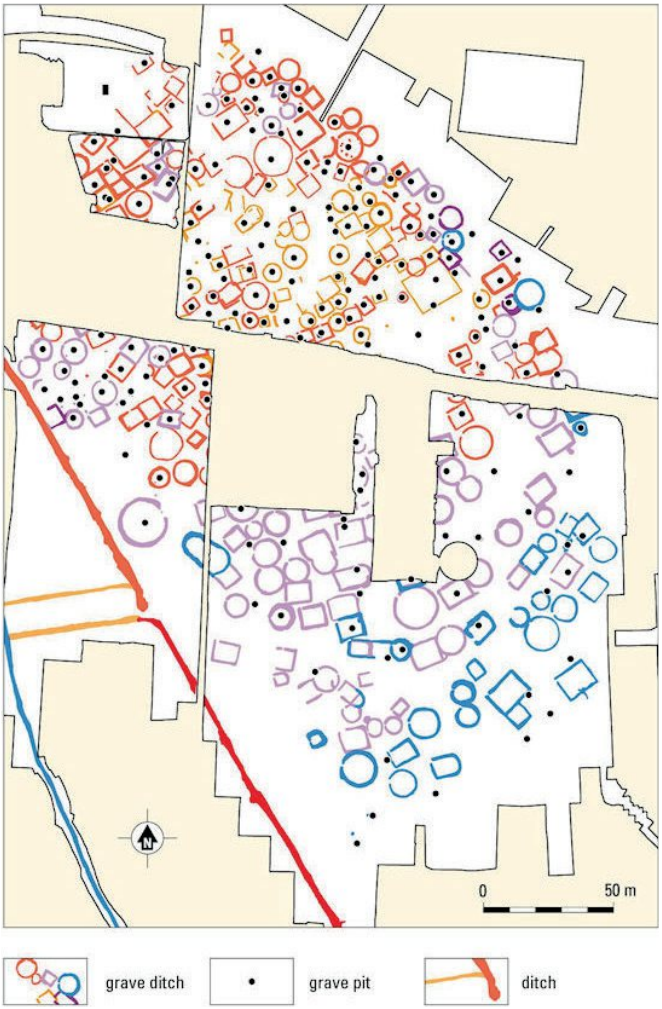


Fig. 10. The central cemetery in Tiel-Passewaaij, The Netherlands (after Aarts – Heeren 2007).

In several 1st- and 2nd-century AD cemeteries in Pannonia—such as those at Hegyeshalom,[11] Halimba,[12] Páty[13] and Budaörs[14]—circular and rectangular ditches have been found side by side. Although neither form can be attributed conclusively to a specific ethnic group, it appears that Celts had a slight preference for the rectangular type.[15]

Similar burial features have also been excavated in the Rhineland, where rectangular and circular grave ditches were found next to each other in numerous Roman cemeteries dating to the 1st–3rd centuries AD.[16] One of the most illustrative examples is a cemetery at Tiel-Passewaaij in the Neth-

8 Beszédes 2024.

9 Ottományi 2019, 42, Footnote 118.

10 The same interpretations were presented in earlier publications, including Beszédes – Szilas 2007, 239–241; Beszédes 2012.

11 Bíró – Figler 2006.

12 B. Bónis 1960.

13 Ottományi 2019, 42.

14 Ottományi 2016, 167–171.

15 Ottományi 2019, 42, Footnote 118.

16 Interpreted as burial mounds in Amand 1960; Wigg 1993; Hornung 2017. For the Celto-Roman ▸

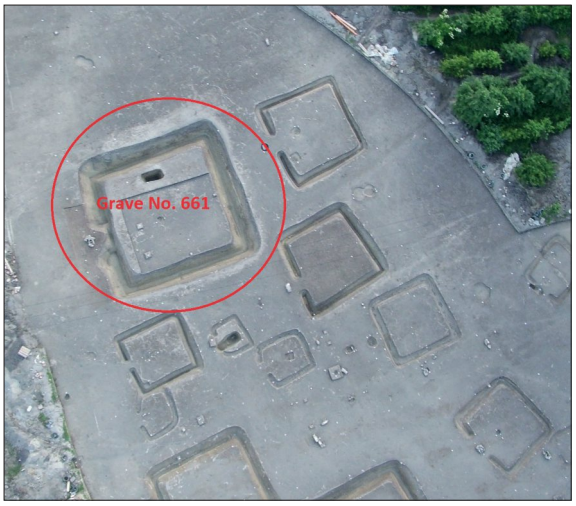


Fig. 11. Southern edge of the Nagytétény cemetery with Grave Complex 661 (photo: G. Rákóczi).

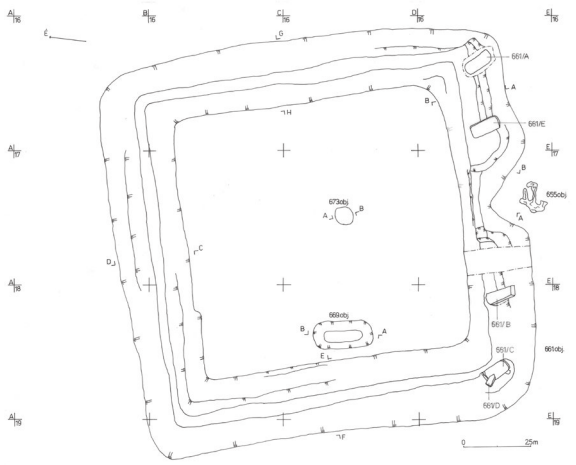


Fig. 13. Drawing of the Grave Complex 661 (with the cremation Grave 673 and Horse Burial 669) (drawing: R. Beszédes).

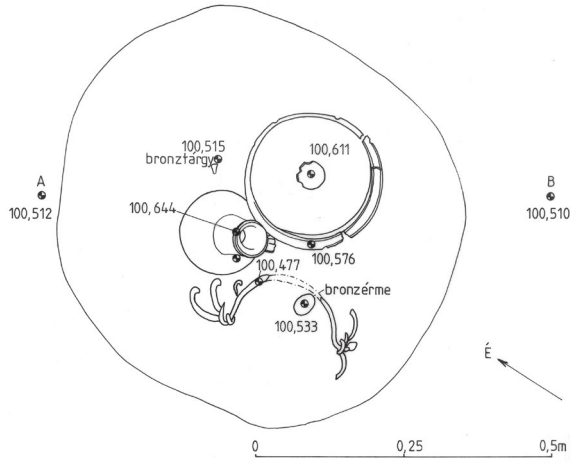


Fig. 15. Drawing of the Grave 673 (Grave Complex 661) (drawing: R. Beszédes).



Fig. 12. Nagytétény cemetery, Grave Complex 661 with the five tombstones in the filling of the ditch.



Fig. 14. Cremation Grave 673 within the Grave Complex 661.



Fig. 16. Orange-coated jug from Grave 673.

erlands, used between AD 60 and 270 (Fig. 10).[17] Out of the 280 ditches surrounding the graves, both circular and rectangular ones were found in close proximity, forming an extensive tumulus field.

Grave Complex 661 in the cemetery at Budapest-Nagytétény (M6 Motorway)

The richest burial in the Nagytétény cemetery was Grave Complex (tumulus) 661, consisting of an urn grave (Feature 673), a grave pit containing a complete horse skeleton (Feature 669), and the largest ditch found in the cemetery enclosing them (Figs 11–13).[18]



Fig. 17. Grey bowl with horizontal rim *(Knickwandschüssel)* and lid.



Fig. 18. Obverse and reverse of Nero's *sestertius* from Grave 673.

The urn grave containing human ashes was found at the centre of the encircled enclosure (Figs 14–15). An orange-coated single-handled jug, a grey bowl with a horizontal rim and lid, and a *sestertius* of Emperor Nero, minted in AD 65, were placed in the shallow grave pit (Figs 16–18).[19] They were covered with fragments of different pottery bowls. A bronze handle with two attachments, most likely from a wooden bucket, was also found in the grave (Fig. 19). Beneath the bronze handle, a partially burnt bronze ladle *(simpulum)* was uncovered (Fig. 20). The calcined human bones found beneath the bucket handle suggest that the cremains were collected in a wooden bucket after cremation.[20]

The grave pit containing the complete skeleton of a two-year-old horse killed there and buried in a standing position lay 3.5 metres west of the urn grave (Fig. 21). A horse-bit was found between the front legs of the animal, and additional harness elements were discovered next to its head (Fig. 22).[21]

A total of five stone stelae, all of which had been toppled or deliberately knocked over during the centuries since the funeral, were recovered from the fill of the southern section of the perimeter ditch, closest to the *limes* road (Fig. 12, Fig. 23).

▸ cemetery in Oberlöstern (Germany) with reconstructed *tumuli*, see Lang – Schröer-Spang 2014; Glansdorp – Glansdorp 2020.

17 Aarts – Heeren 2007, 137.

18 The enclosed area measured 14.6 × 15.2 m. The width of the ditch varied between 2.5 and 2.8 m, and its depth reached 1.4 m. On the southern side, facing the limes road, its line was interrupted; the metre-wide break formed an entrance to the enclosed burial place *(tumulus)*, allowing for its maintenance and horticultural upkeep.

19 For a detailed description of the finds from the urn grave, see Beszédes 2012, 331–341.

20 Wooden buckets, made of material that is easy to decay, are only rarely found in Pannonia. For the wooden bucket found in a Late Roman grave at Szárászpuszta, see Burger 1977, 189, 201–202, Fig. 4, Figs 7–9.

21 For a detailed description of the finds from the horse grave, see Beszédes 2012, 340–341.

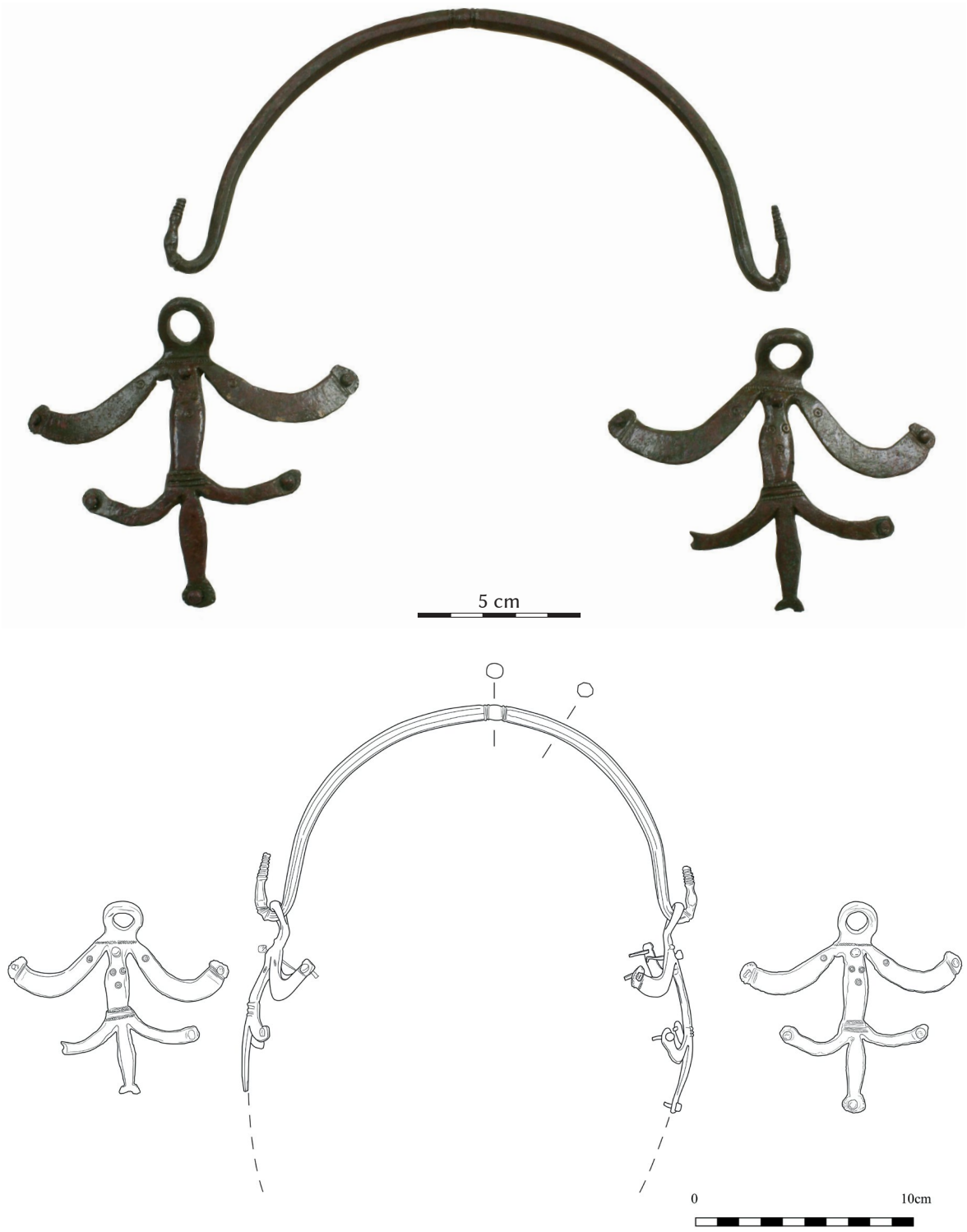


Fig. 19. Bronze handle and fittings of a wooden bucket from Grave 673 (drawing: L. Illés).

Four of these gravestones were made of the same material, limestone, had a similar shape (with a rounded top), and were decorated with rustic reliefs: two depicted maidservants *(camillae)* in Celtic costumes, the third a mounted figure carrying a shield, and the fourth an oval shield with an *umbo* (Figs 24–27).[22]

22 For the description of the gravestones see Beszédes 2012, 335–340.

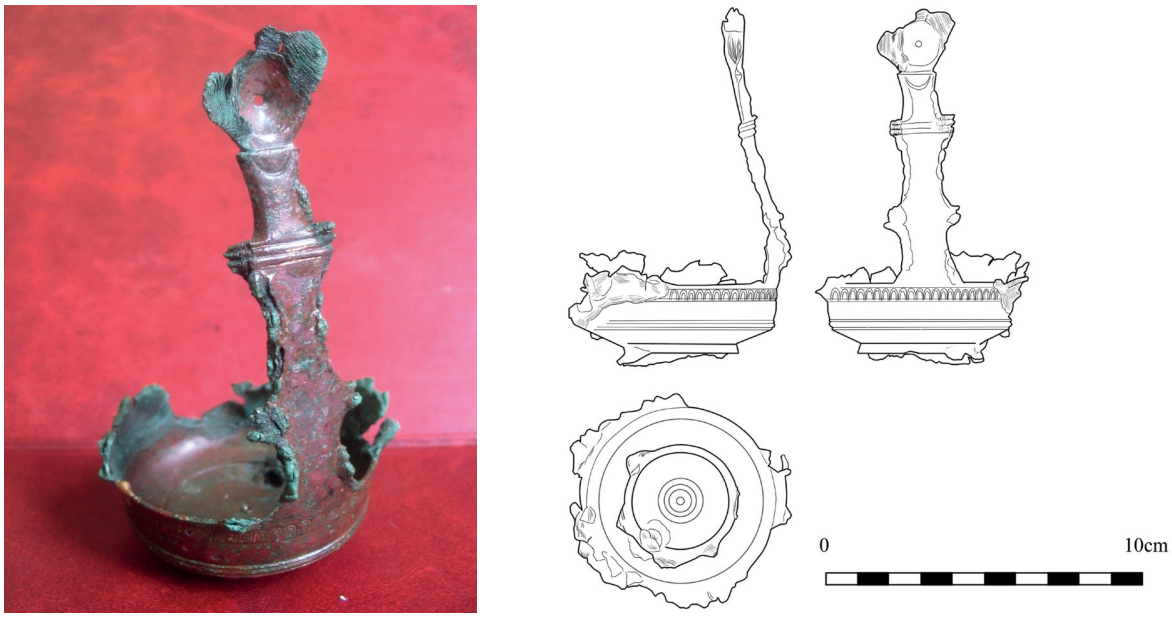


Fig. 20. Bronze ladle *(simpulum)* from Grave 673 (photo: Á. Vecsey; drawing: L. Illés).

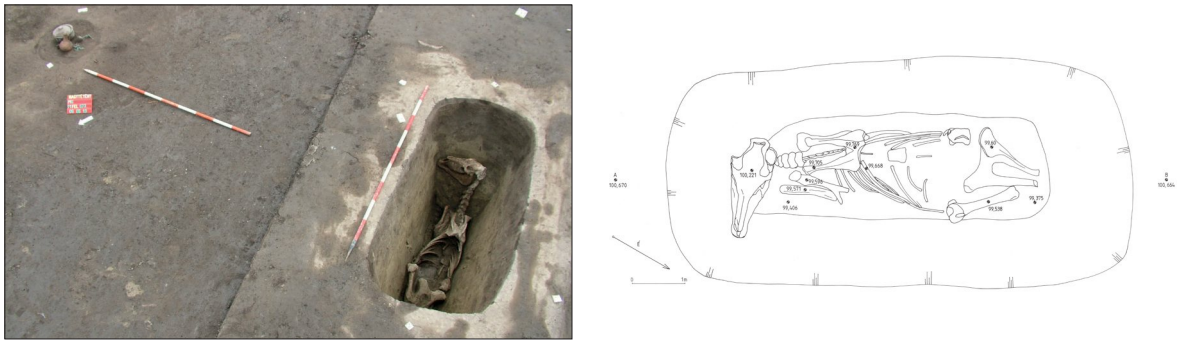


Fig. 21. Horse burial (Grave 669) with the cremation Grave 673 (drawing: F. Somogyi and K. Dittera).

Originally, these four stelae were placed at equal distances next to the two sides of the *tumulus*, facing the limes road. The two bearing *camillae* related to the funeral ceremony stood on the left side of the entrance, while the others, featuring reliefs connected with the deceased, were erected on the right side (Fig. 28). The military-themed representations indicate that the deceased had served as an auxiliary cavalryman.[23]

The fifth gravestone recovered from the ditch was made of a different material, and its design also differed from that of the previous four (Figs 29–31). It was smaller and had originally been set into a pedestal.[24] An eagle with outstretched wings is



Fig. 22. Bronze and iron elements of the harness from the horse burial (Grave 669).

23 For Pannonian tombstones with auxiliary cavalryman representations from the 1st century AD, see Burger 1956. For further examples on Pannonian tombstones, see Beszédes 2012, 336, Footnotes 69–76.

24 Dimensions: height: 53 cm (without the fitting tenon: 50 cm), width: 25 cm, thickness: 9.5 cm.

depicted on its pediment, and beneath it a standing male figure with his legs crossed, holding a spear and a sword, can be seen. This figure may represent the deceased or the *virtus* of the deceased, while the eagle can be interpreted either as a military symbol or as an apotheosis scene. Although it certainly belonged to the grave, the small size and pedestal suggest that it did not stand next to the four stelae mentioned above, but was likely placed at the top of the mound, akin to a comparable piece in a *tumulus* reconstruction from Oberlöstern, Germany (Fig. 32).[25]

The military-themed relief on the fifth gravestone further reinforces the assumption that the Grave Complex *(tumulus)*, dated to the last third of the 1st century AD, was the tomb of a veteran auxiliary cavalryman.

Analysis of Grave Complex 661

Based on their relative positions within the same grave complex, the urn grave (Feature 673) and the horse burial (Feature 669) must have belonged together.[26] Their connection is further confirmed by the orientation of the horse's head, which was turned toward the urn grave (Fig. 24).

In Pannonia, only the wealthy members of society could obtain imported bronze vessels in the



Fig. 23. Southern part of the Grave Complex 661 with five tombstones from the ditch.



Fig. 24. Tombstone representing a female servant figure *(camilla)* from the Grave Complex 661.



Fig. 25. Tombstone representing a female servant figure *(camilla)* standing on a pedestal from the Grave Complex 661.



Fig. 26. Tombstone representing a cavalryman from Grave Complex 661.



Fig. 27. Tombstone depicting an oval shield with umbo from Grave Complex 661.

25 See Footnote 16.

26 There was no evidence of a chronological gap between the two graves.

1st and 2nd centuries AD.[27] Within these affluent groups, the deposition of metal vessels (predominantly bronze) as grave goods was particularly characteristic of two social strata: the local Celtic tribal aristocracy and the likewise indigenous auxiliary soldiers who, upon discharge, returned to their original homeland.[28] Graves of the members of the local Celtic elite include exceptionally rich and sumptuous chariot graves with extensive assemblages of metal vessels.[29] The graves of discharged auxiliary soldiers are more modest, though the inclusion of metal items consistently remains a feature of the funerary practice.[30]



Fig. 28. Reconstruction of the Grave Complex 661 as a barrow *(tumulus)* with the four tombstones standing at the front.

The cast *simpulum* from the grave at Nagytétény (Fig. 20) was most likely manufactured in northern Italy and reached its owner either as an imported item or through personal acquisition. This type of ladle (Type Radnóti 43), belonging to the group of *simpula* with short, vertical handles, became common in Pannonia by the mid-1st century AD.[31] The closest parallel is known from Emona, where the shaping of the handle corresponds exactly to our specimen.[32]

The grey ceramic bowl with a horizontal rim (Fig. 17), represents a type that first appeared in Pannonia during the Flavian period and survived into the 4th century AD.[33] Such vessels are frequent in settlements and cemeteries in the northern provinces, particularly in the hinterland of Aquincum—especially in the indigenous cemetery at Solymár,[34] while also appearing in *tumulus* burials in eastern Pannonia.[35]

27 Alföldy 1960, 9.

28 These two social strata evidently overlapped to a certain degree: in northern Pannonia, young men of the native aristocracy often entered the Roman army as auxiliary cavalrymen in the late 1st and the first half of the 2nd century AD (Mráv 2007, 245–254).

29 For more on chariot burials, see Mráv 2007.

30 For early Pannonian graves of auxiliary soldiers, see Márton 2002; Mráv 2007, 245–248.

31 Radnóti 1938, 85. The closest parallels are known from Emona, Poetovio, Neviodunum, and Savaria, as well as from Burnum and Salona in Dalmatia; see Breščak 1982, 51–52. For more on the production centre, see Radnóti 1938, 87.

32 Breščak 1982, 51, Nr. 93, Tab. 10.

33 Ottományi 2012, 239–240; B. Bónis 1942, 23; Grünewald 1979, 57; Petznek 1998, 233–239.

34 V. Kocztur 1991.

35 K. Palágyi – Nagy 2000, 115–116, Tab. 10.19,23,25.



Fig. 29. Tombstone representing a man holding a spear and a sword, with an eagle in the pediment from the Grave Complex 661.



Fig. 30. Detail of the tombstone representing a man holding a spear and a sword from the Grave Complex 661.



Fig. 31. Detail of the tombstone representing a man holding a spear and a sword, with an eagle in the pediment from the Grave Complex 661.

Pale brick-coloured pottery jugs with orange slip coating, a globular body, a long neck, and a single handle are frequent in 1st–2nd-century AD cemeteries in Pannonia. A close parallel to the Nagytétény jug was found in a grave at the Solymár-Dinnyehegy cemetery, dated to the first half of the 2nd century AD.[36]

Although the conceptual background of coin deposition is not always clear, the well-preserved *sestertius* of Emperor Nero, struck at Lugdunum in AD 65,[37] was most likely deposited in the grave as an *obolus* (Fig. 18).[38] In any case, the practice of placing coins in graves appears to have been more of a 'Roman' custom than a Celtic one.

The most intriguing aspect concerns the representations on the five gravestones belonging to the *tumulus* (Figs 24–31). The figures of servants (*camillae* or/and *camilli*) assisting at the funerary ceremony in eastern Pannonia were generally carved in the band between the main image field and inscription of the gravestones. In the most widespread composition, they stand beside a table laden with sacrificial food, holding ritual implements in their hands. Such depictions often occur together with chariot scenes, particularly on gravestones of indigenous people in north-eastern Pannonia.[39]

36 V. Kocztur 1991, 288, 8.31.5 and 328, 47.11.

37 RIC I, 438.

38 For the interpretations, see Stevens 1991; Oettel 2000.

39 Erdélyi 1974, 29–31.

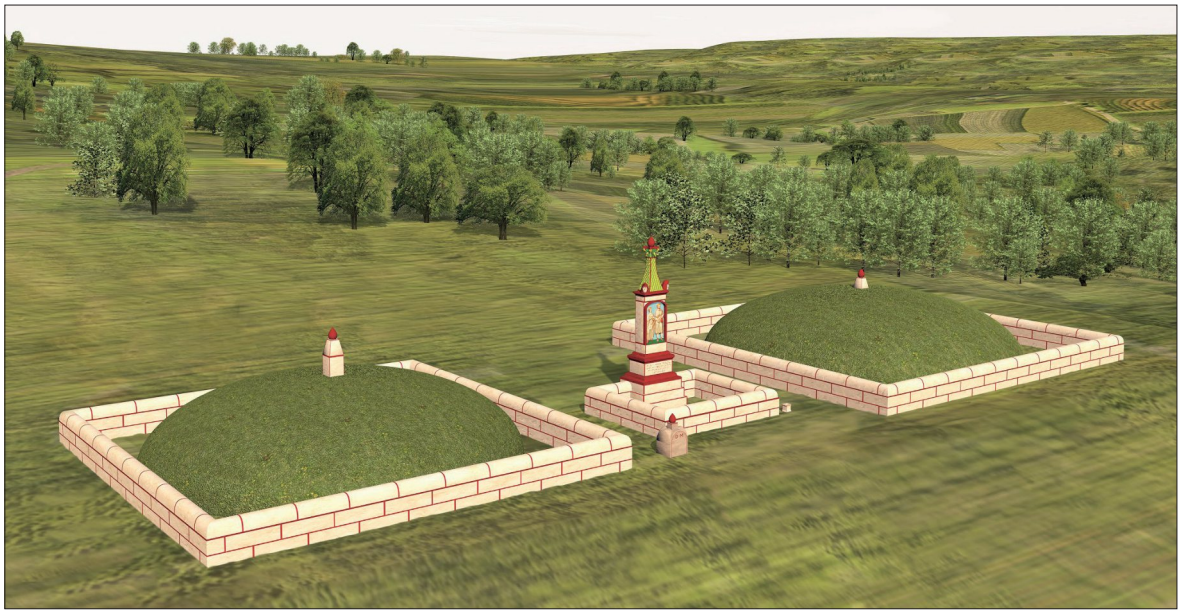


Fig. 32. Reconstructed barrows *(tumuli)* from Oberlöstern, Germany.

Although the reliefs depicting servants on both gravestones from Nagytétény are in very poor condition, it can nevertheless be established that they wore the characteristic double skirt and turban-like headdress typical of local Celtic attire[40] while holding sacrificial objects in their hands. Earlier scholarship regarded this image type as a simplified representation of the funerary banquet motif originating from the Balkan peninsula;[41] however, it is much more likely a genuine depiction of a funerary rite conducted according to local traditions.

Gravestones depicting mounted horsemen, usually carrying an oval shield and a spear, frequently appear in Pannonia, primarily in the vicinity of cavalry camps and along military roads. Such representations are known from several sites along the so-called Amber Road, including Peresznye,[42] Walbersdorf,[43] and Poetovio,[44] while from the frontier zone they are attested mainly at Arrabona,[45] Brigetio,[46] Aquincum,[47] Vetus Salina,[48] and Intercisa.[49] Every surviving inscription confirms that the related gravestone was erected for a cavalryman, most often an auxiliary soldier. Accordingly, it is reasonable to assume that the Nagytétény gravestone depicting a mounted figure also belonged to the grave of an auxiliary cavalryman.

40 On Celtic costume in Pannonia and Noricum, see Garbsch 1965. For critical remarks on Garbsch's datings, see Hainzmann-Pochmarski 1994, 279–280.

41 Barkóczi 1982.

42 *Abilus Turanci f. eques alae Pannoniorum*: Farkas – Gabler 1994, 51, Nr. 58; Lőrincz 2001, 203, Nr. 151; lupa 3365.

43 *Caius Petronius missus alae Gemellianae*: Krüger 1974, 15, Nr. 13; Lőrincz 2001, 195, Nr. 122; lupa 427. *Tiberius Iulius Rufus miles alae Scubulorum*: Krüger 1974, 13, Nr. 9; Lőrincz 2001, 207, Nr. 165; lupa 423.

44 *Caius Rufius miles legionis XIII geminae*: Pochmarski 1998, 46, Abb. 4; Ragolič 2023, Nr. 17; lupa 3096.

45 *Acrabanis Ababunis f. alae Augustae Ituraeorum*: Farkas – Gabler 1994, 76, Nr. 83; Lőrincz 2001, 200, Nr. 140; lupa 3367.

46 *Caius Iulius Respectus eques legionis I adiutricis*: RIU 2, 561; Borhy 2006, Nr. 40; lupa 3461.

47 *Tiberius Claudius eques alae Hispanorum I (?)*: Németh 1999, 17, Nr. 23; Lőrincz 2001, 196, Nr. 128; Tituli Aquincenses, Vol. II, 82, 594; lupa 2705.

48 *Elviacus (?)*: RIU 6, 1455; Tituli Aquincenses, Vol. IV, 1917; lupa 4052.

49 *Cusides Disalae f. eques alae Frontonianae*: RIU 5, 1220; Lőrincz 2001, 223, Nr. 217; Tituli Aquincenses, Vol. V, 2166; lupa 3560.

The shield depiction on the fourth tombstone can likewise be interpreted within this context, since the elongated oval shield was characteristic of the auxiliary cavalry.[50] Although the material, design, and execution of the fifth gravestone differ from the other four stelae, the circumstances of discovery point to that they all belonged to the same *tumulus*. The tenon at the bottom of the gravestone indicates that it was set into a small base. Given its smaller size and the base, it can be assumed that the stone was placed atop the *tumulus* in a manner similar to the reconstructed burial mounds at Oberlöstern.[51]

The eagle with outstretched wings, carved into the surface of the pediment, appears on both civilian and military gravestones and cannot be attributed to any specific social or ethnic group. It is most frequent in south-eastern Noricum, especially the territory of Flavia Solva, and along the Amber Road.[52] The sepulchral meaning of this motif can be understood as the *psychopompos* of the soul, guiding it to the afterlife.[53] This is perhaps also the most plausible interpretation in the case of the Nagytétény gravestone, too. The finest sculptural expressions of this concept are *apotheosis* reliefs depicting members of the imperial family in Rome.

The interpretation of the figure of the youth with crossed legs and holding weapons is problematic. The rendering of the figure is clumsy, and its execution rudimentary. The neck is disproportionately long and thick, while the hair is schematic. The right ear of the figure has 'slipped' down to the lower part of the face. The proportions of the hands and feet are exaggerated, and the body and limbs were carved in a simplified manner, disregarding anatomical features. No figure with an identical posture and the same weapons is known from any tombstone found in Pannonia and Noricum. Naked male figures holding weapons frequently appear on corner blocks of sepulchral monuments in south-eastern Noricum and south-western Pannonia.[54] These, however, are high-quality reliefs, whose composition reflects the classical principles of *contrapposto*. According to the most widely accepted interpretation, such representations are heroising depictions of the deceased's former martial skill and *virtus*.[55] Although the Nagytétény gravestone, owing to its more rustic and less refined execution, cannot be classified among the Norican youth depictions, it is perhaps not far-fetched to assume that in its case, too, the image was intended to represent the martial *virtus* of the deceased—especially because the figure holds a weapons in either hand.

Conclusions

In summary, the largest burial mound *(tumulus)* of the Celtic cemetery at Nagytétény contained the grave of a discharged auxiliary cavalryman, who had returned to his place of origin and was buried there in the last third of the 1st century AD. This veteran or his family possessed sufficient wealth to acquire bronze vessels (most probably from Italy) and to commission the erection of gravestones in front of the *tumulus*.

The custom of erecting gravestones was introduced in Pannonia by the Romans; prior to the Roman occupation, the indigenous Celtic population living north of the river Drava did not practice it. However, the rustic gravestones mentioned above are not mere imitations of Roman monuments; rather, they bear local features, such as the absence of an inscription field and the servant figures depicted in Celtic attire, wearing double skirts.

50 Le Bohec 2001, 123.

51 See Footnote 16.

52 For an overview of examples, see Beszédes 2012, 338, Footnotes 82–87.

53 Cumont 1922, 102 and 157–159.

54 On the representations, see Walde 2005. For the distribution map, see Beszédes 1996, 138.

55 Hainzmann – Pochmarski 1994, 88. For further interpretations, see Praschniker 1946, 22; Diez 1959, 9; Walde 1988.

The auxiliary soldier buried at Nagytétény was thus closely familiar with the material culture of the more developed regions of the Roman Empire and played an important role in disseminating new 'imperial' customs within his community. At the same time, local Celtic traditions are evident in the burial rite, the dress of the maidservants, and the overall character of the cemetery.

This is not surprising, since the 1st century AD was characterised by intense interaction between local cultures and Roman imperial influences. This burial underscores the significance of the Roman military in introducing new funerary customs to indigenous communities.

In response to the question posed in the title of our study, one may conclude that the complex phenomena of the burial under discussion are more appropriately described in terms of integration rather than as a one-directional process of Romanisation.

Sources

Lupa: Harl, O. – Harl, F.: *Ubi Erat Lupa. Bilddatenbank zu antiken Steindenkmälern.* https://lupa.at/

RIC I: Mattingly, H. – Sydenham, E. A. 1923: *The Roman Imperial Coinage I. From Augustus to Vitellius.* London.

RIU 2: Barkóczi, L. – Mócsy, A. (eds): *Die Römischen Inschriften Ungarns. Band 2. Lieferung: Salla, Mogentiana, Mursella, Brigetio.* Budapest–Amsterdam, 1976.

RIU 5: Barkóczi, L. – Mócsy, A. – Lőrincz, B. (eds): *Die Römischen Inschriften Ungarns. Band 5. Lieferung: Intercisa.* Budapest–Bonn, 1991.

RIU 6: Lőrincz, B. – Szabó, Á. – Fitz, J. (eds): *Die Römischen Inschriften Ungarns. Band 6. Lieferung: Das Territorium von Aquincum, die Civitas Eraviscorum und die Limesstrecke Matrica–Annamatia.* Budapest–Bonn, 2001.

Tac. *Hist.*: Tacitus, Publius Cornelius, *Historiae.*

Tituli Aquincenses: Kovács, P. – Fehér, B. – Lőrincz, B. – Szabó, Á. – Mráv, Zs. – Németh, M. – Borhy, L. – Tóth, E. (eds): *Tituli Aquincenses. Band I–VI.* Budapest, 2009–2023.

References

Aarts, J. – Heeren, S. 2007: Begraven Bataven: het dodenritueel in de veranderende wereld van Tiel-Passewaaij. In: Roymans, N. – Derks, T. – Heeren, S. (eds): *Een Bataafse gemeenschap in de wereld van het Romeinse rijk. Opgravingen in Tiel-Passewaaij.* Utrecht, 71–86.

Alföldy, A. 1960: Bronze vessels in the burial rites of the native population in North Pannonia. *Archeologia Warszawa* 11, 1–12.

Amand, M. 1960: Roman barrows in Belgium. In: *Analecta Archaeologica. Festschrift Fritz Fremersdorf zum 70. Geburtstag.* Köln, 69–81.

Andrade, N. J. 2013: *Syrian identity in the Greco-Roman world.* Cambridge. https://doi.org/10.1017/CBO9780511997808

Barkóczi, L. 1982: A keletpannóniai sírsztélék ábrázolásainak délkeleti és keleti kapcsolatai (Die südöstlichen und orientalischen Beziehungen der Darstellung an der ostpannonischen Grabstelen). *Archaeologiai Értesítő* 109, 18–50.

Beszédes, J. 1996: Dioscuros ábrázolású sarokkő Alsóhetényből (Ein Eckstein mit der Darstellung eines Dioskurs). *Folia Archaeologica* 45, 133–153.

Beszédes, J. 2012: Auxiliáris lovaskatona sírkertbe foglalt, kora császárkori hamvasztásos sírja Nagytétényből (Budapest XXII. ker., M6 autópálya nyomvonala) (Graveyard with a cremation burial of an auxiliary cavalryman from the early Roman period in Nagytétény [Budapest, District XXII]). In: Bíró, Sz. – Vámos, P. (eds): *Fiatal Római Koros Kutatók II. Konferenciakötete.* Győr, 327–360.

Beszédes, J. 2024: Data for the problem of the identifying the East Pannonian barrows (tumuli) and their chronological questions. In: Csirke, O. (ed.): *"afelé kell hajolnod, amerre tehetséged ereje vonz". Tanulmánykötet Palágyi Sylvia 80. születésnapja alkalmából – "you must lean towards where the power of your talent draws you". Studies for Sylvia Palágyi on her 80th birthday.* Veszprém, 53–67.

Beszédes, J. – Szilas, G. 2006: Őskori és római kori lelőhelyek feltárása az M6 autópálya budapesti szakaszának nyomvonalán 2005-ben (Excavation of prehistoric and Roman period sites along the path of the Budapest stretch of the M6 highway in 2005). *Aquincumi Füzetek* 12, 147–158.

Beszédes, J. – Szilas, G. 2007: Ős- és római kori lelőhelyek feltárása az M6 autópálya nyomvonalán 2006-ban (Excavation of prehistoric and Roman sites along the route of the M6 highway in 2006). *Aquincumi Füzetek* 13, 233–248.

Bíró, Sz. – Figler, A. 2006: Hegyeshalom. Temető a határon (Hegyeshalom. Gräberfeld an der Grenze). In: Bíró, Sz. (ed): *Rómaiak nyomában. Kiállításvezető – Auf der Spur der Römer. Ausstellungsführer.* A Győr-Moson-Sopron Megyei Múzeumok Kiállításvezetője 1. Győr, 107–114.

B. Bónis, É. 1942: *A császárkori edényművesség termékei Pannoniában – Die Erzeugnisse der kaiserzeitlichen Gefäßindustrie in Pannonien.* Dissertationes Pannonicae II.20, Budapest.

B. Bónis, É. 1960: Römerzeitliche Gräber in Halimba. *Folia Archaeologica* 12, 91–110.

Borhy, L. 2006: Vezető Komárom város római kori kőemlékeihez. *Acta Archaeologica Brigetionensia* 1.5. Komárom.

Breščak, D. 1982: *Antično bronasto posodje Slovenije – Roman bronze vessels in Slovenia.* Situla 22.1. Ljubljana.

Burger, A. 1956: Lovas-sírkövek Pannoniában az i. u. I. századból (Reitergrabsteine aus Pannonien im I. Jahrhundert n. u. Z.). *Archaeologiai Értesítő* 83, 191–197.

Burger, A. 1977: Későrómai sírok Mucsfa-Szárászpusztán (Spätrömische Gräber in Mucsfa-Szárászpuszta). *Archaeologiai Értesítő* 104, 189–204.

Cumont, F. 1922: *After life in Roman paganism.* New Haven, CT.

Diez, E. 1959: *Flavia Solva.* Graz.

Erdélyi, G. 1974: *A római kőfaragás és kőszobrászat Magyarországon.* Apollo könyvtár 5. Budapest.

Farkas, Z. – Gabler, D. 1994: *Die Skulpturen des Stadtgebietes von Scarbantia und der Limesstrecke Ad-Flexum-Arrabona.* Corpus Signorum Imperii Romani, Ungarn 2. Budapest.

Garbsch, J. 1965: *Die norisch-pannonische Frauentracht im 1. und 2. Jahrhundert.* Münchner Beiträge zur Vor- und Frühgeschichte 11. München.

Glansdorp, E. – Glansdorp, E. P. 2020: Die Ausgrabungen des gallo-römischen Gräberfeldes mit Pfeilergrabmal und Tumuli von Wadern-Oberlöstern. In: Koch, M. (ed.): *Archäologentage Otzenhausen 5. Archäologie in der Großregion. Beiträge des Internationalen Symposiums zur Archäologie in der Großregion in der Europäischen Akademie Otzenhausen vom 12.-15.04.2018.* Nonnweiler, 233–246.

Goudineau, Ch. 1979: *Les fouilles de la Maison au Dauphin. Recherches sur la romanisation de Vaison-la-Romaine.* Éditions du Centre National de la Recherche Scientifique, Supplément à Gallia 37. Paris.

Grünewald, M. 1979: *Die Gefäßkeramik des Legionslagers von Carnuntum (Grabung 1968–1974).* Der Römische Limes in Österreich 29. Wien.

Hainzmann, M. – Pochmarski, E. 1994: *Die römerzeitlichen Inschriften und Reliefs von Schloß Seggau bei Leibnitz.* Die römerzeitlichen Steindenkmäler der Steiermark 1. Graz.

Haverfield, F. J. 1923: *The Romanization of Roman Britain.* Oxford.

Hornung, S. 2017: Gedanken zu den kaiserzeitlichen Grabhügeln der Nordwestprovinzen. *Bericht der Römisch-Germanischen Kommission* 95, 51–159. https://doi.org/10.11588/berrgk.2017.0.44430

V. Kocztur, É. 1991: Kora császárkori temető Solymáron (Frühkaiserzeitliches Gräberfeld in Solymár). *Studia Comitatensia* 21, 171–334.

Krüger, M. L. 1974: *Die Reliefs der Stadtgebiete von Scarbantia und Savaria.* Corpus Signorum Imperii Romani, Österreich 1.5. Wien.

Lang, T. – Schröer-Spang, S. 2014: Das gallo-römische Gräberfeld von Oberlöstern – Grabbrauch und Selbstdarstellung auf einem ländlichen Bestattungsplatz im Treverergebiet. *Mitteilungen des Vereins für Heimatkunde Wadern* 20, 5–26.

Le Bohec, Y. 2001: *The imperial Roman army.* London–New York.

Lőrincz, B. 2001: *Die römischen Hilfstruppen in Pannonien während der Prinzipatszeit.* Wiener Archäologische Studien 3. Wien.

Márton, A. 2002: Roman burial with a weapon from the Bécsi Road cemetery (Aquincum-Budapest). *Communicationes Archaeologicae Hungariae*, 117–152. https://doi.org/10.54640/CAH.2002.117

Mommsen, Th. 1861: *Römische Geschichte. Band III. Die Provinzen des Römischen Reiches.* Berlin.

Mráv, Zs. 2007: Díszpajzs, markolatgyűrűs kard és lándzsák egy budaörsi római kori kocsisírból. A helyi elit fegyveres temetkezései Pannoniában (A ceremonial shield, a sword with handgrip ring and lances from a wagon grave of Roman Age in Budaörs: Weapon burial of the local elite in Pannonia). In: Bíró, Sz. (ed.): *Fiatal Római Koros Kutatók I. Konferenciakötete.* Győr, 233–266.

Muniz Grijalvo, E. – Moreno Soldevila, R. (eds) 2023: *Understanding integration in the Roman world.* Impact of Empire 47. Leiden–Boston. https://doi.org/10.1163/9789004545632

Németh, M. 1999: *Vezető az Aquincumi Múzeum kőtárában.* Budapest.

Oettel, A. 2000: Charonspfennig und Tötenglöckchen. *Altorientalische Forschungen* 27, 106–120. https://doi.org/10.1524/aofo.2000.27.1.106

Ottományi, K. 2012: Római *vicus* Budaörsön (Der römische *vicus* von Budaörs). In: Ottományi, K. (ed.): *Római vicus Budaörsön. Régészeti Tanulmányok.* Budapest, 9–407.

Ottományi, K. 2016: A budaörsi római *vicus* temetője (The cemetery of the Roman *vicus* at Budaörs). In: Ottományi, K. (ed.): *A budaörsi római vicus temetője. Régészeti Tanulmányok.* Budapest, 9–372.

Ottományi, K. 2019: *A pátyi temető római sírjai (Malom-dűlő)* (Die römische Bestattungen im Gräberfeld von Páty). Szentendre.

K. Palágyi, S. – Nagy, L. 2000: *Római kori halomsírok a Dunántúlon.* Veszprém.

Petznek, B. 1998: Römerzeitliche Gebrauchskeramik aus Carnuntum. Ausgrabungen des Bundesdenkmalamtes 1971 bis 1972. Teil 1. *Carnuntum Jahrbuch 1997*, 167–323.

Pochmarski, E. 1998: Frühe Stelen aus Poetovio. *Alba Regia* 27, 39–53.

Praschniker, C. 1946: Die Skulpturen des Heiligtums des Mars Latobius von St. Margareten im Lavanttal. *Österreichisches Jahreshefte* 36, 21–40.

Radnóti, A. 1938: *A pannoniai római bronzedények. Die römischen Bronzegefäße in Pannonien.* Dissertationes Pannonicae II.6. Budapest.

Ragolič, A. 2023: *Poetovio. Römische Grabdenkmäler. Inscriptiones Latinae Sloveniae (ILSl) 2/1.* Situla 46. Ljubljana.

Stevens, S. T. 1991: Charon's obol and other coins in ancient funerary practice. *Phoenix* 45.3, 215–229. https://doi.org/10.2307/1088792

Walde, E. 1988: Zu den Jünglingsdarstellungen auf römischen Grabmälern in den Provinz Noricum und benachbarten Gebieten. *Bayerische Vorgeschichtsblätter* 53, 293–300.

Walde, E. 2005: *Im herrlichen Glanze Roms. Die Bilderwelt der Römersteine in Österreich.* Innsbruck.

Webster, J. 2001: Creolizing the Roman provinces. *American Journal of Archaeology* 105.2, 209–225. https://doi.org/10.2307/507271

Wigg, A. 1993: *Die Grabhügel des 2. und 3. Jahrhunderts n. Chr. an Mittelrhein, Mosel und Saar.* Trierer Zeitschriften für Geschichte und Kunst des Trierer Landes und seiner Nachbargebiete Beiheft 16. Trier.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 39–50. 10.17204/dissarch.suppl.5.2026.39

Fashion in Roman Dacia

Local production of anchor brooches – the hinged fastening variant

Sorin Ilie Cocis ✉

Institute of Archaeology and History of Art Cluj-Napoca, Romanian Academy – Cluj Branch, Cluj-Napoca, Romania
scocis@yahoo.com

Vlad-Andrei Lăzărescu

Institute of Archaeology and History of Art Cluj-Napoca, Romanian Academy – Cluj Branch, Cluj-Napoca, Romania
lazarescu_vlad@yahoo.com; vlad.lazarescu@acad-cj.ro

Received 9 November 2025 | Accepted 2 April 2026 | Published 18 November 2026

Abstract: The stylistic preferences for brooches in the Roman world varied by region, with local craftsmanship reflecting both indigenous traditions and external influences. Anchor brooches have been the subject of numerous studies, either as part of broader typological analyses within specific provinces, archaeological sites, or museum collections, or as luxury artefacts recovered as part of various hoards, often considered separately from their bronze counterparts. Recent discoveries of brooches with a hinged fastening system provide new insights into their typology, chronology, distribution, and production centres. Only thirteen examples of this variant are known across the Roman Empire and the Barbaricum, with nine originating from Dacia. These brooches are characterised by a small head, flattened anchor arms, a rectangular protective plate, and incised decorations. Their reduced dimensions (3.5–5.6 cm) and standardised bronze casting techniques suggest a local production adapting the earlier, larger models with a spring mechanism. Chronological and contextual analyses indicate their use from the late 2nd to mid–3rd century AD, with a prevalence in military forts and *vici*, while occasional finds in graves and rural settlements highlight broader social adoption. The hinged anchor brooch represents a distinct local development together with Kovrig's Types 142–143 or the late knee brooch variants, marking the transition towards the production of hinged brooches in Roman Dacia.

Keywords: Roman Dacia, Roman Moesia, Barbaricum, trade, brooches, production of bronze artefacts

The Roman taste in brooches displayed marked regional variation, with locally produced examples embodying a synthesis of indigenous craft traditions and external stylistic influences. Anchor-shaped brooches have long attracted scholarly attention, whether through dedicated studies or as components within broader typological analyses of provincial assemblages, excavated contexts, and museum collections.[1] However, research has focused primarily on silver specimens

1 Kovrig 1937, 18–19, Pl. 8; Popescu 1938, 241–242; Patek 1942, 29–32; Koščević 1980, 24–25, Pl. 20; Bojović 1983, 44–46, Pl. 16.145, Pl. 17.146–149; Buora 2000, 93–96; Genčeva 2004, 102, Pl. 7.10–12; Cocis 2004, 105–111, Pls 82–94; Gładysz-Juścińska – Juściński 2005; Cocis 2006; Busuladžić 2010, 83–87, Cat. 245–261; Petković 2010, 105–115, Pls 18–19; Sedlmayer 2015, 91, Fig. 57; Buora 2016, 169–171.

✉ Corresponding author

recovered from hoards, while comparable examples in bronze or other materials have received comparatively limited consideration.[2]

The first typological classification of these brooches was proposed by Ilona Kovrig (1937) in her seminal study on Roman brooches from Pannonia,[3] which laid the foundation for subsequent research on regional ornamentation and stylistic development of this find group. Although the precise place of origin of anchor brooches remains debated, the prevailing view places their production in Lower Pannonia,[4] a region that served as a significant centre of metalworking innovation during the Roman period. Following this perspective, these brooches are considered to represent the culmination of the evolution of the strongly profiled brooch type, embodying its technical and aesthetic refinement. Their design perpetuates key structural features, such as the spring mechanism, notched bow, zigzag motif, and rectangular catchplate, while displaying a degree of standardisation and craftsmanship that reflects both local expertise and broader provincial stylistic currents.

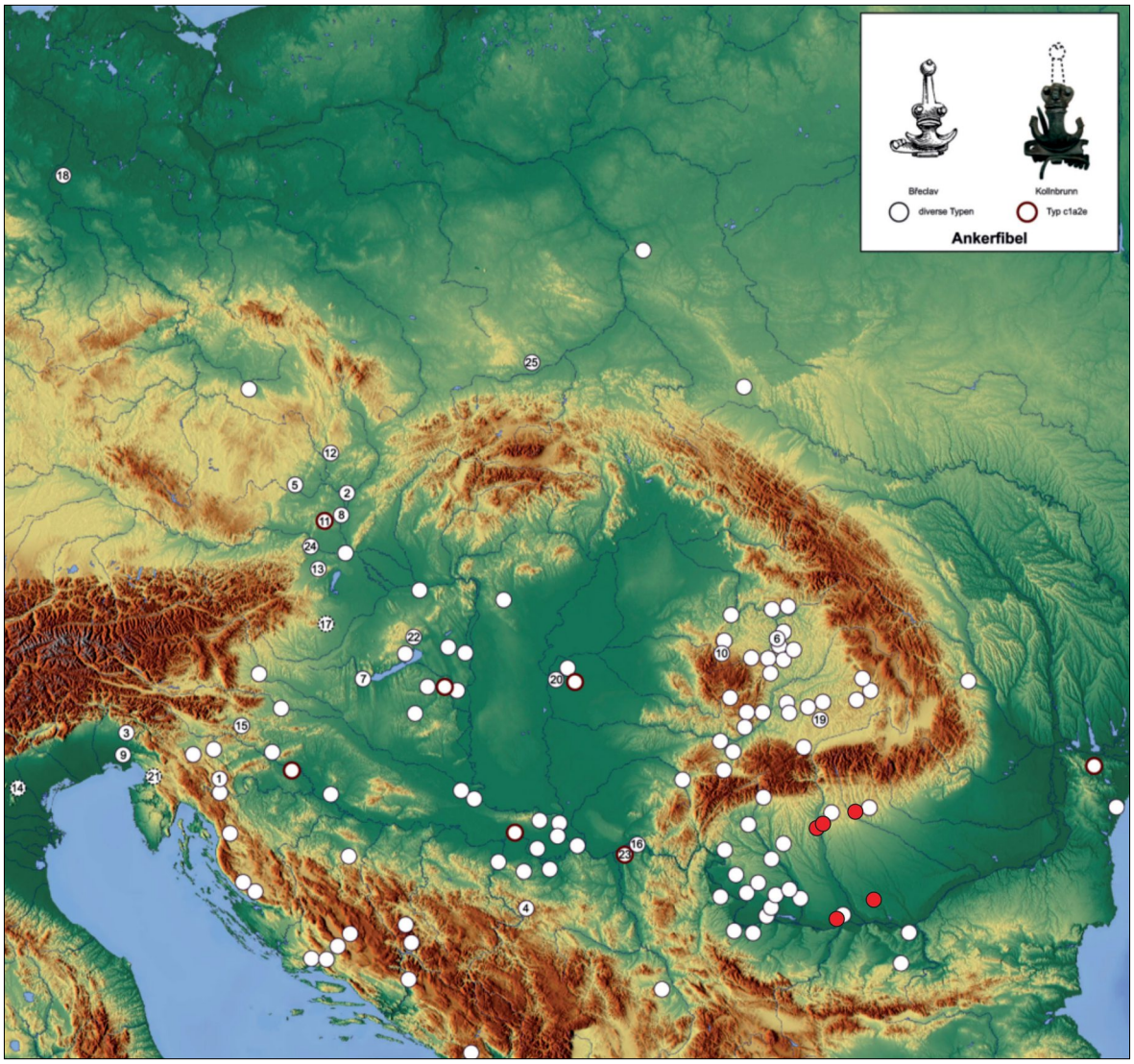


Fig. 1. General distribution map of hinged anchor brooches (updated from Sedlmayer 2015; added occurrences are marked in red).

2 Crișan 1959; Popović 1996; Popilian 1998.

3 Kovrig 1937, 18.

4 Genčeva 2004, 102; Petković 2010, 353.

The distribution of these brooches is largely regional, encompassing Dacia, Dalmatia, Pannonia, Moesia, and Italy, with occasional occurrences beyond the provincial boundaries within the Barbaricum (Fig. 1).[5] This pattern suggests both regional production and the existence of exchange networks that facilitated the movement of objects and stylistic influences across the Danube provinces. Brooches with spring mechanisms first appeared in Dacia in the period spanning the reigns of Trajan and Hadrian, the earliest variants retaining close morphological ties to the strongly profiled types. The more standardised and massive forms remained in fashion until the mid-3rd century AD, reflecting a sustained local tradition that paralleled developments across the wider Danube and Adriatic regions.

Archaeological evidence indicates local manufacturing in at least three workshops within the Roman province of Dacia, notably at Napoca, Dacia Porolissensis, and the newly documented site of Slătioara, Olt County (Dacia Inferior).[6] The finds from these centres suggest a well-established local metalworking tradition and a wide circulation of such brooches among both civilian communities and military groups.

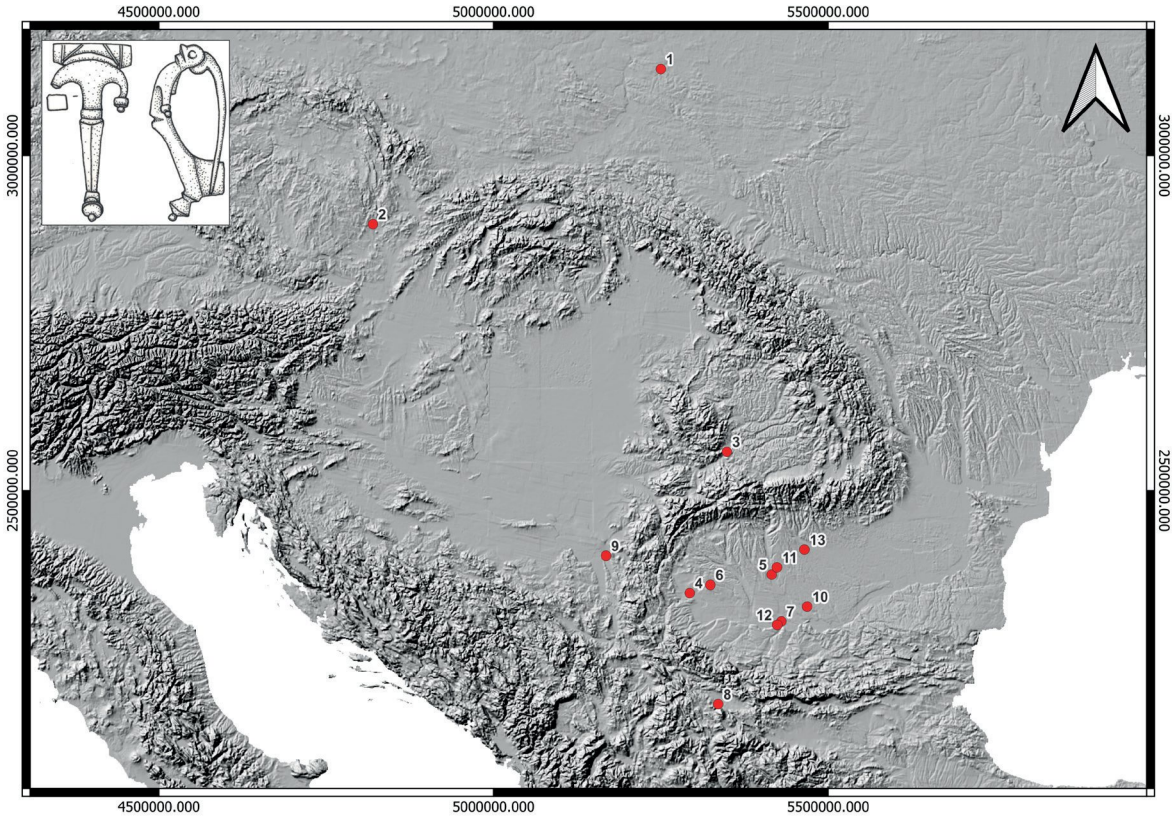


Fig. 2. Spatial distribution map of hinged anchor brooches.

A rare variant, present both in Roman Dacia and, more broadly, across the Roman Empire, is distinguished by a hinged fastening mechanism. Such brooches consist of two parts, the body and a separate hinged locking mechanism, which may be either tubular or short, and is frequently concealed beneath a rectangular protective plate. The latter is often embellished with oblique lines or concentric circles, which add a decorative emphasis to its functional design. The broadened head, typically shaped in the form of an anchor and terminating in small knobs, is a defining feature of the type. Additional embellishment includes fine incisions or rows of punched dots along the bow. The body itself is curved,

5 Cociş 2006, 399–401, Pl. 15; Sedlmayer 2015, 93, Fig. 57.

6 Cociş 2019, 26, Pl. 9.13 Napoca, 35, Pl. 85.2–3 Dacia Porolissensis; Cociş *et al.* 2025, 235–236, Pls 17–18.

ending in a stepped knob or an expanded ridge, occasionally marked by an X-shaped incision evocative of antennae-like terminals. The foot, triangular in section, terminates in a prominent knob, while the rectangular catchplate is markedly elevated. Dimensions range from 3.5 to 5.6 cm in length, with an average width of approximately 2.5 cm across the arms or the protective plate.

Prior to 2006, hinged anchor-headed brooches were regarded as extremely rare, with only five known examples, two of which originated from the Barbaricum, making the type a notable exception within the corpus of Roman brooches. The first specimen was published in 1948 from Nebovidy in the Barbaricum (modern-day Czechia).[7] As a result of subsequent research by Czech archaeologists, the find was dated to the C1–C2 horizon (1st–2nd century AD).[8] In 1952, excavations at the prehistoric site of Verbița yielded four Roman brooches, one of which may also belong to this hinged variant.[9] Although recovered from an early medieval context, these brooches were associated with Roman tiles and pottery fragments, suggesting either earlier use or secondary deposition. The years 2004 and 2005 saw the publication of three additional specimens: one from Lublin[10] and two others from the provinces of Dacia Malvensis (Gârla Mare)[11] and Moesia Inferior (Suhodol),[12] further expanding the known distribution of this rare type.

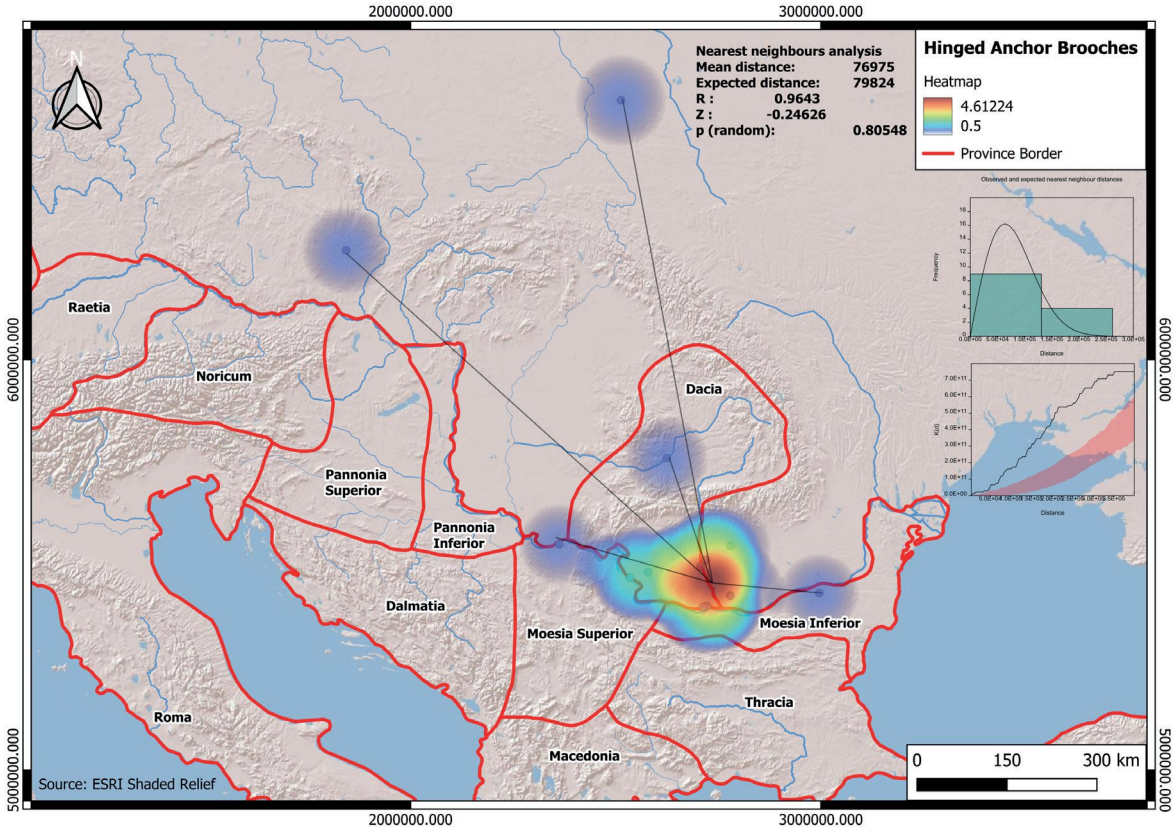


Fig. 3. Heatmap of the spatial dispersion of hinged anchor brooches; results of the nearest-neighbour analysis suggest concentrations corresponding to potential production centres and broader distribution networks.

7 Svoboda 1948, 110, Fig. 18.6.

8 Beneš *et al.* 2011, 110, Fig. 5.4.

9 Săpăturile de la Verbița 1952, 157–163, 160, Fig. 19.1.

10 Gładysz-Juścińska – Juściński 2005, 129, Fig. 1.1.

11 Stîngă 2005, 62, Pl. 29.17.

12 Genčeva 2004, 150, Pl. 7.12.

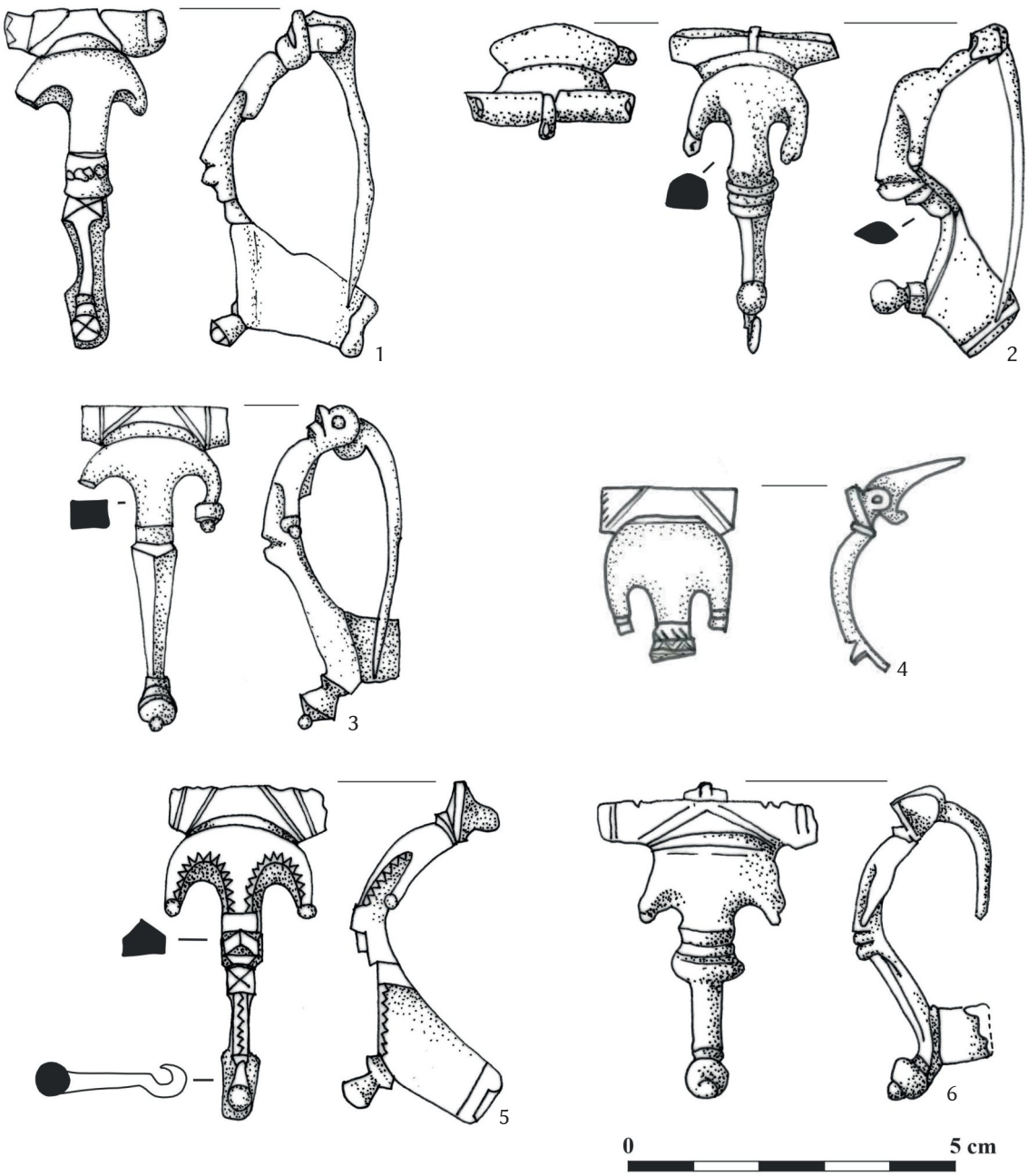


Fig. 4. Hinged anchor brooches. 1 – Lublin, Lublin Voivodeship, PL, 2 – Nebovidy, Kolín District, CZ, 3 – Apulum, Alba Iulia, Alba County, RO, 4 – Gârla Mare, Mehedinți County, RO, 5 – Slătioara, Olt County, RO, 6 – Verbița, Dolj County, RO.

In 2007, a further specimen from the Roman necropolis at Viminacium was added to the corpus,[13] extending both the geographical and contextual range of this rare variant. In subsequent years, the number of examples from Romania has increased considerably. A newly identified piece from the Sucidava necropolis is dated to the late 2nd–early 3rd century AD,[14] while two additional artefacts discovered through metal-detecting at Apulum[15] and Pădureni[16] have also been documented.

13 Redžić 2007, 23, Cat. 63, Pl. 8.63; Petković 2010, 113, 117, Typ 15D, Cat. 584, Pl. 19.6.

14 Popilian – Bondoc 2012, 24, 109, Pls. 26.303, Pl. 72.2.

15 Cociș *et al.* 2023.

16 Based on information kindly communicated by I. Dumitrescu (Argeș County Museum, Pitești).

Further items have been recovered from systematic excavations at the Roman settlement of Orlea (though without a clear stratigraphic context)[17] and from the *vicus militaris* of the Băneasa fort,[18] the latter securely dated to the early 3rd century AD. More recently, rescue excavations along the Pitești–Craiova expressway have yielded comparable examples from Slătioara[19] and Buicești,[20] further attesting to the type's distribution and sustained use across southern Dacia during the Roman Imperial period.

The piece at Slătioara was discovered in close proximity to a bronze workshop, as indicated by the presence of clay moulds used in the production of springed anchor-headed and T-shaped brooches, datable to the late 2nd–early 3rd century AD. By contrast, the brooch from Buicești represents a subvariant distinguished by a pin set within a tubular hinge. Additional examples have been identified through online auction platforms[21] and photographic archives;[22] however, these cannot be included in the present analysis owing to the absence of information on their provenance and find context.

Within the broader typological framework of Roman anchor-headed brooches, the hinged variant is currently classified as Cociș's Subtype C3a2, a category progressively refined through the publication of several newly identified examples. The growing set of examples has not only broadened the known geographical range of the type's distribution but has also provided a basis for a more nuanced reassessment of its typology, chronology, and patterns of distribution. Taken together, these finds suggest a certain degree of regional differentiation and point towards the existence of local production centres, particularly within Dacia, where technical and decorative features indicate both adaptation to provincial taste and the persistence of more general stylistic traditions within the Danube region (Fig. 2).[23]

Morphologically, these brooches display a remarkable degree of uniformity, defined by a hinged fastening mechanism, anchor-shaped head, standardised body form, knobbed foot, and bronze composition. Minor variations can be observed in dimensions, hinge structure, the decoration of the bow, and the shape of the catchplate (which may be trapezoidal or rectangular). Nevertheless, given the limited number of specimens and the scarcity of reliable data on find context, establishing a more refined typology would be premature at present.

In Roman Dacia, the assemblage from Slătioara provides a rare opportunity to examine local bronze-working practices. Archaeological evidence, including ceramic moulds and metallurgical debris, attests to small-scale production or recycling activities within the settlement.[24] Elemental analysis (ED-XRF) of a hinged anchor brooch revealed the use of lead bronze,[25] an alloy typical of

17 Based on information kindly communicated by A. Rustoiu (Institute of Archaeology and History of Art Cluj-Napoca, Romanian Academy – Cluj Branch).

18 Based on information kindly communicated by E. S. Teodor (National History Museum of Romania, Bucharest).

19 Măndescu *et al.* 2020, Fig. 5.1.

20 Măndescu *et al.* 2022, Fig. 5.5.

21 https://www.lot-art.com/auction-lots/Ancient-Roman-Anchor-Brooch/125-ancient_roman-23.1.18-jasper52 (accessed May 2025); https://timevaultgallery.com/ancient-roman-celtic-bronze-fibulae-brooch-pins-cel010/ (accessed May 2025); https://www.worthpoint.com/worthopedia/l07-ancient-thracian-bronze-kraftig-406673088:2 (accessed May 2025); https://www.ancient-art.co.uk/the-celts/romano-celtic-anchor-fibula/ (accessed May 2025).

22 https://www.flickr.com/photos/piedmont_fossil/6803741799/in/photostream (accessed May 2025).

23 Cociș 2006.

24 Cociș *et al.* 2025, 235–237, 260–263, Pls 17–20.

25 Bayley 1991; Bayley 1998, 7–8.

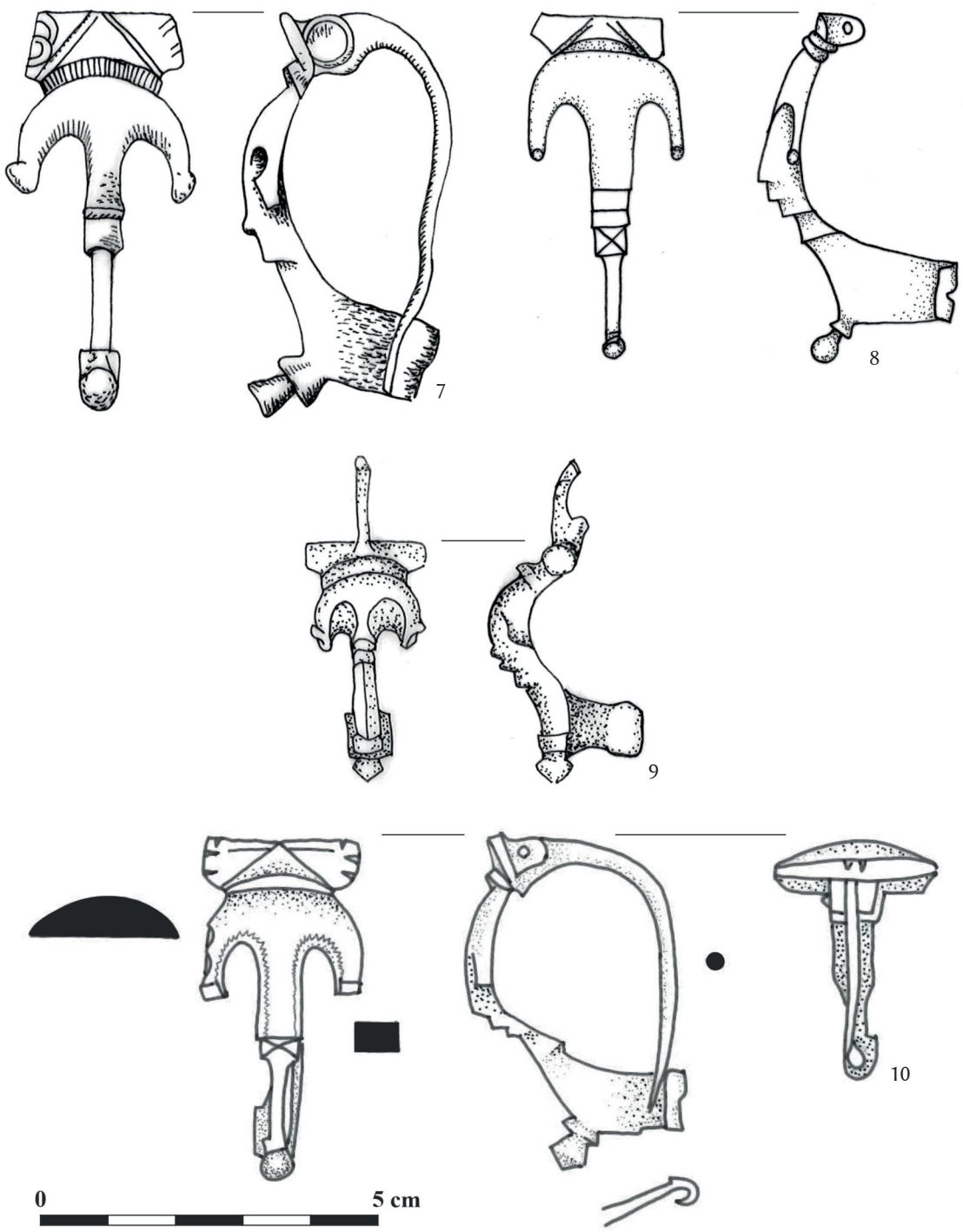


Fig. 5. Hinged anchor brooches. 7 – Sucidava, Corabia, Olt County, RO, 8 – Suhodol, Montana Province, BG, 9 – Viminacium, Kostolac, Požarevac Municipality, SRB, 10 – Băneasa, Teleorman County, RO.

Roman metallurgy during the Roman Imperial period.[26] Deliberate alloying with lead facilitated casting by lowering the melting point and improving fluidity; accordingly, the manufacturing of small artefacts such as brooches or jewellery also became easier.[27] Comparative data from Napoca and other Transylvanian contexts remain limited,[28] yet the available analyses display similar ele-

26 Bayley 1984; Bayley 1998; Bayley – Butcher 2004, 12–14.

27 Dungworth 1997, 902; Bayley – Butcher 2004, 15–16.

28 Riederer – Cociş 2000; Cociş 2019, 20–21, Tab. 1.

ment compositions, suggesting a shared technological tradition or comparable sources of raw material. This result supports the interpretation that the bronze statue fragment found together with ceramic moulds at Slătioara might have been prepared for recycling and served as the raw material of other artefacts.[29] A similar situation can be observed at Napoca, where Sample 16, a Jobst type 4F brooch recovered from a workshop context, has a composition that also indicates the re-melting and reuse of metal artefacts, corroborating the hypothesis of multiple localised but consistent production practices.

While specific production centres remain to be identified, technological evidence indicates the likely use of lost-wax casting, which enabled a detailed and standardised replication of artefacts with a complex design, such as brooches with a hinged mechanism and a knobbed foot. With only a few exceptions found in Barbaricum, the distribution of these brooches remains concentrated within the provinces of Dacia and the Moesia (Fig. 3). The results of a Nearest Neighbour Analysis show a marginal, yet statistically insignificant, inclination towards clustering, indicating that their scatter is best understood as the outcome of random dispersal and local circulation instead of evidence of focused centres of production or deposition.

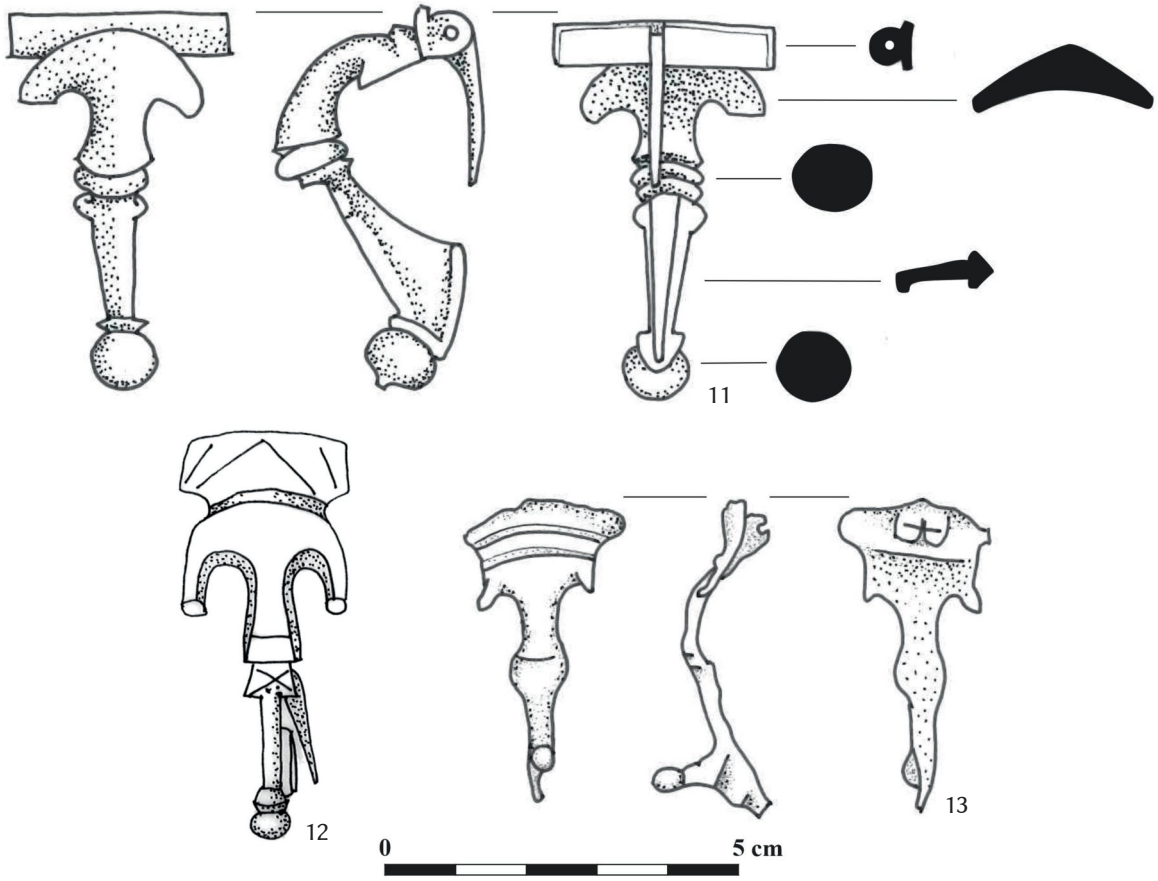


Fig. 6. Hinged anchor brooches. 11 – Buicești, Olt County, RO, 12 – Orlea, Olt County, RO, 13 – Pădureni, Argeș County, RO.

Most examples appear to be associated with military contexts, as indicated by their occurrence in closed assemblages, particularly graves and other well-documented archaeological deposits. The introduction of hinged fastening mechanisms in the Lower Danube region during the late 2nd

29 For the complexity of the recycping of copper alloys, see Bray 2020.

century AD—a development that coincides with the gradual decline of spring-based brooch types—suggests that the type was in fashion from the late 2nd to the mid-3rd century AD. A comparable technological development, marked by a transition from springed to hinged mechanisms, took place in the Central Alpine region. However, this innovation appears to be independent, representing a case of convergent technological evolution instead of the diffusion of a single prototype across the provinces.[30]

This parallel development supports the view that the adoption of hinged fastening mechanisms did not result from the direct diffusion of a single prototype but rather reflects a broader pattern of localised innovation in response to changing functional requirements and stylistic preferences. Such regional trajectories highlight the adaptive capacity of provincial workshops and illustrate the dynamic character of technological exchange across the Roman frontier.

Conclusions

The hinged anchor brooch appears to represent a form of localised innovation that originated within the provinces of Moesia or Dacia, with Dacia Inferior most plausibly serving as the principal centre of its production and distribution, as indicated by the notable concentration of such finds there. The scatter of this variant is limited, closely mirroring the spatial distribution patterns of late Aucissa brooches (Kovrig's Types 141–143) and hinged knee brooches. The transition from springed to hinged mechanisms was likely driven by concerns of manufacturing efficiency and the practical advantages offered by easier maintenance and repair. Nevertheless, it should be emphasised that Roman dress and ornamentation were far from uniform, shaped by regional preferences, social identities, and chronological trends—factors which collectively shaped the diversification and dissemination of brooch types across the Empire.

Funding

Vlad-Andrei Lăzărescu's contribution to this article was prepared within the framework of the research project *Travelling Things: Corpus of Roman Finds in Romanian Barbaricum. The Case of Iași and Neamț Counties*, funded by the Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI, Romanian Ministry of Education and Scientific Research), project number PN-IV-P1-PCE-2023-1124.

Catalogue

1. Lublin, Lublin Voivodeship, PL (Fig. 4.1). Bronze; length: 5.3 cm, width: 2.1 cm, complete, no data on find context. Literature: Gładysz-Juścińska – Juściński 2005, 129, Fig. 1.1.

2. Nebovidy, Kolín District, CZ (Fig. 4.2). Bronze; length: 4.5 cm, width 1.9 cm, complete, no data on find context. Literature: Svoboda 1948, 110, Fig. 18.6; Beneš *et al.* 2011, 110, Fig. 5.4.

3. *Apulum*, Alba-Iulia, Alba County, RO (Fig. 4.3): Bronze; length: 5.3 cm, width: 2.2 cm, weight: 23.7 g, incomplete, no data on find context. Literature: Cociș *et al.* 2023, 364, Cat. 53, Pl. 4.53.

4. Gârla Mare, Mehedinți County, RO (Fig. 4.4). Bronze; width: 2.3 cm, incomplete, found in a Roman settlement or *statio*. Literature: Strîngă 2005, 62, Pl. 29.17.

5. Slătioara, Olt County, RO (Fig. 4.5). Bronze; length: 5.3 cm, width: 2.5 cm, found in a Roman settlement, ('Context 22'), 3rd century AD. Literature: Măndescu *et al.* 2020, Fig. 5.1.

6. Verbița, Dolj County, RO (Fig. 4.6). Bronze; length: 4.7 cm, width: 3 cm, incomplete, found in a Roman settlement. Literature: Săpăturile de la Verbița 1952, 151, Fig. 19.1.

30 Grabherr 2013.

7. Sucidava, Corabia, Olt County, RO (Fig. 5.7). Bronze; length: 5.3 cm, width: 2.7 cm, complete, found in a Roman necropolis (Grave 61/1970, inhumation burial of a 5–6-year-old child; grave goods: a brooch and a coin issued by Agrippa). Literature: Popilian – Bondoc 2012, 24, 109, Pl. 26, 303, Pl. 72.2.

8. Suhodol, Montana Province, BG (Fig. 5.8). Bronze; length: 5.1 cm, width: 2.2 cm, incomplete, found in a Roman settlement. Literature: Genčeva 2004, 150, Pl. 7.12.

9. Viminacium, Kostolac, Požarevac Municipality, SRB (Fig. 5.9). Bronze; length: 3.5 cm, width: 1.8 cm, complete, found in a Roman necropolis (second half of the 2nd–early 3rd century AD). Literature: Redžić 2007, 23, Cat. 63, Pl. 8.63 Type VIII, Variant 3; Petković 2010, 113, 117 Type 15D, Cat. 584, Pl. 19.6.

10. Băneasa, Teleorman County, RO (Fig. 5.10). Bronze; length: 5.1 cm, width: 2.4 cm, weight: 21.97 g, found in a Roman *vicus* (Feature T44, S1, Square 7, in a secondary position in the access pit to a bread oven; the site is dated to approximately AD 200–245). Literature: unpublished, information provided by E. S. Teodor (National History Museum of Romania, Bucharest).

11. Buicești, Olt County, RO (Fig. 6.11). Bronze; length: 5.3 cm, width: 3.1 cm, weight: 25.28 g, complete, found in a Roman settlement. Literature: Măndescu *et al.* 2022, 316, Fig. 55, *passim*.

12. Orlea, Olt County, RO (Fig. 6.12). Bronze; length: 5.7 cm, width: 2.8 cm, complete, found in a Roman settlement. Literature: unpublished, information provided by A. Rustoiu.

13. Pădureni, Argeș County, RO (Fig. 6.13). Bronze; length: 4.5 cm, width: 2.2 cm, weight: 7.71 g incomplete, found in a Roman settlement. Literature: unpublished, information provided by I. Dumitrescu.

References

Bayley, J. 1984: Roman brass-making in Britain. *Historical Metallurgy* 18.1, 42–43.

Bayley, J. 1991: Alloy nomenclature. In: Egan, G. – Pritchard, F. (eds): *Dress accessories c. 1150–1450*. Medieval finds from excavations in London 3. London, 13–17.

Bayley, J. 1998: The production of brass in Antiquity with particular reference to Roman Britain. In: Craddock, P. T. (ed.): *2000 years of zinc and brass*. British Museum Occasional Paper 50. London, 7–23.

Bayley, J. – Butcher, S. 2004: *Roman brooches in Britain: A technological and typological study based on the Richborough Collection*. London. https://doi.org/10.26530/20.500.12657/50365

Beneš, Z. – Hornik, P. – Kašpárek, F. 2011: Rozrušený soubor z pohřebiště a sídliště z Nebovid, okr. Kolín. Předběžná zpráva (A disturbed assemblage from the cemetery and settlement at Nebovidy, Kolín District: A preliminary report). In: Droberjar, E. (ed.): *Archeologie Barbarů 2010. Hroby a pohřebiště Germánů, Mezi labem a Dunajem, Sborník příspěvků ze Vi. Protohistorické konference, Hradec Králové, 6.–9. září 2010*. Olomouc.

Bojović, D. 1983: *Rimske fibule Singidunuma* (*Roman brooches from Singidunum*). Belgrad.

Bray, P. 2020: Modelling Roman concepts of copper-alloy recycling and mutability. The chemical characterization hypothesis and Roman Britain. In: Duckworth, C. N. – Willson, A. (eds): *Recycling and reuse in the Roman economy*. Oxford Studies on the Roman Economy. Oxford, 237–264. https://doi.org/10.1093/oso/9780198860846.003.0007

Buora, M. 2000: Fibule del tipo 'ad ancora' nell'Italia nordorientale. *Quaderni friulani di archeologia* 10, 93–96.

Buora, M. 2016: Von der Adria (Aquileia) bis zur mittleren Donau. Das Fibelspektrum römischer Zeit vom 1. Jh. v. Chr. bis zum 6. Jh. n.Chr. In: Rubel, A. (ed.): *Die Barbaren Roms Inklusion, Exklusion und Identität im Römischen Reich und im Barbaricum (1.-3. Jahrhundert n. Chr.)*. Studien zu Archäologie und Geschichte des Altertums 2. Konstanz, 163–197.

Busuladžić, A. 2010: *Morfologija antičkih fibula iz zbirke Zemaljskog muzeja Bosne i Hercegovine* (*The morphology of antique fibulae in the collection of the National Museum of Bosnia and Herzegovina*). Sarajevo.

Cociş, S. 2004: *Fibulele din Dacia romană – The brooches from Roman Dacia*. Biblioteca Ephemeris Napocensis 3. Cluj-Napoca.

Cociş, S. 2006: Anchor shaped brooches: Typology, chronology, diffusion area, style, workshops. *Dacia* 50, 389–423.

Cociş, S. 2019: *The brooch workshops from Dacia and the other Danubian provinces of the Roman Empire (1st c. BC–3rd c. AD)*. Patrimonium Archaeologicum Transylvanicum 16. Cluj-Napoca.

Cociș, S. – Lăzărescu, V.-A. – Ciută, M. 2023: Fibule pierdute – fibule regăsite, Cazul Alba Iulia (Lost and rediscovered brooches: The case of Alba Iulia). *Apulum* 60, 349–385.

Cociș, S. – Lăzărescu, V.-A. – Dumitrescu, I. – Heroiu, A. 2025: Atelierul de bronzieri de la Slătioara, jud. Olt. O discuție preliminară (The bronze workshop at Slătioara, Olt County: A preliminary discussion). In: Aparaschivei, D. – Bilavschi, G. – Bacumenco-Pîrnău, L. (eds): *Varia Archaeologica (V). Cercetarea arheologică românească: între performanță și austeritate.* Cluj-Napoca, 229–263.

Crișan, I. H. 1959: Le trésor d'Aţel et ses relations balkano-danubiennes. *Dacia* 3, 353–367.

Dungworth, D. 1997: Roman copper alloys: Analysis of artefacts from Northern Britain. *Journal of Archaeological Science* 24, 901–910. https://doi.org/10.1006/jasc.1996.0169

Genčeva, E. 2004: *Les fibules romaines de Bulgarie de la fin du Ier s. av. J.-C. a la fin du VIe s. ap. J.-C.* Sofia.

Gładysz-Juścińska, M. – Juściński, M. 2005: Znalezisko fibuli kotwicowatej z Lubelszczyzny (An anchor-shaped brooch found in the Lublin region). In: Łuczkiewicz, P. – Gładysz-Juścińska, M. – Juściński, M. – Niezabitowska, B. – Sadowski, S. (eds): *Europa Barbarica.* Monumenta Studia Gothica 4. Lublin, 129–139.

Grabherr, G. 2013: Identität oder Technologie – Scharnierfbeln im zentralen Alpenraum. In: Grabherr, G. – Kainrath, B. – Schierl, Th. (eds): *Relations abroad brooches and other elements of dress as sources for reconstructing interregional movement and group boundaries from the Punic Wars to the decline of the Western Roman Empire. Proceedings of the international conference from 27th–29th April 2011.* Innsbrucker Klassisch Archäologische Universitätsschriften Band 8. Innsbruck, 299–316.

Koščević, R. 1980: *Antičke fibule s produčja s Siska* (*Ancient brooches from the Siscia area*). Zagreb.

Kovrig, I. 1937: *A császárkori fibulák fő formái Pannoniában – Die Haupttypen der kaiserzeitlichen Fibeln in Pannonien.* Dissertationes Pannonicae 2.4. Budapest.

Măndescu, D. – Păduraru, M. – Dumitrescu, I. – Piţigoi, A. – Heroiu, A. – Gheorghiu, L. – Grumezescu, G. 2020: *Raport final de cercetare arheologică preventivă Drumul Expres Craiova-Piteşti: Situl 2, Slătioara, comuna Slătioara, județul Olt, Km. 41+720–42+040.* Pitești (*unpublished manuscript*).

Măndescu, D. – Colțeanu, P. – Piţigoi, A. – Gheorghiu, L. 2022: *Raport de cercetare arheologică preventivă, Drum Expres Craiova Piteşti, Tronson 3, Sit 1 Km 59+450-59+700 + Extindere, Buicești, comuna Priseaca, jud. Olt.* Pitești (*unpublished manuscript*).

Patek, E. 1942: *A pannoniai fibulatípusok elterjedése és eredete – Verbreitung und Herkunft der römischen Fibeltypen von Pannonien.* Dissertationes Pannonicae 2.19. Budapest.

Petković, S. 2010: *Rimske fibule u Srbiji od I do V veka n.e.* (*Roman Brooches in Serbia from the 1st to the 5th Century AD*). Beograd.

Popilian, G. 1998: Câteva considerații cu privire la tezaurul de la Vârtop jud. Dolj (Quelques observation concernant le trésor de Vârtop, dep. de Dolj). *Arhivele Olteniei* 13, 43–70.

Popilian G.-D. – Bondoc, D. 2012: *The Roman and Late Roman cemetery of Sucidava-Celei: The excavations from 1969–1983.* Craiova.

Popović, I. 1996: Certain traits of the Roman silver jewellery. Manufacture in the Central Balkans. *Starinar* 47, 139–154.

Popescu, D. 1938: Fibules en bronze des collections du Musée National des Antiquités. *Dacia* 6–7, 239–246.

Redžić, S. 2007: *Nalazi rimskih fibula na nekropolama Viminacijuma* (*Finds of Roman brooches from the necropolis of Viminacium*). Arheologija I prirodne nauke 4. Beograd.

Riederer, J. – Cociș, S. 2000: Die Fibelwerkstatt von Napoca: Vorläufige Angaben zur Metallanalyse. In: Giumlia-Mair, A. (ed.): *Ancient Metallurgy between Oriental Alps and Pannonian Plain. Workshop Trieste, 29–30 October 1999.* Udine, 189–192.

Săpăturile de la Verbița 1952: Șantierul Verbicioara. *Studii și Cercetări de Istorie Veche și Arheologie* 3, 141–190.

Sedlmayer, H. 2015: Kollnbrunn – Archäologische Funde aus dem römischen Feldlager. In: Groh, S. – Sedlmayer, H. mit einem beitrag von Schachinger, U.: Expeditiones Barbaricae, Forschungen zu den römischen Feldlagern von Engelhartstetten, Kollnbrunn und Ruhhof (Niederösterreich). In: Lauermann, E. – Laussegger, A. (eds): *Archäologische Forschungen in Niederösterreich.* Krems, 86–94.

Stîngă, I. 2005: *Villa Rustica de la Gârla Mare, judeţul Mehedinţi: Studiu monographic* (*The* villa rustica *at Gârla Mare, Mehedinți County: A Monographic Study*). Craiova.

Svoboda, B. 1948: *Cechy a rimské Imperium – Bohemia and the Roman Empire*. Sbornik narodniho musea v praze. Svazek ii-A-Historicky Sborník Národního musea v Praze: A-Historický. sv. 2. Praha.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 51–68. 10.17204/dissarch.suppl.5.2026.51

Coins of a 2019 field survey from the legionary camp of Brigetio (Komárom/Szőny, Hungary)

Illés János Darvas-Tanács
Institute of Archaeological Sciences, ELTE Eötvös Loránd University, Budapest, Hungary
tanacsilles@gmail.com

Received 25 November 2025 | Accepted 13 March 2026 | Published 18 November 2026

Abstract: This paper is an excerpt from my Bachelor's thesis. Building upon the findings and results of previous years, I conducted the analysis of the 82 Roman coins that were found on a field survey in August 2019 at the Komárom-Szőny/Brigetio, Stadion út archaeological site, in the *praetentura* of the Roman legionary fortress of Brigetio. The coins span a period of four centuries, ranging from the reign of Nero to the early 5th century; however, as expected, the majority date to the 3rd and 4th centuries.

Keywords: Roman coins, numismatics, Pannonia, Brigetio

Introduction

Following the course of Roman municipalisation, a significant increase can be observed in the circulation of Roman coinage in Pannonia in the 60s and 70s of the 1st century AD.[1] In the case of Brigetio, a similar process can be observed. At the end of the 1st century, the *legio XIII Gemina*, *legio XIV Gemina*, and *legio XV Apollinaris* began the construction of the legionary fortress; in the early 2nd century, following the brief stationing of the *legio XI Claudia* and *legio XXX Ulpia Victrix*, the *legio I Adiutrix* settled into the fortress, which then remained there until the end of the imperial period.[2] Merchants, craftsmen, and family members arriving together with the legionaries also brought coins with themselves. The first *denarii* and *aurei* in Pannonia can be dated to the reign of Nero.[3]

The 82 Roman coins that were found during a field survey in August 2019 at the Komárom-Szőny/Brigetio, Stadion út site, in the Roman legionary fortress of Brigetio[4] date from the reign of Nero (54–68) to the reign of Valentinian III (425–455). Most of the coins were found in the area of the legionary camp's baths, the adjacent barracks and the *scamnum tribunorum*. A smaller number of the finds come from the area around the *tabernae*, and some from the *valetudinarium* (Fig. 1). It is important to note that the coins were stray finds collected during a field survey. Their positions

1 All dates are AD unless otherwise indicated; Lányi 1979, 189–190.

2 Barkóczi 1951, 13–17; Lőrincz 1975; Borhy 2012; Szabó – Borhy 2015, 112; Dobosi – Borhy 2022, 140–145.

3 Bíróné Sey 1977, 5.

4 The legionary camp of Brigetio (today Komárom-Szőny), the *canabae* and the *municipium* were already mentioned in numerous places in ancient times. From the reign of Caracalla (211–217) onwards, together with Aquincum, Brigetio played a prominent role in the life of the province as one of the legionary camps of Pannonia Inferior. See Alföldi 1942, 298–299; Barkóczi 1951; Számadó 1992, 149; Borhy 2021. For the recent excavations in the legionary fortress and for the location of the buildings mentioned below see: Bartus *et al.* 2025, with further literature.

✉ Corresponding author

have undoubtedly shifted multiple times over the past 2,000 years and were certainly not found where they were originally left. Annual ploughing, sowing, and harvesting, as well as the movement of agricultural machinery have displaced the coins by an unknown distance from where they were originally lost.

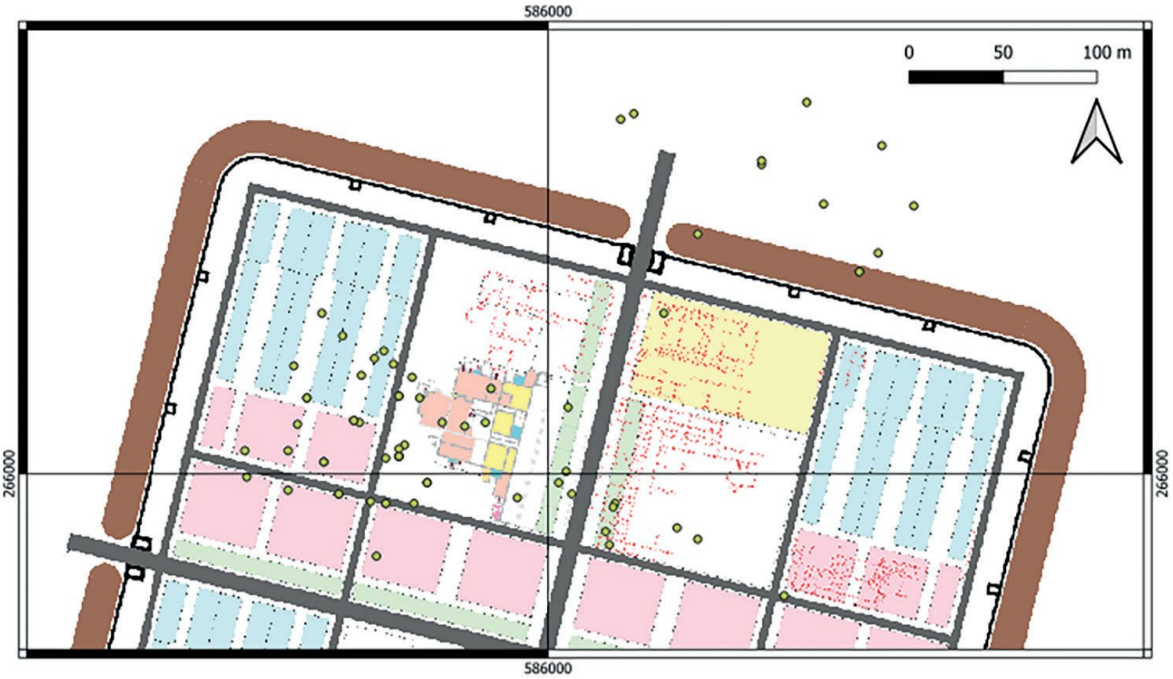


Fig. 1. Distribution map of the coins (map by Bence Simon). The eastern/southeastern corner of the map was not covered by the field survey.

Emperors and denominations

The vast majority of the coins date to the 4th century (between 337 and 363), dominated by AE3 and AE4 bronzes and the FEL TEMP REPARATIO reverse. The most frequently represented emperor is Constantius II (337–361). The coin/year ratio shows a steady increase culminating in the mid-4th century, followed by a marked decline after 383.

Of the 82 coins, 76.8% (63) can be dated to the 4th century, mainly to the period between 337 and 363 (from the death of Constantine I to the end of the reign of Julian II). It is not surprising that all the FEL TEMP-REPARATIO coins (17) can be dated to this period. It is also not surprising that the majority of the finds are AE3 (37) and AE4 (23) bronzes (Fig. 4).

Focusing on the 3rd century, 10 coins can be dated to this period. The majority of these are from the last third of the century: one coin from the years of 201–217; two from the period of 218–238; one issue from the years of 238–259; six from the years of 260–296. Most of these are *antoniniani* (7); the others are: a *sestertius*, a *denarius (subaeratus)* and an *as*. A total of four coins are from the 1st, 2nd and 5th centuries. These are the issues of Nero (1), Septimius Severus (2) and Valentinian III (1).

The majority, 20.7% of the coins (17) are issues of Constantius II. He is followed by Valentinian I (364–375) with 8 coins, and Constantius II's co-emperor, Constans (337–350) with 6 coins. Eight coins could not be identified due to their worn state but based on their size, seven of them are fourth-century coins and one is earlier.

If we look at the coin/year ratio (Fig. 5), we do not see any surprising data either. There is a steady increase, which reaches its peak in the period between 337 and 363. After 383, coins are found only

sporadically, but in general, it can be said about Brigetio and Pannonia that the regular inflow slows down significantly from the end of the 4th century.[5]

Mints and *officinae*

The 82 coins are the issues of 13 mints. The most frequent one is Siscia, followed by Rome and Constantinopolis. The Siscian material is dominated by the Constantinian and Valentinian dynasty.

If we look at the material in a little more detail: as already mentioned, a total of 13 mints are represented.[6] The mint of 17 coins cannot be determined due to their condition. Coins from Siscia appear most frequently, 23 times, followed by Rome (16) and Constantinopolis (8). A small number of coins also originate from Londinium (1), Thessalonica (1), and Cyzicus (1) (Fig. 2).

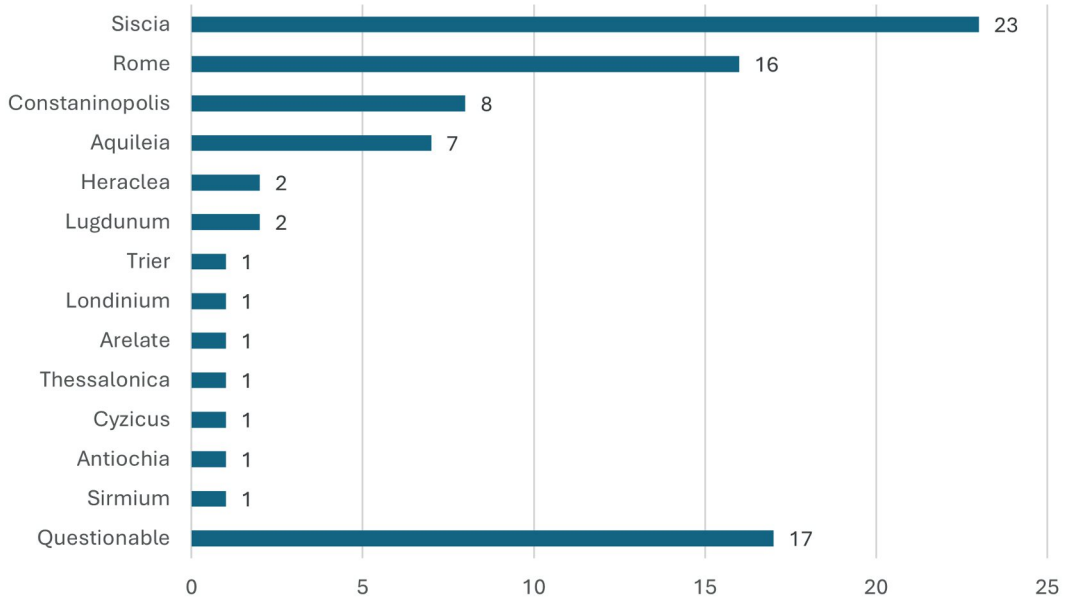


Fig. 2. Distribution of mints.

Of the 23 Siscian coins, 15 were issued by the Constantinian dynasty, while 7 coins were issued by members of the Valentinian dynasty. In one case, the emperor cannot be determined. After the death of Constantine I (306–337), under the rule of Constans, Constantius II, and Constantius Gallus (351–354), as well as Vetranio, who was briefly *caesar* in 350, five *officinae* were operating in Siscia.[7] At least one coin from each of these *officinae* can be found among the 23 coins minted in Siscia. Six coins each come from the 1st and 2nd *officinae* (Fig. 3).

If we look at the mint of Rome, two of the 16 coins can be dated to the 4th century (both are related to the Constantinian dynasty). The remaining coins are mainly third-century *antoniniani* (7). All of the eight coins from the mint of Constantinopolis can be linked to the Constantinian dynasty.

Reverses

Regarding the reverses, FEL TEMP REPARATIO is the most common, appearing 17 times—of these, 13 coins were issues of Constantius II, 4 coins of Constantius Gallus, and in one case the emper-

5 Vida 2020, 63; Juhász 2024.

6 Antiochia, Aquileia, Arelate, Constantinopolis, Cyzicus, Heraclea, Londinium, Lugdunum, Rome, Sirmium, Siscia, Thessalonica, and Trier.

7 Jónás 1934, 17.

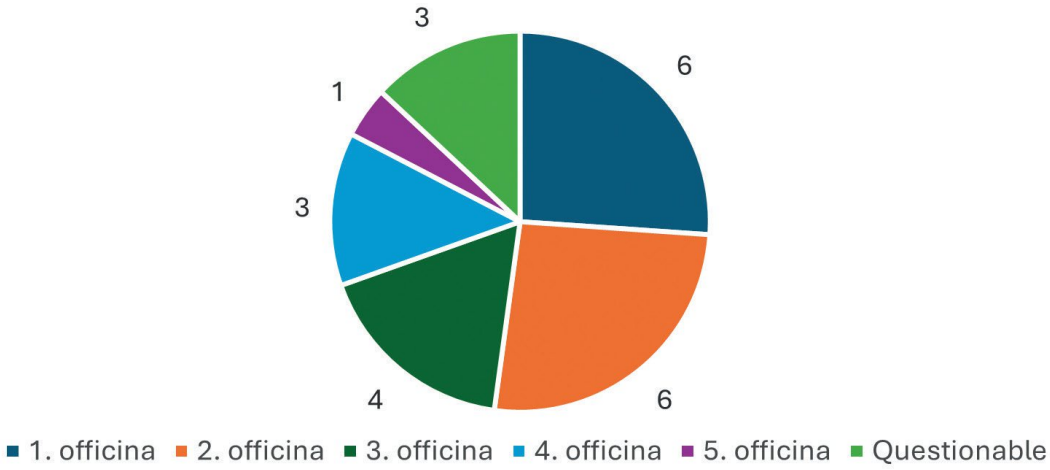


Fig. 3. *Officinae* of the mint of Siscia.

or cannot be determined. The second most common are the GLORIA EXERCITVS (13), then the SECVRITAS REI PVBLICAE (7) coins.

These reverse types reflect imperial propaganda in the mid to late 4th century, emphasizing the restored—rather aspired—prosperity, prominence and excellence of the army, and the stability of the *imperium*. All of these are common motifs in this period.

Issues worth mentioning

Nero (Cat. 1.)

As it is usual for first-century coins, the mint is Rome. The heavily worn coin was issued between 64–68. The reverse shows the Temple of Ianus, with a barred window on the left and a closed door on the right. In the field is the inscription S-C *(senatus consultum)*.[8] The obverse is NERO CAESAR AVG GERM IMP,[9] while the reverse is PACE P R VBIQ PARTA IANVM CLVSIT // S-C. The same RIC 306 type is also known from Carnuntum[10] but not from the legionary camp of Brigetio.

The coin is part of a series of coins issued with similar reverse.[11] On Nero's coins, the closed door of the Temple of Ianus is the symbol of peace. Spreading the news (the appearance?) of peace was particularly important after Rome's war with Parthia between 58 and 63.[12] After the peacemaker Nero ordered the gates of the Temple of Janus to be closed in 65, he soon came into conflict with the Jews living in Judea, and after uncovering a conspiracy, he also ordered the execution of members of the senate.[13]

From the early 60s AD onwards, the brass and copper issues of mints of Rome and Lugdunum generally depicted the emperor in a lofty, exalted appearance. The reverses proclaimed the deeds of the "philanthropist" Nero.[14]

8 *Pace Populo Romano Ubique Parta Ianum Clusit // Senatus Consultum* – Peace to the Roman people everywhere, the gates of the temple of Ianus are closed. Decree of the senate.

9 *Nero Caesar Augustus Germanicus Imperator.*

10 Hahn 1976, Vol. III/I, 35. lot 493.

11 Sutherland – Carson 1984, 168.

12 Lacey 2016, 120–122.

13 Townend 1980, 237–242; Grant 1996, 44. Whether C. Calpurnius Piso or Faenius Rufus led the conspiracy, the consequences of the retaliation were 19 executions/suicides, as well as 13 exiles.

14 Grant 1996, 43.

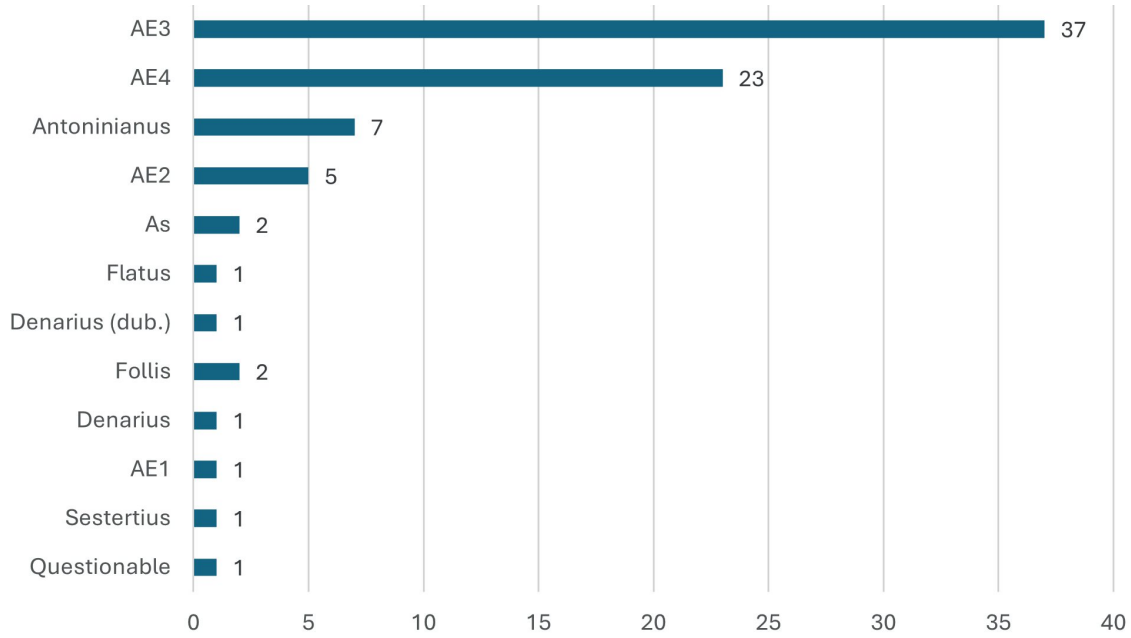


Fig. 4. Denominations.

Septimius Severus (193–211, Cat. 2 and 3)

Cat. 2. is an *as* issued in Rome.[15] The obverse reads L SEPT SEV PERT AVG IMP VIII,[16] while the reverse is VOTA PVBLICA. It is an interesting piece, because unlike the usual type, in this case there is no S-C inscription in the reverse field. The coin is heavily worn, only a few letters are legible.

The coins of Septimius Severus can be dated according to his imperial titles or his consulships. Of the former, the latest known piece bears IMP XI. The IMP VIII records the fall of Byzantium in 196, the fall of Pescennius Niger, the rival of Severus.[17]

VOTA PVBLICA means "to make a vow for the welfare of the republic". This is a custom or ritual dating back to the time of the Republic, which the consuls made on their first day in office.[18] In the case of Severus's coinage, this reverse indicates a vow made by the emperor and the members of the senate for the welfare of the *populus* and the Imperium Romanum after many years of power struggles, as symbolized by the emperor standing before the altar, holding a *patera*.

Another coin of Severus (Cat. 3) is a *flatus* (cast coin) also dated to 196. The obverse is SEPT SEV PERT AVG IMP VIII, while the reverse reads ADVENTVI AVG FELICISSIMO which commemorates Severus's eastern campaign. Severus's enemy, Pescennius Niger, was supported by the Parthians in his attempts. In retaliation, Severus mobilised several legions and marched east, then through the Cilician Gates and invaded Antiochia. Severus's armies caught up with Niger at the Euphrates and assassinated him.[19] Severus then returned to Rome, where he had only Clodius Albinus to defeat for the throne.[20]

15 Such pieces were also minted at the mint of Laodicea ad Mare in Syria. Coins were minted here between 196–202 with minor variations. The coins with the inscription L SEPT SEV PERT AVG IMP VIII were issued here between 196–197.

16 *Lucius Septimius Severus Pertinax Augustus Imperator Octavum*. See Mattingly – Sydenham 1936, 54.

17 Mattingly – Sydenham 1936, 59–60.

18 Hickson-Hahn 2004, 35–36. The phrase *vota pro salute rei publicae* is also known, but the meaning remains the same.

19 Grant 1996, 108–110.

20 Roach Smith 1889, 10; Mattingly – Sydenham 1936, 67. Severus defeated the armies of Albinus in 197. In the same year, coins with IMP VIIII (sic) began to be issued.

Caracalla (211–217, Cat. 4)

Caracalla's *denarius* was minted in Rome between 201 and 206. The obverse is ANTONINVS PIVS AVG and shows a teenage boy; the reverse is VICT PART MAX. This issue is in very good condition, with little damage.

Neither the young Caracalla, nor his brother Geta had played a significant role in the battles against the Parthians, although their father, Septimius Severus, had already been at war in the Middle East for years. Most of his attempts failed, but the propaganda directed at the Roman people could have made this somewhat more nuanced, as we can see in this case. After the death of Septimius Severus, Caracalla led an unsuccessful campaign against Parthia between 213 and 217. The Parthians made a final victory at Nisbis a year later, in 218.[21]

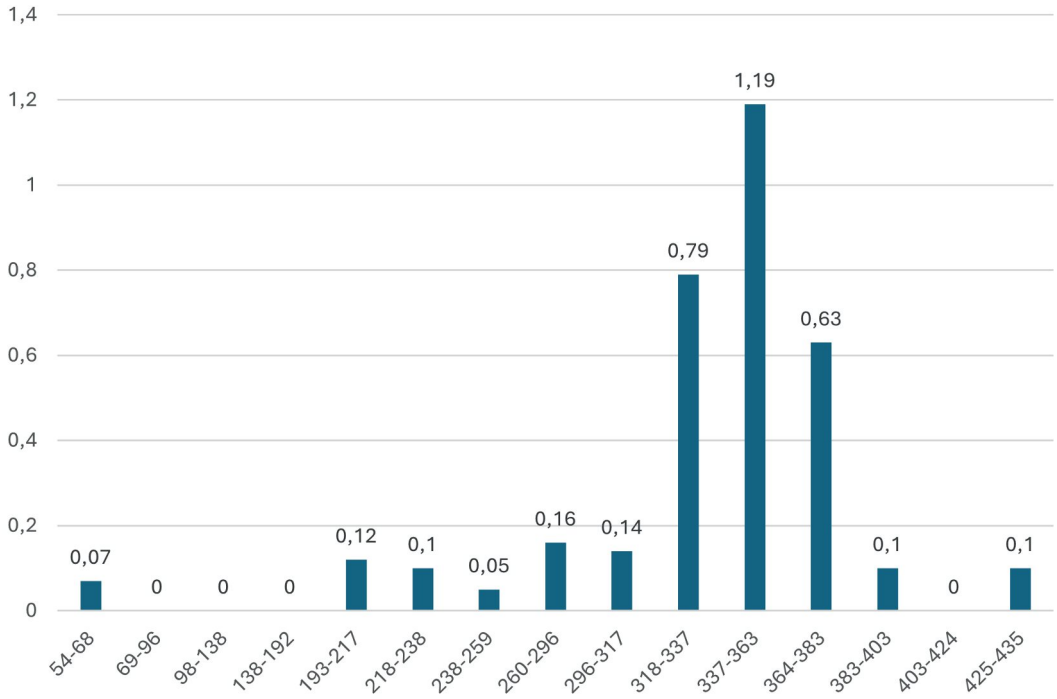


Fig. 5. Coin/year ratio.

Valentinian III (425–455, Cat. 14)

This fifth-century AE4 with SALVS REIPVBLICE reverse is an exceptional piece, not only in terms of the discussed material, but also regarding the coins known from Brigetio. It can be dated to the beginning of the reign of Valentinian III, between 425–435, thus it is the latest published Roman coin ever to have been found in the legionary fortress of Brigetio.[22] The heavily worn coin was minted in Rome. Only one other similar coin has come to light in the settlement complex, between 2014–2017 in the *canabae*.[23]

Salus—or Hygeia in Greek mythology—was the daughter of Aesculapius. She is always depicted on coins with a snake, which to this day—think of pharmacies—is a symbol of healing.[24] The obverse

21 Grant 1996, 115 and 118.

22 Two sixth-century coins of Iustinian are also known, but they can be dated after the legionary camp was abandoned and belong to the period of the Migration Period. See Bíróné Sey 1977, 81/2229–2230.

23 Juhász 2024, 29, Cat. 222.

24 Bíróné Sey 2002, 44.

is D N PLA VALENTINIANVS P F AVG, in which the abbreviation PLA reveals that the coin was made not only for the emperor, but also—and primarily—for Galla Placidia, daughter of Theodosius II and mother of Valentinian III.[25] A staurogram (�Ᵽ) can be seen on the left side of the reverse field.[26]

Coinage of the legionary camp and the *canabae*

Regarding the coins of the field survey, 76.8% of the finds, 63 coins are from the 4th century. Almost half, 49.2% of these 63 coins (31) can be dated to the period between 337 and 363.

In 2024 Lajos Juhász published the 231 coins that were unearthed in the area of the *canabae* of Brigetio between 2014 and 2017.[27] Of those, 112 coins (51.6%) can be dated to the period between 337 and 363. Admittedly, this is just 4 years of excavations but the jump (Fig. 6) can be clearly seen here compared to before 337 and after 363 (in the case of the *canabae*, a total of 90 coins can be attributed to the period before 337; 15 coins to the years after 363), and can be compared with the coins interpreted in this paper.

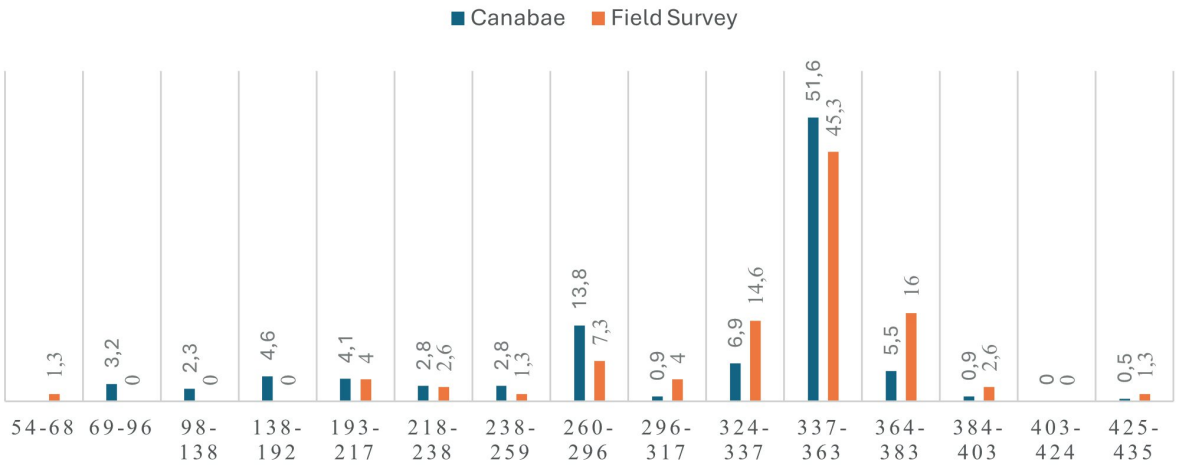


Fig. 6. Coinage of the *canabae* and the 2019 field survey (in percentage).

Conclusions

The 82 Roman coins found in August 2019 in the *praetentura* of the Brigetio legionary camp fit well into the known patterns of monetary circulation in Brigetio and the province of Pannonia and thus confirm earlier numismatic observations. The chronological and typological composition reflects the long-term use of the area and the dominance of third-fourth-century bronze coinage in everyday transactions.

The unusually broad chronological range of the material—from the *as* of Nero to the AE4 of Valentinian III from the first half of the 5th century—sets it apart from the otherwise relatively uniform characteristic of the site. These early and late outliers provide valuable evidence for both the initial phases of monetary circulation and its persistence into the late Imperial period, making it a useful contribution to the further study of coin use and circulation in Pannonia and Brigetio.

25 Carson – Kent 1994, 173.

26 The Greek letters tau (T τ) and rho (P ρ) superimposed. The symbol is an abbreviation of the Greek word *stauros* (σταυρός), meaning 'cross'. A common symbol of Christianity, along with the abbreviation Chi-Rho (☧).

27 Juhász 2024, 17–18.

Catalogue

Cat. 1. Inv. no.: 2019.1.1094.25. Emperor: Nero. Denomination: *As* (7.59 g). RIC: RIC Nero 306 (64–68). Mint: Rome. Obverse: NERO CAESAR AVG [GERM IMP]. Reverse: [PA]CE P R VBIQ P[ARTA IANVM CLVSIT] // S-C / The Temple of Janus, latticed window to left, garland hung across closed double doors on the right.

Cat. 2. Inv. no.: 2019.1.1094.26. Emperor: Septimius Severus. Denomination: *As* (3.56 g). RIC: RIC 736 var. (196). Mint: Rome. Obverse: [L SEPT] SEV [PERT AVG] I[MP] VIII. Reverse: [VO]TA P[VBLICA] (no S-C) / Emperor, veiled, togate, standing front by altar, looking left, holding patera and scroll.

Cat. 3. Inv. no.: 2019.1.1094.27. Emperor: Septimius Severus. Denomination: *Flatus*. RIC: RIC 74 (196). Mint: Rome. Obverse: SEPT [SEV PERT] A[VG IMP VIII]. Reverse: ADVENTV[I AVG FELICISSIMO] / Severus on horseback right, raising hand.

Cat. 4. Inv. no.: 2019.1.1094.28. Emperor: Caracalla. Denomination: *Denarius* (2.95 g). RIC: RIC 144a (201–206). Mint: Rome. Obverse: ANTONINVS PIVS AVG. Reverse: VICT PART MAX / Victory walking left, holding palm and wreath.

Cat. 5. Inv. no.: 2019.1.1094.29. Emperor: Severus Alexander. Denomination: *Denarius subaeratus* (2.87 g). RIC: the reverse is: RIC VI 513 (231). Mint: Rome. Obverse: IMP AL[EX]AN-DER PIVS AV[G]. Reverse: P M TR P X COS III [P] P / Sol standing facing, looking left, holding whip and raising right hand.

Cat. 6. Inv. no.: 2019.1.1094.30. Emperor: Maximinus Thrax. Denomination: *Sestertius* (17.50 g). RIC: RIC 61 (235–236). Mint: Rome. Obverse: IMP MAXIMINVS PIVS [A]VG. Reverse: PROVIDENTIA AVG // S-C / Providence standing left, holding cornucopiae and wand over globe at feet.

Cat. 7. Inv. no.: 2019.1.1094.31. Emperor: Gallienus. Denomination: *Antoninianus* (3.04 g). RIC: RIC 186 (257–258). Mint: Rome. Obverse: IMP GALLIE[NVS P F AVG G]ERM. Reverse: VIRTV[S AVGG] / Mars walking right, holding transverse spear and trophy.

Cat. 8. Inv. no.: 2019.1.1094.32. Emperor: Gallienus. Denomination: *Antoninianus* (1.85 g). RIC: RIC 179 (260–268). Mint: Rome. Obverse: [GALLIENVS A]VG. Reverse: [DIANAE CONS] AVG / Stag walking right.

Cat. 9. Inv. no.: 2019.1.1094.33. Emperor: Gallienus. Denomination: *Antoninianus* (2.41 g). RIC: — (260–268). Mint: Rome. Obverse: [GALLI]EN[VS AVG]. Reverse: [AEQVITAS] AVG.

Cat. 10. Inv. no.: 2019.1.1094.34. Emperor: Probus. Denomination: *Antoninianus* (3.26 g). RIC: RIC 238 var. (276–282). Mint: Rome. Obverse: IMP PROBV[S AVG]. Reverse: VIR[TVS AVG] / Soldier standing left, holding spear and resting right hand on shield.

Cat. 11. Inv. no.: 2019.1.1094.35. Emperor: Probus. Denomination: *Antoninianus* (3.31 g). RIC: RIC 712 xxi-type var. (280). Mint: Rome. Obverse: [IMP C] PROBVS P F AVG. Reverse: [P]AX AVGVSTI / Pax standing left, holding branch and sceptre.

Cat. 12. Inv. no.: 2019.1.1094.36. Emperor: Probus. Denomination: *Antoninianus* (2.76 g). RIC: RIC 157 [wreath Z] (276–282). Mint: Rome. Obverse: IMP P[RO]BVS AVG. Reverse: [A]DVENTVS [A]VG / Emperor on horseback left, raising right hand and holding a sceptre in the left, treading down a captive seated on ground to left.

Cat. 13. Inv. no.: 2019.1.1094.37. Emperor: Numerianus. Denomination: *Antoninianus* (3.98 g). RIC: RIC 423 (283–284). Mint: Rome [KAS]. Obverse: IMP NV[M]ERIANVS AVG. Reverse: VNDIQVE VICTORES / Numerian standing left, holding globe and sceptre.

Cat. 14. Inv. no.: 2019.1.1094.38. Emperor: IIValentinian I. Denomination: AE4 (1.10 g). RIC: RIC X 2108 var. (425–435). Mint: Rome. Obverse: [D N PLA VALENTINIANVS P F AVG]. Reverse: [SALVS REI-PVBLICE] // ₣ / Victory walking left, holding wreath and palm branch.

Cat. 15. Inv. no.: 2019.1.1094.39. Emperor: Flavia Maximiana Theodora. Denomination: AE4 (1.39 g). RIC: — (337–340). Mint: —. Obverse: FL M[AX THEO-DORAE AVG]. Reverse: [PIETAS] ROMA[NA] / PietAs standing right, holding a child at her breast.

Cat. 16. Inv. no.: 2019.1.1094.40. Emperor: Flavia Julia Helena. Denomination: AE4 (1.19 g). RIC: RIC VIII 90 var. (337–340). Mint: Trier. Obverse: [FL IVL HE-]LENAE AVG. Reverse: [PAX] PV-[BLICA] / Pax standing left, holding branch and transverse sceptre.

Cat. 17. Inv. no.: 2019.1.1094.41. Emperor: Licinius. Denomination: *Follis* (6.74 g). RIC: RIC VI 53b (310–311). Mint: Heraclea [HT ε]. Obverse: IMP C VAL LIC LICINIVS P F AVG. Reverse: GENIO IMP-E-RATORIS / Genius standing left, holding patera and cornucopia. Crescent in right field.

Cat. 18. Inv. no.: 2019.1.1094.42. Emperor: Licinius. Denomination: *Follis* (2.77 g). RIC: RIC VII 7 (317). Mint: Aquileia [AQS]. Obverse: [IMP] LICINIVS P F AVG. Reverse: IOVI CON[SER]VATORI / Jupiter standing left, chlamys across left shoulder, sceptre in left hand, thunderbolt in right.

Cat. 1



Cat. 2



Cat. 3



Cat. 4



Cat. 5



Cat. 6



Cat. 7



Cat. 8



Cat. 9



Cat. 10



Cat. 11



Cat. 12



Cat. 13



Cat. 14



Cat. 15



Cat. 16



Cat. 19. Inv. no.: 2019.1.1094.43. Emperor: Constantine I. Denomination: AE2 (2.97 g). RIC: RIC VI 234c (313). Mint: Siscia [SIS]. Obverse: IMP CONSTANTINVS P F AVG. Reverse: IOVI CON-SERVATORI AVGG NN // B – Jupiter standing left, chlamys hanging from left shoulder, holding Victory on globe and sceptre, eagle with wreath at the left foot.

Cat. 20. Inv. no.: 2019.1.1094.44. Emperor: Constantine I. Denomination: AE3 (2.21 g). RIC: RIC VII 48 var. (318). Mint: Siscia [ΓSIS star]. Obverse: IMP CON-ST[AN]TINVS AVG. Reverse: VICTORIAE LAETAE P[RINC PERP] / Two Victories, standing facing each other, holding shield on an altar decorated with a star.

Cat. 21. Inv. no.: 2019.1.1094.45. Emperor: Constantine I. Denomination: AE3 (1.63 g). RIC: RIC VII 59 var. (330–333). Mint: Constantinopolis [CONSH]. Obverse: CONSTANTI-NVS MAX AVG. Reverse: GLOR-[IA E] XERC-ITVS / Two soldiers holding spears and shields with two standards between them.

Cat. 22. Inv. no.: 2019.1.1094.46. Emperor: Constantine I and his sons. Denomination: AE3 (1.71 g). RIC: — (330–340). Mint: Rome [RBQ]. Obverse: [V]RB[S] ROMA/**. Reverse: Lupa Romana suckling Romulus and Remus; two stars above.

Cat. 23. Inv. no.: 2019.1.1094.47. Emperor: Constantine I and his sons. Denomination: AE3 (2.44 g). RIC: — (330–340). Mint: Constantinopolis [CONS]. Obverse: VRBS ROMA/*. Reverse: Lupa Romana suckling Romulus and Remus; two stars above.

Cat. 24. Inv. no.: 2019.1.1094.48. Emperor: Constantine I and his sons. Denomination: AE4 (1.91 g). RIC: — (330–340). Mint: Constantinopolis. Obverse: VRBS ROMA. Reverse: Lupa Romana suckling Romulus and Remus; two stars above.

Cat. 25. Inv. no.: 2019.1.1094.49. Emperor: Constantine I and his sons. Denomination: AE4 (1.38 g). RIC: — (337–340). Mint: Constantinopolis [CONSA]. Obverse: [VRBS] ROMA. Reverse: [GLORIA] EXERCITVS / Two soldiers holding spears and shields with two standards between them.

Cat. 26. Inv. no.: 2019.1.1094.50. Emperor: Constantine I and his sons. Denomination: AE3 (2.50 g). RIC: — (337–340). Mint: Constantinopolis. Obverse: [C]ONSTAN-[TI]NOPOLIS. Reverse: Victory standing left on prow, holding spear and resting on shield.

Cat. 27. Inv. no.: 2019.1.1094.51. Emperor: Constantine I and his sons. Denomination: AE4 (1.17 g). RIC: — (337–340). Mint: Constantinopolis. Obverse: [CONST]AN-TINOPOLIS. Reverse: Victory standing left on prow, holding spear and resting on shield.

Cat. 28. Inv. no.: 2019.1.1094.52. Emperor: Constantine I and his sons. Denomination: AE4 (1.39 g). RIC: — (337–340). Mint: Constantinopolis. Obverse: CONSTAN-TINOPOLIS. Reverse: Victory standing left on prow, holding spear and resting on shield. Staurogram in left field.

Cat. 29. Inv. no.: 2019.1.1094.53. Emperor: Constantine I and his sons. Denomination: AE4 (0.86 g). RIC: — (337–340). Mint: —. Obverse: —. Reverse: GLORIA EXERCITVS.

Cat. 30. Inv. no.: 2019.1.1094.54. Emperor: Crispus. Denomination: AE3 (3.21 g). RIC: RIC VII 69 (320–321). Mint: Aquileia [AQT]. Obverse: CRISPVS NOB CAES. Reverse: CAESARVM NOSTRORVM // VOT V.

Cat. 31. Inv. no.: 2019.1.1094.55. Emperor: Crispus. Denomination: AE2 (2.93 g). RIC: RIC VII 295 (324–325). Mint: Londinium [PLON]. Obverse: F L [IVL] CRISPVS NOB CAES. Reverse: PROVIDEN-TIAE C[AESS] / Campgate, 6 layers, 2 turrets, star above.

Cat. 32. Inv. no.: 2019.1.1094.56. Emperor: Constantine II. Denomination: AE3 (2.02 g). RIC: RIC VII 336 (330–331). Mint: Rome [RBS]. Obverse: CONSTANTINVS IVN NOB C. Reverse: GLOR-IA EXERC-ITVS / Two soldiers holding spears and shields with two standards between them.

Cat. 33. Inv. no.: 2019.1.1094.57. Emperor: Constantius II. Denomination: AE3 (1.29 g). RIC: RIC VIII 75 (337–341). Mint: Siscia [ΓSIS star]. Obverse: CONSTANT[I]-VS M[AX] AVG. Reverse: GLOR[-I]A EXERC-ITVS / Two soldiers holding spears and shields with one standard between them with O on banner.

Cat. 34. Inv. no.: 2019.1.1094.58. Emperor: Constantius II. Denomination: AE4 (0.96 g). RIC: RIC VIII 52 var. (337–341). Mint: Antiochia [SMAN ε]. Obverse: CONSTAN-TIVS AVG. Reverse: G[L]OR-[IA] EXERC-ITVS / Two soldiers holding spears and shields with one standard between them.

Cat. 35. Inv. no.: 2019.1.1094.59. Emperor: Constantius II. Denomination: AE3 (2.26 g). RIC: — (348–354). Mint: Siscia. Obverse: D N CONSTA[N-]TIVS [P F AVG]. Reverse: FEL TEMP-REPARATI[O] / Soldier spearing fallen horseman.

Cat. 36. Inv. no.: 2019.1.1094.60. Emperor: Constantius II. Denomination: AE3 (1.84 g). RIC: RIC VIII 369 (348–354). Mint: Siscia [ΓSIS zig-zag]. Obverse: D N CONSTAN-TIVS P F AVG. Reverse: FEL TEMP-REP[ARATIO] / Soldier spearing fallen horseman.

Cat. 17



Cat. 18



Cat. 19



Cat. 20



Cat. 21



Cat. 22



Cat. 23



Cat. 24



Cat. 25



Cat. 26



Cat. 27



Cat. 28



Cat. 29



Cat. 30



Cat. 31



Cat. 32



Cat. 37. Inv. no.: 2019.1.1094.61. Emperor: Constantius II. Denomination: AE3 (2.34 g). RIC: RIC VIII 82 B (348–354). Mint: Heraclea [SMHB]. Obverse: D N CONSTAN-TIVS P [F] AVG. Reverse: FEL TEMP-REPARAT[IO] / Soldier spearing fallen horseman.

Cat. 38. Inv. no.: 2019.1.1094.62. Emperor: Constantius II. Denomination: AE3 (1.95 g). RIC: RIC VIII 369? (348–354). Mint: Siscia [BSIS zig-zag / ΓSIS zig-zag]. Obverse: D N [CONS]TAN-TIVS P F A[VG]. Reverse: [FEL] TEMP-REPARATI[O] // H / Soldier spearing fallen horseman.

Cat. 39. Inv. no.: 2019.1.1094.63. Emperor: Constantius II. Denomination: AE3 (5.34 g). RIC: — (348–354). Mint: —. Obverse: D N CONSTAN-[TIVS P F AVG]. Reverse: [F]EL TEMP-RE-[PARATIO] / Soldier spearing fallen horseman.

Cat. 40. Inv. no.: 2019.1.1094.64. Emperor: Constantius II. Denomination: AE4 (2.51 g). RIC: — (348–354). Mint: —. Obverse: [D N CO]NSTAN-TIVS P [F AVG]. Reverse: FEL TEMP-[REPARATIO] // M / Soldier spearing fallen horseman.

Cat. 41. Inv. no.: 2019.1.1094.65. Emperor: Constantius II. Denomination: AE2 (2.79 g). RIC: RIC VIII 84 [Δ] (348–350). Mint: Cyzicus [SMKΔ]. Obverse: [D N CON]STAN-TIVS P F AV[G]. Reverse: FEL TEMP-REPARATIO / Emperor walking right, holding standard with cross on banner, two kneeling captives to left, leaning left, star in left field.

Cat. 42. Inv. no.: 2019.1.1094.37. Emperor: Constantius II. Denomination: AE2 (3.71 g). RIC: RIC VIII 112 var. (351–355). Mint: Constantinopolis [CONST]. Obverse: [D N] CONST[AN]-TIVS P F AVG // Δ. Reverse: FEL TEM[P-REPARAT]IO // B / Soldier spearing fallen horseman. B in left field.

Cat. 43. Inv. no.: 2019.1.1094.54. Emperor: Constantius II. Denomination: AE3 (2.80 g). RIC: RIC VIII 350 (351–355). Mint: Siscia [BSIS]. Obverse: [D N CONST]AN-TIVS P F AVG. Reverse: [FEL TEMP-]REPARATIO / Soldier spearing falling enemy horseman who wears Phrygian helmet; at right, shield on ground.

Cat. 44. Inv. no.: 2019.1.1094.53. Emperor: Constantius II. Denomination: AE3 (2.38 g). RIC: RIC VIII 189B var. (353–354). Mint: Thessalonica [SMTS]. Obverse: D N CONST[AN-]TIVS P F AVG. Reverse: FEL TEMP-[RE]PARATIO // B / Soldier standing left, right knee raised, spearing fallen horseman who is reaching backwards, wearing a Phrygian helmet. B in left field.

Cat. 45. Inv. no.: 2019.1.1094.64. Emperor: Constantius II. Denomination: AE3 (1.21 g). RIC: — (353–354). Mint: Aquileia [AQ]. Obverse: D [N] CONSTAN-T[IV]S P F AVG. Reverse: FEL TEMP-REPARATIO / Soldier spearing fallen horseman.

Cat. 46. Inv. no.: 2019.1.1094.93. Emperor: Constantius II. Denomination: AE3 (1.65 g). RIC: — (353–354). Mint: —. Obverse: D N CONSTAN-[TIVS P F AVG]. Reverse: [FEL TEMP] RE-PARATIO / Soldier spearing fallen horseman.

Cat. 47. Inv. no.: 2019.1.1094.103. Emperor: Constantius II. Denomination: AE3 (3.41 g). RIC: RIC VIII 118 (353–354). Mint: Arelate [PARL]. Obverse: [D N CONST]AN-TIVS P F AVG // A. Reverse: [FEL] TEMP-RE[PARATIO] / Soldier spearing fallen horseman.

Cat. 48. Inv. no.: 2019.1.1094.55. Emperor: Constantius II. Denomination: AE4 (1.92 g). RIC: — (351–355). Mint: —. Obverse: D N CON[STAN-]TI[VS P F AVG]. Reverse: [SPES REI-PUBLICAE] / Emperor standing left holding globe and spear.

Cat. 49. Inv. no.: 2019.1.1094.35. Emperor: Constantius II. Denomination: AE3 (2.05 g). RIC: — (357–361). Mint: Siscia. Obverse: [D N CON]STAN-[TIVS P F AVG]. Reverse: [SP]ES REIPVBLI[CAE] / Emperor standing left holding globe and spear.

Cat. 50. Inv. no.: 2019.1.1094.30. Emperor: Constans. Denomination: AE3 (2.02 g). RIC: RIC VIII 94 (337–340). Mint: Siscia [ε SIS crescent]. Obverse: CONS[T]A[NS] P F AVG. Reverse: [G]LOR[I]A EXERCITV[S] / Two soldiers, holding spears and shields, standing to left and right of one standard with chi-rho on banner.

Cat. 51. Inv. no.: 2019.1.1094.98. Emperor: Constans. Denomination: AE4 (1.61 g). RIC: RIC VIII 88A (337–341). Mint: Siscia [ASIS]. Obverse: CONSTAN[S] P F AVG. Reverse: [GL]ORIA [EXERCITVS] / Two soldiers, holding spears and shields, standing to left and right of one standard with chi-rho on banner.

Cat. 52. Inv. no.: 2019.1.1094.49. Emperor: Constans. Denomination: AE3 (1.30 g). RIC: RIC VIII 99 [B] (337–342). Mint: Siscia [BSIS dot in crescent]. Obverse: CONSTAN-S P [F] AVG. Reverse: GLOR-IA EXERC-ITVS / Two soldiers, holding spears and shields, standing to left and right of one standard with chi-rho on banner.

Cat. 53. Inv. no.: 2019.1.1094.59. Emperor: Constans. Denomination: AE4 (2.07 g). RIC: RIC VIII 183 (340–348). Mint: Siscia [BSIS]. Obverse: [D N] CONS[TAN]S P F [AVG]. Reverse: [VI]CTORIA[E] DD AVGG Q NN / Two Victories standing facing each other, each holding wreath and palm.

Cat. 33



Cat. 34



Cat. 35



Cat. 36



Cat. 37



Cat. 38



Cat. 39



Cat. 40



Cat. 41



Cat. 42



Cat. 43



Cat. 44



Cat. 45



Cat. 46



Cat. 47



Cat. 48



Cat. 54. Inv. no.: 2019.1.1094.52. Emperor: Constans. Denomination: AE4 (1.38 g). RIC: RIC VIII 87 (346–348). Mint: Siscia [Δ SIS]. Obverse: [C]ONSTA[N]-S P [F AVG]. Reverse: [G]LOR-[IA EXERC-ITV]S / Two soldiers, holding spears and shields, standing to left and right of one standard with chi-rho on banner.

Cat. 55. Inv. no.: 2019.1.1094.67. Emperor: Constans. Denomination: AE4 (1.15 g). RIC: RIC VIII 99A (346–348). Mint: Siscia [ASIS dot in crescent]. Obverse: [C]O[N]S[T]AN-S P F AVG. Reverse: GLOR-IAE-[XER]C-ITVS / Two soldiers, holding spears and shields, standing to left and right of one standard with chi-rho on banner.

Cat. 56. Inv. no.: 2019.1.1094.66. Emperor: Constantius Gallus. Denomination: AE3 (2.83 g). RIC: RIC VIII 351A var. (351–354). Mint: Siscia [ASIS]. Obverse: D N CONS[TAN]TIVS IVN NOB C. Reverse: FEL TE[MP]-REPARATIO / Soldier spearing fallen horseman.

Cat. 57. Inv. no.: 2019.1.1094.94. Emperor: Constantius Gallus. Denomination: AE3 (2.63 g). RIC: RIC VIII 53 (351–354). Mint: Sirmium [ASIRM]. Obverse: D N CONSTANTIVS IVN NOB C. Reverse: FEL TEMP-REPARATIO / Soldier spearing fallen horseman.

Cat. 58. Inv. no.: 2019.1.1094.57. Emperor: Constantius Gallus. Denomination: AE3 (2.34 g). RIC: — (353–354). Mint: —. Obverse: D N CONSTANTIVS IVN N[OB CAES]. Reverse: [FEL TEM]P-REPARATIO / Soldier spearing fallen horseman.

Cat. 59. Inv. no.: 2019.1.1094.48. Emperor: Constantius Gallus. Denomination: AE3 (2.10 g). RIC: RIC VIII 208 (352–355). Mint: Aquileia [AQP]. Obverse: D N CONSTANTIVS [IVN N]OB C. Reverse: FEL [TEMP-R]EPARATIO // Soldier spearing fallen horseman. II in left field.

Cat. 60. Inv. no.: 2019.1.1094.28. Emperor: Julian II. Denomination: AE1 (7.44 g). RIC: RIC VIII 236 [P] (361–363). Mint: Lugdunum [LVGDOFFP]. Obverse: D N FL CL IVLIANVS P F AVG. Reverse: [S]ECVRITAS REIPVB/** / Bull standing right, two stars above.

Cat. 61. Inv. no.: 2019.1.1094.56. Emperor: Valentinian I. Denomination: AE3 (3.37 g). RIC: RIC IX 12a (364–367). Mint: Aquileia [SMAQP]. Obverse: [D N VA]LENTINI-AN[VS] P F [AVG]. Reverse: [SECVRITAS-R]EIPVBLIC[AE] / Victory walking left, holding wreath and palm.

Cat. 62. Inv. no.: 2019.1.1094.83. Emperor: Valentinian I. Denomination: AE3 (2.25 g). RIC: — (364–367). Mint: —. Obverse: D N VALENTINI-ANVS P F AVG. Reverse: SECVRIT[AS]-REIPVBLICAE / Victory walking left, holding wreath and palm.

Cat. 63. Inv. no.: 2019.1.1094.105. Emperor: Valentinian I. Denomination: AE3 (2.03 g). RIC: RIC IX 7a vi-type (b) (364–367). Mint: Siscia [DΔSISC]. Obverse: [D N VALENTINI-A]NVS P F AVG. Reverse: [SECV]RITAS-REIPVBLICAE // A* / Victory walking left, holding wreath and palm. A* in left field.

Cat. 64. Inv. no.: 2019.1.1094.32. Emperor: Valentinian I. Denomination: AE3 (2.26 g). RIC: RIC IX 15a xvii (b) (367–375). Mint: Siscia [Δ SISC]. Obverse: D N VALENTINI-ANVS [P F AVG]. Reverse: [SE]CVRITAS-[REIPVB]LICAE // */P|M / Victory walking left, holding wreath and palm. Star over P in left field, M in right field.

Cat. 65. Inv. no.: 2019.1.1094.61. Emperor: Valentinian I. Denomination: AE3 (2.21 g). RIC: RIC IX 5a (364–375). Mint: Siscia [ASISC]. Obverse: D N VALENTINI-ANVS P F AVG. Reverse: GLORIA RO-MANORVM / Emperor walking right, head left, holding labarum and dragging captive behind him.

Cat. 66. Inv. no.: 2019.1.1094.71. Emperor: Valentinian I. Denomination: AE3 (2.11 g). RIC: RIC IX 9a i-type (b) (367–375). Mint: Aquileia [SMAQS]. Obverse: D N VAL[ENTINI-]ANVS P F AVG. Reverse: [S]ECVRITAS-REIPVBLIC[AE] // B / Victory walking left, holding wreath and palm. B in left field.

Cat. 67. Inv. no.: 2019.1.1094.74. Emperor: Valentinian I. Denomination: AE3 (2.80 g). RIC: RIC IX 14a, xi-type var. (367–375). Mint: Siscia [ΓSISC]. Obverse: [D N VALENTINI-]ANVS P [F AVG]. Reverse: [GLORIA RO-]MANORVM // D / Emperor in military dress, walking right, head left, holding labarum, dragging captive behind him. D in right field.

Cat. 68. Inv. no.: 2019.1.1094.76. Emperor: Valentinian I. Denomination: AE3 (2.41 g). RIC: RIC IX 14a xvi-type (367–375). Mint: Siscia [BSISC]. Obverse: [D] N VALENTINI-[ANVS P F AVG]. Reverse: GLORIA RO-[MANORVM] // M|*/F / Emperor in military dress, walking right, head left, holding labarum, dragging captive behind him. M in left field. Star over F in right field.

Cat. 69. Inv. no.: 2019.1.1094.91. Emperor: Valentinian dynasty. Denomination: AE4 (1.01 g). RIC: — (364–379). Mint: —. Obverse: […] -VS P F AVG. Reverse: [GLORIA RO-MANORVM] / Emperor in military dress, walking right, head left dragging captive behind.

Cat. 70. Inv. no.: 2019.1.1094.68. Emperor: Valens. Denomination: AE3 (2.01 g). RIC: RIC IX 21a xxii-type (364–367). Mint: Lugdunum [LVGP]. Obverse: [DN VAL]EN-[S P F AVG]. Reverse: SECVRITAS-REIP[VBLICAE] // OF | I / Victory walking left, holding wreath and palm; OF in left field, I over dot-in-crescent in right field.

Cat. 49



Cat. 50



Cat. 51



Cat. 52



Cat. 53



Cat. 54



Cat. 55



Cat. 56



Cat. 57



Cat. 58



Cat. 59



Cat. 60



Cat. 61



Cat. 62



Cat. 63



Cat. 64



Cat. 71. Inv. no.: 2019.1.1094.84. Emperor: Valens. Denomination: AE3 (1.71 g). RIC: RIC IX 7b vii-type (364–367). Mint: Siscia [DASISC]. Obverse: D N VALENS P F [AVG]. Reverse: SECVRITAS [REI]PVBLICAE // A* / Victory walking left, holding wreath and palm, star over A to left.

Cat. 72. Inv. no.: 2019.1.1094.38. Emperor: Valentinian II. Denomination: AE3 (2.85 g). RIC: RIC IX 38a (383–387). Mint: Siscia [ASISC]. Obverse: D N VALENTINIANVS P F A[V]G. Reverse: GLORIA RO-MANORVM / Emperor walking right dragging captive with right hand and holding labarum in left.

Cat. 73. Inv. no.: 2019.1.1094.70. Emperor: Valentinian II. Denomination: AE3 (2.24 g). RIC: — (375–392). Mint: —. Obverse: DN VA-[LENTINI-ANV] S P [F] AVG. Reverse: [GLO]RIA RO-MANORVM / Emperor walking right dragging captive with right hand and holding labarum in left.

Cat. 74. Inv. no.: 2019.1.1094.102. Emperor: Magnus Maximus. Denomination: AE4 (0.93 g). RIC: RIC IX 55a var. (387–388). Mint: Aquileia [SMAQP]. Obverse: D N MAG MA[-XIMUS P F AVG]. Reverse: SPES RO-MA-[NORVM] / Campgate with six rows, two beacons, star above.

Cat. 75. Inv. no.: 2019.1.1094.45. Emperor: —. Denomination: AE4 (1.23 g). RIC: —. Mint: —. Obverse: —. Reverse: —.

Cat. 76. Inv. no.: 2019.1.1094.75. Emperor: —. Denomination: — (4.46 g). RIC: —. Mint: —. Obverse: —. Reverse: —.

Cat. 77. Inv. no.: 2019.1.1094.82. Emperor: —. Denomination: AE4 (1.04 g). RIC: —. Mint: —. Obverse: —. Reverse: —.

Cat. 78. Inv. no.: 2019.1.1094.99. Emperor: —. Denomination: AE4 (1.06 g). RIC: —. Mint: —. Obverse: —. Reverse: —.

Cat. 79. Inv. no.: 2019.1.1094.100. Emperor: —. Denomination: AE4 (0.67 g). RIC: —. Mint: —. Obverse: —. Reverse: —.

Cat. 80. Inv. no.: 2019.1.1094.73. Emperor: —. Denomination: AE3 (1.63 g). RIC: — (348–354). Mint: Siscia [SIS]. Obverse: —. Reverse: [FEL TEMP-]REPARATIO / Soldier spearing fallen horseman.

Cat. 81. Inv. no.: 2019.1.1094.86. Emperor: —. Denomination: AE4 (0.67 g). RIC: — (330–342). Mint: —. Obverse: —. Reverse: [GLORIA EXERCITVS].

Cat. 82. Inv. no.: 2019.1.1094.88. Emperor: —. Denomination: AE4 (0.77 g). RIC: — (330–342). Mint: —. Obverse: —. Reverse: [GLORIA EXERCITVS].

Cat. 65



Cat. 66



Cat. 67



Cat. 68



Cat. 69



Cat. 70



Cat. 71



Cat. 72



Cat. 73



Cat. 74



Cat. 75



Cat. 76



Cat. 77



Cat. 78



Cat. 79



Cat. 80



Cat. 81



Cat. 82



References

Alföldi, A. 1942: Aquincum városa és a római világbirodalom. In: Szendy, K. (ed.): *Budapest története 1. Budapest az Ókorban 1.* Budapest, 266–352.

Barkóczi, L. 1951: *Brigetio.* Dissertationes Pannonicae II.22. Budapest.

Bartus, D. – Szabó, M. – Olasz, R. – Müller, Á. – Simon, B. – Joháczi, Sz. – Juhász, L. – Négyökrű, T. – Ivancsics, K. – Borhy, L. – Számadó, E. 2025: Excavations in the legionary fortress of Brigetio in 2025. *Dissertationes Archaeologicae* 3.13, 763–779. https://doi.org/10.17204/dissarch.2025.763

Bíróné Sey, K. 1977: *Coins from identified sites of Brigetio and the question of local currency.* Régészeti Füzetek II.18. Budapest.

Bíróné Sey, K. 2002: *Bevezetés a római pénzek gyűjtésébe. Császárkor.* Budapest.

Borhy, L. 2012: Die Legio XI Claudia im pannonischen Brigetio (Komárom/Szőny, Ungarn). In: Kovács, P. – Fehér, B. (eds): *In memoriam Barnabás Lőrincz*. Epigraphia Pannonica 4. Budapest, 23–36.

Borhy, L. 2021: *Brigetio – Egy pannoniai határváros társadalma és kultúrája*. Budapest. https://doi.org/10.36820/szekfoglalo.2021.borhy

Carson, R. A. G. – Kent, J. P. C. 1994: *Roman Imperial Coinage. Part 10*. London.

Dobosi, L. – Borhy, L. 2022: The legionary tilery of Brigetio and the late Roman watchtower at Kurucdomb. The 1934–1935 excavation of István Paulovics at Komárom/Szőny-Kurucdomb with a catalogue of the brick stamps. *Dissertationes Archaeologicae* 3.10, 129–191. https://doi.org/10.17204/dissarch.2022.129

Grant, M. 1996: *Róma császárai*. Budapest.

Hahn, W. 1976: *Fundmünzen der Römischen Zeit in Österreich. Abteilung III Niederösterreich. Band 1. Carnuntum*. Wien.

Hickson-Hahn, F. 2004: The Politics of Thanksgiving. In: Konrad, C. F. (ed.): *Augusto augurio: rerum humanarum et divinarum commentationes in honorem Jerzy Linderski*. Stuttgart, 35–36.

Jónás, E. 1934: Verdejegyek a császárkori római pénzeken. *Az Érem* 7, 13–19.

Juhász, L. 2024: Coin finds from the excavations at the canabae of Brigetio (Szőny-Dunapart) between 2014 and 2017. *Acta Numismatica Hungarica* 2, 15–32.

Lacey, J. 2016: *Great strategic rivalries: From the Classical world to the Cold War*. Oxford.

Lányi, V. 1979: Pannonia pénzforgalma az 1. században (Pannonian currency in the first century A. D.). *Archaeologiai Értesítő* 106, 187–198.

Lőrincz, B. 1975: Zur Erbauung des Legionslagers von Brigetio. *Acta Archaeologica Academiae Scientiarum Hungaricae* 27:3–4, 343–352.

Mattingly, H. – Sydenham, E. A. 1936: *Roman Imperial Coinage IV*. Part I. London.

Roach Smith, C. 1889: *A dictionary of Roman Coins. Republican and Imperial*. London.

Sutherland, C. H. V. – Carson, R. A. G. 1984: *The Roman Imperial Coinage I*. London.

Szabó, M. – Borhy, L. 2015: *Magyarország története az ókorban: Kelták és rómaiak*. Budapest.

Számadó, E. 1992: Brigetio kutatástörténete. *Komárom-Esztergom Megyei Múzeumok Közleményei* 5, 149–173.

Townend, G. B. 1980: Tacitus, Suetonius and the temple of Janus. *Hermes* 108, 233–242.

Vida, I. 2020: Thoughts on the numismatic history of the Pannonian limes. In: Farkas, G. I. – Neményi, R. – Szabó, M. (eds): *The Danube limes in Hungary. Archaeological research conducted in 2015–2020*. Pécs, 47–76. https://doi.org/10.15170/CLIR.2020.03

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 69–78. 10.17204/dissarch.suppl.5.2026.69

Prestigious Roman homes built in Aeduan territory

The example of the peristyle houses at Bibracte (Mont-Beuvray, France)

Charlotte Defer
University Bourgogne-Europe, Lab. ArTeHiS, Dijon, France[1]
charlotte.defer@gmail.com

Received 4 November 2025 | Accepted 13 March 2026 | Published 18 November 2026

Abstract: The peristyle *domus* of Bibracte, built in the Aeduan capital at the beginning of the Augustan era, exemplify the process of Romanisation in the lifestyles and social customs of urban communities following the Gallic War. The Aeduan example is particularly noteworthy for its precocity, especially in the light of its geographical location north of the Alps, far from the Mediterranean sphere of influence. These *domus* are distinguished by their Roman-inspired plans, featuring a vast surface area exceeding 1,000 m^2 and organised around a central courtyard with peristyles. At Bibracte, such *domus* were built on the *oppidum* as early as 30 BC. Their introduction accompanied a veritable Romanisation of both public and private architecture within the town.

Keywords: Bibracte, Roman domestic architecture, *Domus*, Roman building techniques

Introduction

Located in Burgundy, in eastern France, the *oppidum* of Bibracte was the capital of the Aedui (Fig. 1; Fig. 2). Founded in 120 BC on the top of a hill (Mont-Beuvray), it was abandoned around the beginning of the Christian era in favour of Augustodunum, a town founded on the plain around 15 BC. Bibracte's town planning was characterised by an initial phase of timber-framed construction, which changed just after the Roman conquest of Gaul around 50 BC, with the construction of masonry buildings based on plans and techniques imported directly from Italy. This real architectural transition is particularly well illustrated in domestic architecture, with the construction of several vast *domus*, aristocratic urban houses that enabled the Aeduan elite to show off their new Roman lifestyle. This phenomenon is particularly remarkable for its precocity, as the construction of these Roman houses began as early as the Augustan period, especially considering that the region, unlike Gallia Narbonensis, was far from the main centres of Italian influence.

Plans

Having established the exceptional precocity of Roman-style domestic constructions in Bibracte, we now turn to the internal layouts of these houses to examine how Roman domestic designs were implemented locally. Thirteen *domus* plans are known at Bibracte, from excavations in the 19th

1 PhD Student under the direction of Prof. Pierre Nouvel (University Bourgogne-Europe, Dijon, France) and Benjamin Clément (University Marie et Louis Pasteur, Besançon, France).

✉ Corresponding author

century and from modern excavations since 1984. The documentation of these houses, therefore, varies considerably from one excavation to another. From the 13 *domus* built from the beginning of the Augustan era, eight were prestigious dwellings of over 900 m² and five smaller houses organised according to a modular plan. The floor plans of these houses can be divided into several categories.[2]



Fig. 1. Map of Aeduan territory in France (CAD A. Meunier, Bibracte).

The first category concerns houses with a developed plan: two buildings have a plan that is very similar to the Italic houses: Domus PC1 in phase 5[3] and Domus des Grandes Forges[4] (Fig. 3.a–b). There are several features in common with Vitruvius' recommendations and the Pompeian *domus*, especially in Domus PC1, with the development of the rooms around two successive courtyards, a cruciform atrium with *alae*, and an axiality from the entrance. In Domus PC1, the axiality of the plan is expressed through the alignment of the entrance, *atrium*, *tablinum*, perpendicular peristyle, and reception area. However, these two buildings still leave some questions unanswered: Domus PC1

2 These categories were initiated by Meylan 2005 and Luginbühl 2019.

3 Paunier – Luginbühl 2004.

4 Timár *et al.* 2006; Szabó *et al.* 2019.

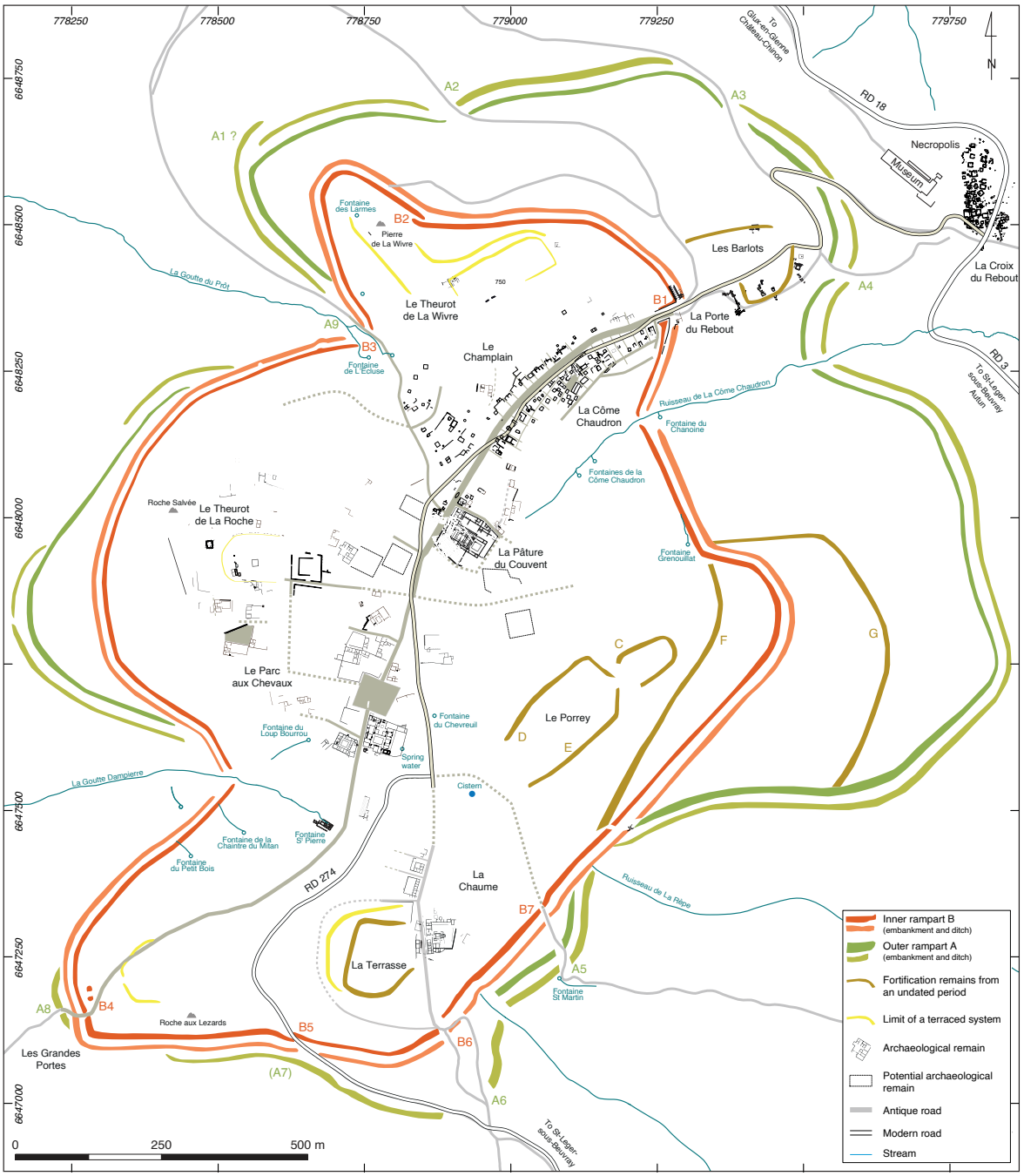


Fig. 2. Archaeological map of Bibracte (CAD A. Meunier, Bibracte).

is dated to the beginning of the Tiberian period, at a time when the *oppidum* already began to be abandoned. It therefore seems rather strange to build this kind of urban palace of over 3,000 m² in an almost empty town. As for the Domus des Grandes Forges, it was built on a former public building, which necessarily raises the question of its private status.

The second category is peristyle houses: the floor plan was organised around a single courtyard, which is a peristyle, and these houses had a vast surface area of 900 to 1,000 m² (Fig. 3.c–d). This peristyle floor plan can be found in southern Gaul from the middle of the 1st century,[5] so the construction of these peristyle houses at Bibracte, at the beginning of the Augustan era was very early

5 Gros 2017, 149.



Fig. 3. Plans of several *domus* at Bibracte (CAD C. Defer).

given its location north of the Alps. There are a few early examples in southern Gaul, for example the first phase of the Maison au Dauphin in Vaison,[6] and the Domus de la Sioutat in Roquelaure[7] dating from the Augustan era. The peristyle plan is quite rare in *domus* in Italy (with a few later examples in Ostia, such as the Domus Fulminata),[8] where the *domus* include an *atrium* and a peristyle, or just an *atrium* if there is a single courtyard.

6 Goudineau 1979.

7 Gardes *et al.* 2013.

8 Van der Meer – Stoger 2005.

The third category is houses with an *atrium*, and there is just one example at Bibracte: Domus PC33,[9] also dating from the Augustan period. It covers an area of 750 m² (Fig. 3.e).

The final category includes small modular houses with a front courtyard. These houses are built on a very uniform plot size of around 200 m², with a vast courtyard occupying two-thirds of the surface area (Fig. 3.f). The living area is at the back of the courtyard. This type of floor plan is comparable to Pompeian houses of type 4 as defined by Salvatore Nappo in 1997,[10] and can also be found in Gallia Narbonensis: houses from the Saint-Florent excavation in Orange[11] as well as in the context of Roman colonies. While it seems fairly obvious that the first three categories were inhabited by families belonging to the *oppidum*'s aristocracy, François Meylan proposed in his thesis that this last category of dwellings belonged to a wealthy bourgeoisie.[12]

There are several differences compared to the Italian model, indicating that these plans were adapted to some extent. In *domus* with a developed layout like Domus PC1 (Fig. 3.a), the *atrium* appears to have lost much of its original function. Rather than serving as a central core with many rooms opening onto it—as is typical in Italian houses—it primarily acts as a passageway to the peristyle, with few rooms connected directly to it. Additionally, the *atrium* opens onto several corridors, some leading to the rear of the two *alae*, a layout not found in Pompeian houses. In this context, the *atrium* seems to have taken a more symbolic role, serving as a marker of social status that the Aeduan elite sought to emulate: since the *atrium* was a significant space in Italian elite houses, the Aeduan elite reproduced it in their own homes. This means that *atria* may have been used in a slightly different way, as can be seen from the small number of *atrium* in the Bibracte *domus*: the peristyle was often preferred. Several reasons can be put forward to explain this change: it could be a question of the evolutionary perspective of the *domus* (we have already mentioned Ostia, which includes *domus* with peristyle from the 2nd century AD), since we have seen in domestic architecture in Italy an increase of the peristyle importance and the spaces associated with this type of courtyard since its introduction in the 2nd century BC.[13] There is also the question of climate: the *atrium* is well-suited to mild, Mediterranean climates, but this wide opening onto the interior of the house seems inadequate for colder climates. Finally, the social use of the *atrium* was probably less relevant in Aeduan society (even though clientelism was in use in their society according to Caesar).[14] The *atrium* did not have the same traditional symbolism among the Aedui as it did among the Romans, who had a particular attachment to this room due to its Etruscan ancestry,[15] unlike the peristyle which was of Greek origin. This preference for the peristyle over the *atrium* can be found at other Gallic sites besides Bibracte (Vienne and Narbonne for example).[16]

There were also a few differences in terms of access and internal circulation. Unlike the courtyards of Campanian houses, which are largely open to the street, this is not the case with Bibracte houses: there is a system of corridors and transitional spaces at Domus PC1 (Fig. 3.a), and several houses do not have direct access from the entrance to the courtyard: for example at Domus PC2 (Fig. 3.c), or at the Domus des Grandes Forges (Fig. 3.b): the peristyle with shops makes the transition from the street. This also shows that social uses have evolved to some extent. The use of numerous corridors at Domus PC1 perhaps implies an accentuated social divide within the domestic space: they enable

9 Déchelette 1904, 44–56; Meylan 2005, Vol. 3, 175–180.

10 Nappo 1997; Luginbühl 2019, 434.

11 Mignon 1996; Luginbühl 2019, 434.

12 Meylan 2005, Vol. 1, 74–91.

13 Gros 2017, 45.

14 Baray 2014.

15 Jolivet 2011, 181.

16 Gros 2017, 149.

people to go directly from one space to another without having to cross several rooms, so access to certain areas may have been very restricted. In the Roman *domus*, this notion of controlled access to different spaces was already present: for example, the position of the *tablinum* between the *atrium* and the peristyle allowed the *dominus* to watch over the access to the peristyle.[17] This consideration must have existed in Aeduan society, which could explain the rapid adoption of *domus* on Beuvray: the preoccupation with separating spaces and restricting access to certain areas is already present, and the layout of the *domus* was well suited to this.

Materials and building techniques

As with the plans, the construction methods employed in the *domus* at Bibracte were directly derived from Italic building traditions. These Roman-style houses were built using masonry construction techniques, with materials extracted locally:[18] the builders mainly used rhyolite, granite and microgranite from Mont Beuvray or the St Léger quarries located around ten kilometres from the site. Limestone was also used, mainly to make lime for mortars, but also occasionally as an architectural block. As the Mont Beuvray region is essentially granitic, this limestone comes from quarries located around fifty kilometres away, on the Châlon plateau.[19]

These materials were processed using Italic techniques. *Opus incertum* made with small blocks of rhyolite is the most common facing technique (Fig. 4.a). Some prestigious structures were built with *opus quadratum* made with granite blocks: the naviform basin in the town centre,[20] the outdoor basin in Domus PC1.[21] Mixed techniques were also used, combining *opus incertum* and *opus quadratum* for quoins, thresholds, door jambs, etc (Fig. 4.a–b). This mixed use is also found in Italy, including the Pompeian region. On Mont Beuvray, rhyolite is found in abundance, but it is very brittle and poorly workable. Builders therefore used granite to make dressed blocks.

Terracotta began to be used for roofing at Bibracte shortly after the Roman conquest. Based on the study of inclusions (granite sand), the tiles appear to have been produced on site, although the workshops have not been identified.[22] Tiles were also occa-



Fig. 4. Masonry made with *opus incertum* technique with small blocks of rhyolite in domus PC 2 (a) and *Opus quadratum* technique with granite blocks used for a quoin in domus PC2 (b) (photo by N. Scavone, University Bourgogne-Europe).

17 Jolivet 2011, 265.
18 Delencre – Garcia 2012.
19 Delencre – Garcia 2012, 368.
20 Almagro-Gorbea – Gran-Aymerich 1990; Borau 2020, 75–79.
21 Paunier – Luginbühl 2004, 117.
22 Delencre 2017, 121.



Fig. 5. Two uses of terracotta in the architecture at Bibracte. a – tile concrete in domus PC2, 2 – column brick from domus PC1 (photos by C. Defer and A. Maillier, Bibracte).

sionally used in the masonry to level the courses, as seen in Domus PC1 and PC2. Brick was also used on the site, especially for hypocausts and columns (Fig. 5.b). Most columns are made of rendered brick, but stone elements have been found as well in the first masonry building known at Bibracte, in the monumental centre. These consist of a limestone base and shafts made of stacked quarter-round and sixth-round blocks of granite and sandstone.[23]

The floor coverings in the *domus* of Bibracte also reflect Roman traditions: *opus spicatum*, various types of concrete floors, and mosaics are all present. It is important to note that the highly acidic sediments of Mt Beuvray have severely affected the preservation of these floors and mosaics. Most of the floors uncovered consist of concrete layers built upon a rubble stone foundation. These layers typically comprise lime mortar mixed with graded gravel or terracotta fragments (Fig. 5.a). Some tile concrete floors feature decorative inlays of shale and limestone *tesserae*.[24] This decorative technique is common in the Narbonensis region,[25] seen at sites such as Vieille-Toulouse, Serre-de-Brienne, and the Ermitage *oppidum*. Similar to the Gallia Narbonensis region, these types of floor coverings at Bibracte are not consistently associated with water features.

From a wooden town to a stone town?

The introduction of masonry techniques at Bibracte occurred without a real transitional phase concerning housing. These techniques were already mastered at the time of their introduction into the *oppidum*, and the nature of locally available materials influenced the choice of construction methods. This mastery suggests the involvement of Italian teams. Masonry construction may also have benefited from the expertise of Aeduan builders who had used dry stone before this period, in fortifications for example.

The introduction of masonry houses took place around the beginning of the Augustan period, implying a gap of about twenty years between the construction of the monumental town centre[26] and the introduction of masonry in residential contexts. Prior to this, houses were timber-framed with earthen floors, reflecting a local architectural tradition,[27] remains of which have been found beneath the masonry *domus*. Before the introduction of Roman masonry techniques at Bibracte, several

23 Delencre *et al.* 2013, 296–301.

24 Verriez – Martini 2017, 291.

25 Vassal 2006, 79; Olmer 2019; Darles *et al.* 2019.

26 Szabó *et al.* 2018, 20.

27 Fochesato 2020.

houses already show evidence of Mediterranean influence: they follow plans based on the Italic tradition and they were built using the Roman timber-framing technique known as *opus craticium*. We have two occurrences of such buildings, predating the *domus* (Fig. 3.d).[28] They remain poorly understood, and their limited number makes it difficult to identify a distinct initial phase of Italic timber-frame construction preceding the introduction of masonry houses.

The skills of Aeduan builders, already familiar with timber-framed construction, likely facilitated the adoption of the Roman *opus craticium*. Some buildings with Italic-style floor plans in the *oppidum* also combined masonry with timber framing—for example at PC14, where the annex of a masonry dwelling was built with a timber frame set on masonry foundation walls.[29] Timber-framed buildings did not disappear from the *oppidum* with the spread of masonry housing: the technique continued to be used not only for houses associated with lower social classes, but also for prestigious constructions, such as the large building at PC15.[30] This vast structure, built with monumental posts, was likely a public building.

Conclusion

In conclusion, the adoption of masonry housing at Bibracte began in the early Augustan period—that is, around 20 years after the construction of the monumental town centre, which marked the introduction of stone-built architecture at the *oppidum*. This transfer of architectural plans and techniques seems to have taken place considerably earlier than in most of Gaul north of the Alps, where signs of Romanisation in urban architecture only became evident in the early 1st century AD. This early development can be explained by the strong alliance forged between the Aedui and Rome well before the Roman conquest, as well as by the desire of the elites living in these prestigious residences to demonstrate that they were worthy of Rome's trust by adopting the lifestyle of the Roman aristocracy—a way of securing their status in a political landscape profoundly reshaped by the Gallic War.

References

Almagro-Gorbea, M. – Gran-Aymerich, J. 1990: Le bassin monumental du mont Beuvray (Bibracte). *Monuments et mémoires de la Fondation Eugène Piot* 71, 21–41. https://doi.org/10.3406/piot.1990.1615

Baray, L. 2014: L'importance du système de clientèle dans le mode de fonctionnement de l'appareil politique des sociétés celtiques du milieu du I er siècle a.C. In: Alberti, G. – Féliu, C. – Pierrevelcin, G. (eds): *Transalpinare: mélanges offerts à Anne-Marie Adam*. Bordeaux, 157–170.

Borau, L. 2020: La gestion de l'eau à Bibracte (Saône-et-Loire), avant et après la Conquête romaine. *Gallia* 77:2, 57–96. https://doi.org/10.4000/gallia.5192

Darles, C. – Gardes, P. – Schaad, D. – Vidal, M. – Viers, C. 2019: Construire comme à Rome dans le sud-ouest de la Gaule avant le principat. In: Guichard, V. – Vaginay, M. (eds): *Les modèles italiens dans l'architecture des IIe et Ier siècles avant notre ère en Gaule et dans les régions voisines. Actes du colloque de Toulouse, 2-4 octobre 2013*. Bibracte 30. Glux-en-Glenne, 289–313.

Déchelette, J. 1904: *Les fouilles du Mont Beuvray de 1897 à 1901*. Autun.

Defer, C. 2021: La domus PC2. Intervention 953. In: Guichard, V. (ed.): *Rapport annuel 2020 du programme quadriennal de recherche 2017–2020 sur le Mont-Beuvray*. Glux-en-Glenne, 145–166.

Delencre, F. 2017: *Terres et pierres pour matières de cultures: l'apparition et la diffusion de nouveaux modes et matériaux de construction dans le Nord-Est de la Gaule romaine (IIème siècle avant J.-C. - IIème siècle après J.-C.)*. PhD Dissertation, Université de Bourgogne-Franche-Comté, Dijon.

28 PC2 Phase 3: Defer 2021; PC1 Maison à l'opus spicatum: Paunier – Luginbühl 2004, 79–99.

29 Nouvel *et al.* 2024.

30 Guichard *et al.* 2018, 180–187.

Delencre, F. – Garcia, J.-P. 2012: Méthodologie et enjeux de l'analyse pétrographique des matériaux de construction et de couverture romains. Un cas d'étude : les matériaux de construction en terre cuite de PC 1. In: Guichard, V. (ed.): *Programme de recherches sur le Mont Beuvray. Rapport annuel 2012.* Glux-en-Glenne, 365–378.

Delencre, F. – Garcia, J.-P. – Landois, R. – Soudry, A. – Boyer, F. 2013: Les matériaux de construction de la romanisation. In: Guichard, V. (ed.): *Rapport intermédiaire 2013 du programme quadriennal de recherche 2013-2016 sur le Mont Beuvray.* Glux-en-Glenne, 293–318.

Fochesato, A. 2020: *Aux origines de la ville européenne. Technologie, typologie et fonction de l'architecture en bois dans l'habitat urbain des oppida celtiques (IIe-Ier s. av. J.-C.). Le cas de Bibracte, mont Beuvray (France).* PhD Dissertation, Université de Bourgogne-Franche-Comté, Dijon, Université libre de Bruxelles, Bruxelles.

Gardes, P. – Coiquaud, A. – Dardenay, A. – Denysiak, A. – Lemaire, A. – Badie, A. – Beau, P.-E. – Benquet, L. – Callède, F. – Callegarin, L. – Le Dreff, T. – Passelac, M. – Soler, M. – Vidal, M. 2013: Les maisons romaines précoces de l'oppidum de la Sioutat à Roquelaure (Gers): Bilan des recherches récentes. *Gallia* 70:2, 25–57. https://doi.org/10.4000/129hn

Goudineau, C. 1979: *Les fouilles de la Maison au Dauphin: recherches sur la romanisation de Vaison-la-Romaine.* Paris.

Gros, P. 2017: *L'architecture romaine: du début du IIIe siècle av. J.-C. à la fin du Haut-Empire. 2. Maisons, palais, villas et tombeaux.* Les manuels d'art et d'archéologie antiques. Paris.

Guichard, V. – Meunier, A. – Paris, P. 2018: Chronique des recherches sur le Mont Beuvray: 2013-2016. *Revue archéologique de l'Est* 67.190, 151–211. https://doi.org/10.4000/jgib

Jolivet, V. 2011: *Tristes portiques: sur le plan canonique de la maison étrusque et romaine des origines au principat d'Auguste: VIe-Ier siècles av. J.-C.* Bibliothèque des Écoles françaises d'Athènes et de Rome. Rome.

Luginbühl, T. 2019: Les maisons de tradition méditerranéenne de Bibracte : techniques et matériaux, types architecturaux, organisation spatiale et fonctions. In: Guichard, V. – Vaginay, M. (eds): *Les modèles italiens dans l'architecture des IIe et Ier siècles avant notre ère en Gaule et dans les régions voisines. Actes du colloque de Toulouse, 2–4 octobre 2013.* Bibracte 30. Glux-en-Glenne, 421–440.

Meylan, F. 2005: *Les influences romaines dans l'urbanisme et l'architecture de l'oppidum de Bibracte (Mont Beuvray).* PhD Dissertation, Université de Bourgogne, Dijon, Université de Lausanne, Lausanne.

Mignon, J.-M. 1996: Approche morphologique et fonctionnelle de la maison: le lotissement augustéen de Saint-Florent à Orange. In: Borgard, P. (ed.): *La maison urbaine d'époque romaine en Gaule narbonnaise et dans les provinces voisines. Actes du colloque d'Avignon, 11–13 novembre 1994.* Documents d'archéologie vauclusienne. Avignon, 218–233.

Nappo, S. 1997: The urban transformation at Pompeii in the late third and early second centuries B.C. In: Laurence, R. – Wallace-Hadrill, A. (eds): *Domestic space in the Roman world: Pompeii and beyond.* Journal of Roman Archaeology Suppl. Series 22. Portsmouth, 91–120.

Nouvel, P. – Barral, P. – Clément, B. – Joly, M. – Thivet, M. 2024: Exploration de la frange occidentale de la terrasse PC14. Intervention 1010. In: Guichard, V. (ed.): *Rapport intermédiaire 2023 du programme de recherche archéologique 2022–2025 sur le Mont-Beuvray.* Glux-en-Glenne, 185–257.

Olmer, F. 2019: Les modèles italiques dans l'architecture des IIe et Ier siècles avant notre ère en Languedoc oriental et dans son arrière-pays. In: Guichard, V. – Vaginay, M. (eds): *Les modèles italiens dans l'architecture des IIe et Ier siècles avant notre ère en Gaule et dans les régions voisines. Actes du colloque de Toulouse, 2-4 octobre 2013.* Bibracte 30. Glux-en-Glenne, 253–273.

Paunier, D. – Luginbühl, T. 2004: *Bibracte: le site de la maison 1 du Parc aux Chevaux, PC1: des origines de l'oppidum au règne de Tibère.* Bibracte 8. Glux-en-Glenne.

Szabó, M. – Timár, L. – Szabó, D. 2018: Bibracte, the monumental complex on the Pâture du Couvent. In: Bohry, L. – Dévai, K. – Tankó, K. (eds): *Celto - Gallo - Roman. Studies of the MTA–ELTE Research Group for Interdisciplinary Archaeology.* Paris, 11–25.

Szabó, M. – Szabó, D. – Timár, L. 2019: La basilique de Bibracte et son environnement. In: Guichard, V. – Vaginay, M. (eds): *Les modèles italiens dans l'architecture des IIe et Ier siècles avant notre ère en Gaule et dans les régions voisines. Actes du colloque de Toulouse, 2–4 octobre 2013.* Bibracte 30. Glux-en-Glenne, 389–406.

Timár, L. – Szabó, M. – Czajlik, Z. 2006: La domus du dernier état de l'îlot des Grandes Forges. In: Guillaumet, J.-P. – Szabó, M. (eds): *Études sur Bibracte – 1.* Bibracte 10. Glux-en-Glenne, 13–46.

Van der Meer, B. – Stoger, H. 2005: Domus Fulminata, The House of the Thunderbolt at Ostia (III, vii, 3-5). *BABesch* 80, 91–111. https://doi.org/10.2143/BAB.80.0.630020

Vassal, V. 2006: *Les pavements d'opus signinum. Technique, décor, fonction architecturale.* British Archaeological Reports – International Series 1472. Oxford. https://doi.org/10.30861/9781841719085

Verriez, Q. – Martini, C. 2017: La domus PC2. Intervention 863. In: Guichard, V. (ed): *Rapport intermédiaire 2017 du programme quadriennal de recherche 2017–2020 sur le Mont-Beuvray.* Glux-en-Glenne, 281–303.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 79–92. 10.17204/dissarch.suppl.5.2026.79

Trends in the use of glass vessels and its ritual connotations at the Iseum Savariense

Kata Dévai
HUN-REN–ELTE Research Group for Interdisciplinary Archaeology, Hungarian Research Network – Eötvös Loránd University, Budapest, Hungary
kata.devai@gmail.com

Received 9 January 2026 | Accepted 23 March 2026 | Published 18 November 2026

Abstract: The glass assemblage unearthed from the precinct of the Iseum Savariense represents one of the most extensive and chronologically cohesive corpora of Roman ritual glassware in Pannonia. More than 1,500 fragments, the majority belonging to vessels, were recovered during the recent excavations. Typological and technological analyses demonstrate that over two-thirds of the identifiable vessels—primarily ribbed bowls, cups, and beakers—can be dated to the sanctuary's earliest phases, corresponding to the late Flavian and early Trajanic periods. The predominance of blue-green cast and early blown glass, together with the presence of imported Italian forms, strongly suggests that this material arrived at the sanctuary at the time of its foundation or shortly thereafter.
The early horizon of the assemblage coincides with the monumental construction of the Iseum, implying that these vessels were intentionally deposited as part of cultic activities associated with the dedication of the sanctuary. The functional composition of this find material—dominated by open forms used for pouring, libation, and ritual consumption—differs markedly from that of contemporary settlement assemblages, underscoring the distinctive use of glass artefacts in sacred contexts. The find material thus provides crucial evidence for the introduction and ritual integration of fine Roman glass into the religious practice of early Imperial Pannonia, offering new insights into the social and symbolic roles of glass during the formative phase of the Isis cult in Savaria.

Keywords: glass vessels, Pannonia, Roman glass, ritual glass use, glass beads, Iseum Savariense, cultic practice in the early Roman Imperial period

Introduction

The sanctuary of Isis in the Roman province of Pannonia is the only Roman period temple complex in the province with ground-plan surveyed in detail, and indeed the sole fully excavated Iseum in the Danubian provinces.[1] Moreover, the existence of such a large temple precinct *(temenos)*—especially one so thoroughly documented—which remained in use uninterrupted for several centuries in the Roman Empire counts as a rare phenomenon.

Romanised urban life commenced at least a generation earlier than in other regions of the province in the *colonia* of Savaria (modern-day Szombathely in Hungary), the first settlement along the Amber Road in Pannonia to be granted the status of *colonia* under the reign of Emperor Claudius. The earliest evidence of an Isis cult in Savaria—an altar dedicated by Tiberius Barbius Valens (commonly referred to as the 'Barbius altar'), discovered on the northern flank of the Iseum precinct—dates to the late Flavian era. This dedicator, a *duumvir* of the city, indicates the presence of a significant local Isis community.

1 Gabler 2022, 13.

✉ Corresponding author

Major excavations were conducted in the imposing sanctuary complex, extending to approximately 3,000 m², between 1955 and 1961. This campaign was followed by control excavations led by Ottó Sosztarits (2001–2010), aimed at clarifying the construction phases of the sanctuary, assessing the reliability of earlier reconstructions, and publishing newly recovered finds. In its heyday, the Iseum of Savaria likely ranked among the most remarkable cult-buildings not only in Pannonia but across the broader Danube region (Fig. 1).[2]

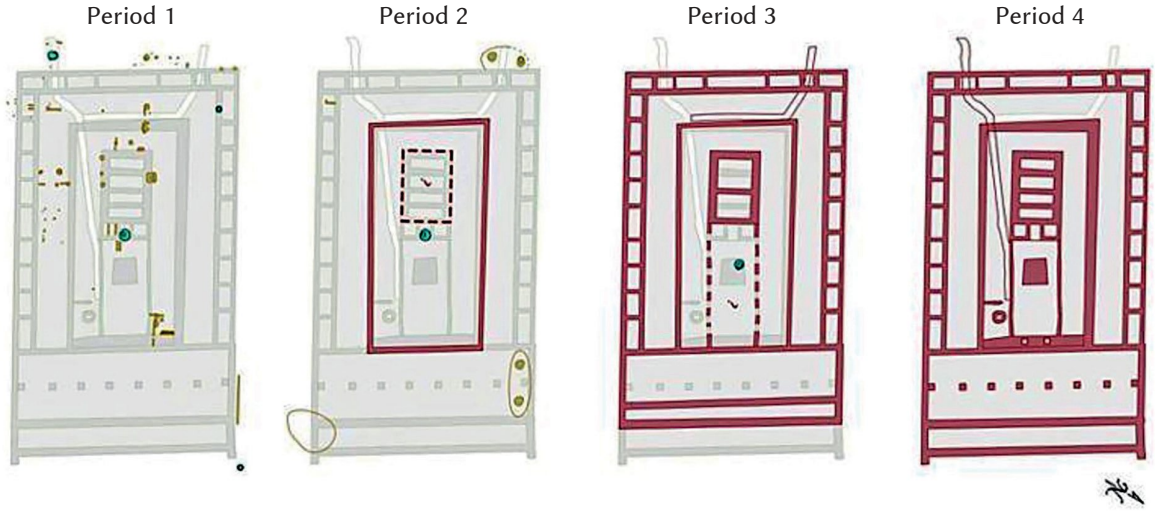


Fig. 1. Ground plan of the Iseum Savariense (after Bíró – Sosztarits 2023).

The earliest phase of the Iseum Savariense dates to the Flavian period (Fig. 1), when the first sanctuary—of which only the precinct wall can be identified today—was constructed in a rectangular area of c. 42 × 21 m. At that time, the wider zone surrounding the sanctuary was already urbanised, housing workshops engaged in various crafts.[3]

At the turn of the 1st and 2nd centuries AD, extensive rebuilding transformed the complex: the podium temple, flanked on three sides by rows of *cellae* and framed by a columned *porticus*, was erected within an enlarged *temenos* of ca. 74 × 43 m (Fig. 1). The Severan period witnessed the last major phase of monumentalisation, when the existing building complex was expanded with an antechamber and a new marble façade with a sculpted frieze, and the temple underwent comprehensive decorative refurbishment.

Despite minor modifications, the sanctuary retained its architectural coherence for more than a century. Its systematic dismantling in the early 4th century AD and the subsequent reuse of the area as a burial ground mark the final stage of the site's occupation (Fig. 1).[4]

The glass finds

More than 1,500 glass fragments were recovered from the area of the Isis sanctuary of Savaria during excavations in 2001–2010. Although quantitatively modest in relation to the size of the investigated area, this assemblage is of particular significance: most fragments can be dated to the earliest phase of the sanctuary, offering a rare insight into the ritual use of glass in a cultic context. Most pieces belong to vessels, while a smaller number of finds could be identified as costume accessories or window glass.

2 Bíró – Sosztarits 2023, 38–39.
3 Bíró – Sosztarits 2023, 38–39.
4 Bíró – Sosztarits 2023, 38–39.

The study of glass finds from Roman sanctuaries remains a markedly underexplored field. Whereas vessel glass from settlements, *villae*, or military sites has been studied widely, such finds from sanctuary precincts are published only sporadically and often treated as secondary to architectural remains or sculptural decoration. Yet the functional and symbolic use of glass in such a context differs fundamentally from that in everyday life. In ritual settings, glass vessels were not merely utilitarian objects but part of the material expression of cultic practice, and their deposition, fragmentation, and restricted movement within the *temenos* reflected specific ritual behaviours.

The glass record of the Iseum Savariense represents one of the few systematically documented assemblages from a Roman sanctuary in the Danubian provinces. Its composition—dominated by tableware such as bowls, beakers, and ribbed cups—suggests deliberate selection for ritual consumption rather than everyday use. The glass finds of the Iseum thus contribute not only to the reconstruction of the cultic practices adopted in Pannonian sanctuaries but also to the broader understanding of the symbolic and functional dimensions of Roman glass in sacred contexts. In the following, a selection of noteworthy types and their quantitative distribution is discussed, accompanied by a brief description. This study does not address several minor glass finds and glass accessories recovered from the sanctuary, as its scope is limited to examining the patterns of glass vessel use and their correlation with the building phases of the Isis sanctuary at Savaria.

Ribbed bowls

Small cast ribbed bowls constitute the most characteristic and diagnostically most significant vessel type among the glass finds from the Isis sanctuary at Savaria (Fig. 2). A total of 75 fragments were recovered during the recent excavations—an exceptionally high number within the Pannonian corpus, where such bowls are generally rare.[5] Typologically, the specimens correspond to Isings' Form 3a–b, the so-called 'pillar-moulded bowls' (Rütti AR 2; Goethert-Polaschek Trier 3).[6]

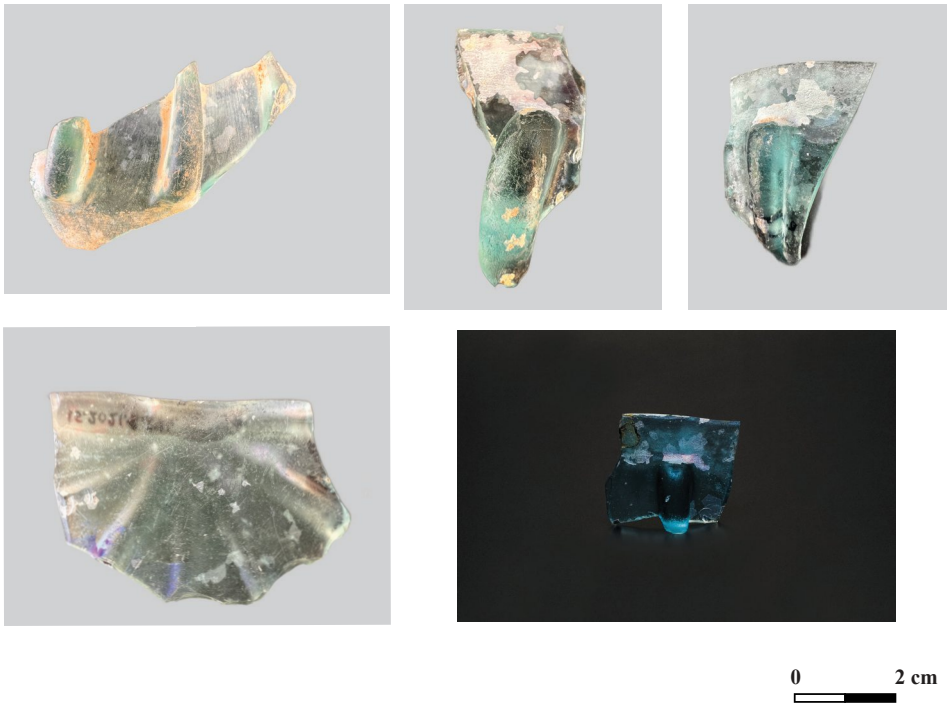


Fig. 2. Ribbed bowl fragments (Inv. nos R.2009.2.625, R.2009.2.421, R.2009.2.1243, IS.2021.3.274, R.2009.2.8195).

5 Barkóczi 1988, 61, Cat. 31.

6 Isings 1957, 17–18; Rütti 1991, 15–31; Goethert-Polaschek 1977, 16–17.

The fragments from the Iseum Savariense are made of blue-green and natural green glass, occasionally showing abrasion bands and traces of interior polishing. Rim diameters range from 10–15 cm, and heights from 5–8 cm. The ribs, irregular in form and spacing, often extend to the base, a feature characteristic of the youngest variants.[7] Morphological traits, together with fabric and hue of glass, firmly place the assemblage within the Flavian period, that is, the closing decades of the 1st century AD.

Typological and technological parallels point to northern Italian workshops, whose products were widespread in the western provinces.[8] Typical strongly coloured eastern Mediterranean varieties of the previous phases are absent; instead, the glass record of the Iseum represents the final generation of monochrome cast glass vessels before the emergence of blown glass. As shown by their high number, ribbed bowls were immensely popular throughout the empire and were probably produced in several workshops—it seems most unlikely that all known pieces were made by a single workshop.[9]

A total of 75 ribbed bowl fragments were recovered from the Iseum (Fig. 2). Since the production of this vessel type in the western provinces did not continue beyond the Flavian period, the assemblage must date either to the years preceding the construction of the sanctuary or to its foundation in Period 2 at the latest. It is conceivable that the sanctuary's founders imported these bowls to Savaria as components of a more costly and luxurious tableware set, possibly manufactured in a northern Italian workshop. The quantity of fragments is exceptionally high, even if the total number of individual bowls they represent cannot be established.

The unusually high number of ribbed bowl fragments within the Iseum Savariense suggests that they formed part of a luxury vessel set associated with the sanctuary's foundation. Their deposition within the *temenos* may indicate ritual consumption or libation, possibly linked to initiation ceremonies central to the Isis cult. Although their precise function remains uncertain, the bowls' size and refined execution indicate ceremonial rather than domestic use.

The ribbed bowls from the Iseum thus not only serve as a chronological indicator for the sanctuary's earliest construction phase but also represent a rarely documented instance of ritual glass use in a Pannonian cultic context. Their study provides new evidence for the persistence of cast glass traditions and the symbolic role of glass vessels within the sacred sphere of early Imperial Pannonia.

Mosaic bowls

Mosaic glass vessels, produced from the Hellenistic period onward, represent one of the most elaborate cast-glass traditions of the Roman world.[10] Their decorative patterns were composed of monochrome or polychrome canes fused onto a pre-cast blank, creating distinctive designs such as strip mosaic, reticella, or millefiori motifs. These wares enjoyed widespread popularity across the Mediterranean during the 1st century AD, although their use persisted locally into the 3rd century AD.

In Pannonia, mosaic vessels are rare finds, known mainly from Brigetio,[11] Vetus Salina,[12] Győr,[13] Aquincum[14] and Intercisa.[15] Their occurrence in cultic contexts is especially uncommon.

7 Israeli 2003, 76.

8 Fünfschilling 2015, 104–106; Fontaine 2014, 359–360.

9 Țârlea – Cliante 2021, 232.

10 Stern – Schlick-Nolte 1994, 69–71; Price – Cottam 1998, 11.

11 Barkóczi 1988, 51, Cat. 1.

12 Bónis 1954, 163, Taf. 42.12.

13 Lovas 1931, 11.

14 Uzsonyi *et al.* 2011, 2389–2392.

15 Dévai 2024b, 46, Cat. 1–4.

At the *Iseum Savariense*, only two small fragments of mosaic glass were recovered in marked contrast to the large number of ribbed bowl fragments from the same context. A translucent greenish glass rim fragment decorated with fine opaque yellow dots and spiral tendrils formed from sliced and twisted canes (Fig. 3) has stylistically close Flavian–2nd-century parallels from Augusta Raurica.[16] The second fragment preserves an opaque dark-blue base with a white strip.

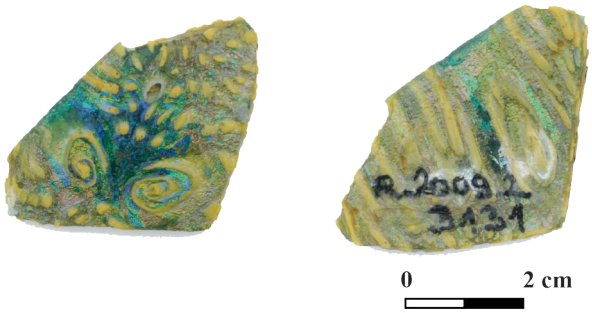


Fig. 3. Fragment of mosaic bowl (Inv. no. R.2009.2.3131).

The small number and fragmentary state of mosaic glass artefacts from the Iseum suggest that these vessels were imported luxury items, likely integrated into the cult assemblage during the foundation phase of the sanctuary. Their presence, though limited, provides valuable evidence of the selective use of high-quality cast glass in early Imperial ritual contexts in Pannonia, complementing the larger corpus of ribbed bowls from the site.

Cups and beakers

Cups and beakers form the most numerous and functionally coherent group among the glass vessel finds of the Iseum Savariense. Although several fragments are too small for a complete reconstruction, diagnostic rims and bases allow for the recognition of a number of well-defined types ranging from the early to the late Roman period. The proportion of diagnostic fragments is unusually high.

Following the introduction of glassblowing in the late 1st century BC, the two techniques (casting and blowing) coexisted for some decades, until the latter became dominant by the mid-1st century AD. Early Roman glassworkers still favoured strongly coloured material, often dark blue or green, while later examples show the characteristic pale, colourless hues typical of recycled glass.[17] The colour and form of the fragments from the Iseum Savariense confirm this general evolution; the earliest pieces were likely Italian imports, while the later ones were probably produced by provincial workshops.

Early dark blue vessels

A total of 16 dark-blue glass fragments of vessels representing early 1st-century forms have been identified in the record (Fig. 4). Two main morphological variants could be identified. The first comprises cast cups with a wide mouth, a straight or slightly flaring wall, a fire-rounded rim, and a small base ring, corresponding to Isings' Form 3,[18] a type frequently appearing in Italian contexts between c. AD 40 and 80. Close parallels—with similar proportions and thick walls—are known from Magdalensberg, Cyprus, and Delos.[19]

The second variant includes free-blown beakers with a tall wall, a solid base, and a horizontal fire-rounded rim, classified as Isings' Form 34 or Rütti's Form AR 37 8 (Fig. 4).[20] These vessels are among the earliest free-blown drinking glasses in the West, with parallels from Vindonissa, Augusta

16 Fünfschilling 2015, Vol. 1, 64–65.

17 Fünfschilling 2015, Vol. 2, 47–48.

18 Isings 1957, 48–49.

19 Stern 2001, 86; Scatozza Höricht 1987, 37, No. 52.

20 Rütti 1991, Vol. 2, 55; Fünfschilling 2015, Vol. 2, 479.

Raurica, and Aquileia. This beaker type was likewise produced in translucent dark-blue glass—a variant a few fragments from the Iseum could be assigned to. These tall, thin-walled vessels reach their maximum diameter at the rim, while their slightly curved sides taper down to a flat, thickened base. They are frequently embellished with wheel-cut lines or bands below the rim and on the body, executed as either narrow or broader zones (occasionally only 0.2–0.3 cm wide). Beakers decorated with wheel-cut bands were used throughout both halves of the Empire, although they seem to have enjoyed greater popularity in the West. Eastern parallels are known from Samothrace and Corinth,[21] while further examples have been reported from Aquileia and Locarno in northern Italy,[22] as well as from Magdalensberg and Vindonissa, from contexts dated from the Claudian period to the end of the Flavian era.[23] The characteristic 1st-century AD specimens were made from glass of an intense blue colour; while the form remained popular for a long time, later variants were made predominantly from decolourised or natural green glass. The beakers from the Iseum Savariense are small and thin-walled; their dense blue matrix suggests an early, pre-Flavian dating.

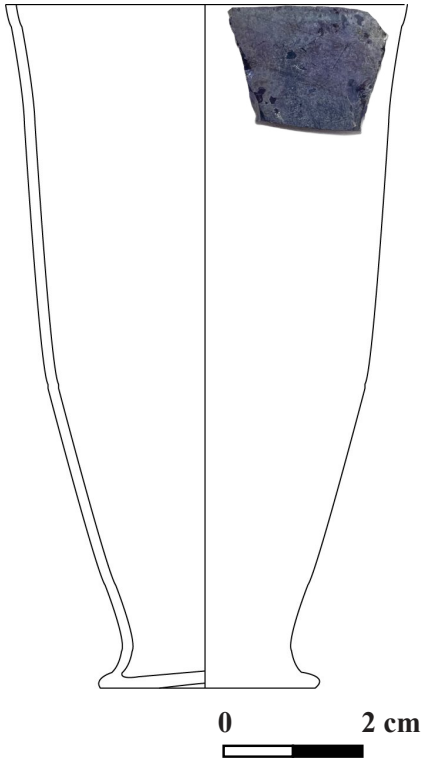


Fig. 4. Dark blue early Roman tall beaker, Isings' Form 34 (Inv. no. R.2009.2.10100).

Bell-shaped beakers

Two small fragments belong to bell-shaped beakers with gently curving walls and wheel-cut decoration, matching Isings' Form 36b.[24] These bell-shaped vessels, usually featuring an applied base ring, were current from the late 1st to the 2nd century AD, particularly in the eastern, Mediterranean regions of the empire. Their widest point is the fire-rounded rim.

These vessels were free-blown from greenish glass and exhibit typical narrow, abraded line bands. Such beakers were particularly widespread in the eastern Mediterranean and Italian workshops from the late 1st to 2nd centuries AD.[25] Their design evokes metal prototypes, and the form is sometimes compared to the *carchesium* mentioned by Latin authors.[26] The scarcity of fragments of this type—only two fragments—suggests that the Iseum assemblage included primarily utilitarian rather than luxury drinking ware, though imported pieces evidently also reached the sanctuary.

Honeycomb beakers

Four fragments from the Iseum Savariense represent facet-cut beakers *(Wabenbecher)* decorated with deep circular or hexagonal facets arranged in a honeycomb pattern. These correspond to Rütti's Forms AR 45–47 (Fig. 5),[27] typical of the Flavian period and the early Trajan era. Well-dated

21 Davidson 1952, 101; Dusenbery 1967, 46.

22 Calvi 1968, 56; Baggio Simona 1991, Vol. 1, 115–116.

23 Berger 1960, 46; Czurda-Ruth 1979, 102, Nos 762–764.

24 Isings 1971, 48.

25 von Saldern 1968, No. 54; Whitehouse 1997, Vol. 1, 228, Cat. 387.

26 Hilgers 1969, 140–141.

27 Rütti 1991, 58–60.

parallels from Exeter[28] and Vetera[29] indicate that the type was produced between AD 60 and 120.

The examples in the record of the Iseum were all made of colourless glass and feature a single register of large facets bordered by wheel-cut lines, matching Oliver's Group I.[30] Honeycomb beakers are among the earliest facet-cut forms; their spread reached the northern Alpine region and Pannonia.[31] The few examples from Savaria attest to the circulation of fine imported tableware even in a cultic context, possibly in relation to ritual consumption.

Cylindrical cups with vertical walls

By far the largest subgroup, comprises 26 fragments of cylindrical cups with vertical walls and slightly thickened rims, either cracked off or fire-rounded. This wide-mouthed, relatively low cup type was widely popular in the northern provinces in the late 2nd and 3rd centuries AD, retaining its popularity in Roman settlements in present-day Switzerland up to the end of the 3rd century AD.[32] Most specimens have a trailed base ring; however, variants with tall base rings pinched out of the vessel wall are known from Gaul, with local variants occurring in Raetia.[33]

These vessels correspond roughly to Rütti's Form AR 98.1–98.2, Isings' Form 85b, and Goethert-Polaschek's Trier 47a type (Fig. 6).[34] Most were made from colourless glass, occasionally with a greenish hue; their diameters range between 8 and 11 cm.

This type was common across the western provinces from the mid-2nd to late 3rd centuries AD; numerous examples have been published from, for example, Augusta Raurica, Brigetio, and Intercisa.[35] The cargo of a shipwreck off the southern coast of France by the island of Embiez contained several cups of this type, some of which were stacked inside each other, alongside blocks of raw glass from

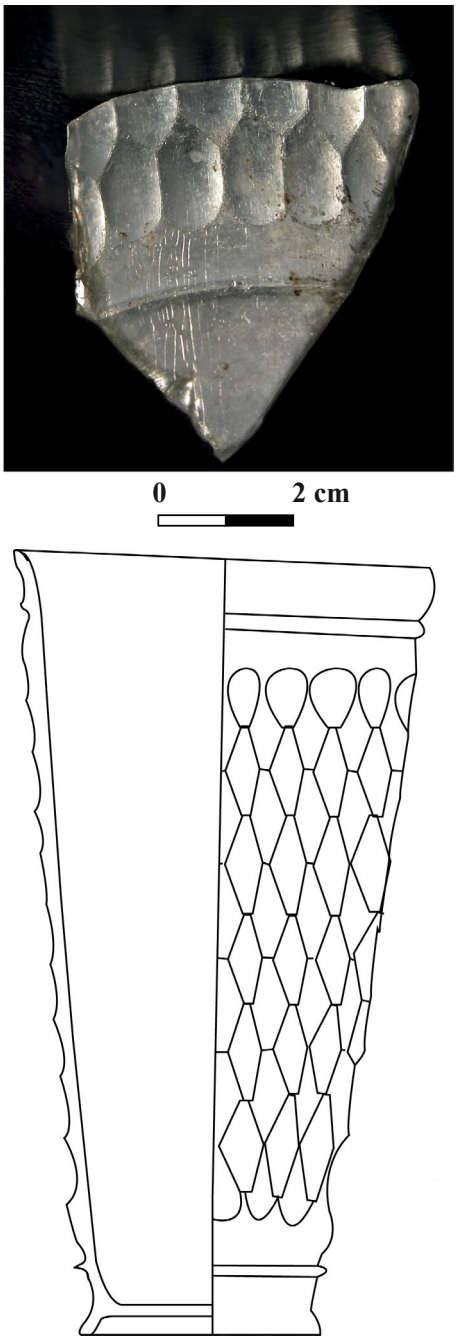


Fig. 5. Reconstruction of a *Wabenbecher*, an early beaker with facet-cut decoration (Inv. no. R.2009.2.7683).

28 Cool – Price 1995, 72.
29 Hanel 1995, 245.
30 Oliver 1984, 58.
31 Fünfschilling 2015, Vol. 1, 123.
32 Fünfschilling 2015, 134.
33 Foy – Nenna 2001, 110; Foy – Nenna 2003, 284, Abb. 218–222.
34 Isings 1957, Form 85b; Goethert-Polaschek 1977, Form Trier 47a; Rütti 1991, Forms AR 98.1, AR 98.2.
35 Barkóczi 1988, Cat. 60–62; Dévai 2011, 137.

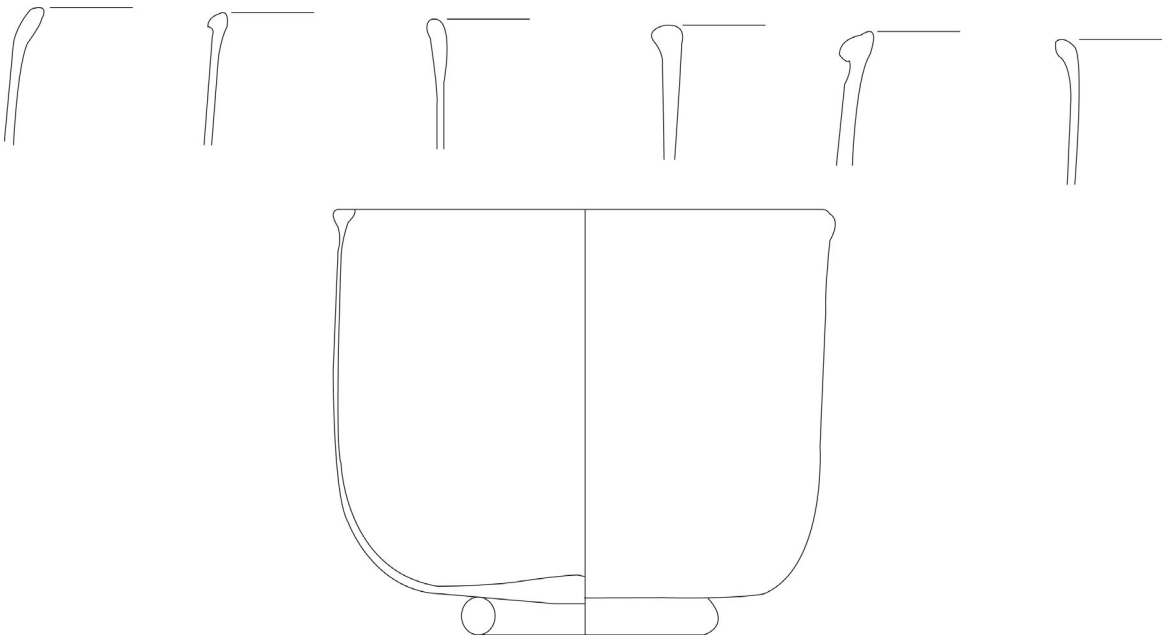


Fig. 6. Cylindrical beaker with vertical wall (Rütti's Form AR 98.1, AR 98.2) and rim variants (after Fünfschilling 2015, Fig. 174).

the Syro-Palestinian region.[36] Their simple design recalls Dragendorff 35/36 *terra sigilliata* vessels, underscoring the conceptual continuity between ceramic and glass tableware.[37]

Given their prevalence and wide size range, these vessels likely served multiple functions, including drinking cup, small serving container, or even votive offering. Their dominance in the Iseum assemblage—over half of all diagnostic beaker fragments—suggests that cylindrical cups were the standard form in daily and ritual use during the sanctuary's main phases, i.e. between the Antonine and Severan periods.

The overwhelming majority of the glass finds from the Iseum Savariense consists of cups, beakers, and bowls. The remaining vessel categories—jugs, bottles, jars, and *unguentaria*—are represented by considerably fewer fragments and are therefore discussed here only briefly, with an emphasis on their quantitative proportions and the general tendencies they illustrate.

Fragments attributable to jugs and pitchers are very scarce; most come from plain or reeded strap handles and indeterminate rims. Many are too fragmentary to be distinguished from bottles. The few identifiable pieces were made from pale greenish glass, which suggests a utilitarian rather than a decorative function. Considering the ritual role of water in the cult of Isis—used for ablutions, purification, and the cleansing of the cult statue—the rarity of glass jugs is notable and might indicate that ceramic counterparts were preferred for such tasks.

By contrast, bottles and storage vessels are somewhat better represented, adding up to about 15% of all identifiable glass finds. Most are thick-walled and square or prismatic in form, corresponding to Isings' Form 50 and Rütti's AR 156 (Figs 7–8)[38] dated to the 1st to 3rd centuries AD. Approximately 20 sherds can be assigned to this category, mostly base and wall fragments of square-section bot-

36 Foy – Nenna 2001, 110.

37 Fünfschilling 2015, 137.

38 Goethert-Polaschek 1977, 193, 201; Rütti 1991, 131–146, Kat. 2610–3222; Cool – Price 1995, 179–198; Price – Cottam 1998, 194–198; Harter 1999, 105–111; Lazar 2003, 150.

tles with reeded handles. Parallels from Brigetio, Intercisa, and Aquincum[39] point to their role in transporting and storing liquids, perhaps oils or ritual substances, whose use was recurrent in sanctuaries dedicated to Isis.

Jars and urns are rare; these categories are represented only by three small fragments belonging to convex vessels with outward-folded rims, matching Isings' Form 67a and Rütti's AR 117–118 (Fig. 9),[40] in use from the Tiberian to the early Antonine period. The few examples found at Savaria may reflect secondary domestic or storage functions within the sanctuary precinct, even though such large glass vessels often served in Pannonia as urns in cremation burials.[41] The small size of the Iseum fragments, however, argues against a funerary context and suggests a role in storing aromatic or ritual materials instead.

Finally, unguent bottles are also present in limited numbers. The roughly ten small fragments belong to early forms such as Isings' Type 6, 28a, and 8 (Fig. 10), dated to the mid-1st to early 2nd century AD.[42] Such vessels were made mostly of bluish-green glass and used as small containers for perfumes or cosmetic oils. The colour and fabric of the specimens in the analysed find material indicate that they precede or belong to the earliest phase of the sanctuary, implying that they may not have been related directly to cultic activities but rather to the earlier occupational phase of the site.

In summary, the quantitative dominance of cups, beakers, and bowls—exceeding two-thirds of the identifiable vessel glass finds—demonstrates that the glass record of the Iseum Savariense was linked to consumption and ritual activities rather than storage or transport. However, the few bottles, jars, and *unguentaria* among the finds refine our understanding of the functional diversity of the sanctuary's glass inventory, while their typological range and chronological distribution attest to the continuous importation and reuse of glassware in Savaria from the early to the late Roman period.



Fig. 7. Square bottle fragments (Inv. no. R.2009.2.5002) (photo by Tamás Tárczy).

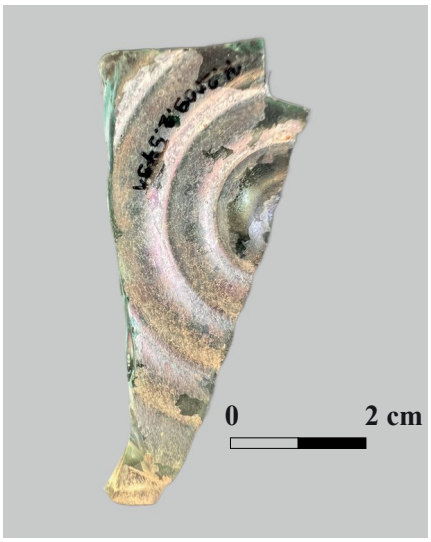


Fig. 8. Base fragment of a square bottle (Inv. no. R.2009.2.5791).

39 Barkóczi 1988; Dévai 2024a.

40 Isings 1957, 86–87; Rütti 1991, 110–111.

41 Barkóczi 1988; Rütti 1991.

42 Isings 1957, 22–23, 41–42; Goethert-Polaschek 1977, 106–111; Rütti 1991, 114.

Conclusions

A total of 1,571 glass fragments were recovered from the sanctuary precinct of the *Iseum Savariense*; the finds were inventoried in 1,559 entries. Approximately one-third of these finds could be assigned to a functional and typological category. The 366 items represent all identifiable vessel forms attested within the assemblage. The material is dominated by fragments of open forms—bowls and cups/beakers—accompanied by a smaller proportion of bottles, jugs, jars and other closed vessels.

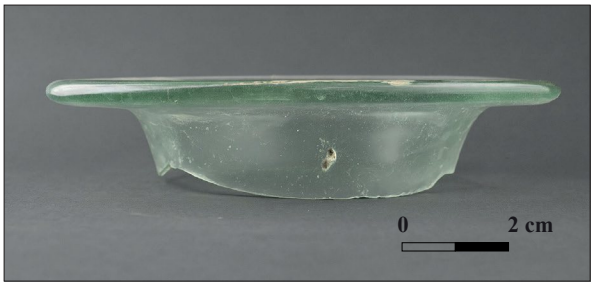


Fig. 9. Rim fragment of a jar-shaped vessel (Inv. no. R.2009.2.13028).

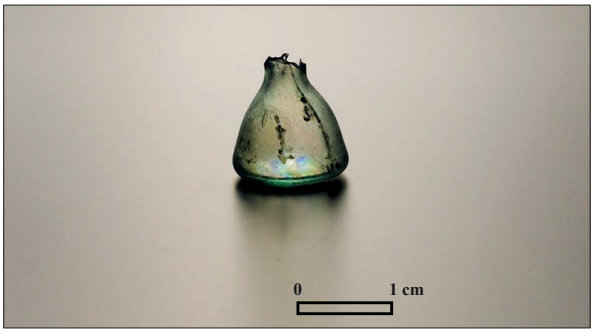


Fig. 10. Conical *unguentarium* (Inv. no. R.2011.4.836) (photo by Péter Vizi).

Colour composition and technological character

The distribution of glass by colour reveals a clear predominance of blue-green glass (55%), a hue characteristic of early Roman Imperial period glass in Pannonia.[43] Colourless glass accounts for 20%, and natural green glass for 15%. Yellowish green and olive green shades, typical of late Roman glass, make a small proportion (1.5%), while dark blue opaque pieces (2%) correspond to early cast and mould-blown types (Figs 11–12).

The predominance on the blue-green glass indicates an early dating, predominantly to the 1st and early 2nd centuries AD. The blue-green shade, typical of glass produced from natron-based raw materials and recycled cullet, is characteristic mainly of the early phases of glass production before the widespread appearance of decolourised and natural green glass in the 2nd century AD.[44] This transition may reflect changes in raw glass supply from Italian or Syro-Palestinian workshops, together with the increasing prevalence of glass recycling, contributing to a greater variety of hues.[45]

Distribution by form

Bowls (32%) and cups/beakers (24%) clearly dominate among the identified functional types, accounting for over 56% of identifiable vessels (Fig. 11). Ribbed bowls[46] alone are present with over 70 fragments, corresponding to 32% of all identified vessels. These belong mainly to early variants of the type, produced from the mid-1st to early 2nd centuries AD, with close parallels from Aquileia, Magdalensberg and Brigetio.[47] Their high occurrence in the glass record of the Iseum reflects both their chronological position and their likely ritual function: such bowls are commonly interpreted as ceremonial serving or libation vessels.[48]

43 Dévai 2024b, 45.
44 Dévai 2024b, 45; Foy – Nenna 2001, 110.
45 Isings 1957, 49; Fünfschilling 2015, 134.
46 Isings 1957, Form 3; Barkóczi 1988, Type 1; Dévai 2024b, 49.
47 Barkóczi 1988, 60–62; Stern 2001, 86.
48 Siebert 1999, 40.

Roughly 5.8% of the all vessel glass finds and 24% of the identified ones came from cups and beakers. Within this group, early types characterised by strong colours—such as dark blue cast cups imitating Dragendorff 4 forms[49] and tall translucent blue beakers of Isings' Form 34 and Rütti's Form AR 37—could be dated to the mid- and late 1st century AD. These early drinking vessels, rare elsewhere in Pannonia, have close parallels in northern Italy,[50] at Magdalensberg and Vindonissa,[51] and in Samothrace and Corinth in the East.[52] The pieces found in the Iseum align well with this distribution and suggest importation from northern Italian workshops via the Amber Road, likely through Aquileia.

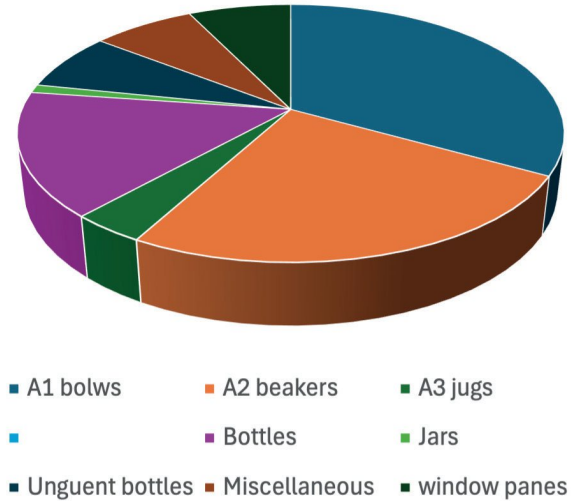


Fig. 11. Distribution of glass vessels by function.

Fewer (only four or five) fragments could be identified as the remains of younger free-blown vessel types, such as bell-shaped beakers[53] and facet-cut honeycomb beakers.[54] Honeycomb beakers are characteristic of the Flavian and early Trajanic periods,[55] and their presence at the Iseum Savariense aligns with the initial construction phase of the sanctuary (Period 2). The facet-cut ornamentation and the high-quality colourless glass material of these pieces underscore their role as prestige drinking vessels, most likely imported luxury tableware used in ritual banquets or libation ceremonies associated with the cult of Isis.

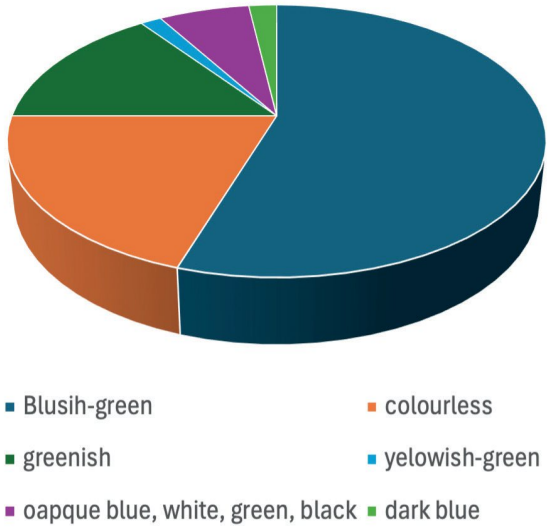


Fig. 12. Distribution of glass vessels by colour.

The assemblage also includes cylindrical cups with vertical walls,[56] amounting to roughly 25 identifiable pieces. These simple free-blown vessels, with fire-rounded or cracked-off rims, represent one of the most common forms of the 2nd and 3rd centuries AD; however, they already appear in Periods 1–2 of the Iseum, which attests to their long-lived popularity. Comparable examples are known from Augst and Brigetio.[57] Most finds of such cups in Pannonia are made from colourless or blue-green glass, are usually undecorated, and were probably used as drinking or libation vessels.

49 Isings 1957, 48–49.
50 Calvi 1968, 56; Baggio Simona 1991, 115–116.
51 Czurda-Ruth 1979, 102.
52 Davidson 1952, 101; Dusenbery 1967, 46.
53 Isings 1957, Form 36b.
54 Rütti 1991, Form AR 45–47.
55 Cool – Price 1995, 72; Hanel 1995, 245; Fünfschilling 2015, 123.
56 Isings 1957, Form 85b; Rütti 1991, Form AR 98.1–2; Barkóczi 1988, Form 29.
57 Barkóczi 1988, 60–62; Dévai 2011, 137; Fünfschilling 2015, 134–137.

Closed vessels

Closed forms are represented by bottles (15%), jugs (3–4%), and jars or urns (1%). Mostly square or prismatic bottles are known from all four building periods of the sanctuary and correspond to widespread Roman utilitarian types used for storing liquids or perfumed oils. Their scarcity contrasts with the marked predominance of open forms, suggesting that vessels of other materials were used for liquid offerings, while glass was reserved for table use and libation rituals.

Chronological and contextual assessment

A comprehensive analysis of morphological characteristics and colour indicates that most glass vessels belong to the early building periods of the sanctuary (Periods 1–2). The horizon marked by the predominance of cast and mould-blown vessels of blue and blue-green glass, spanning the mid- and late 1st century AD, aligns with the foundation and monumental development of the Iseum. The presence of Italian imports in the glass record aligns with D. Gábler's observations on Samian ware from the same contexts, 58% of which are Italian imports dating from the late 1st and early 2nd centuries AD.[58]

Younger types, such as free-blown undecorated forms typical of the 2nd and 3rd centuries AD are almost absent from the find material. This is partly a classification bias, since the highly fragmented and undecorated wall sherds are rarely diagnostic.[59] Another factor may be ritual restrictions: once deposited within the sanctuary precinct, objects may not have been removed, and during subsequent reconstructions, earlier offerings were redeposited, which resulted in further fragmentation. Accordingly, the glass assemblage excavated to date primarily reflects the earliest phases of cult activity, whereas material from later phases may remain buried in uninvestigated areas of the sanctuary.

Functional interpretation

Taken together, the glass assemblage of the Iseum Savariense represents a coherent and chronologically unified group, dominated by fine imported tableware, including ribbed bowls, cast cups, facet-cut beakers, and early blue-green free blown vessels. The high proportion of open forms (~56%) points to the use of glass in the sanctuary predominantly in the context of libation rituals and banquets. Closed forms are secondary and suggest limited utilitarian storage rather than domestic consumption.

Data thus confirm that the vessel glass finds of the Iseum Savariense reflect the earliest cultic activities associated with the construction and dedication of the sanctuary. The combination of early Italian imports, high-quality blue-green glass vessels, and an emphasis on open forms underscores the ritual character of glass use within the sacred precinct, distinguishing it sharply from contemporary assemblages of settlement finds from other sites across Pannonia. It may be cautiously proposed that the early, likely imported glass vessels of the predominant types were brought to the site at the time of foundation of the sanctuary. If so, this early glass horizon provides rare archaeological evidence of a foundation horizon that is otherwise difficult to detect. The material traces of the establishment of a sanctuary are ephemeral and archaeologically elusive, partly because they represent a very short activity period. In this respect, the group of ribbed bowls, early cast glass vessels, and brightly coloured blue glassware may be of particular interest, as they may tentatively be interpreted as representing precisely this foundational phase.

58 Gabler 2022, 14.

59 Dévai 2024b, 45.

Funding

This paper was supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences (BO/00187/2) and the FK 138156 project of the National Research, Development and Innovation Office (NKFIH) (Hungary).

References

Baggio Simona, S. 1991: *I vetri romani. Provenienti dalle terre dell'attuale cantone Ticino.* Locarno.

Barkóczi, L. 1988: Frühe Gläser aus Brigetio. *Acta Archaeologica Academiae Scientiarum Hungaricae* 40, 49–60.

Berger, L. 1960: *Römische Gläser aus Vindonissa.* Veröffentlichungen der Gesellschaft pro Vindonissa 4. Basel.

Bíró, Sz. – Sosztarits, O. 2023: Architectural and infrastructural changes in Savaria in the first half of the second century. In: Láng, O. (ed.): *Hadrianus MCM. Proceedings of the international conference on the occasion of the 1900th anniversary of the Emperor Hadrian's accession to the throne.* Aquincum Nostrum II.10. Budapest, 35–50.

Bónis, É. 1954: A vetus salinai későrómai erőd feltárása. *Archaeologiai Értesítő* 81, 145–167.

Calvi, M. C. 1968: *I vetri romani del Museo di Aquileia.* Aquileia.

Cool, H. E. M. – Price, J. 1995: *Roman vessel glass from excavations in Colchester, 1971–85.* Colchester Archaeological Report 8. Colchester.

Czurda-Ruth, B. 1979: *Die römischen Gläser vom Magdalensberg.* Kärntner Museumsschriften 65. Klagenfurt.

Davidson, G. R. 1952: *Corinth XII. The minor objects.* Princeton, NJ. https://doi.org/10.2307/4390685

Dévai, K. 2011: A Komárom/Szőny-vásártéri ásatások római kori üvegleletei (Glass vessels found at the excavations of Komárom/Szőny-Vásártér). *Komárom-Esztergom Megyei Múzeumok Közleményei* 17, 133–150.

Dévai, K. 2024a: Prismatic bottles from the auxiliary fort and vicus of Intercisa. *Acta Archaeologica Academiae Scientiarum Hungaricae* 75:2, 215–232. https://doi.org/10.1556/072.2024.00021

Dévai, K. 2024b: Roman glass bowls from Intercisa. *Acta Archaeologica Academiae Scientiarum Hungaricae* 75:1, 43–72. https://doi.org/10.1556/072.2024.00009

Dusenbery, E. B. 1967: Ancient glass from the cemeteries of Samothrace. *Journal of Glass Studies* 9, 34–49.

Fontaine, S. 2014: Maritime Roman glass trade: An archaeological case study of Arles Harbor (France). *Journal of Glass Studies* 56, 357–364.

Foy, D. – Nenna, M.-D. 2001: *Tout feu, tout sable. Mille ans de verre antique dans le Midi de la France.* Marseilles.

Foy, D. – Nenna, M.-D. 2003: Productions et importations de verre antique dans la vallée du Rhône et le Midi méditerranéen de la France (Ier–IIIe siècles). In: Foy, D. – Nenna, M.-D. (eds): *Échanges et commerce du verre dans le monde antique.* Monographies Instrumentum 24. Montagnac, 227–297.

Fünfschilling, S. 2015: *Römisches Glas aus Augusta Raurica. Die figürlichen und mosaikverzierten Gläser. Kommentierter Formenkatalog und ausgewählte Neufunde 1981–2010 aus Augusta Raurica.* Forschungen in Augst 55. Augst.

Gabler, D. 2022: *A savariai Iseum terra sigillatái – Samian ware from the Iseum of Savaria.* Sistrum Ser. C. No. 1. Szombathely.

Goethert-Polaschek, K. 1977: *Katalog der römischen Gläser des Rheinischen Landesmuseums Trier.* Trierer Grabungen und Forschungen 9. Mainz am Rhein.

Hanel, N. 1995: *Vetera I. Die Funde aus den römischen Lagern auf dem Fürstenberg bei Xanten.* Rheinische Ausgrabungen 35. Bonn.

Harter, G. 1999: *Römische Gläser des Landesmuseums Mainz.* Wiesbaden.

Hilgers, W. 1969: *Lateinische Gefässnamen: Bezeichnungen, Funktion und Form römischer Gefässe nach den antiken Schriftquellen.* Düsseldorf.

Isings, C. 1957: *Roman glass from dated finds.* Groningen.

Isings, C. 1971: *Roman glass in Limburg.* Archaeologica Traiectina 9. Groningen.

Israeli, Y. 2003: *Ancient glass in the Israel Museum. The Eliahu Dobkin collection and other gifts.* Jerusalem.

Lazar, I. 2003: *Rimsko steklo Slovenije – The Roman glass of Slovenia.* Ljubljana. https://doi.org/10.3986/9789610503156

Lovas, E. 1931: I risultati degli studi archeologici su Arrabona e dintorni. *Associazione Internationale Studi Mediterranei* 23, 1–18.

Oliver, A. 1984: Early Roman faceted glass. *Journal of Glass Studies* 26, 35–58.

Price, J. – Cottam, S. 1998: *Romano-British glass vessels: A handbook.* CBA Practical Handbook in Archaeology 14. York.

Rütti, B. 1991: *Die römischen Gläser aus Augst und Kaiseraugst.* Forschungen in Augst 13. Augst.

Saldern, A. von 1968: *Ancient glass in the Museum of Fine Arts.* Boston.

Scatozza Höricht, L. A. 1987: Sull'origine del vetro romano di Pompei alla luce dei recenti saggi stratigrafici. *Rivista di Studi Pompeiani* 1, 85–90.

Siebert, A. V. 1999: *Instrumenta Sacra: Untersuchungen zu römischen Opfer-, Kult- und Priestergeräten.* Berlin–Boston. https://doi.org/10.1515/9783110803723

Stern, E. M. 2001: *Roman mold-blown glass: The first through sixth centuries.* Toledo.

Stern, E. M. – Schlick-Nolte, B. 1994: *Early glass of the ancient world: 1600 B.C.–A.D. 50.* New York.

Ţârlea, A. – Cliante, L. 2021: Crystal clear. Two early roman ribbed bowls from Tomis in the collections of the Museum of National History and Archaeology Constanţa. *Peuce* 19, 183–260. https://doi.org/10.62781/PeuceSN.19.08

Uzsonyi, I. – Csontos, K. – Verebes, A. – Cserháti, C. – Csedreki, L. – Kis-Varga, M. – Kiss, Á. Z. 2011: Characterization of a millefiori glass find from Aquincum by SEM-EDX and micro-PIXE methods. *Nuclear Instruments and Methods in Physics Research* Section B 269/20, 2389–2392. https://doi.org/10.1016/j.nimb.2011.02.030

Whitehouse, D. 1997: *Roman glass in the Corning Museum of glass. Vol. 1.* Corning.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 93–108. 10.17204/dissarch.suppl.5.2026.93

Three Roman game boards from Pannonia in the collection of the Hungarian National Museum

Linda Dobosi ✉
HUN-REN–ELTE Research Group for Interdisciplinary Archaeology, Budapest, Hungary; Institute of Archaeological Sciences, ELTE Eötvös Loránd University, Budapest, Hungary
dobosi.linda@btk.elte.hu

Tamás Szabadváry
Hungarian National Museum Public Collection Centre, Budapest, Hungary
szabadvary.tamas@mnm.hu

Received 9 January 2026 | Accepted 27 February 2026 | Published 18 November 2026

Abstract: Game boards incised on stone pavements in the Mediterranean or on the surface of bricks or tiles along the *limes* are frequent finds in the provinces of the Roman Empire. Pieces of gaming equipment, including game boards have been systematically collected and thoroughly studied recently in the framework of the Locus Ludi ERC funded project (2017–2023) and the Game Table Cost Action (CA 22145, 2023-2027) which multiplied our knowledge about Roman board games. Hundreds of game boards have been published from all over the Roman Empire and the Roman Age Barbaricum, however, hardly any from Pannonia. Situated along the Danube *limes*, Pannonia was an important link between the Roman Empire and the non-Roman peoples in Northeastern Europe, for example in the territory of present-day Slovakia or Poland. This paper intends to fill a gap in Roman board games research by presenting three Roman game boards on *tegulae* from Pannonia in the collection of the Hungarian National Museum. An intact and a fragmented *ludus duodecim scriptorum* game board came from Intercisa (Dunaújváros, Hungary) and Aquincum (Budapest-Óbuda, Hungary), respectively, and a fragmented grid-type board used for *ludus latrunculorum* was unearthed in the auxiliary *castellum* of Campona (Budapest-Nagytétény, Hungary).

Keywords: Roman Pannonia, *tegulae*, Roman board games, *ludus latrunculorum*, *ludus duodecim scriptorum*

Introduction

Roman board games and pieces of gaming equipment have been a neglected area of research in Roman Pannonia, although there are many related finds in the stores of Hungarian museums. Game boards on the surface of Roman bricks or tiles have been mentioned in passing in a few publications but detailed studies are generally lacking on the Hungarian material. We aim to fill this hiatus with the comprehensive study of three, as yet unpublished Roman game boards on *tegulae* in the collection of the Hungarian National Museum (HNM).

The study of ancient game boards is an extremely complex problem full of methodological challenges. Most of the game boards from Graeco-Roman Antiquity survive as carved markings on stone slab pavements or on the surface of bricks or tiles, although game boards made of wood or temporary ones drawn in the dirt also existed.[1] Identifying the different designs as game boards for

1 Courts – Penn 2021, 5–6; Penn *et al.* 2024, 16.

✉ Corresponding author

board games as opposed to markings for throwing, tossing or rolling games, or as signs with other functions, for example *topos* markers is by no means straightforward and has been the subject of much scholarly discussion.[2] Even if a design is recognised as a game board, linking it to a specific game can be challenging and sometimes open to several interpretations. Additionally, similar game boards could have been used for different games or similar games with slightly different rules as games spread and evolved through space and time.[3]

No books have survived from classical Antiquity on ancient games that explain the rules of specific games, although we do know that emperor Claudius (41–54 AD) wrote a book on dice games and Suetonius (c. 69–122 AD) wrote one on Greek games.[4] Therefore, all research done on ancient Roman board games relies mostly on literary allusions, inscriptions and graffiti, as well as depictions on frescoes, mosaics, reliefs or sculpted figures and the material remains, the pieces of gaming equipment. In some cases, the Roman name of the game is unknown, and even if we know the name, pairing the names with the correct game boards or markings on pavements and tiles remains hypothetical based on the small pieces of information available about each game.[5]

To aid board games research and provide reference, a summary of the present knowledge on Greek and Roman games (Ulrich Schädler) as well as a guide to game board designs (Alessandro Pace, Tim Penn, Summer Courts) were compiled in 2024,[6] which will be referred to in this paper.

The identification of game boards is easier if found together with other pieces of gaming equipment. Unfortunately, none of the three boards discussed in this paper was found in a ludic assemblage. The exact find circumstances are somewhat uncertain in all three cases: the tile from Intercisa (Dunaújváros/Dunapentele, Hungary) was probably found in the debris of a Roman building, the tile from Aquincum (Budapest-Óbuda, Hungary) was either found in a grave or in the debris of a house, while the third tile was unearthed in the auxiliary fortress of Campona (Budapest-Nagytétény, Hungary).

Game board 1

Game board 1 was drawn onto the upper surface of a roof tile before firing and consists of two rows of 6+6 squares separated by an additional larger square in the middle (Fig. 1). The *tegula* survived in an intact state: it was 51.9–52.2 cm long and 38.0–38.6 cm wide (inv. no. HNM RT-RO 85.1906.232).

The roof tile with the game board was found in 1906 during the excavations of Ede Mahler in Intercisa, at the Dunapentele-Öreghegy site. The excavations of the Hungarian National Museum led by Ede Mahler and Antal Hekler between 1903–1913 were the first scientific excavations in Intercisa, although the site had already been known for a long time.[7] The Dunapentele-Öreghegy site was mostly covered by small vineyards owned by several individuals at the time of the excavations. It lay a few hundred meters north of the auxiliary *castellum* of Intercisa and contained several Roman buildings including a bathhouse, as well as the so-called northern cemetery of the settlement in its eastern part. The localisation of the place where the game board was found proved to be tricky

2 For the most recent summaries of this problem see: Carè 2022, 238–239; Pace *et al.* 2024, 359.

3 Penn *et al.* 2024, 16–24; Schädler – Hall 2024; Penn *et al.* 2025.

4 Schädler 1995, 73.

5 Penn *et al.* 2024, 16.

6 Schädler 2024; Pace *et al.* 2024.

7 First comprehensive article on the history of and finds from Intercisa: Hampel 1906. Archaeological finds from Intercisa from the 19th century are also mostly in the Hungarian National Museum but were gifted or sold to the Museum by private collectors (Prohászka 2016, 9–24). The scientific excavations stopped due to the outbreak of World War I.



Fig. 1. *Tegula* with a graffiti game board: a two-row version of the *ludus duodecim scriptorum / alea* game board (photo: V. Törő, Hungarian National Museum).

because both Ede Mahler and Antal Hekler used the names of the parcel owners for the identification of the individual parcels which caused several misunderstandings already in the 1920s. Sensing the problem, Ede Mahler compiled a map in 1906 based on the cadastre map of the town marking all locations where excavations were carried out or lootings had taken place. This map, put in the folder of Antal Hekler's 1913 excavation documentations, was unknown until recently.[8] Further difficulties were caused by the lack of documentation for the 1906 excavation.[9] Based on his map and

8 His map is now in the HNM (HNM KA-IT 32.D.I.). It was made on June 24, 1906, and was used by both archaeologists all through the excavations until 1913.

9 Excavation documentations from E. Mahler are only available from the year 1908 (HNM KA-RA 51.D.II.): he either did not make any in the year 1906 or it has been lost since (Hampel 1907, 38–39).

the inventory book, the game board was found on the parcel of György Szávó (parcel 123, today Öreghegy Street 26a),[10] a mere 30 meters west of the Roman bathhouse.[11] During the excavation, parts of a building were unearthed along with a rich find material including more than a hundred roof tiles, mostly stamped.[12] The find material, and most importantly the roof tiles can be dated to between the second half of the 2nd to the end of the 3rd century AD.[13] E. Mahler mentions 4th century bronze coins in his excavation report, however, these cannot be found in the inventory book in the HNM.[14] The *tegula* with Game board I is not specifically included in the publication and does not have a stamp on its surface. Therefore, it is impossible to date it precisely, however, based on the dating of the stamped tiles it was probably made between the second half of the 2nd and the end of the 3rd century.

As mentioned above, the game board on the upper surface of the *tegula* consists of two rows of 6+6 squares and a larger rectangle in the middle. The incised lines were made in a cursory manner before firing. There is no stamp on the *tegula*, but there is a signature drawn with one finger in the shape of a half-circle at the lower edge of the tile. The signature was made when the clay was still soft, but the lines belonging to the game board were scratched days or even weeks later, when the clay was already beyond leather hard, nearing the bone-dry state. One of the squares of the game board overlaps the signature. The squares of the game board are not regularly executed, so the lines are not straight, all squares were drawn freehand without the aid of a ruler. The large rectangles in the middle were drawn with several lines on top of each other. In the first row the middle rectangle seems to have started out as a circle but then the maker changed his mind and finished the shape as a rectangle. The small squares are 15–20 × 15–20 mm large and are mostly irregular in shape, while the large rectangles in the middle are about 35 × 50 mm in size and also irregular in shape. There is a gap of about 25–30 mm between the squares and 120 mm between the two rows. A third row of squares was definitely never made and not just wore off.

The game board can be identified as a two-row version of the *duodecim scripta/alea* game board. *Ludus duodecim scritorum/alea* were backgammon type race games. The usual board for Roman backgammon-type games consisted of three rows of 6+6 geometrical motifs, such as circles, squares, ro-

10 According to A. Mahler, he originally wanted to dig on another parcel (that of József Vörös) but he did not give his consent to the planned excavation. The parcel of Gy. Szávó was recommended by Károly Tiszuczky, local teacher who often mediated between the locals and the Museum (Prohászka 2021, 10–12). In 1906, Mahler also led an excavation a little to the west in the parcel of József Fekete, where further building remains and 8 late Roman burials were unearthed (Mahler 1907a, 147).

11 Parts of the baths were uncovered by E. Mahler in 1908–1909 but the building was largely excavated by Zsuzsánna Újlaki Pongrácz in 1992 (Újlaki Pongrácz 2007).

12 Mahler 1907b, 242–246.

13 The stamps of the *cohors I Aurelia Antonina milliaria Hemesenorum sagittaria equitata civium Romanorum* can be dated to between AD 176 and the end of the 3rd century, because the *cohors* arrived at Intercisa in AD 176 and stayed about 100 years in the settlement, see Lőrincz 2001, 35; Visy 2003, 118. The *exercitus Pannoniae inferioris* stamps can also be dated to after Marcomannic wars, to between the end of the 2nd and end of the 3rd centuries AD, see Lőrincz 1977, 20–21. The *cohors VII Breucorum* was stationed near Intercisa in Lugio (Dunaszekcső, Hungary) from about AD 143 to the middle of the 3rd century AD, so the brick stamps of the *cohors* can be dated to the same period. The only precisely datable examples are the COH VII BR COR stamps which were made during the reign of emperor Gordian III (238–244), see Lőrincz 2001, 31; Kovács 2005, 245; Farkas 2013, 111–113; Gábor 2020. The stamps of the *legio II Adiutrix* cannot be dated more precisely within the range between early 2nd and late 4th centuries AD when the legion was the garrison of Aquincum (Budapest-Óbuda, Hungary). Two Samian ware shards with name stamps PROVINCIALIS and MATERNIANVS respectively can be dated to 180–260 AD (RT-RO 85/1906.157–158), we thank Barbara Hajdu for this information.

14 Mahler 1907b, 243.

settes, ivy leaves, etc. with a larger and more elaborate motif in the middle.[15] Such boards have been found everywhere in the Roman Empire, both in the eastern Mediterranean at sites like Ephesus or Aphrodisias and in the western provinces, in Britain, for example.[16] Hundreds of boards have been collected during the Locus Ludi ERC project, about 150 from the Roman west alone.[17] Sometimes such game boards even crossed the borders of the Empire, travelling occasionally several hundred kilometres, as far as Vimose in Denkmark, for example.[18]

One of the most important of these boards came from fourth-century AD Qustul in Egypt, where a wooden game board was placed into a grave as part of a gaming set complete with two sets of 15 counters (ebony and ivory), five six-sided cubic dice made of ivory, a leather bag, and a wooden *pyrgus* (dice tower).[19] Other famous finds include the game boards with letters instead of geometric forms: these display hexagrams, simple "poems" of six six-letter words arranged in three rows. Popular in the Latin half of the Empire, these poems revolved around a handful of themes: the pleasures of daily life (eating, drinking, bathing, etc.), circus and games, loosing and cheating, and conquering the enemies of the Empire.[20]

The connection between game boards with three rows of 6+6 squares and the names *duodecim scripta* or *alea* is not straightforward. A game named *ludus duodecim scriptorum* is mentioned by Cicero (106–43 BC) and Quintilianus (c. 35–c. 100 AD), who both state that Quintus Mucius Scaevola Augur (c. 169–88 BC), lawyer and a teacher of Cicero, was an excellent player of this game.[21] Moreover, Ovid (43 BC–17/18 AD) speaks of a game played on a board that is divided into as many markings *(scriptula)* as the number of months in a year.[22] Although these sources do not mention any more details about the game, they were linked to boards with 12 squares in a row.[23] A game called *alea* is mentioned by Isidore of Seville (c. 560–636 AD) as a board game played with counters, dice and a dice tower.[24] He also states that the board is made up of three lines (for the three tenses) and is divided into six regions (6 × 6 squares, for the ages of a human).[25] This description fits the Qustul find consisting of a game board with three rows of 6+6 squares, counters, dice and a dice tower. The word *alea* more generally means

15 Courts – Penn 2021, 3; Durnagölü – Söğüt 2025, 27.

16 For such game boards in Ephesus: Schädler 2024, 132–133; in Aphrodisias: Russell *et al.* 2024, 116; in Southwestern Asia Minor: Talloen 2024, 94–97; in Stratonikeia: Durnagölü – Söğüt 2025; in Britain: Courts – Penn 2019, 7–8; Courts – Penn 2021, 3–4.

17 Dasen 2020, 310. There are currently 104 pieces listed in the Ludii database: https://ludii.games/data.php?gameId=5 (last access: 12. 08. 2025).

18 Schädler – Hall 2024, 159–160.

19 Schädler 1995, 80; de Voogt 2019, 94–96.

20 Schädler 1995, 81; Németh 2002, 68–69.

21 Cic. *De Orat.*, 1,217: *"licet ista ratione dicamous, pila bene, et Duodecim Scriptis ludere, proprium esse iuris civilis, quoniam utrumque eorum P. Mucius optime fecerit"*; Quint. *Inst.*, 11,2,38: *"An vero Scaevola in lusu duodecim scriptorum, cum prior calculum promovisset essetque victus, dum rus tendit repetito totius certaminis ordine, quo dato erraset recordatus, rediit ad eum quocum luserat, isque ita factum esse confessus est: minus idem ordo valebit in oratione, praesertim totus nostro arbitrio constitutus, cum tantum ille valeat alternus?"*

22 Ov. *Ars am.*, 3,363: *"Est genus, in totidem tenui ratione redactum / Scriptula, quot menses lubricus annum habet."*

23 Schädler 1995, 83–84.

24 Isid. *Orig.*, 18,60: *"De tabula. Alea, id est lusus tabulae, inventa a Graecis in otio Troiani belli a quodam milite Alea nomine, a quo et ars nomen accepit. Tabula luditur pyrgo, calculis, tesserisque."*

25 Isid. *Orig.*, 18,64: *"De figuris aleae. Quidam autem aleatores sibi videntur physiologice per allegoriam hanc artem exercere, et sub quadam rerum similitudine fingere. Nam tribus tesseris ludere perhibent propter tria saeculi tempora: praesentia, praeterita, futura; quia non stant, sed decurrunt. Sed et ipsas vias senariis locis distinctas propter aetates hominum ternariis lineis propter tempora argumentantur. Inde et tabulam ternis discriptam dicunt lineis."*

dice and thus might refer to any game played with dice, but in the case of Isidore of Seville the word *alea* seems to have been specifically used for *duodecim scripta*. We now seem to have two names for the same game board, however, we do not know, whether *duodecim scripta* and *alea* were the same games with the same rules, or were different versions of a game: *duodecim scripta* played earlier in the late Republic and early Imperial period and *alea* in Late Antiquity.[26] A similar sounding game is described in more detail by Agathias Scholasticus (c. 536–582 AD) in his verse titled Τάβλη where he discusses a famous game played and lost by Zeno, emperor of the Eastern Roman Empire (474–491 AD).[27] It is not clear whether the title of the verse refers to board games or game pieces in general or one game called *tabula* in particular. The game described involves the use of a board, 15-15 counters, three dice and a dice tower, therefore, the poem might refer to *alea* or *duodecim scripta* and the title could be the Greek name for it.[28] The poem does not explicitly state the size of the board, however, the largest number of squares he mentions is the eighteenth and the fourth from the last, from which scholars have reconstructed a board of two rows of 12 squares, the common board size of the later backgammon game.[29]

Game boards with two rows of 6+6 squares, so the two-row version of the *duodecim scripta/alea* board did exist in Roman times. The examples collected by U. Schädler from Ostia and Rome can be dated to after the middle of the 3rd or the 4th century AD, to Late Antiquity. The squares on these boards tend to be arranged asymmetrically: one of the outer rows are cancelled from the three rows, not the middle one.[30] Based on archaeological evidence, the three-row and the two-row versions of *duodecim scripta/alea* boards co-existed during the 4th century.[31] P. Talloen collected examples from Perge and Sardis, where three-row boards were sometimes cut to create a two-row board.[32]

Interestingly, some of the two-row boards made of stone have been found in Christian catacombs in Rome where they were used as funeral slabs.[33] Not actual game boards, they were built into the graves for their symbolic value based on their inscriptions. The game board itself and the game played on it were allegories of the human life as we have seen in the writing of Isidore of Seville.[34]

The guide to game board designs on pavements compiled by Alessandro Pace, Tim Penn and Summer Courts in 2024 lists eleven types of the three-row version of the game board (Types 52–62) and one of the two-row version (Type 63).[35] The type of our Game board 1, 6+6 small squares divided by a larger square in the middle, is not on the list yet. This means that we can now add a new type to the existing typology, which is mostly based currently on examples found in Aphrodisias.

The size of Game board 1 on our *tegula* is 51.3 × 18.6 cm, which is comparable to *duodecim scripta/alea* boards carved into pavements. The three-row game boards documented by B. Carè in Athens were 60 × 37 cm, 55 × 39 cm and 53 × 37 cm large,[36] while one from Carthage measured 72 × 49 cm.[37] Another three-row board on a *tegula* from Holt (Britain) was 48.6 × 43.2 cm large.[38]

26 Schädler 1995, 83–84; Durnagölü – Söğüt 2025, 27–30.

27 de Voogt 2021.

28 Schädler 1995, 85–86; de Voogt 2021.

29 Schädler 1995, 86–89; de Voogt 2021; Talloen 2024, 96–97.

30 Schädler 1995, 89–95.

31 Schädler 1995, 95.

32 Talloen 2024, 96–97.

33 Schädler 2013, 68; Schädler 2022, 371.

34 Schädler 2013, 68; Schädler 2022, 371.

35 Pace *et al.* 2024, 366–367.

36 Carè 2022, 236.

37 Schädler 1995, 88, Fig. 7.

38 Schädler 1995, 88, Fig. 7.

Game board 2

Game board 2 was also drawn onto the upper surface of a *tegula* and originally consisted of rows of 6+6 squares from which only one row survives on the broken *tegula* (Fig. 2). Unfortunately, it is impossible to tell, whether the game board originally had two or three rows. The whole length of the *tegula* is 46.4 cm and its surviving width is 21.7 cm (inv. no. HNM RT-RO 13.1882.82). Not many whole *tegulae* are known from Pannonia, however, a 46.5 × 38 cm large tile is known from Aquincum, the same town in which Game board 2 was found, so our *tegula* might have been around the same size.[39]



Fig. 2. *Tegula* with a graffiti game board: a fragmented *ludus duodecim scriptorum / alea* game board (photo: V. Törő, Hungarian National Museum).

The roof tile with the game board was unearthed during the 1881–1882 excavations of József Hampel in Aquincum (Budapest-Óbuda) connected to the construction works of the new dam on the Danube, the so-called Filatorigát. Many Roman objects came to light from the large amounts of earth moved during the construction works led by Károly Kulcsár engineer. Therefore, J. Hampel from the Hungarian National Museum kept a close eye on the find material and later published his observations.[40] Most of the earth for the dam came from the parcel of Mihály Frey between present-day

39 Havas 2019, Kat. 171.

40 Hampel 1891, 47–80.

Bogdáni, Szentendrei and Reviczky alezredes Streets.[41] By the end of January 1882, remains of two Roman buildings, a section of a northwest-southeast running gravel road and more than 45 graves were unearthed.[42] The graves were part of the northern necropolis of the *canabae* (so-called Kaszás-dűlő-Raktárrét cemetery) which was used between the 2nd and the 4th centuries AD.[43]

Unfortunately, the find material from the excavation was not catalogued according to their find spot, so it is impossible to tell, in which part of the excavated area the game board was found. While J. Hampel paid careful attention to the stamped tiles,[44] he did not include the tile fragment with the game board in his publication. He only mentioned a graffiti in passing: "there was a drawing on one of the tiles the significance of which is questionable".[45] This particular tile was referred to in connection to three late Roman burials, however, it is impossible to tell if this sentence was meant to describe the game board or some other graffiti. According to the inventory book in the HNM, there seem to have been two *tegula* fragments with game boards on them, but now there is only one left. Based on the varied find material, it is not possible to date the tile fragment more precisely than between the middle of the 2nd and the late 4th century AD or tell if it came from a grave or the debris of the Roman building.

This game board can be identified as a *duodecim scripta*/*alea* game board of either the three-row or two-row version, undecidable because of its fragmented state. The surviving part consists of one row of 6+6 small squares divided by a larger square in the middle (the last small square is not visible on the tile fragment). The whole appearance of the game board is much more irregular and make-shift than that of Game board 2. The lines were drawn in a cursory manner onto the surface of the green tile without the aid of a ruler. The 'squares' are irregular in shape and size, the lines are crooked and shallow. The row of squares lies tilted in relation to the edge of the roof tile. The small squares are somewhere between 10 × 25 mm and 20 × 20 mm large, while the large rectangle in the middle measures 35 x 53 mm, almost exactly the same size as on the Intercisa board. The space between the squares is around 12–23 mm. The space between the first and second row must have been more than 90 mm, because no trace of the second row can be seen on the broken tile. The length of the game board was c. 41 cm, a bit smaller than Game board 1.

Game board 3

Game board 3 with checkerboard pattern was drawn onto the upper surface of a *tegula* after firing (Fig. 3). Only a 17.2 × 15.8 cm large, 27–30 mm thick fragment of the roof tile survives with a small part of its flange (inv.no. HNM RT-RO 56.8.99). The identification of tiles with grid pattern as game boards is not always straightforward,[46] however, in this case, several factors make the identification unambiguous. Firstly, the grid pattern was drawn on the upper surface of a roof tile after firing, secondly, the lines are thin, shallow and not filled with plaster, and finally, the game board does not fill the whole surface of the *tegula* but only starts 60 mm from the flange, so there is an empty area,

41 Lrn. 1401. The parcel can be seen on the 1882 map of Budapest: https://maps.arcanum.com/hu/map/budapest-1882/?layers=96&bbox=2118753.462284834%2C6032200.452789327%2C2121046.5731333895%2C6033048.4260718655 (accessed: January 29, 2026).

42 Map of the excavated area: Hampel 1891, Fig. 1. In his publication, Hampel mentions 45 graves, however, there are finds even from Grave 47 in the HNM. A few graves must have been unearthed under the supervision of Károly Torma and Gusztáv Zsigmondy as well.

43 Hampel 1891, 74–75; Zsidi 1995, 38–41; Zsidi 1997, 142–143; Budai Balogh 2005.

44 Stamps*: legio II Adiutrix, Cohors VII Breucorum, Frigeridus v(ir) p(erfectissimus) d(ux) Ap(paratu) Valen(-tini), Ap(paratu) Iovini.*

45 Hampel 1891, 76: "Az egyik téglán karcolatok vannak, melyeknek jelentősége kérdéses."

46 Courts – Penn 2021, 1.

a border around the game board. These make it improbable that the grid pattern served as scoring for the plaster to better adhere to the tile instead of being the lines of a game board.[47] As a game board, it corresponds to Type 29 in the typological table in Pace *et al.* 2024.[48]



Fig. 3. *Tegula* with a graffiti game board: a fragmented grid-type for *ludus latrunculorum*; Inv. no. RT-RO 56.8.99 (photo: V. Törő, Hungarian National Museum).

The tile with Game board 3 was found during the excavations of Ferenc Fülep in the auxiliary fort of Campona (Budapest-Nagytétény) conducted between 1949–1960.[49] The auxiliary *castellum* in Campona was built in the early 2nd century AD and was home to the *ala I Thracum Veterana sagittariorum civium Romanorum*, a mounted archery unit, until at least the middle of the 3rd century AD. The fortress was still very much in existence during the 4th century when it was probably manned by the *equites Dalmatae* and was rebuilt and fortified several times in Late Antiquity.[50] Our information about the find location of the *tegula* is somewhat vague, but it seems that the tile came to light near the southeastern corner tower in 1955.[51] Ferenc Fülep opened excavation trench no. 16 perpendicular to the eastern wall, halfway between the southeastern corner tower and the *porta principalis*. In the trench, he found the 1.80 m thick wall of the *castellum* and the 0.95–1.00 m thick wall of a tower. The *tegula* came to light near these, in surface no. 25 from unknown depth, among pottery and brick fragments. Dating is impossible, the find material contained pottery from the early principate to late antiquity,[52] as well as a coin of emperor Gratianus (375–383) dated to AD 379.[53] A *tegula* fragment bore the stamp of the *legio II Adiutrix*, also undatable precisely between the early 2nd and late 4th centuries.[54]

47 In comparison, see Penn *et al.* 2025.

48 Pace *et al.* 2024, 363.

49 The documentation of the excavation is in the HNM Central Database, Archaeological Documentation Collection, no. N.II.154.

50 Mráv 2022, 21–29 and 42.

51 Fülep 1958, 21–22.

52 RT-RO 56.8.90-91.

53 RT-RO 60.30.15: Æ3, Mattingly *et al.* 1951, (RIC IX), 15(c) (xi). Av: [D N GRATIANVS P F AVG], Diademed, curiassed, draped bust to right. Rv.: [SECVRITAS] REI PVB[LI]CAE | D \ / [*]BSISC Victory advancing left, holding wreath and palm. Diam.: 1.653 × 1.716 cm; die axis: 1 h, Weight: 2.20 g.

54 RT-RO 56.8.99. *[leg(io)] II Ad(iutrix)* stamp in *tabula ansata*.

The *tegula* on which the checkerboard pattern was drawn is fragmented, and only 6 × 3 squares of the grid are at least partially preserved. The size of the individual squares is around 30–35 mm large. The grid was incised with shallow and thin lines after firing, in most cases drawn with several lines. The grid was fairly regular in terms of square shapes and sizes, although the lines were drawn freehand, without the aid of a ruler. It cannot be called a professionally carved board, but for a make-shift board it is quite well executed.

If we take into consideration the size of *tegulae* in Pannonia we can make a rough estimate to the original size of the board: we have evidence for *tegulae* between 42 × 34 cm and 59 × 44 cm.[55] There was an approximately 6 cm border on one side of the game board. If we assume that the 6 cm border ran around the whole game board and the flanges along the long sides of the *tegulae* were 2 cm wide, then the surface of the game board might have been around 30 × 18 cm on a smaller *tegula* or 47 × 28 cm on a larger *tegula*. This means that the grid-type game board might have consisted of about 10 × 6 squares or 16 × 9 squares if the individual squares were 3 cm large. Grid boards from other provinces, for example Britain, tend to have been between 6 × 6 and 11 × 16 squares with a peak in frequencies at the 7 × 8 and 8 × 8 large grids.[56] The sides of the individual squares are usually between 2–4 cm long and in most cases they are irregular.[57] Squares smaller than 2 cm square also appear occasionally, for example on a game board made of stone in Dover,[58] or on *tegula* game boards found at the Roman road station at Gönyű (Hungary)[59] or in the counter fortress at Iža (Slovakia).[60] This means that our board fits well into the general pattern of Roman grid-type game boards.

Game boards with checkerboard pattern are widespread in the western half of the Roman Empire and even outside its border, in Roman Iron age northern Europe. In Britain for example, the majority of game boards are grid-type.[61] In contrast, they seem to be less frequent in the Eastern Mediterranean where they make up only a small portion of the hundreds of known game boards.[62] It has been noticed that many of these boards were found at military sites, especially in Britannia, Hispania Tarraconensis and Aegyptus,[63] and Pannonia seems to fit into this trend as well (see below).

Examples of grid-type boards turn up regularly in Northern Europe, outside the boundaries of the Roman Empire. These boards are usually made of wood and are contemporaneous with the boards found inside the Empire and were found at sites in contact with the Roman Empire. Some of them are much larger than the average Roman boards, the wooden board from a 4th-century elite tomb in Poprad, Slovakia has a 17 × 17/18 grid.[64] The interpretation of these finds is subject to discussion:

55 Aquincum: 46.5 × 38 cm (Havas 2019, Kat. 171); Brigetio (Komárom-Szőny, Hungary): 45–47 × 32–34 cm, 50–52 × 39–40 cm and 56–59 × 44 cm (Dobosi – Szabadváry 2024, 280); Gorsium: 42–44 × 34–36 cm (Kovács 2006).

56 Schädler 1994, 49–50; Schädler 2001, 10; Courts – Penn 2019, 5; Courts – Penn 2021, 2; Crist – Soemers 2023, 7; Crist *et al.* 2024, 65–66, Fig. 2, where they List 25 intact examples.

57 Courts – Penn 2021, 2.

58 Crist *et al.* 2024, Fig. 1.

59 Dobosi in press.

60 Kovár *et al.* in press.

61 Courts – Penn 2019, 5; Courts – Penn 2021, 1. This means 58 out of 98 potential game boards, but this is probably an underestimate. The research is still ongoing, and new results may slightly alter this ratio.

62 Crist *et al.* 2024, 66–67, Fig. 4; Penn *et al.* 2025.

63 Crist *et al.* 2024, 65. However, in Britain most game boards are from military sites, regardless of board type, see Courts – Penn 2019, 8, and Courts – Penn 2021, 6.

64 Crist *et al.* 2024, 67–68; Penn *et al.* 2025.

were they just precious prestige objects or did they serve as actual game boards? If they were used as game boards, was the same game played on them with the same ruleset as on their Roman counterparts?[65]

Game boards with grid pattern are usually associated with *ludus latrunculorum* or *latrunculi*, a popular game of strategy or war game, however, it cannot be ruled out that grid-type game boards were used for other, unidentified games as well.[66] *Latrunculi* is a well-known game mentioned by several Roman authors from Varro (116–27 BC) in the 1st century BC through Ovid (43 BC–17/18 AD), Martialis (38/41 AD–104 AD) and the *Laus Pisonis* (1st century AD) to Isidore of Seville in the 7th century AD.[67] From these we can deduce that *latrunculi* was played on a rectilinear board, the game started with an empty board on which the gaming pieces were placed in the first phase of the game, the pieces were moved in straight lines (orthogonal movement) and could be captured if trapped between two counters of the enemy (custodial capture). None of the sources mention the use of dice, so chance or luck did not play a role in this game.[68] The game does not involve the stacking of several counters on one square of the grid, therefore, the game could be played with plano-convex glass or bone counters as well as flat bone counters.

Latrunculi had an ancient Greek forerunner, the game *polis* or *poleis* (city or cities), which was likewise played on a grid-type board.[69] In Late Antiquity or early Middle Ages, *ludus latrunculorum* might have slowly evolved into the medieval game *Hnefatafl*.[70]

Based on what we know about the rules of *ludus latrunculorum*, grid-type boards of different sizes have been recently tested in the Digital Ludeme Project to see if all board sizes were suitable for playing *latrunculi* on them. The research found that game boards larger then 10 × 10 squares tended to prolong the game so much that it became endlessly long, uneventful and boring. This indicates that at least some of the larger than average boards might have been used for a game other than *latrunculi*. This corroborates the assumption that such game boards found in the Barbaricum were not used with Roman game rules.[71]

Ludus latrunculorum was apparently a game for adults as one of the most famous and brilliant players was a Roman senator, Gnaeus Calpurnius Piso (1st century BC).[72] As a man of senatorial rank he must have served about ten years in the military as part of his *cursus honorum*. *Latrunculi* as a game of strategy was widely played in the military and beyond being recreational might have been used for teaching strategy and discipline to the soldiers. As mentioned above, many of the *latrunculi* game boards were found in military contexts, such as military installations of different sizes in Britain or along the Danube *limes* in Pannonia. The Roman military not only played a significant role in the spread of board games but also in the processes of Romanisation and acculturation of newly conquered areas and after auxiliary soldiers learned to play these games, they then brought the knowledge and new customs home. Playing board games served both as a tool to help

65 Crist *et al.* 2024, 68; Schädler – Hall 2024, 165–169; Penn *et al.* 2025.

66 Penn *et al.* 2025.

67 Richmond 1994; Schädler 1994, 48–58; Schädler 2001, 10–11; Courts – Penn 2019, 5; Courts – Penn 2021, 2; Crist – Soemers 2023, 7; Crist *et al.* 2024, 64–65; Penn *et al.* 2025; Varro *De ling.*, 10.22; Ov. *Tr.*, 2.477; Ov. *Ars Am.*, 3.358; Ov. *Epigr.*, 14.17; Isid. *Orig.*, 18.67; s. n. *Laus Pisonis*, 190–208.

68 Schädler 1994, 48–58; Schädler 2001, 10–11; Courts – Penn 2019, 5; Crist *et al.* 2024, 64; Penn *et al.* 2025.

69 Schädler 1994, 59; Schädler 2002, 94–99; Chidiroglou 2022, 343–346; Penn *et al.* 2024, 14–15; Crist *et al.* 2024, 75; Penn – Mairs in press.

70 Hall – Forsyth 2011, 1333; Hall 2019, 204–207; Crist *et al.* 2024, 68.

71 Crist – Soemers 2023, 7; Crist *et al.* 2024, 74–76; Schädler – Hall 2024, 169.

72 Schädler 1994, 48; Schädler 2001, 10.

interaction between soldiers and civilians as well as Romans and indigenous peoples and as a tool to integrate soldiers of non-Roman origin into the Roman way of life and to teach them discipline and to follow rules.[73]

Game boards from Pannonia

Both *duodecim scripta* and *latrunculi* game boards are known from Pannonia from other settlements as well. A *duodecim scripta* game board was unearthed in the 1970s on the *forum* of Scarbantia (Sop-ron, Hungary) in secondary deposition. The game board was carved onto the surface of a 43 × 41 × 11 cm large sandstone slab which was originally mounted on a 34.5 × 34.5 stone pillar, based on the 1.5 cm deep square shaped deepening on the underside of the stone block. The board originally consisted of three rows of 6+6 small dot-ring motifs divided by a larger dot-ring in the middle. As the stone slab is broken, only two and a half of the rows can be seen now. The smaller rings are between 20–35 mm in diameter, while the larger ones are 45–50 mm large. The dot-ring motifs lie side-by-side without gaps between them and there is a distance of 65 and 100 mm between the rows. There are two additional groups of circles between the rows: these seem to be two rows that were started but then abandoned halfway during the production process. They were probably deemed to be too close to each other (only 20 mm space between the rows), therefore, they were not finished but left half-done. The game board was used on the *forum* probably during the 2nd–3rd centuries AD.[74] Roman game boards are often found on prominent public spaces in well visible locations, such as *forum* spaces. However, most of the similar public game boards are known from the Eastern Mediterranean and not from the northwestern *limes*.[75]

Much more numerous are the *latrunculi* game boards in Pannonia. All examples have survived in a fragmented state on the surface of *tegulae* in various settlements mostly along the *limes*. Grid-type boards are known from Carnuntum (Bad Deutsch-Altenburg, Austria),[76] Aquincum (Budapest, Hungary),[77] Brigetio (Komárom-Szőny, Hungary),[78] the counter fortress of Brigetio at Iža (Slovakia),[79] the Roman road station at Gönyű,[80] the Roman road station in Sárvár (Hungary),[81] late Roman fortlet of Dunakeszi (Hungary),[82] the military *castellum* of Gerulata,[83] and the late Roman villa palace in Szabadbattyán.[84]

Conclusions

The three Roman game boards in the collection of the Hungarian National Museum provide evidence for the types of games that were played along the Danube *limes* in Pannonia. Game board 1 can be seen on an almost intact *tegula* found in Intercisa. The board consisted of two rows of 6+6

73 Pace 2024, 254; Schädler – Hall 2024, 143; Pace 2025, 218–219.

74 Gömöri 1982, 64–67, Figs 1–2.

75 Trifiló 2011; Penn *et al.* 2024, 20–21; Talloen 2024, 99.

76 Ertl 1986, 28–29, Fig. 19.

77 On display in the Tegularium exhibition in the BHM Aquincum Museum and Archaeological Park in Budapest.

78 On display in the Brigetio Heritage Visitor Centre in Komárom.

79 Kovár *et al.* in press.

80 In the Rómer Flóris Museum in Győr, Hungary; Dobosi 2026.

81 Gabler 1991, 67, Fig. 49.

82 Mráv 2011, 47, Fig. 52.5.

83 Penn *et al.* 2025.

84 Nádorfi 2007, 176; Nádorfi 2012, 129.

small squares divided by a larger rectangle in the middle and can be identified as a two-row version of the *duodecim scripta/alea* game boards. Similar to Game board 1, Game board 2 from Aquincum survived in a fragmented state with only one row of 6+6 small squares with a larger square in the middle visible, therefore, it remains uncertain whether it was a two- or three-row game board originally. A three-row *duodecim scripta* game board made of stone is also known from Scarbantia (Sopron, Hungary) where it was mounted on a small pillar and placed into the *forum* square. According to previous research, the shorter, two-row version of the game started to appear from the middle of the 3rd century AD and co-existed with the longer, earlier three-row version during the 4th century. Apparently, in Late Antiquity these game boards were not only used for gaming, but also as part of funerary inscriptions, as can be seen from the examples found in the catacombs of the city of Rome. The boards of this race game might have been used for their symbolic value as metaphors for the passage and stages of human life.

Game board 3 is a fragment of a grid-type board: a checkerboard pattern was drawn onto the surface of a *tegula* after firing. It was unearthed in the auxiliary *castellum* of Campona (Budapest-Nagytétény) and can probably be dated to the 2nd–3rd centuries AD. Boards with grid pattern can be identified as *ludus latrunculorum* game boards and several are known from different settlements in Pannonia: Carnuntum (Bad Deutsch-Altenburg, Austria), Aquincum (Budapest, Hungary), Brigetio (Komárom-Szőny), the counter fortress of Brigetio at Iža (Slovakia), the Roman road station at Gönyű, the Roman road station in Sárvár (Hungary), late Roman fortlet of Dunakeszi (Hungary), the military *castellum* of Gerulata, and the late Roman villa palace in Szabadbattyán.

Acknowledgement

This publication is based upon work from COST Action CA22145 – Computational Techniques for Tabletop Games Heritage (GameTable) which is supported by COST (European Cooperation in Science and Technology; www.cost.eu).

Sources

Cic. *De Orat.*: Cicero, *De oratore.*

Isid. *Orig.*: Isidorus, *Origines (Etymologiae).*

Ov. *Ars. Am.*: Ovidius, *Ars amatoria.*

Ov. *Epigr.*: Ovidius, *Epigrammata.*

Ov. *Tr.*: Ovidius, *Tristia.*

Quint. *Inst.*: Quintilian, *Institutio oratoria.*

Varro, *De Ling.*: Varro, *De lingua Latina.*

s. n., *Laus Pisonis.*

References

Budai Balogh, T. 2005: A Ladik utcai temető újabb részletének feltárása (The excavation of another fragment of the Ladik Street cemetery). *Aquincumi Füzetek* 11, 53–67.

Carè, B. 2022: Pavement designs and game boards from public spaces of ancient Athens: A review across the board. *Board Game Studies Journal* 16:1, 225–249. https://doi.org/10.2478/bgs-2022-008

Chidiroglou, M. 2022: A playful coroplast? A new look at the terracotta group of the early Roman board-game players Nam 4200 and related finds. *Board Game Studies Journal* 16:1, 339–368. https://doi.org/10.2478/bgs-2022-0011

Courts, S. L. – Penn, T. M. 2019: A corpus of gaming boards from Roman Britain. *Lucerna* 57, 4–12.

Courts, S. L. – Penn, T. M. 2021: Roman gaming boards from Britain. *Roman Finds Group Datasheet* 13, 1–7.

Crist, W. – Soemers, D. J. N. J. 2023: The Digital Ludeme Project: Combining archaeological and computational methods for the study of ancient board games. *Journal of Archaeological Science: Reports* 49, 104005. https://doi.org/10.1016/j.jasrep.2023.104005

Crist, W. – Piette, E. – Soemers, D. J. N. J. – Stephenson, M. – Browne, C. 2024: Computational approaches for recognising and reconstructing ancient games: The case of ludus latrunculorum. In: Pace, A. – Penn, T. – Schädler, U. (eds): *Games in the ancient world: Places, spaces, accecories.* Monographies Instrumentum 79. Drémil-Lafage, 63–80.

Dasen, V. 2020: Play and games in Ostia. In: Karivieri, A. (ed.): *Life and death in a multicultural harbour city: Ostia Antica from the Republic through Late Antiquity.* Acta Instituti Romani Finlandiae 47. Rome, 305–311.

de Voogt, A. 2019: Traces of appropriation: Roman board games in Egypt and Sudan. *Archimède: archéologie et histoire ancienne* 6, 89–99. https://doi.org/10.47245/archimede.0006.ds2.03

de Voogt, A. 2021: Tables. *Cordite Poetry Review* 102. http://cordite.org.au/poetry/game/tables/ (accessed: 5 March 2026).

Dobosi, L. – Szabadváry, T. 2024: Roman stamped bricks from the Tussla-collection in the Hungarian National Museum. *Dissertationes Archaeologicae* 3.12, 267–331. https://doi.org/10.17204/dissarch.2024.267

Dobosi, L. 2026: Roman gaming paraphernalia from the Rómer Flóris Museum in Győr, Hungary. *Acta Archaeologica Academiae Scientiarum Hungaricae* 77:1, 103–124. https://doi.org/10.1556/072.2026.00056

Durnagölü, N. – Söğüt, B. 2025: A study on the late antique board game duodecim scripta / alea from Stratonikeia and Lagina. *Board Game Studies Journal* 19, 25–57. https://doi.org/10.2478/bgs-2025-0002

Ertl, R. F. 1986: Bemerkenswerte Ziegelfunde aus dem Carnuntiner Lagerbereich (1983–1985). *Carnuntum Jahrbuch*, 9–30.

Farkas, I. G. 2013: Roman stamped tiles from Dunaszekcső. *Acta Antiqua Academiae Scientiarum Hungaricae* 53, 101–132. https://doi.org/10.1556/AAnt.53.2013.1.6

Fülep, F. 1958: Budapest, XXII., Nagytétény. *Régészeti Füzetek* 9, 21–23.

Gabler, D. 1991: Römische Strassenstation in der Gemarkung von Sárvár. *Communicationes Archaeologicae Hungariae*, 39–84. https://doi.org/10.54640/CAH.1991.39

Gábor, O. 2020: Római kori katonai téglaégető műhely Dunaszekcső-Halenán. In: Fazekas, F. (ed.): *FIRKÁK V. Fiatal Római Koros Kutatók V. konferenciakötete. A Paksi Városi Múzeum 2017. május 12–14. között rendezett Fiatal Római Koros Kutatók IX. konferenciájának szerkesztett anyaga.* Paks, 115–138.

Gömöri, J. 1982: Gondolatok egy kiállításon. *Soproni Szemle* 36:4, 59–69.

Hall, M. A. 2019: Whose game is it anyway? Board and dice games as an example of cultural transfer and hybridity. *Archimède: archéologie et histoire ancienne* 6, 199–212. https://doi.org/10.47245/archimede.0006.ds2.11

Hall, M. A. – Forsyth, K. 2011: Roman rules? The introduction of board games to Britain and Ireland. *Antiquity* 85, 1325–1338. https://doi.org/10.1017/S0003598X00062086

Hampel, J. 1891: Aquincumi temetők. 1881–1882. évi följegyzések alapján. *Budapest Régiségei* 3, 47–80.

Hampel, J. 1906: Intercisa emlékei. *Archaeologiai Értesítő* 26, 221–274.

Hampel, J. 1907: IV. Érem- és régiségtár. In: *Jelentés a Magyar Nemzeti Múzeum 1906. évi állapotáról.* Budapest, 33–72.

Havas, Z. 2019: *Az aquincumi helytartói székhely tégla építészete.* PhD Thesis, ELTE Eötvös Loránd University, Budapest.

Kovács, L. O. 2006: Égetett agyag tetőfedő elemek a táci római kori településről. *Alba Regia* 35, 137–242.

Kovács, P. 2005: A new imperial epithet of the cohors VII Breucorum. *Acta Archaeologica Academiae Scientiarum Hungaricae* 56, 245–249. https://doi.org/10.1556/AArch.56.2005.1-3.7

Kovár, B. – Penn, T. – Courts, S. – Rajtár, J. in press: Playing at soldiers: Gaming finds from Roman Kelamantia (Iža), Slovakia. In: Benediková, L. – Kovár, B. – Bistáková, A. (eds): *Iron age legacies: Current*

approaches to the period in Central Europe. Essays in honour of Gertrúda Březinová on her 70th birthday. Amsterdam, in press.

Lőrincz, B. 1977: Pannonische Stempelziegel I: Limes-Strecke Annamatia – Ad Statuas. *Dissertationes Archaeologicae* 2.5, 1–97. https://doi.org/10.17204/dissarch.1977.1

Lőrincz, B. 2001: *Die römischen Hilfstruppen in Pannonien während der Prinzipatszeit. Teil I: Die Inschriften*. Budapest.

Mahler, E. 1907a: Pannoniai feliratos emlékek (Első közlemény). *Archaeologiai Értesítő* 27, 140–151.

Mahler, E. 1907b: Pannoniai feliratos emlékek (Második közlemény). *Archaeologiai Értesítő* 27, 231–247.

Mattingly, H. – Suthreland, C. H. V. – Carson, R. A. G. (eds) 1951: *The Roman Imperial Coinage. Vol. IX. Valentinian I – Theodosius I*. London.

Mráv, Zs. 2011: *Dunakeszi – Late Roman fortlet along the Danube – Dunakeszi – késő római kikötőerőd*. Guide to Hungarian sites of the Roman limes that are nominated for World Heritage Status 1. Budapest.

Mráv, Zs. 2022: *Campona Victrix – Győzedelmes Campona. Nagytétény a római korban*. Budapest.

Nádorfi, G. 2007: Előzetes jelentés a szabadbattyáni késő római épület feltárásáról. *Alba Regia* 36, 171–178.

Nádorfi, G. 2012: Előzetes jelentés a szabadbattyáni késő római kori épület feltárásáról (Preliminary report on the excavation of the late Roman building at Szabadbattyán). In: Visy, Zs. – Mráv, Zs. (eds): *A Seuso-kincs és Pannonia. Magyarországi tanulmányok a Seuso-kincsről I – The Seuso treasure and Pannonia. Scientific contributions to the Seuso treasure from Hungary I*. Pécs, 112–138.

Németh, Gy. 2002: *Ókori gyermekjátékok*. Budapest.

Pace, A. 2024: Game as cultural bridging. The case of the Batavians of Vindolanda. In: van Enckevort, H. – Driessen, M. – Graafstal, E. – Hazenberg, T. – Ivleva, T. – van Driel-Murray, C. (eds): *Living and dying on the Roman frontier and beyond. Proceedings of the 25th International congress of Roman frontier studies 3*. Leiden, 249–256. https://doi.org/10.59641/1b090en

Pace, A. 2025: Le regole del gioco. il ludus come mediatore culturale nei contesti militari del mondo romano. In: Spadini, F. – Pace, A. – Vespa, M. (eds): *Serio Ludere: Comprendre les cultures antiques par le jeu. Mélanges en l'honneur de Véronique Dasen*. Ludiographie 5. Zürich, 217–242.

Pace, A. – Penn, T. – Courts, S. 2024: Appendix II. A guide to recognising carved pavement signs in the Greek and Roman World. In: Pace, A. – Penn, T. – Schädler, U. (eds): *Games in the ancient world: Places, spaces, accessories*. Monographies Instrumentum 79. Drémil-Lafage, 359–370.

Penn, T. – Pace, A. – Schädler, U. 2024: More than just fun and games: the past, present, and future of the materiality of play. In: Pace, A., Penn, T., Schädler, U. (eds): *Games in the ancient world: Places, spaces, accesssories*. Monographies Instrumentum 79. Drémil-Lafage, 13–30.

Penn, T. – Kovár, B. –Šebesta, B. 2025: A gameboard from *Gerulata* (Rusovce) in the context of Roman-period gaming finds in the north of the Carpathian Basin. *Slovenská archeológia* 73, 121–135. https://doi.org/10.31577/slovarch.2025.73.5

Penn, T. – Mairs, R. in press: Gaming analogies on the Stele of Moschion. *Classical Quarterly*, in press.

Prohászka, P. 2016: Rómer Flóris és Dunapentele régészeti emlékei. *Az Intercisa Múzeum Évkönyve* 1, 9–24.

Prohászka, P. 2021: Egy dunapentelei római szarkofág és mellékletei a 20. század elejéről. *Az Intercisa Múzeum Évkönyve* 5, 9–19.

Richmond, J. 1994: The "Ludus latrunculorum" and "Laus Pisonis". *Museum Helveticum* 51:3, 164–179.

Russell, B. – Chaniotis, A. – Wilson, A. 2024: Gaming in the place of Palms at Aphrodisias. In: Pace, A. – Penn, T. – Schädler, U. (eds): *Games in the ancient world: Places, spaces, accessories*. Monographies Instrumentum 79. Drémil-Lafage, 107–126.

Schädler, U. 1994: Latrunculi – ein verlorenes strategisches Brettspiel der Römer. In: Bauer, G. G. (ed.): *Homo Ludens. Der spielende Mensch 4. Internationale Beiträge des Institutes für Spielforschung und Spielpädagogik an der Hochschule "Mozarteum" Salzburg*. München–Salzburg, 47–67.

Schädler, U. 1995: XII scripta, alea, tabula: New evidence for the Roman history of 'backgammon'. In: de Voogt, A. (ed.): *New approaches to board games research. Asian origins and future perspectives*. Leiden, 73–98.

Schädler, U. 2001: Latrunculi. A forgotten Roman game of strategy reconstructed. *Abstract Games* 7, 10–11.

Schädler, U. 2002: The Talmud, Firdausî and the Greek game "City". In: Retschitzki, J. – Haddad-Zubel, R. (eds): *Step by step. Proceedings of the 4th colloquium board games in academia*. Fribourg, 91–102.

Schädler, U. 2013: Jouer avec la mort: Jeux en réemploi ou inscriptions en forme de jeux? *Archéothéma* 31, 68.

Schädler, U. 2022: Catacomb games: Reused game boards or funerary inscriptions? *Board Game Studies Journal* 16:1, 369–395. https://doi.org/10.2478/bgs-2022-0012

Schädler, U. 2024: Roman, Byzantine, and medieval games in Ephesus: Preliminary survey results. In: Pace, A. – Penn, T. – Schädler, U. (eds): *Games in the ancient world: Places, spaces, accessories*. Monographies Instrumentum 79. Drémil-Lafage, 127–140.

Schädler, U. – Hall, M. A. 2024: Europe's playful frontiers: Roman board games in the Barbaricum, from Britain and across the Rhine and Danube lands. In: Pace, A., Penn, T., Schädler, U. (eds): *Games in the ancient world: Places, spaces, accesssories*. Monographies Instrumentum 79. Drémil-Lafage, 141–180.

Talloen, P. 2024: Games and gaming in southwestern Asia Minor. In: Pace, A. – Penn, T. – Schädler, U. (eds): *Games in the ancient world: Places, spaces, accessories*. Monographies Instrumentum 79. Drémil-Lafage, 89–106.

Trifiló, F. 2011: Movement, gaming, and the use of space in the forum. In: Laurence, R. – Newsome, D. J. (eds): *Rome, Ostia, Pompeii: Movement in space*. Oxford, 312–331. https://doi.org/10.1093/acprof:osobl/9780199583126.003.0014

Újlaki Pongrácz, Zs. 2007: *Római kori fürdő a dunaújvárosi Öreghegyen – Roman time bath in Öreghegy of Dunaújváros*. Az Intercisa Múzeum Kincsei IV. – Treasures of Intercisa Musuem IV. Dunaújváros.

Visy, Zs. 2003: Intercisa castellum. In: Visy, Zs. (ed.): *The Roman army in Pannonia. An archaeological guide of the ripa Pannonica*. Budapest, 116–118.

Zsidi, P. 1995: Kutatások az aquincumi canabae északkeleti peremén (Research on the north-eastern edge of the Aquincum canabae). *Aquincumi Füzetek* 1, 38–43.

Zsidi, P. 1997: Grabummaurungen am nördlichen Rand der Canabae von Aquincum (Budapest III., Ladik-Str.). *Communicationes Archaeologicae Hungariae*, 109–147. https://doi.org/10.54640/CAH.1997.109

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 109–142. 10.17204/dissarch.suppl.5.2026.109

Transformations along the western part of the Via Egnatia in Roman Antiquity

Damjan Donev
Institute of National History, University of Ss. Cyril and Methodius, Skopje, North Macedonia
damjaned@gmail.com

Received 3 November 2025 | Accepted 9 April 2026 | Published 18 November 2026

Abstract: The impact of major roads on ancient societies is still largely a matter of scholarly speculation. The rare references in the historical sources are vague and ambiguous and a standardised method of evaluating this impact with the help of the archaeological record is lacking. This study examines the role of the Via Egnatia, the main land corridor that connected the Adriatic and Aegean coasts, in shaping the regional urban geography and the spread of Roman culture, as manifested in the distribution of imported tableware. Only the areas gravitating towards the landlocked, western segment of the Egnatian road are considered. A diachronic perspective is adopted, looking at the transformations in urban geography and the concomitant spread of imported fine ceramics from the time of the Roman conquest to the end of Antiquity. The main conclusion is that the construction of the Via Egnatia had a delayed but profound impact on the distribution of wealth and urbanity in the adjacent areas. However, from a long-term perspective, this was a transitory episode and, with the collapse of central authority towards the end of Antiquity, the system returned to the 'pre-Egnatian' stage.

Keywords: Via Egnatia, Roman Antiquity, towns, tableware imports

Introduction

Via Egnatia, the celebrated interregional road between Apollonia/Dyrrhachium (near present-day Polan and Durrës in Albania, respectively) and Byzantium (Istanbul, Turkey), constructed by the Romans soon after the final annexation of Macedonia in 148 BC, does not require a lengthy introduction.[1] It was one of the first major infrastructural projects carried out by Rome outside Italy and, no less significantly, it was the only project of such scale implemented in the newly-conquered area prior to the reign of Augustus. The tracing and construction of the 1120 km-long road, marked by a pair of milestones at each mile and conquering both mountainous and marshy terrain would have presented an immense challenge, even from the perspective of modern engineering. It is all the more striking that the Romans managed to complete it within two decades after the founding of the province.[2]

The expediency of this construction is understandable. Without well-maintained roads adapted to wheeled traffic, it would have been impossible to defend and govern the newly acquired possessions in the Balkans. This is paralleled in virtually all provinces in the Balkans and beyond.[3] The conquest

1 For a full history of research see, Fasolo 2008.

2 Certainly by 120 BC, Polyb. *Hist.*, 34.12.4. This refers to the earliest phase of the road, ending at the eastern frontier of the new province: Adams 1982, 269–312; Adams 1986, 17–42; Fasolo 2008, 97–99.

3 Thrace: Madzharov 2009; Moesia Superior: Mirković 2007; Pannonia: Soproni 1980.

✉ Corresponding author

or final pacification and the founding of a new province were soon followed by the construction of roads that followed the most direct routes to Italy. However, the Egnatian Road had an additional importance, providing Rome with a secure land-bridge to the rich Asian provinces which, unlike the pirate-infested maritime routes, could be used year-round. To the Romans, this would have been obvious from the moment they set foot in this area. As early as 190 BC, the Macedonian king Phillip V (221–179 BC), a Roman ally at that time, was asked to provide a secure passage for the Roman troops during their campaign against Antioch III (223–187 BC).[4] Ancient authors were certainly aware of the primary role of the Via Egnatia, and Cicero explicitly calls it a military road.[5]

But what of the other consequences of the construction of the Egnatian Road? In the past, modern scholarship was mostly concerned with searching for the material remains of this road and determining the chronology of repairs and reconstructions from the epigraphic record and the scant information in the written sources.[6] This is somewhat surprising, because elsewhere, the construction of roads of similar rank and importance has been associated with significant changes in local and regional development.[7] From an archaeologist's point of view, these should be readily apparent in the settlement map and the settlement hierarchy, as well as in the presence of imported goods. A recent study has demonstrated that approximately three-quarters of all urban settlements in Roman Pannonia were located on the newly-built corridors that followed the ancient Amber Road or the Sava, the Pannonian counterparts of the Via Egnatia.[8] In addition to the transport of troops and government officials, these roads were central to the spread of Roman culture and Latin language, especially in landlocked provinces. There is no doubt that the Via Egnatia had a comparable effect on the society and economy of Roman Macedonia. Geographically, it was the backbone of this province.

These and other questions related to the Egnatian Road have already been raised in a seminal paper by Yannis Lolos.[9] In this work, he makes a preliminary examination of the social and cultural impact of the Via Egnatia on provincial life, by looking at the distribution of civic status, Roman communities and Italic imports along this road. The conclusion is that the Egnatian Road played a key role not only in the spread of material culture and ideas, but it also shaped the urban geography of Roman Macedonia. Although few would disagree with this conclusion, it is not as demonstrable as it seems at first sight. What to make of the fact that, after the first wave of written references to the Via Egnatia, by contemporaries who lived in the last couple of centuries BC, there are hardly any mentions of this road in the written sources until Late Antiquity?[10] Or the inscriptions commemorating the repairs and reconstruction of the road under Trajan (98–117 AD), which inform that, by then, the famous road had fallen into disrepair?[11] No matter how we view this scant evidence, its intimations challenge the established image of the Egnatian Road as a constantly busy and vibrant conduit of people, goods and ideas. To what extent is the popular image of this ancient highway a modern myth?

Following Lolos' lead, the present study aims to analyse the transformations of the urban network in the parts of Roman Macedonia that border on the Egnatian Road and evaluate the capacity of this network to provide the hinterland with high-order services and imported goods. The underpinning

4 Adams 1982, 274–275.

5 Wallbank 1985, 193–210.

6 Gounaropoulou – Hatzopoulos 1985; Adam-Veleni 2003, 109–114; Amore *et al.* 2005, 336–360; Kaimaris *et al.* 2009.

7 Laurence 1999; Laurence 2012, 67–94.

8 Donev 2024, 33–52.

9 Lolos 2009, 264–284.

10 Fasolo 2008, 53–63.

11 Adams 1993, 29–39.

assumption is taken from Central Place Theory (henceforth CPT), which, provided that a certain set of conditions are met, postulates that the logistics of demand and supply will result in a patterned spacing of urban rank.[12] As will soon transpire, the classical CPT models, in their basic form, (market and transportation varieties) do not apply to our study area. This has to do with the political fragmentation, the dramatic variations in relief and population density and, more detrimentally, the incomplete settlement maps. Nevertheless, it is worthwhile to examine the spatial projection of the urban hierarchy along the Egnatian Road and its potential role in the supply of the adjacent areas with imported goods. The absence of any obvious structuring will be no less interesting against the data for the spread of imported goods.[13]

The chronological limits of this paper encompass the entire period of Roman Antiquity, from the time of the conquest and subsequent construction of the Via Egnatia to the end of Antiquity. Needless to mention, a truly diachronic approach routinely practiced by sociologists or modern historians is beyond our reach. The study will essentially look and compare the situation at three consecutive stages during this long period. These are the Late Republic or better known locally as Hellenistic-Roman, which also approximates the situation in the pre-conquest period, the time of the High Empire and the last couple of centuries of Antiquity, following the reforms of the Tetrarchs and Constantine I (306–337 AD).

Because the ultimate goal is to evaluate the role of the Egnatian Road in the spread of Roman culture and ideas, it makes sense to limit the study to the landlocked, western half of the road. The aim is to ignore the likely influx of imported goods from port-towns to the adjacent inland areas via secondary and local roads. To this end, the focus shall be on the segment between Dyrrhachium and Apollonia on the Adriatic Coast and Thessaloniki (Greece) on the northern Aegean. This western leg of the Via Egnatia was the only link to the outside world for an extensive area. Its limits cannot be drawn in a non-arbitrary way. Due care was taken to exclude areas potentially serviced by other interprovincial roads, but the inclusion of segments of these roads near their junctions with the Via Egnatia was inescapable. The end-result is a roughly rectangular strip of land, extending for up to 70 km on both side of the road (Fig. 1). It includes parts of northern Epirus, southern Illyria, Upper and Lower Macedonia and Paeonia. We have also extended the study-area to Amphipolis (present-day Amphipoli, Greece) on the east, to include the landlocked area around modern Lake Volvi, which also depended on the Egnatian road for access to the coast. The Strymon Valley and eastern Macedonia are left out from this analysis.

Methodology and data acquisition

The urban geography and hierarchy

The sheer distribution of towns and town-like settlements in the study-area will suffice to give the reader an idea of the extent of urban coverage during the period under study. However, in order to identify a structure in the urban map, it is necessary to order the known towns into distinct hierarchical tiers. In view of the uneven quality of the data, especially between the different phases of the period under study, this endeavour is ridden by a number of difficulties. Ideally, when assigning individual settlements to discrete ranks, it is best to consider as many attributes as possible. Focusing on a single attribute, like size or status, is potentially misleading.[14] Unfortunately, this is not equally applicable to all three phases of the period under consideration.

12 King 1985; for applications in Roman archaeology, see the overview in Bekker-Nielsen 2020, 81–97.

13 See Blake 1980, 4–12.

14 Bekker-Nielsen 2020, 86–87. Perhaps, the most striking example of the potential mismatch between multiple attributes are the district capitals, some of which cannot be traced on the ground, see below.

The most amenable phase to this type of analysis is the time of the High Empire, when it is possible to combine a wide range of attributes, including settlement status, size, public buildings, coinage and the presence of foreign communities, typically Roman citizens.[15] Far less is known about these aspects in the Hellenistic-Roman phase, both because the historical testimonies are rare and because the majority of these towns were occupied continuously throughout the Roman period or were reoccupied in Late Antiquity, leaving behind few traces of earlier occupation. This could lead to an underestimate of the true complexity of the urban hierarchy, although there are good reasons to believe that, in this phase, the urban hierarchy was indeed shallower than during the High Empire.



Fig. 1. Map of the study area showing the terminal points of the Egnatian Road.

The Late Antique phase brings along a different set of problems. Although archaeologically it is perhaps the best studied of the three phases, the changed social circumstances reduce the number of attributes of potential relevance to the settlement hierarchy, blurring the differences between individual tiers. Whereas urban status can still be ascertained with the help of the written documents, the range of public buildings is much narrower than in the previous phase and this is accompanied by the disappearance of other useful indicators like autonomous coinage and inscriptions. At the same time, there was an evident upsurge in the number of hillfort settlements with urban characteristics, historical evidence for which is lacking.[16] In most parts of the study area, the systematic study of these settlements is yet to begin and this presents a serious obstacle to the full reconstruction of the urban map and especially the lower reaches of the urban hierarchy.

Assuming that the settlement tiers are positively correlated with the number of services provided to the surrounding population, we shall examine the distribution of individual tiers across the study-area and the spatial relations between the different settlement tiers.[17] Unweighted Thiessen polygons and

15 See for example Hobson 2020, 281–323.

16 Dunn 1994, 61–80; Mikulčić 2003.

17 E.g., Hodder – Hassal 1971, 391–407; Kunow 1988, 55–67.

buffers of variable size will be used to study the extent of urban coverage and the regularity in the distribution of services of various rank. This will help us identify an underlining structure in this distribution, if any, and relate it to one of the CPT principle schemes, market, transportation or administration.

It may be objected that the elaboration of the full settlement hierarchy is of a dubious relevance for the purposes of the present study. In theory, a simple market place, arguably a facility present even among low-ranking settlements, would have sufficient to supply the countryside with imported goods, including tableware.[18] However, it is generally agreed that tableware was rarely if ever an object of direct trade.[19] Transporting cargoes loaded exclusively with pottery over long distances would have been too expensive and risky, all the more so, because in most areas they could be substituted by local products. Most commonly, it would have been associated with other bulk goods and there are many reasons to think that these imports could only reach the base of the settlement hierarchy through the mediation of the high-ranking settlements. Once imported, fine-ware imports would have also spread in association with other goods and services, be it through internal trade or periodic visits to the high-ranking settlements by groups and individuals.[20] But irrespective of the likely mechanisms of distribution of pottery imports, the role of the urban markets in this process cannot be ignored.

A large proportion of the data for this study has already been collected and published. The urban geography and the urban hierarchy of Roman Macedonia were studied in great details in two recent studies, one covering the parts of the province that belong to modern Greece and the other those that fall in the neighbouring countries.[21] There, these and other methodological issues are discussed at great lengths. Quite usefully, both studies pay close attention to developments prior to the Roman conquest and offer lots of important data for the Hellenistic towns and *oppida*. Data for the Late Antique towns were collected independently by the author, and they mostly come from regional studies of Late Antique fortifications and historical sources, like Hierocle's list of *civitates* or the lists of bishops attending the ecumenical church councils.[22]

Distributions of tableware imports

The field of pottery studies in general is still relatively underdeveloped in the countries that cover the area of interest. This is especially true for the Roman period, for which there are only a handful of dedicated studies, most of which were published in the last couple of decades.[23] The published data is heavily biased towards the largest urban centres, which is not particularly helpful for the purposes of the present study. Therefore, in order to create the distribution maps for the different tableware categories, it was necessary to collect the data scattered in numerous excavation and survey reports and exhibition catalogues.[24] This is not only time-consuming, but it also carries risks of importing incorrect data. Typically, when it comes to the small finds, field reports are poorly

18 See the role of fairs in rural districts, De Ligt 1993.

19 For example, the connection between the export of African Red Slip and grain, Bonifay 2017, 327–351; for a review of the mechanism of *terra sigillata* distribution see, Bes 2015.

20 The role of cities in the distribution of Western *terra sigillata* products is discussed in Van Oyen 2015, 279–299.

21 Karambinis 2020, 440–481; Donev 2020.

22 Mikulčić 2003. Papazoglou offers a critical overview of the written evidence for Late Antiquity (Papazoglou 1988).

23 Stojanović-Anderson 1993; Malamidou 2005. The thesis on Roman pottery from central Macedonia by Garyfallopoulos 2024, is still under embargo.

24 Most of the data has been sourced from the following publications: Albania: Shehi 2015 and papers in the journals *Iliria* and *Candavia*; North Macedonia: Ončevska-Todorovska 2008; Stojanović-Anderson 1993, and papers in the journal *Macedoniae Acta Archaeologica*, Greece: Malamidou 2005 and papers in the journal, *To arkhaioloyiko ergo stin Makedonia kai Thraki*.

illustrated and contain only brief comments. Making matters even worse is the frequent use of the term *terra sigillata* in a very broad sense and sometimes incorrectly. Because in the great majority of cases there is no way of verifying these data, the only precautionary measure available was to ignore all references to tableware finds that are not illustrated or explicitly related to recognized types and forms. This will probably lead to an underestimate of the spread of certain categories, but this is the better alternative to including findspots of locally produced, slipped or painted vases. On the other hand, it is unlikely that the reports would have failed to mention tableware imports had they been discovered.

Our goal is not to create an exhaustive database of findspots of ceramic imports, but to arrive at an approximation of their spread and frequency at different points in time. Needless to mention, quantitative studies are limited to a handful of deposits from the major urban centres, and it is only possible to look at presence/absence. But these distributions alone are not particularly telling, because they will primarily reflect site-distributions during periods in which the relevant tableware categories were used. A far more informative index is the proportion of sites per period which contain the tableware categories in question. To this end, in addition to the towns and town-like settlements, the findspots file includes around 100 surveyed or excavated sites of different categories and dated anywhere between the Early Hellenistic and Late Roman period. The variations in these proportions during the three phases of the period under study should provide a reliable measure of the extent to which ceramic imports were accessible in the study area.

This approach is not without problems, though they do not necessarily invalidate it. At this point, two are worth mentioning. The first is the uneven scope and intensity of fieldwork. The findspots file includes both large urban sites and necropolis that have been systematically excavated over many years and sites that have seen only brief rescue campaigns or surveys. The absence of particular categories of finds from the latter is obviously far from definite, and future research may well result in the discovery of such finds. Caution is highly-warranted in these cases, although it can be argued that the sample is large enough to absorb these uncertainties. There is no reason to believe that tableware imports were somehow systematically overlooked at a large number of sites.

The other issue pertains to the interpretation of the results and is potentially a source for a greater concern. Is the proposed index really a measure of the outreach of the markets in the study-area or does it simply reflect local cultural preferences? Is it not possible that the sparseness of certain categories of imported tableware was due to their low popularity or even conscious boycott? At least until an analogous study of a different category of imports, preferably non-ceramic, is carried out, this question will have to stay open.

Hellenistic – Roman, 167–30 BC

The urban geography

Recent studies of the urbanisation in the study-area during the Roman period have recognized a sharp decline in the number of towns and fortified settlements in the centuries following the Roman conquest.[25] Although there are subtle differences between the constituent parts of this area, the overall trend is undeniable. In Southern Illyria, the northern part of Epirus and Lower Macedonia both the number of towns and the total size of the urban area decreased. Preexisting settlements either shrank in size or were abandoned, and this loss was not compensated for by the few expanding or newly-founded towns.[26]

25 Karambinis 2020, Tab. 14.1; Donev 2020, Tab. 2.2–3.

26 Karambinis 2020, 453.

But this de-urbanisation was not a sudden disastrous event caused by the Roman conquest. In some parts of the study-area, like the core of the Macedonian kingdom and the Thermaic Gulf, there had been an ongoing process of centralisation ever since the Macedonian conquest in the middle of the 4th century BC. Certainly, the most striking episode was the founding of Thessaloniki with the synoecism of dozens of earlier settlements in the Thermaic Gulf.[27] The numerous prehistoric tell-settlements in the hinterland of Pella probably experienced a similar fate after the founding of the new capital.[28]

Nor did the Roman conquest of Illyria and Macedonia accelerate this process. Many settlements continued to exist for at least a century after the conquest, and some survived until the late 1st century AD.[29] Changes in the extent and topography of individual towns are difficult to track in the archaeological record, but the historical evidence does not hint at major changes in the urban hierarchy. Though the provincial seat may have moved to Thessaloniki, Pella, the former capital, continued to function as a district capital and was re-founded as a Roman colony towards the end of this period.[30] Most other district capitals had already been important centres prior to the conquest.

The towns in the integral study-area can be ordered into three hierarchical tiers (Tab. 1). The towns that belong to the top-tier are clearly set aside by their size, typically greater than 50 ha, political status and the presence of virtually all attributes of urbanity characteristic for that time-period. Pella is obviously much larger than the other first-tier towns, but this size-estimate refers to the pre-conquest period.[31] It can be reasonably assumed that it lost some of its former standing after the conquest, even though precise data is unavailable. In addition to the former Macedonian capital, the first-tier settlements include the Greek colonies and the other district capitals proclaimed by the Romans. The only possible exception is Pelagonia, the capital of the fourth district, which still has not been located and is therefore relegated to the second tier.[32]

Tab. 1. The attributes of the settlement tiers in the Hellenistic-Roman period.

Status	Size	Number of public buildings	Coinage	Rank
Colonia, district capital	> 50 ha	> 5	yes	1
Polis, tribal centre	10–30 ha	1–3	no	2
Oppidum, fort	< 10 ha	0–1	no	3

The second-tier consists of autonomous or semi-autonomous towns, with attested institutions, a few public buildings and a size-range between 10 and 30 ha. The autonomous status of many of these towns is confirmed in official documents, like the Delphi list of the Theorodochs.[33] The limits of this group are not as sharp as those of the first-tier settlements. In some cases, the historically attested status is not matched by the archaeological evidence, whereas in others, anonymous *oppida* exhibit traits that are defining of the second-tier towns. This is not necessarily the result of data fuzziness, for it also reflects the real dynamics in the lower tiers of the hierarchy.

27 Papazoglou 1988, 189–205.

28 Merousis 2004, 73–82; Chrysostomou 1990, 205–231.

29 Pella: Akamatis 2011, 393–408; Ossa: Adam-Veleni *et al.* 1992, 383–393; Petres: Veleni 1987, 9–24; in general, Adam-Veleni 2010, 170–183.

30 Chrysostomou – Chrysostomou 2011, 283–298.

31 Karambinis 2020, Tab. 14.2.

32 Papazoglou 1988, 276–292; Lilčić-Adams – Jakimovski 2016.

33 Plassart 1921, 1–85; Raynor 2016, 225–262.

The base of the settlement hierarchy includes the great majority of the known settlements. Typically, these are smaller than 10 ha and their only public buildings are their defences. This group possibly includes a number of non-urban sites, like military outposts or *refugia*, but it is worth pointing out that the few excavated examples not only show evidence of permanent occupation, but also traces of urban planning and crafts.[34] Conversely, at least some of these sites could be reassigned to the second tier in the light of new discoveries.

In the aftermath of the conquest, the entire study-area was densely populated with by third-tier settlements, which comprise nearly 90% of all urban or urban-like settlements at that time (Fig. 2). The average intercity distances are only about 11 km, but there are considerable variations and, as a result, urban coverage is partial. Although the Egnatian Road was constructed at the beginning of the period under consideration, there are no signs of alignment on this new axis. On the contrary, a closer look at the settlement distribution in different parts of the study-area will reveal clustering on a micro-regional level, even in the most remote areas. These discrete concentrations often coincide with separate geographic and political units, like the core area of ancient Macedon, Paeonia, Pelagonia, Dassaretia in the Ohrid Basin and the hinterland of Apollonia.

Unlike the settlements from the bottom of the settlement hierarchy, the few high-ranking towns are not distributed evenly. Both the first- and the second-tier settlements are almost exclusively found in the core area of the Macedonian Kingdom and in the hinterland of Apollonia on the Adriatic Coast. Outside these areas, it is difficult to identify high-ranking settlements without distorting the evidence. Potential candidates are Pelagonia the capital of the fourth district and Stobi (near Gradsko, North Macedonia), an *emporium* of the third district for the export of salt, but in neither case is this substantiated by the archaeological evidence.[35] But even if it is proven that these two centres belong to the second tier, still large segments of the study-area would not have had a direct access to high-ranking centres and services.

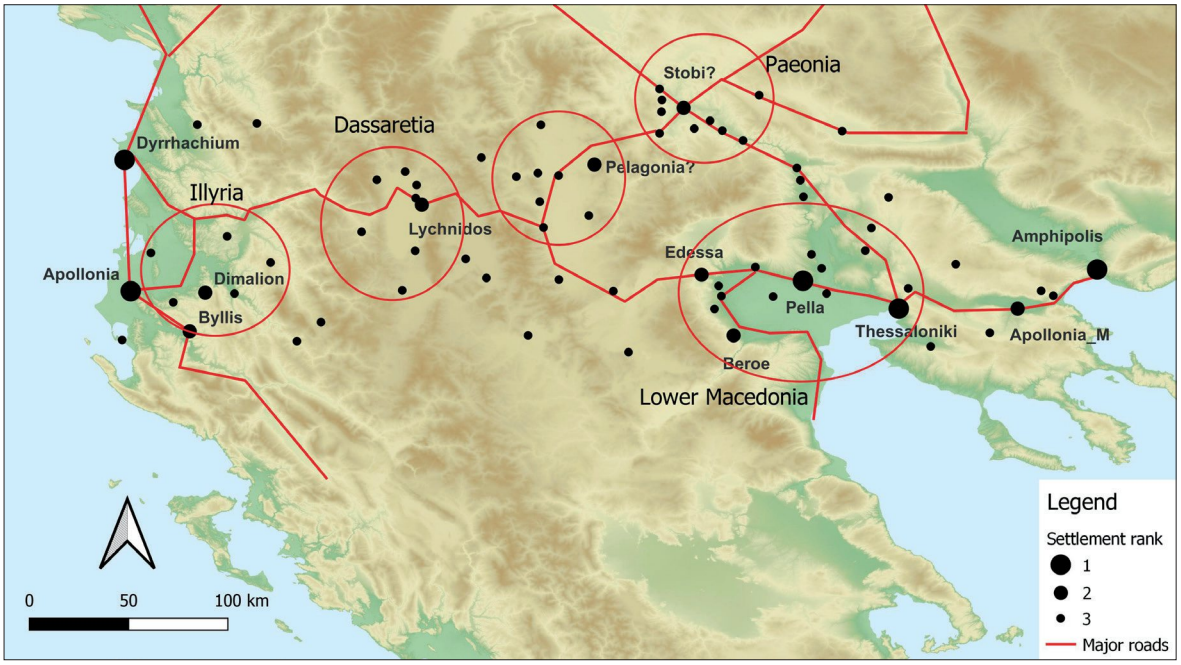


Fig. 2. Distribution of towns and hillforts during the Hellenistic-Roman phase.

34 Adam-Veleni 2010, 170–183.

35 Pelagonia: see Footnote 34; urban growth in Stobi did not pick up prior to Augustan times, see latest Blaževska – Pavlovski 2018, 12–46.

Only in the areas that gravitated towards the colonies on the Adriatic Coast and those brought under the control of the Macedonian kings from early on, is there evidence of regular distribution of the towns of equal rank. In the core area of the Macedonian Kingdom, first- and second-tier settlements appear consistently at every 40-50 km and they are already aligned on the Egnatian Road, which in Lower Macedonia followed closely the old east-west road from royal times (Fig. 3).[36] Two of the best-known CPT models predict that third-tier settlements are located halfway between two first- or second-ranking towns. This is indeed the case with Kyrrhos, located on the boundary of the service areas of Edessa and Pella or Arethousa, between Kalindoe and Amphipolis. However, these are the exceptions. In most of the cases, the third-ranking settlements are too close to the higher-ranking centres and appear just outside their market radii, indicated by the ten-km buffers. Occasionally, as in Pella or Byllis in Epirus, the service areas of the third-ranking settlements nest neatly within the 25-km buffers that delimit the service area for higher-order goods. This pattern is more attuned to the goals of administration or agricultural exploitation than market coverage, and it approximates the administrative variant of CPT.[37] Tributary settlements are pulled inside the service areas of first- and second-ranking towns, but they are confined to the outer rings to secure room for their own agricultural and market territories.

On the other hand, the top-ranking settlements, both in Illyria and in Lower Macedonia do not fit into this scheme (Fig. 4). They are all located on the edges of the system and, in some cases, are positioned too close to each other. Most of these towns were not the product of organic growth. They were either founded by outside colonists or by regional rulers and were grafted onto an existing

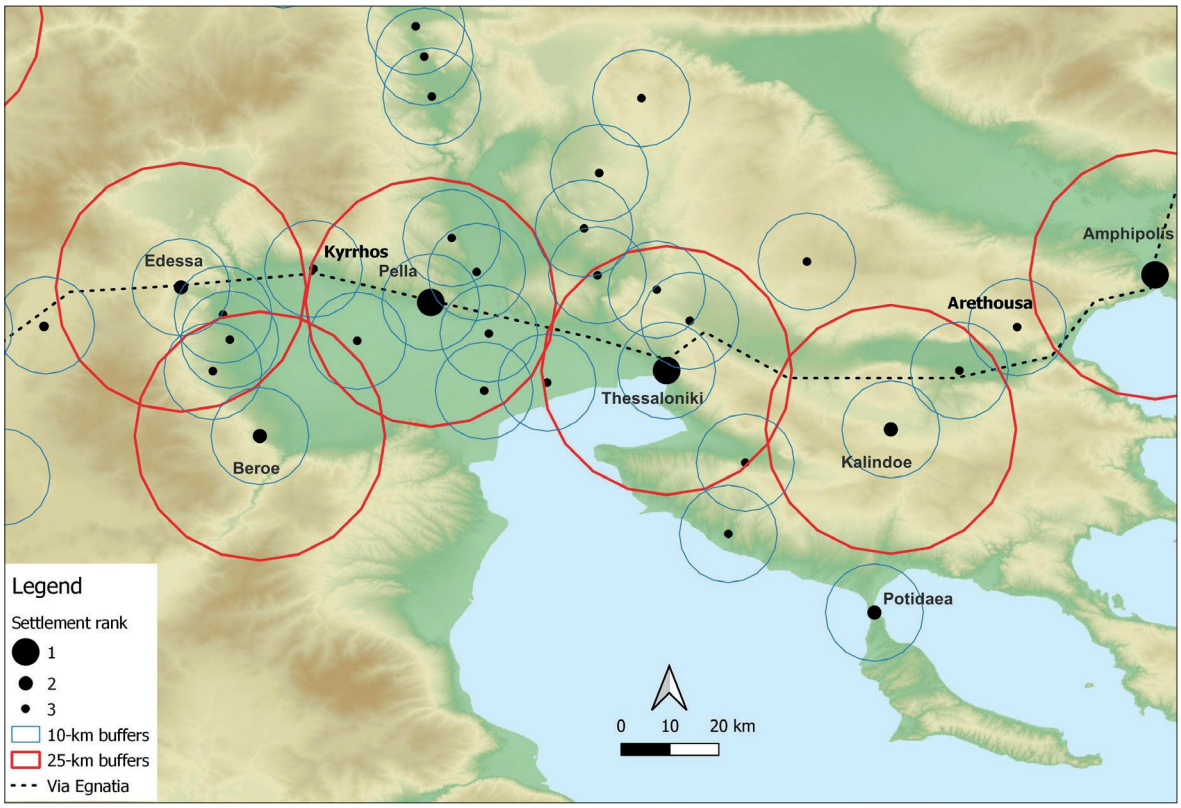


Fig. 3. Distribution of settlements ranked into distinct tiers in Lower Macedonia during the Hellenistic-Roman phase.

36 Gounaropoulou – Hatzopoulos 1985, 22–23.

37 Bekker-Nielsen 2020, 85–86. In market and transportation variants, lower-ranking centres stand halfway between neighbouring higher-ranking centres.

system. The full picture is also partly obscured by the static nature of the data. Prior to the conquest, Pella had stood at the centre of the system in the core area of the Macedonian kingdom, and halfway between the lower-ranking towns of Edessa (Greece) and Thessaloniki. But in the aftermath of the Roman conquest, the system entered a long phase of transition, during which the old royal capital and the new provincial capital of Thessaloniki existed side-by-side. Only in a later phase did the provincial capital take over Pella's former role.

During the first century and a half after the founding of the province, Macedonia did not have a unified urban system. It was an artificial and composite unit that encompassed areas with different developmental trajectories. The old political divisions are still visible on the urban map of the Roman province. Complex settlement hierarchy and signs of urban patterning are discernible only in the parts of the area that had a developed urban tradition prior to the conquest. Excluding the Macedonian segment of the road, which had been in place prior to the conquest, the impact of the Via Egnatia on the settlement distribution or the urban hierarchy in this early phase is imperceptible.

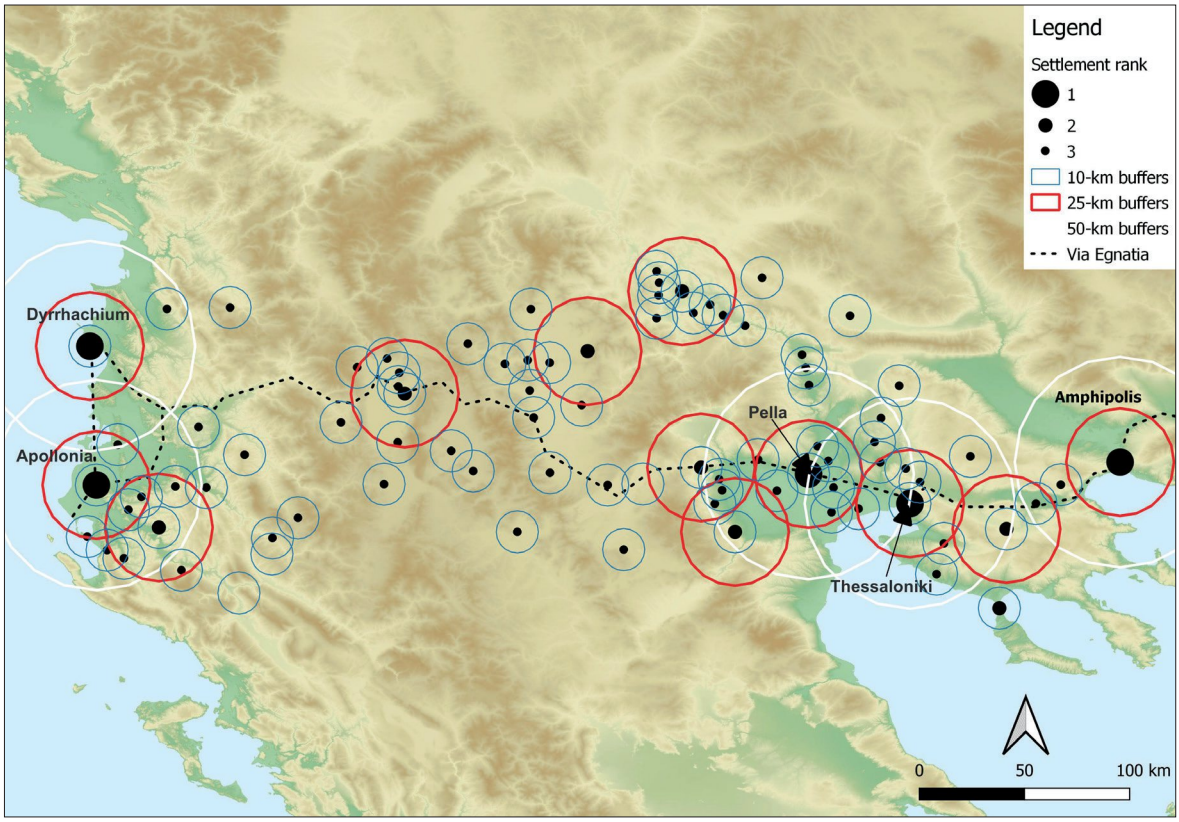


Fig. 4. Distribution of settlements ranked into distinct tiers in the study-area during the Hellenistic-Roman phase.

Distribution of Attic and Apulian Red-figure vases

From a chronological point of view, these categories of fine-ware are seemingly irrelevant for the period studied here, because their production had stopped by the early 3rd century BC.[38] Nonetheless, bearing in mind that the Hellenistic-Roman urban system had changed little since then, they are still potentially indicative of its coverage and connectivity. Additionally, local imitations of Red-figure vases were limited to a small number of production centres and it can be assumed

38 Apulian: Herring 2018; Attic: Moor 1997.

that most of the reported finds are actual imports.[39] On the other hand, there is evidence that the contemporary Hellenistic categories of tableware, the monochrome, Black-slip or painted vases and Megarian bowls were produced in a large number of local centres and these are often impossible to distinguish from imports without archaeometric analyses.[40]

Formally, most examples of Red-figure vases come from drinking sets and *lekythoi* and are found both in settlements and necropoleis. Quantities are by all standards low but, contrary to predictions, their degree of dispersal is surprisingly high (Fig. 5).[41] Except for the mountainous parts of Illyria and Upper Macedonia, finds of this category are present in nearly all corners of the study-area. This material has been found at 49 of the 63 sites with a documented Late Classical-Early Hellenistic phase or at three-quarters of the known sites. Most of the findspots coincide with the towns and their necropolis, and these include settlements from all tiers of the urban hierarchy. This tableware class is also present at rural sites, small open settlements and isolated burials.

The areas with the highest frequences of these finds are the hinterlands of Apollonia and Dyrrhachium and, expectedly, the core of the Macedonian kingdom. This may well be a reflection of the local history of research, but it is nonetheless symptomatic that these concentrations coincide with the

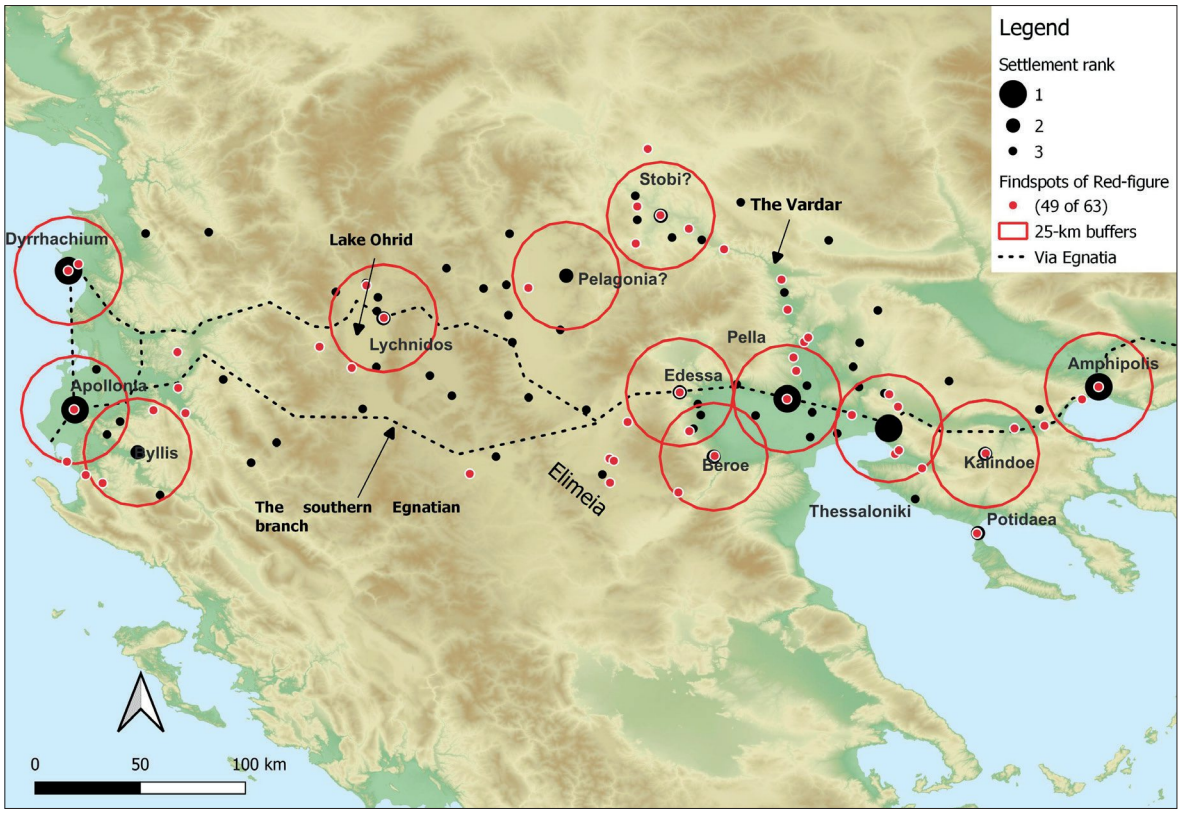


Fig. 5. Distribution of imported Red-figure vases in the study-area.

39 Products from the Pella workshop are mostly limited to the town and its environs, Akamatis 2014, 177–191. On the other hand, most of the material from the oppidum of Kale, Krševica in Serbia has been related to the Attic workshops, Vranić – Radojčić 2023, 221–233; and the same applies to the finds in North Macedonia, Sanev 2013, 3–55. Admittedly, as far is known, this has not been confirmed by archaeometry.

40 Evidence for local production of Megarian bowls at: Dyrrhachium (Shehi 2010, 55–59); Stobi (Stojanović-Anderson 1993) Vergina (Faklaris 1993, 61–68); Palatiano (Hadzipolichroni-Anagnostopoulou 1996, 189–204).

41 Some sites are exceptions, see Vranić – Radojčić 2023, 222, 225; Sanev 2013, 7.

areas that had direct access to first-order services and in which there was a tendency towards regular patterning of urban places. Note that most findspots fall within the 25-km buffers around second-tier towns. Although in small quantities, Red-figure imports have also reached inland areas, like the Middle Vardar Valley, the Ohrid Basin and Elimeia, in which second-tier towns were few and far between, whereas first-tier towns were absent. Even here, they are not limited to the urban centres but are also found at rural sites and necropolis.

It is also worth observing that, from a global perspective, a large number of findspots align on two axes. One extends parallel to and to the south of the Egnatian Road and the other coincides with the Vardar Valley. Both axes were natural corridors used ever since prehistoric times. The former is the so-called southern branch of the Via Egnatia, back then, of a far greater importance than the route later favoured by the Romans, and the latter is the road along the Vardar River, which cut across Lower Macedonia and continued south into Thessaly.[42] Even so, these findspots are not pinned on a linear axis, but are scattered across the areas that border on these corridors.

There is a sharp divide between the western half of the area dominated by Apulian products and the eastern half, where most of the imports came from Attica. The former would have been supplied through Dyrrhachium and Apollonia, the latter through Pella and Thessaloniki. Thus, the spheres of economic interaction coincided with discrete areas of political control and influence. Although natural corridors had connected the Adriatic and Aegean Coast long before the arrival of Rome, regional fragmentation dictated by local historical developments and geography prevailed over integrative processes. Of course, this reflects the situation in the Early Hellenistic period, but the divide between the Illyrian or Candavian segment of the road, oriented towards the western Peloponnese and Italy, and the Macedonian segment looking towards the Aegean and further east would have been still visible in the first couple of centuries after the Roman conquest.

But even though the urban geography along the Egnatian Road is not suggestive of a highly integrated system, imported goods still reached relatively remote inland areas, like Elimeia or Pelagonia. The diffuse spread of wealth and urbanity was matched by the flow of goods that were introduced into this area from the first-tier settlements on the coast, hundreds of kilometres away from the interior. The actual mechanisms of distribution remain unknown, but in many parts of the study-area they appear to be largely independent of the existence of a state-sponsored infrastructure or mature urban networks.

The High Empire, 30 BC–300 AD

The urban geography

The process of the gradual de-urbanisation of the study-area observed in earlier studies had probably come to an end by the time of the Julio–Claudian dynasty. As a result, the number of towns was reduced by 20–30% in Macedonia and Paeonia, and by a staggering two-thirds in parts of Epirus and southern Illyria.[43] This decline did not affect all settlement tiers equally. With the striking exception of Pella, most of the settlements that were already large and prosperous in the previous phase retained their former status and standing. Most affected by this process were the settlements from the base of the settlement hierarchy, in particular those located in remote, mountainous areas. Their share in the urban network dropped from nearly 90% in the Hellenistic-Roman period to about 65% during the High Empire. The causes of this transformation continue to baffle researchers. Hypothetically,

42 The southern branch of the Egnatian Road, following the River Devol, was also the more important one during the Middle Age (Fasolo 2008, 134–135); for the Vardar Road see Mikulčić 2003, 33–36 and Fasolo – Lilčić-Adams 2025. This road followed a different route prior to the Roman conquest (Hatzopoulos – Loukopoulou 1989).

43 Karambinis 2020, 442–443; Donev 2020, Tab. 2.2.

it has been brought in connection with the fact that the study area was the main theatre of the civil wars that marked the end of the Republic.[44] This is neither very convincing nor is it borne out by the archaeological evidence from individual towns, which does not point to a synchronous destruction and abandonment.[45] Whatever the particular causes, the transformation of the urban network would have been a gradual and non-violent process, even if the results were no less dramatic.

In contrast to this, the hierarchical structure of the network had evolved gradually from the previous phase (Tab. 2). There is a clear trend towards centralisation and further crystallization of the differences between individual settlement tiers. The first tier became narrower than in the preceding phase. Thessaloniki, the provincial capital, which had doubled in size by the time of the High Empire, together with the Greek colonies of Dyrrhachium and Apollonia stood on the top of the pyramid. In all three cases, settlement size came close to or exceeded the 100-ha threshold, and the number of known public buildings is greater than five. Their juridical status differed, but significant Roman presence is attested only in Dyrrhachium and Thessaloniki. Note that towards the end of this phase, Apollonia was already in decline and possibly joined the second-tier settlements.[46]

Tab. 2. The attributes of the settlement tiers during the High Empire.

Status	Size	Number of public buildings	Roman communities	Coinage	Rank
Capital, Roman colony	> 100 ha	> 5	yes	yes	1
Roman colony, koinon seat, municipium	20–50 ha	3–5	yes, no	yes, no	2
Poleis, capitals of rural districts	< 20 ha	< 3	no	no	3
Road-stations, special purpose settlements	< 10 ha	0–1	no	no	4

Towns that belong to the second tier usually measure between 20 and 50 ha and the number of public buildings varies between three and five. The latter is to a large degree determined by the location of the sites and the history of research, so these aspects have to be born in mind. The small number of public buildings in Edessa is likely predetermined by the continuity of occupation until the modern period, whereas Apollonia in Mygdonia is poorly researched.[47] Nearly all second-tier towns were either colonies or *municipia* or had organized communities of Roman citizens. Beroe (Verria, Greece) had none, but this town was the seat of the provincial *koinon*.[48] In all of these cases, the elevated juridical status or an added political function was matched by a greater number of public buildings and size. Possible exceptions are Pella (Pella, Greece) and Cassandrea (Kassandreia, Greece), two colonies which, in view of their status and size-estimates, should have joined the second-tier, but which have so far produced very little archaeological evidence of their urbanity.[49] Both have been tentatively assigned to the third settlement tier.

44 Nigdelis 2007, 51–87.

45 See previous section.

46 Dimo *et al.* 2007.

47 Edessa: Chrysostomou 2014; Apollonia in Mygdonia: Adam-Veleni 2000, 273–290.

48 Tataki 1988.

49 Pella: Chrysostomou – Chrysostomou 2011, 283–298; a Roman *domus* from Kassandrea: Misalidou-Despotidou – Germenis 2008, 411–418; for variable developments of the towns in Roman Macedonia see, Evangelidis 2022.

The rest of the autonomous towns and *civitates* comprise the third settlement tier. Here, it is necessary to distinguish between two sub-groups. The first consists of autonomous towns, the sites of which have been securely identified. Their size does not exceed 20 ha and they typically have only a few public buildings, some of which had been constructed prior to the Roman conquest. The second group are the centres of *civitates* or local *koine*, known from the historical sources, but which still have not been located. These are collected in a separate file and their location on the map is approximate. It is possible that future research will result in their discovery, but it is equally possible that many were the nominal centres of autonomous rural districts, often attested in Upper Macedonia.[50] Because it is unclear if these were literally towns, they are shown as a separate category on the map. If these were really only the nominal centres of rural *koine*, it is questionable if they could supply their territories with imported market goods. Yet, even rural districts must have been served by local markets, and, for a lack of a better solution, the rural district capitals can be seen as their proxies.

The last settlement tier consists of secondary or subordinate settlements and road-stations, often newly-founded. The former are always smaller than 10 ha, they have no known historical identity and lack public buildings. The few road-stations that have been identified on the ground and studied do not differ from the other subordinate settlements in these respects, and it is safe to assume the same for the rest of the road-stations.[51] Only the road-stations mentioned in the Antonine Itinerary and the Peutinger Table are included. The Bordeaux itinerary, which lists many more stations than these two sources, reflects the situation in a later period.[52]

Only in the period of the High Empire does the impact of the Via Egnatia on the regional urban map come into full sight (Fig. 6). Over one-third of the archaeologically attested autonomous towns, here ranked in the third settlement tier or higher, were located on this road. These include half of the second-tier towns and all three top-ranking towns. On the other hand, the great majority of the small pre-Roman centres which helped spread Classical urbanism in the most remote inland areas were either in decline or ceased to exist. Even the towns located within a short distance from the Egnatian Road, some of which were ranked in the second settlement tier in the previous phase, show very little evidence of construction. Notable examples include Dimale (Krotinë, Albania), an important Illyrian centre, located only 10 to 15 km west of the supposed route of the Egnatian Road, or Kyrrhos (near Aravissos, Greece) in Lower Macedonia, replaced by the newly founded road-station of Scurio, founded only a few kilometres to the south.[53] Similar developments can be observed in other parts of the study-area and in Aegean Thrace.[54] Settlements that were bypassed by the Egnatian Road, either disappear from the written sources or do not show evidence of a continued urban life, even if they are located at short distances from the road. The remaining prosperous towns, which did not lie on the Egnatian road, belonged to other major corridors, like the Vardar Road or the coastal road to Thessaly and Greece. Thus, the urban geography of Roman Macedonia was trending towards the urban corridor model, attested in provinces with a very different history of urbanisation.[55]

Of itself, a location on the Egnatian corridor did not always guarantee prosperity. Pella, the former capital re-founded as a colony is the most striking case in point. Nearly all other first- and second-tier towns happen to be located near the exits of discrete micro-regions, at the meeting points

50 Hatzopoulos 1996; Papazoglou 1988, 159–169.

51 Ad Quintum: Ceka 1976, 287–312; Scurio: Adam-Veleni 1998, 1–16.

52 For a full discussion of these sources, see Fasolo 2008, 63–74.

53 Dimale: Fenn *et al.* 2010; Kyrrhos: Papazoglou 1988, 152–153.

54 Karambinis 2020, 449; for a more moderate view see, Evangelidis 2021, 503–516.

55 Donev 2024, 34–35.

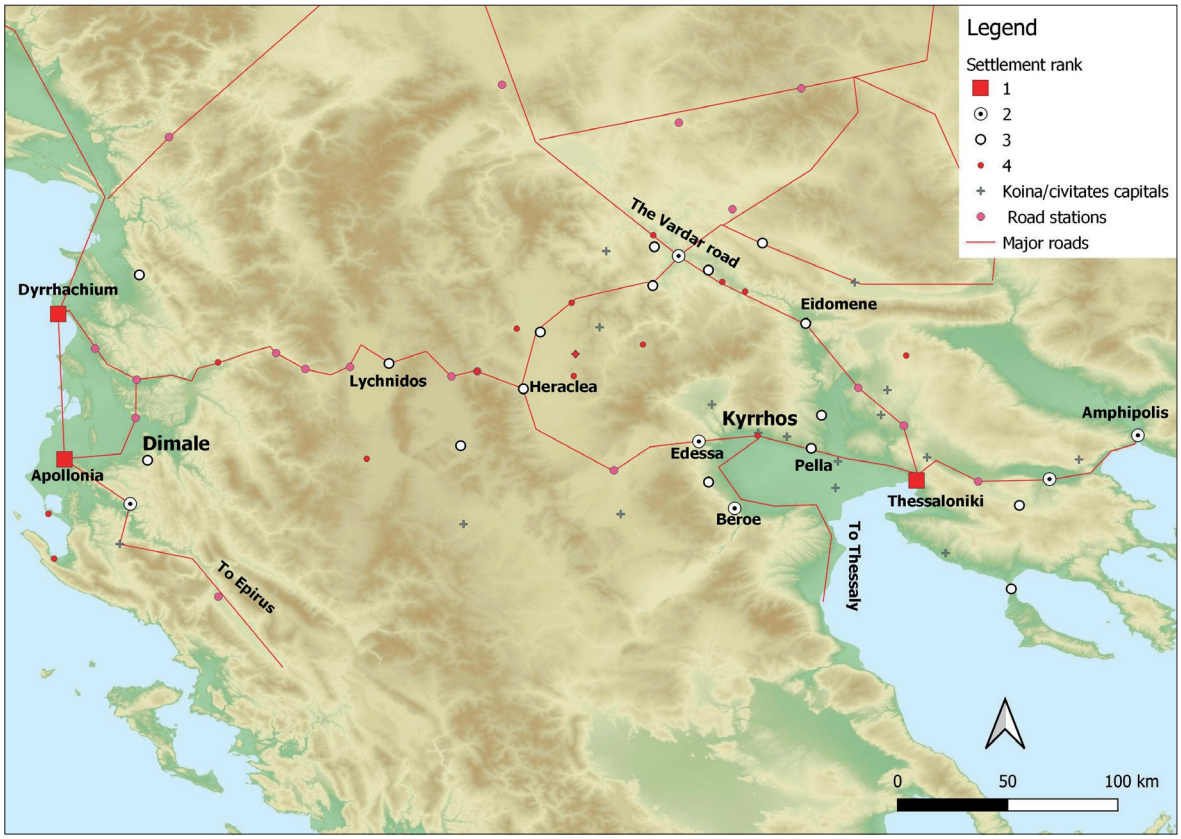


Fig. 6. Distribution of settlements ranked into distinct tiers in the study-area during the High Empire.

of two different geographies. All first-ranking towns stood on the coastline, whereas towns like Edessa, or Heraclea Lyncestis were located near the entries into defiles or at the foot of mountain passes. The same principle applies to the towns located on other corridors like Beroe and Eidomene (near Marvintsi, North Macedonia). This is more than a sheer curiosity because, from the point of view of transportation, this type of location marked changes in the mode of traffic. This is where goods were loaded and unloaded from ships, carts or pack animals. Thanks to this role in the traffic and urban network, these towns certainly had the potential to grow into points from which imports were exchanged for the surplus of the surrounding areas.

Overall, the system does not appear any more unified than in the preceding phase. The great imbalance between the western and the eastern half of the Via Egnatia persists, with over half of the high-ranking towns located on the Macedonian segment of the road. In fact, the only urban settlements in the Candavian or Illyrian segment are the Greek colonies of Dyrrhachium and Apollonia, the starting points of the road. The next autonomous town, Lychnidos (Ohrid, North Macedonia), lies over 150 km away from the coast. It is not by chance that this long-section passing through marshes and high mountains is serviced exclusively by fourth-tier settlements or road-stations. The ancient itineraries mention no less than seven or eight stations on the leg between Apollonia/Dyrrhachium and Lychnidos, as opposed to only a few in the more urbanised Macedonian leg of the road.[56]

Entering the core area of ancient Macedon, the 50-km module observed in the previous phase returns (Fig. 7). This is the most urbanised segment of the road between Edessa and Amphipolis, with second-tier settlements appearing at every 40–50 km and with the capital at the centre of the segment. Contrary to the predictions of the classical CPT models, lower ranking towns and settlements rarely appear near the edge of the service areas of the high-ranking towns. A few examples include

56 Fasolo 2008, 63–67; Gounaropoulou – Hatzopoulos 1985.

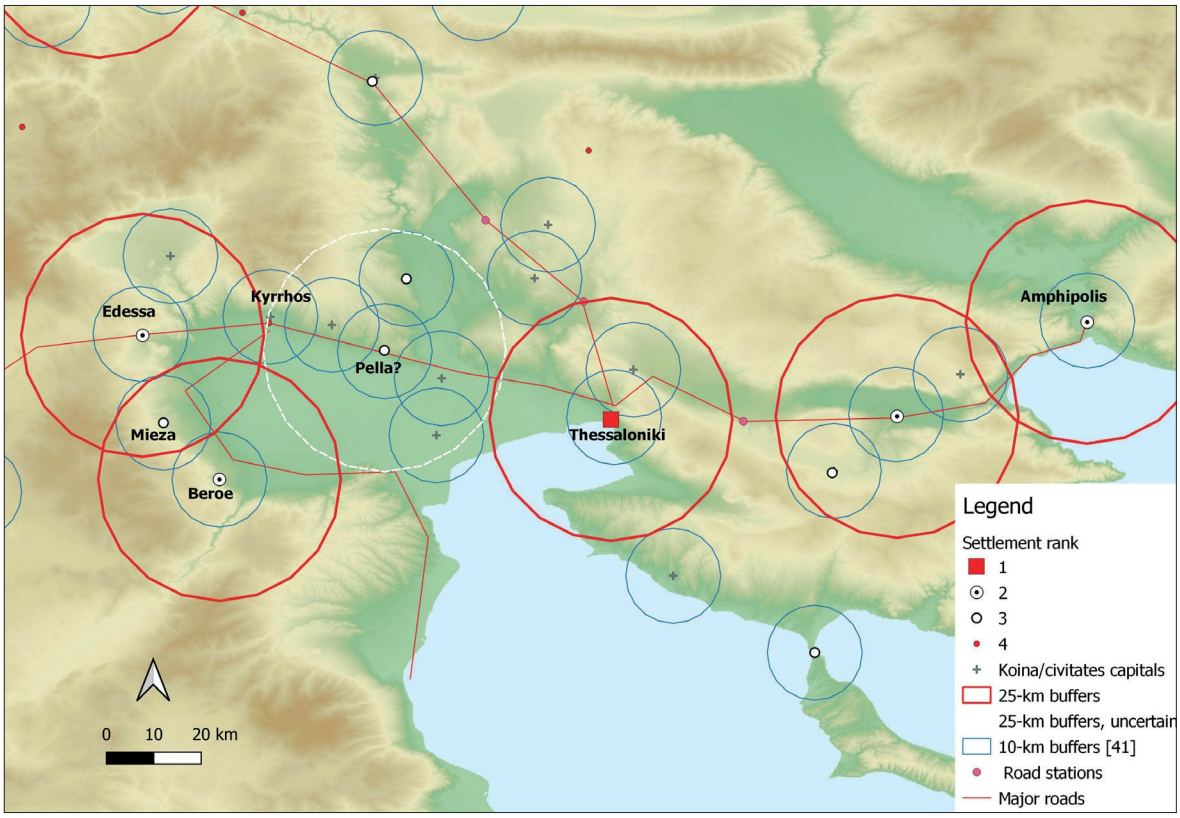


Fig. 7. Distribution of settlements ranked into distinct tiers in Lower Macedonia during the High Empire.

Kyrrhos or Scurrio, between Edessa and Pella, and Mieza (near Naousa, Greece) between Beroe and Edessa, both third-tier towns, and these were mentioned in the previous section. This tendency is slightly more visible along the western segment of the Egnatian Road, with fourth-tier settlements or road-stations appearing halfway between two autonomous towns, conforming to the transportation principle of CPT. Examples include Scampsa between Lychnidos and Dyrrhachium or Cellae between Edessa and Heraclea Lyncestis (near Bitola, North Macedonia) (Fig. 8). Some of these places will eventually achieve a higher rank, but not before Late Antiquity. Elsewhere in Lower Macedonia, in the Middle Vardar Valley and in the hinterland of Apollonia, the low-ranking towns and settlements are arranged in accordance with the administrative principle of CPT, observed in the previous phase. Note that in the most densely urbanised segments of the area, third-ranking towns behave like tributary settlements, even if their autonomous status is historically confirmed, whereas in the peripheral segments, in which this pattern is distorted by the physical geography, third-tier towns stand at the centres of tributary areas equivalent to those of the second-tier towns in the densely urbanised sectors.

During the period of the High Empire, the urban network in the study-area was chiefly confined to the major road-arteries. Ancient towns, even if located only a few km from these roads lost their importance and many were likely deserted. The dense modular urban geography of the previous phase was replaced by a linear system of roads and towns, leaving large swaths of land without any recognisable urban centres.

Distribution of Italian and Eastern *terra sigillata*

Two broad categories of imported tableware started to dominate the market in the study-area towards the end of the preceding phase. These are the Italian *terra sigillata* from the Arretine or Pisan workshops

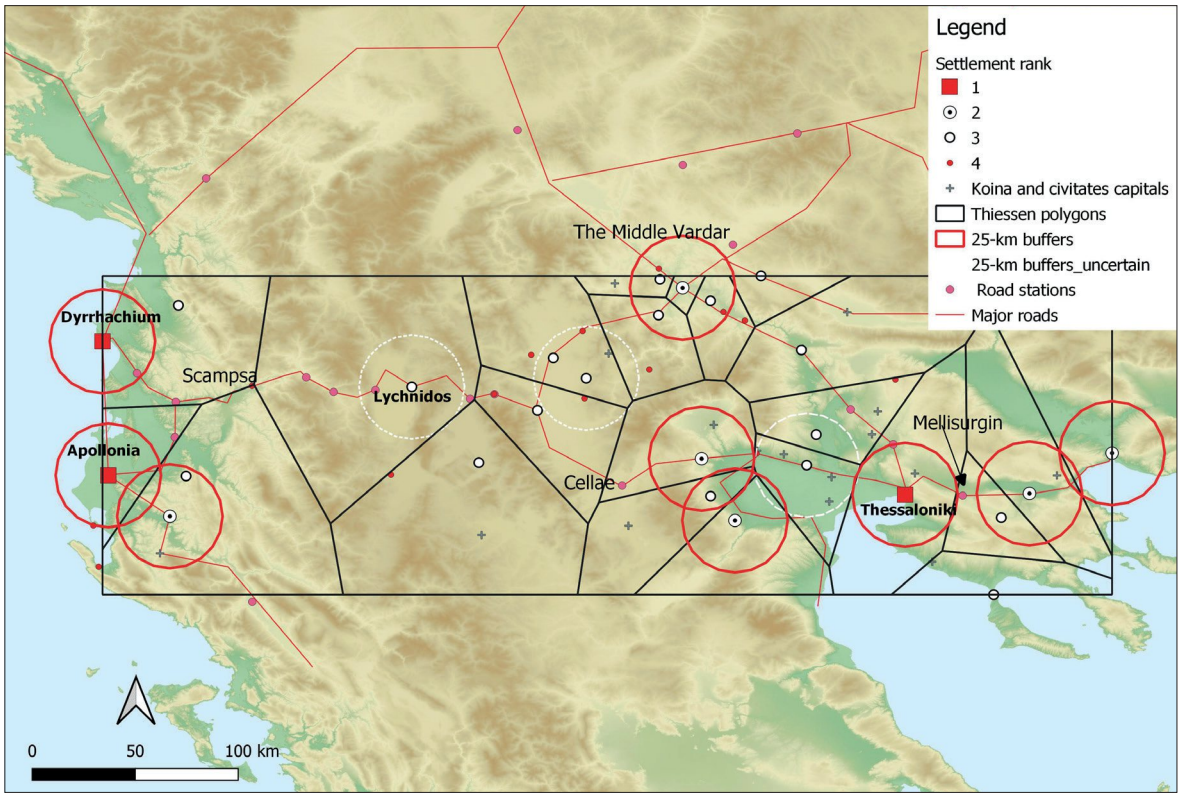


Fig. 8. Distribution of settlements ranked into distinct tiers in the study-area during the High Empire, with Thiessen polygons around high-ranking towns.

and the Eastern *terra sigillata*, mostly ESB and ESC, produced in Asia Minor.[57] Other *terra sigillata* categories, like Pontic or Western *terra sigillata* are rare and they always shadow the distribution of the prevalent classes.[58] Because Italian *terra sigillata* was not produced during the entire period under consideration, both categories are best looked at separately and jointly. In view of the quality of the published data, it is not always possible to make finer distinctions within these two broad categories. Potentially interesting details will thus be likely lost from sight, but the available data will serve the purposes of this paper.

Admittedly, there is some confusion and inconsistencies in the use of the term *terra sigillata* in the relevant literature, but these are more likely associated with the Late Roman period than with the period of the High Empire.[59] The likely source of this confusion is a category of Red Slip pottery, plain or stamped with simple geometric motifs, which was produced locally or in an unknown regional centre and became quite popular during the 3rd and 4th century AD.[60] Better executed or better-preserved examples can easily be mistaken for *terra sigillata* vases by non-experts. Luckily, studies of closed deposits by pottery specialists have demonstrated that, during the High Empire, the favourite local tableware was not covered with a uniform slip, but painted, often partially and not necessarily red.[61] Local *terra sigillata* imitations are rare and of visibly inferior quality to the imports.[62]

57 Bes 2015, 11–24.

58 Shehi 2015, 178–179; Stojanović-Anderson 1993, 54; this material is better represented at coastal sites, Malamidou 2005.

59 On the use of the term *pseudo-terra sigillata*, especially in Albanian archaeology, see Shehi 2015, 19–22.

60 Sokolovska 1976, 157–167.

61 Stojanović-Anderson 1993, 99–124.

62 The rare case of Palatiano, Hadzipolichroni-Agonostopoulou 1994, 263–268, Fig. 6.

Looking at the joint distribution of Italian and Eastern *terra sigillata*, it is apparent that its area of dispersal is much narrower than that of the Red-figure imports from the preceding phase (Fig. 9). This is not a simple effect of the reduced number of towns and sites dated to this period in general. Of the 90 sites with evidence of occupation during the High Empire, 39 include one of the two categories of *terra sigillata* imports and only 23 sites include both categories. Recall that imported Red-figure vases were encountered at three-quarters of the sites dated to the preceding phase. The true percentage for the *terra sigillata* imports is probably even lower, because many of the early *terra sigillata* findspots belong to the previous phase. Sites like Dimale, Antipatrea (Berat, Albania), the major Illyrian centre at Selce (near Pogradec, Albania) and others, were likely abandoned during the High Empire. In other words, these sites were supplied with *terra sigillata* imports through the earlier, Hellenistic network of roads and markets and the presence of these finds there only serves to underline the connectivity of the previous system. In reality, *terra sigillata* imports appear at about 30% of the sites dated to period of the High Empire.

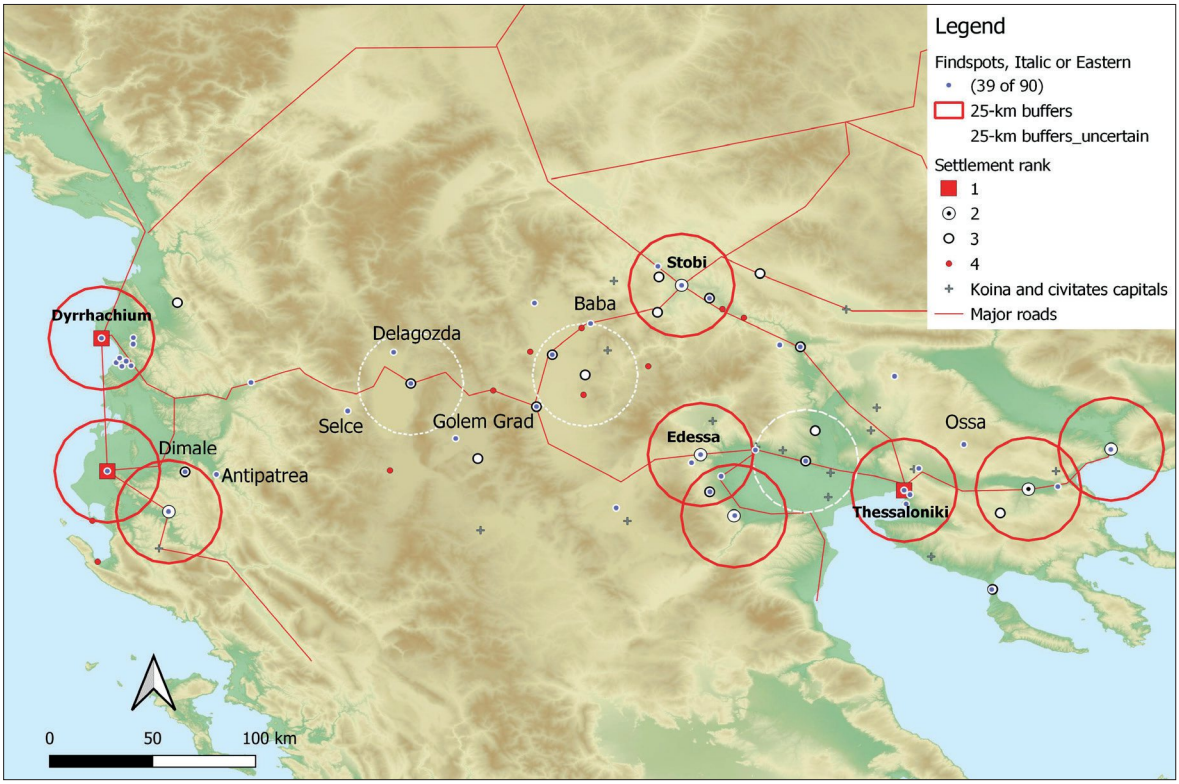


Fig. 9. Joint distribution of Italian and Eastern *terra sigillata*.

There is a striking difference between the distribution of Republican and Imperial *terra sigillata*. With the exception of the *villae* in the hinterlands of Thessaloniki and Dyrrhachium, nearly all findspots located off the major roads are pre-Augustan and include rare examples of early Arretine *terra sigillata* or ESA.[63] These are either Hellenistic towns and *oppida* which survived until the Augustan period or military bases from the Republican period. The rest of the findspots are found exclusively along the main roads and, for the greater part coincide with the known urban settlements. Virtually all tiers of the urban hierarchy are represented, especially among the towns on the Egnatian Road. Quantities likely varied with rank, but *terra sigillata* imports have been found in towns of all ranks, including road-stations and roadside settlements. The rare instances in which this material is absent from the towns located on major roads probably reflect the small amount of field research done, as is surely the case with Mygdonian Apollonia.

63 Atanasovski 2019, 263–284; Shehi 2015, 57–63; Nikolova 2011, 263–274.

Although its presence has been attested in all settlement tiers along the main roads, *terra sigillata* imports were primarily an urban phenomenon.[64] The distribution of *terra sigillata* findspots essentially mirrors the distribution of towns. This material is by and large absent from the ceramic assemblages collected during intensive surveys of rural areas in the Vardar Valley.[65] This should not come as a surprise knowing that even in Stobi, arguably the most important centre in the Vardar Valley in Roman Antiquity, *terra sigillata* imports comprise only between 10 and 15% of all tableware discovered at this site.[66] One jarring exception are the small concentrations of findspots in the environs of major towns, but these only reinforce the general impression. As mentioned, these are villa sites attached to the top-ranking towns of Dyrrhachium and Thessaloniki, and even these are positioned conspicuously close to the Egnatian Road.[67] In the absence of quantitative data, they highlight the centres in which *terra sigillata* imports would have been most readily available. Interestingly, none of the findspots coincide with the lower-ranking towns located within the tributary areas of the major towns on the Egnatian Road.

In contrast to the previous phase, there are no major differences between the distributions of the Italian and Eastern *terra sigillata* imports (Figs 10–11). Previous studies have demonstrated that the presence of Italian *terra sigillata* in particular, is always closely associated with the presence of large communities of Italian settlers.[68] Unlike the Apulian Red-figure vases or other early Italian products, it is found along the entire length of the Egnatian Road, including all colonies, *municipia* and poleis with organised communities of Roman citizens. Apparently, commercial or private contacts overruled geographic factors. This is most bluntly illustrated in the case of Philippi, in which Italian *terra sigillata* is the predominant category of tableware, whereas in the old Greek colonies located a short distance away on the Thracian coast, it is hardly represented.[69] Similarly, until the 2nd century AD, Italian tableware was the best represented category in Stobi, the only *oppidum civium Romanorum* in this area, in spite of the availability of Eastern *terra sigillata* imports in Thessaloniki.[70]

The same applies to the Eastern *terra sigillata*. The findspots of this category of finds are spread evenly along the Egnatian Road. Quantitative analyses will likely reveal important variations, but findspots with Eastern *terra sigillata* imports are equally represented in the hinterlands of Dyrrhachium and Thessaloniki. This is not a simple effect of the Eastern *terra sigillata* products taking over the market after the end of supra-regional production in Italy. This material was present in the western part of the study-area from the beginning of this phase.

The changed urban geography of the study-area in the period of the High Empire is echoed in the distribution of the principal categories of tableware imports. These are almost entirely limited to the main urban centres, which were invariably located on the Via Egnatia and the other roads of major importance. The small number of exceptions are either remnants of the earlier network of roads and markets or villa sites in the territories of the top-ranking towns, which can be seen as a mere extension of the urban lifestyle and consumption practices. It is beyond doubt that the Via Egnatia brought the Ionian and Aegean coasts closer than ever in the past. By the time of the High Empire, the ancient divide between the western and the eastern halves of the study-area had vanished. Goods and people travelled unimpeded along the entire length of this corridor but, in stark contrast to the preceding phase, they rarely dispersed into the areas.

64 See Van Oyen 2015, 289.

65 Donev 2015.

66 Stojanović-Anderson 1993, Fig. 5.2.

67 Forsén *et al.* 2019, 301–317; Adam-Veleni *et al.* 2003.

68 Stojanović-Anderson 1993, 188.

69 Abadie-Reynal *et al.* 2024, 369–384.

70 Stojanović-Anderson 1993, 189.

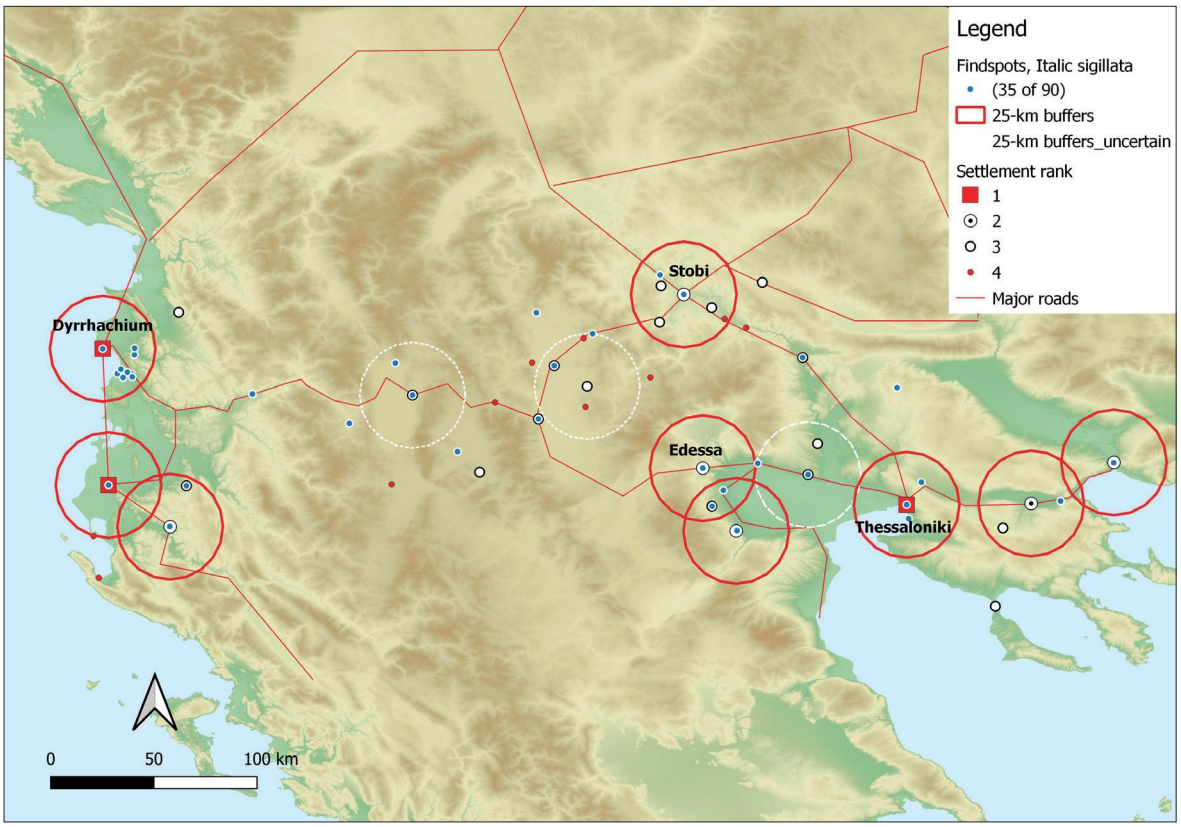


Fig. 10. Distribution of Italian *terra sigillata*.

Late Antiquity, 300–600 AD

The urban geography

Although not as abundant as in the preceding phase, the combined archaeological and historical sources do allow us to look into the hierarchical structure of the urban system in Late Antiquity. In addition to settlement-size and the presence of public buildings, the small corpus of historical documents reveals the formal status of the settlements and their place in the ecclesiastic hierarchy. The principle sources are the Synecdemos of Hierocles, a survey of towns by provinces, based on official documents from the late 5th century AD and the lists of bishops attending the ecumenical church councils.[71] Contrary to the view held by some scholars, these two lists do not coincide.[72] Only a fraction of the *civitates* included in the Synecdemos of Hierocles are confirmed as bishoprics prior to the 7th century AD. Occasionally, single bishops are signed as representatives of two or more *civitates*.[73] Notwithstanding the possibility that these documents are not exhaustive, it seems that only the largest and most important *civitates* became episcopal sees. This is corroborated by the distribution of the other relevant attributes, like settlement-size or the presence of public buildings (Tab. 3). Only two of the confirmed bishoprics fall within the size-range characteristic of the *civitates* that did not achieve this status in Late Antiquity, and even they stand out by the number of public buildings. The rest of the episcopal sees are both larger and boast a greater number of public buildings than the 'ordinary' *civitates*.

71 Honigmann 1943, 20–80; Burckhardt 1893.

72 Papazoglou 1988, 25–26.

73 Apollonia and Byllis in Illyria, Dimo *et al.* 2007, 55.

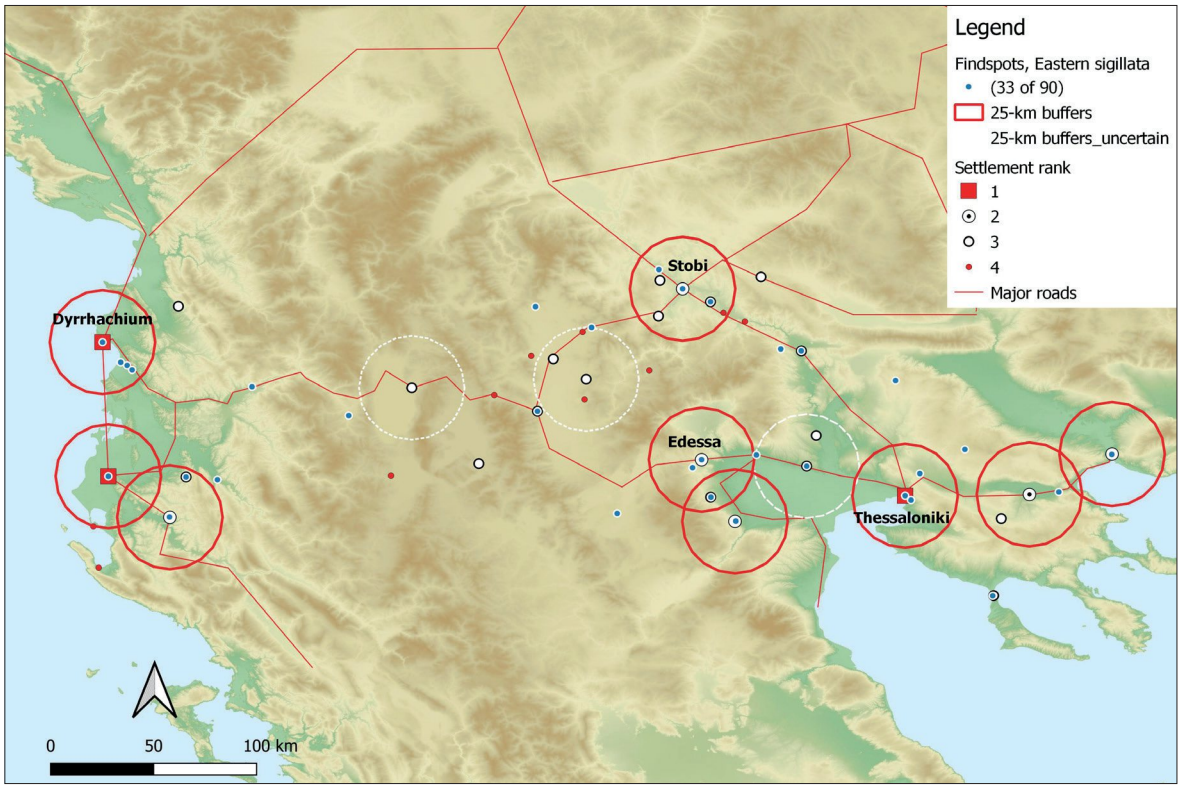


Fig. 11. Distribution of Eastern *terra sigillata*.

Tab. 3. The attributes of the settlement tiers during Late Antiquity.

Status	Size	Number of basilicas	Public buildings	Rank
Capital, metropolis	> 100 ha	> 5	yes	1
Episcopal see	10–50 ha	2–5	yes, no	2
Civitas capital	10–20 ha	0–2	no	3
Road stations, hillforts	< 10 ha	0–1	no	4

If this reasoning is correct, it is possible to distinguish four tiers in the urban hierarchy of the study-area in Late Antiquity. The two metropoleis and provincial capitals, Thessaloniki and Dyrrhachium stood on top of the pyramid. Dyrrhachium became the capital of the newly-formed province of Epirus Nova, a formal acknowledgment of its continued importance since the time before the conquest.[74] Apollonia, on the other hand, lost its place among the top-ranking settlements. In the Bordeaux itinerary, it is replaced by the port-town of Aulon as the *caput viae* on the Egnatian Road.[75]

The group of second-tier settlements consist of the episcopal sees, which mostly fell in the size-range between 20 and 40 ha and possess a number of public buildings. Apart from Early Christian basilicas, these include luxurious residences and baths. Their importance in the regional urban system is further underlined by the frequent references in the written sources. In contrast, we hear much less of the third-tier settlements, which coincide with Hierocles' *civitates*. In fact, a number of these towns are never mentioned outside Hierocle's list. Most of the third-tier settlements which

74 Cabanes – Drini 1995.

75 Fasolo 2008, 68–69.

have been identified archaeologically measure between 10 and 20 ha and have only one or two public buildings, typically Early Christian basilicas. Thus, from a purely archaeological point of view, they are not always easy to distinguish from the fourth-tier settlements.

Unsurprisingly, the bottom-tier is the most problematic category, both conceptually and empirically. The great majority of these sites are hillforts, known only thanks to the remains of their defensive walls. Their true character and role are still debated in the scholarly literature, but it is likely that this formal category unites both permanent settlements and various special-purpose sites, like military outposts, mining camps or *refugia*.[76] Changes in function over time or multiple functions at the same time are equally likely. The only certainty is that they were all either newly-founded or occupied the sites of pre-Roman *oppida*, which had been abandoned in the preceding phase. With rare exceptions, their names are unknown and they fall short of the 10-ha threshold. However, a number of these sites do have Early Christian basilicas, residential buildings and storage facilities, and the energy spent in the construction of their defensive walls suggests that these were not local *refugia* or mere fortified villages.[77]

The other problem with this category of settlements is the uneven amount of data for the region under study. The decades-long program of topographic recording of ancient and medieval forts in North Macedonia has brought to light close to 500 sites of this category with a Late Roman phase.[78] The resulting contrast with the nearly empty areas in most of Lower Macedonia and Illyria is staggering. A recent regional survey of hilltop settlements in the Korçe Basin in Albania has bluntly demonstrated that these variations merely reflect the variable intensity of research.[79] It is therefore advisable to disregard the data from the intensively studied areas. Only a segment of this dataset is shown here, as an illustration of the true density of these sites.

The road-stations listed in the Bordeaux itinerary are added as a separate sub-group to the fourth-tier settlements. The few studied examples fall in the same size-range as the hillforts, but by virtue of their locations, they would have played a different role in channelling the flow of goods and people.[80]

The unsettled conditions that prevailed during most of this phase do not show in the urban map of the study-area (Fig. 12). Doubtless, individual towns were destroyed and deserted, and many shrank in size, but the integral network evolved only gradually. The Egnatian Road was still the backbone of the system and the evidence from milestones and historical accounts suggests that it had retained its former strategic importance.[81] The two top-ranking settlements and over half of the second-ranking towns were still located on this road. The number of third-tier settlements had declined by one-third from the previous phase, but these are mostly the archaeologically elusive *civitates* capitals, the names of which disappear from the written records. Moreover, this decrease was offset by the greater number of second-tier settlements, which are now twice as numerous as in the previous phase. At the same time, the growing number of newly-founded or reoccupied hillforts resulted in a much wider base of the settlement hierarchy than in the preceding phase. With this in mind, it is perhaps more appropriate to speak of a reorganisation than of a general decline. More precisely, whereas in the upper reaches of the urban hierarchy the long-term trend towards centralisation continued, the base of the settlement hierarchy was expanding.

76 Milinković 2007, 159–193; Mikulčić 2003, 50–68; Dunn 1994, 61–80.

77 Ciglenečki 2023; see the numerous examples illustrated in Mikulčić 2003.

78 Milinković 2007, Fig. 6.

79 Kurti – Oberweiller 2020, 67–107.

80 For a well-studied example, just outside the study-area, see Poulter 1998, 463–512.

81 Fasolo 2008, 63–79; Gounaropoulou – Hatzopoulos 1985.

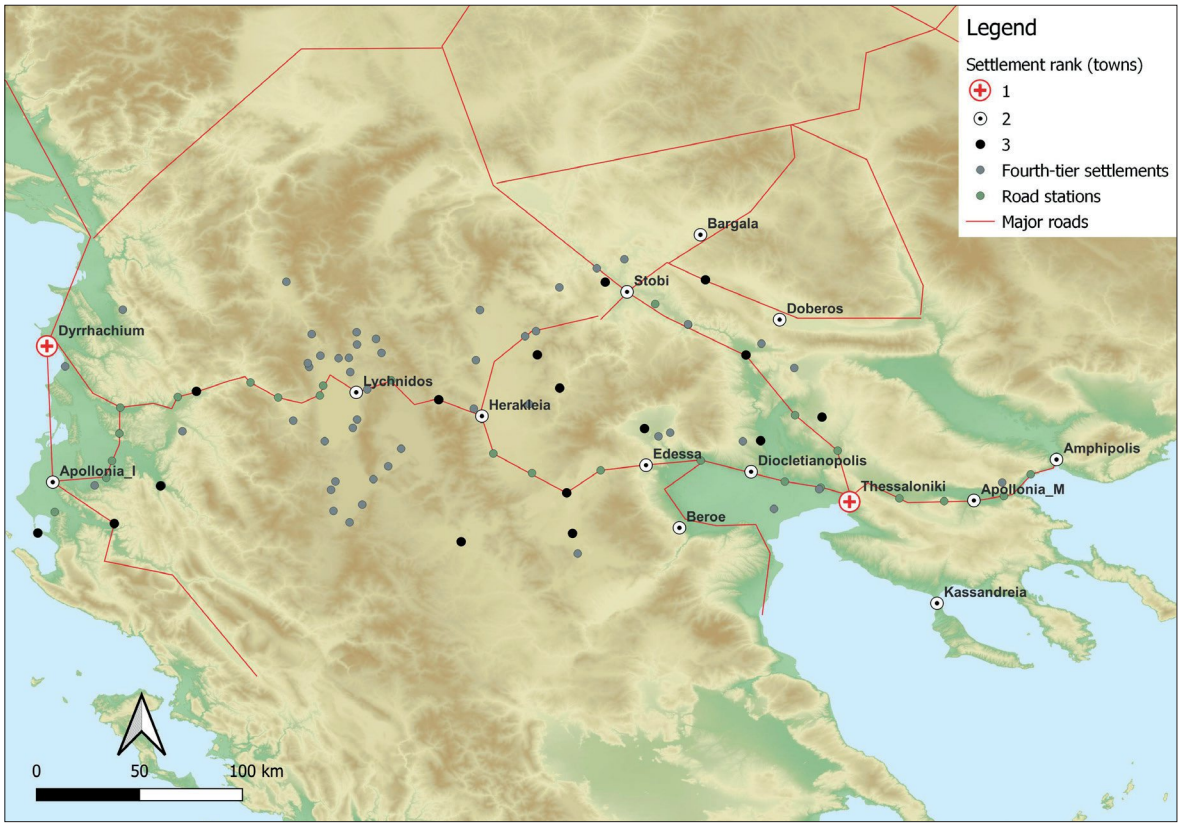


Fig. 12. Distribution of settlements ranked into distinct tiers in the study-area during Late Antiquity.

There are no major perturbances in the composition of the separate tiers. With one or two exceptions, the high-ranking settlements from the previous phase preserved their place in the hierarchy. A vague pattern in the recruitment of the new high-ranking settlements emerges: most of these are located in the western, less-urbanised segment of the study-area and their promotion to a higher rank continues the trends observed in the preceding phase.[82] Due to their locations in the system, both Lychnidos and Heraclea had already acted like second-tier settlements in the preceding phase. Stobi, until then the only second-tier town in the north of the area, was joined by Doberos (near Bansko, North Macedonia) and the newly-founded diocese of Bargala (near Štip, North Macedonia).[83] In Lower Macedonia, Pella renamed Diocletianopolis, joined the second-tier towns and filled the void in the urban map of this area created by its uncertain status in the preceding phase.[84] Even the gradual decline and demotion of Apollonia in Illyria can be viewed in the same light. It rectified the centuries-old anomaly of having two top-ranking settlements spaced less than 70 km apart. Most strikingly, all three newly-recruited third-tier settlements on the western segment of the Egnatian road had developed from fourth-tier stations, which stood approximately half-way between two autonomous towns (see above, Fig. 8). These changes led to a more even spread of urbanism than in the preceding phase, closing the large gaps in the urban coverage of the mountainous, western half of the area. The system was gradually maturing, with no clear signs of crisis in sight.

However, these developments did not lead to a uniform pattern across the entire area. In Lower Macedonia, the old 50-km module survived, but the network of third-tier, tributary settlements all but disappeared (Fig. 13). It was the completion of a millennium-long trend of centralisation.

82 Cp. the urbanisation of inner Pannonia during Late Antiquity, Donev 2024, 43–44.

83 Papazoglou 1988, 308–328.

84 Ogereau 2023, 261–266.

In theory at least, this absence of intermediary centres would have resulted in a reduced access to goods and services for the fourth-tier settlements. As mentioned, the latter are poorly studied in this segment of the study-area, but most of the known examples are located in the outer rings of the notional service territories of the second-tier towns, i.e. outside their market radii. This distribution seems to perpetuate the administrative principle of CPT, which was also characteristic of the preceding phases. Similar patterning can be observed in the Vardar Valley, where more of the old third-ranking towns had survived.

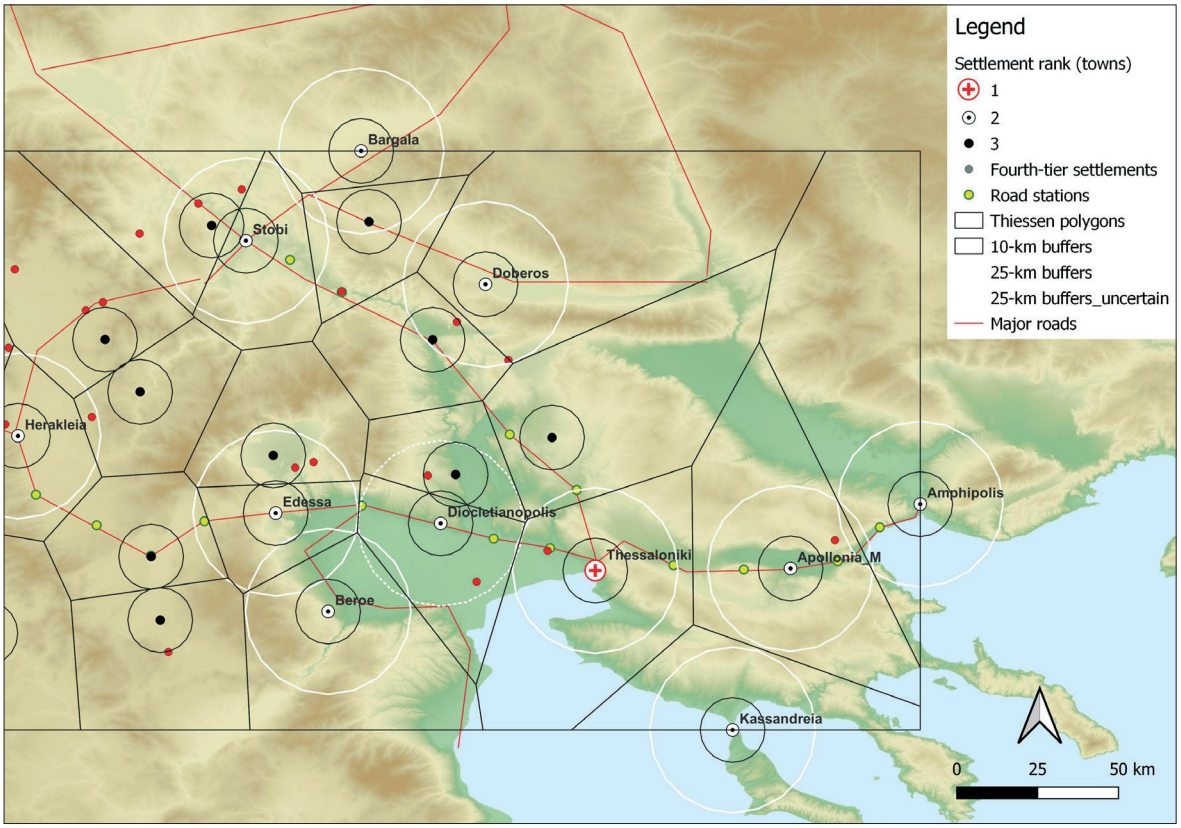


Fig. 13. Distribution of settlements ranked into distinct tiers in the eastern half of the study-area during Late Antiquity.

A different pattern was taking shape in the western half of the study-area (Fig. 14). There, the newly-founded third-tier settlements tend to appear close to the edge of the service-areas of higher-ranking towns, conforming more closely to the transportation than to the administration principle of CPT.[85] This is repeated on the Illyrian coast, in the hinterland of Apollonia, where the third-ranking towns of Aulon and Byllis (near Hekal, Albania) stand on the perimeter of the 25-km buffer around Apollonia. The result is a regular alternation of second- and third-tier settlements along the segment of the Egnatian road between Eordaia, and Dyrrhachium and Apollonia on the coast. Nonetheless, the district intercity distances remain high and the urban coverage partial.

It is difficult to see how the incoherent group of fourth-tier settlements fit into this scheme. There is some regularity in the spacing of the road-stations on the Egnatian Road in Lower Macedonia, where they are often located at the quarter of the distances between two neighbouring second-tier towns, but this is inconsistent and the pattern is broken by the absence of third-tier towns at half these distances. To some extent, the picture is certainly blurred by the intermittently reconstructed

85 Bekker-Nielsen 2020, 86.

network of hillforts. But turning to the best studied micro-regions does little to clarify the picture (Fig. 14). In the Ohrid basin, they are randomly scattered within the territory of Lychnidos, mostly outside the 10-km buffer around the central place, and in the neighbouring Korçe basin, they are unaccompanied by a higher-ranking settlement. In fact, in both micro-regions they are distributed along the rim of the basins and appear poorly related to the higher-ranking towns. In other words, they obey the rules of physical geography not those of supply and demand. This recalls the situation in the earliest, Hellenistic-Roman phase, during which most micro-regional units were occupied by series of small settlements of roughly equal size and rank. A similar process of settlement infill was taking place in Late Antiquity.

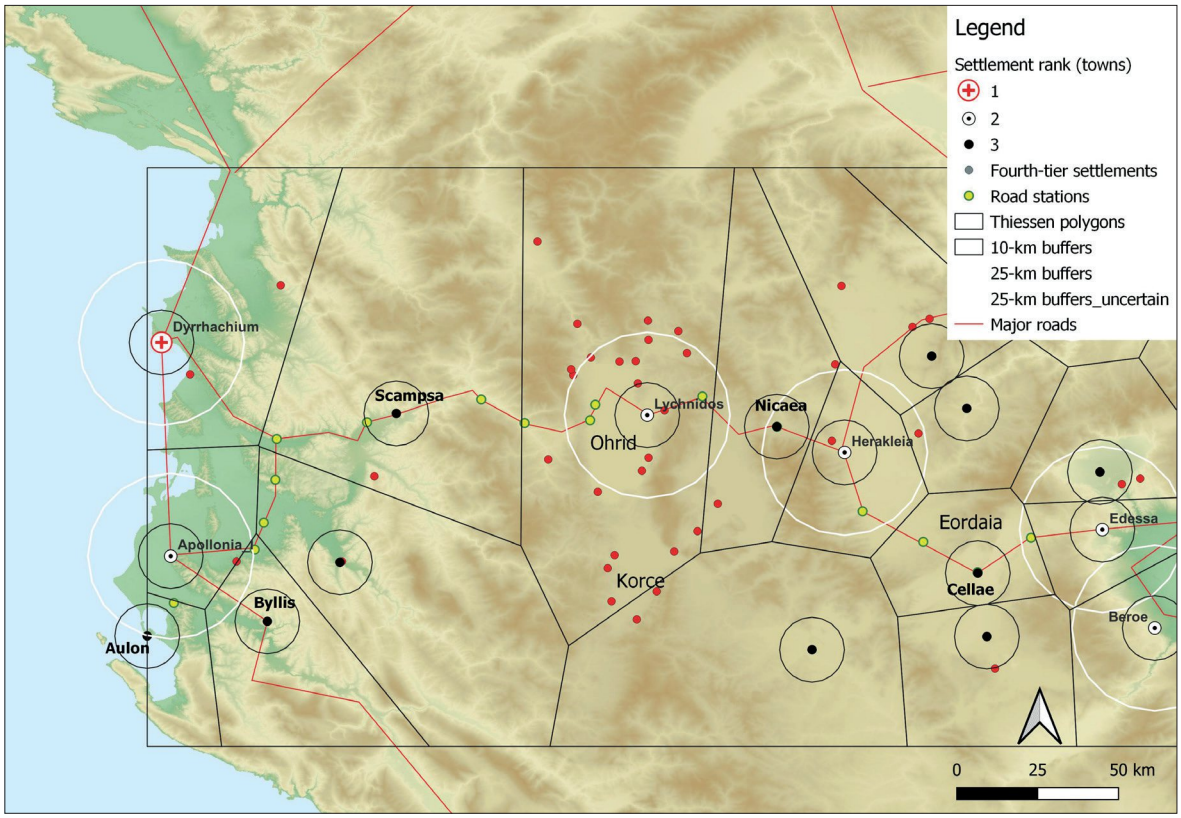


Fig. 14. Distribution of settlements ranked into distinct tiers in the western half of the study-area during Late Antiquity.

Admittedly, it is possible that the fourth-tier settlements were more differentiated than they appear at the current state of knowledge and that we are missing a key piece of the puzzle. If only a fraction of this group joins the third-tier settlements, a coherent pattern could potentially emerge. Recall that, archaeologically, the difference between these two tiers is thin. But at this moment, it is impossible to single out any such group in a non-arbitrary way.

Alternatively, the network of hillforts can be seen as an emergent subsystem within the frames of the old urban geography. As Antiquity was drawing to a close, this old-new settlement form was appropriating more and more of the trappings of urbanity and, by the end of this period, the difference between the decaying old Classical towns and the new Late Antique centres had been completely erased. From a long-term perspective, it was a return to the old pre-Roman pattern of small towns and dispersed urbanity.

Distribution of imported Red Slip Ware

Like in many parts of the Mediterranean, one of the most popular categories of imported tableware in the study-area in Late Antiquity was the African Red Slip Ware (henceforth ARSW).[86] The earliest examples on the Adriatic Coast are dated as early as the 2nd century AD, but this product begins to appear more regularly from the middle or the late 3rd century AD.[87] Pottery specialists distinguish between two waves of imports in this area: one dated between the middle of the 3rd and the middle of the 5th century AD, the second, from the end of the 5th century to the early 7th century AD.[88] Unfortunately, this distinction cannot be extended outside the major urban centres. Although represented, the other major interregional classes, like Phocaean and Cypriot Red Slip are encountered less frequently.[89] They either replace the ARSW or accompany it in small quantities. In this discussion, all Red Slip imports are united into a single broad category.

Unlike in the preceding phase, Red Slip vases were gladly imitated by local potters in Late Antiquity.[90] This local production has its own specific characteristics (see above), but the best examples are not easily distinguished from the imports. This needs to be kept in mind while reading the distribution maps. A far greater challenge is the introduction of a new category of tableware produced in Thessaloniki or its environs, from the early 4th century AD until the middle or the late 5th century AD. This is the Macedonian Grey Ware which overlaps both formally and functionally with the imported Red Slip categories and would have been a strong competitor to the latter.[91] Indeed, this tableware soon became highly popular in the study-area, even as the production of local Red Slip vases was picking up. Never before did a regionally produced ware achieve such popularity in this region. The repercussion of this change in regional production and supply on the thesis of this paper will shortly become apparent.

Imported Red Slip tableware, mostly ARSW, was discovered at 43 of the 94 sites with a documented Late Antique phase (Fig. 15).[92] This is a fairly modest increase from the preceding phase, in which only between 30–40% of the total number of studied sites contained finds of tableware imports. In view of the return of urbanity to the marginal basins and highlands in the western half of the study area, a higher percentage was expected. The increase from the preceding phase is undisputable, but it is still far from the high rate of dispersal of the Red-figure imports.

If anything, the imported Red Slip classes are dispersed far more widely than the earlier *terra sigillata* imports. The towns and settlements on the Egnatian road were still well-supplied, but they comprise less than half of the findspots of imported Red Slip tableware. This material is found not only along the other major regional roads, but also in remote mountainous areas, of which we hardly hear anything in the preceding phase. Like the *terra sigillata* imports, this category is present at sites of all ranks, including road-stations, hillforts and rural sites. The clustering of findspots in the hinterlands of the top-ranking towns is likewise repeated. This is both a discrete testimony to the vitality of the countryside in the territories of the major cities and the availability of these products at the points of entry into the system. Outside the territories of the major cities, imported Red Slip products are only found at rural sites located on the coast.

86 Bes 2015, 22–24.

87 Shkodra-Rrugia 2008, 19–27.

88 Shkodra-Rrugia 2008, 22; Hoxha 1995, 249–266; Stojanović-Anderson 1993, 55–56.

89 Hoxha 1995, 260; Stojanović-Anderson 1993, 55, 59–61.

90 Ončevska-Todorovska 2008, 68; Stojanović-Anderson 1993, 116–124; Sokolovska 1986.

91 Stojanović-Anderson 1993, 61–72; Hayes 1972, 405–407.

92 The total number of sites does not include the numerous hillforts in North Macedonia, because in most of these cases, only architectural surveys have been carried out. To avoid this and similar problems, only excavated or intensively surveyed sites are taken into account.

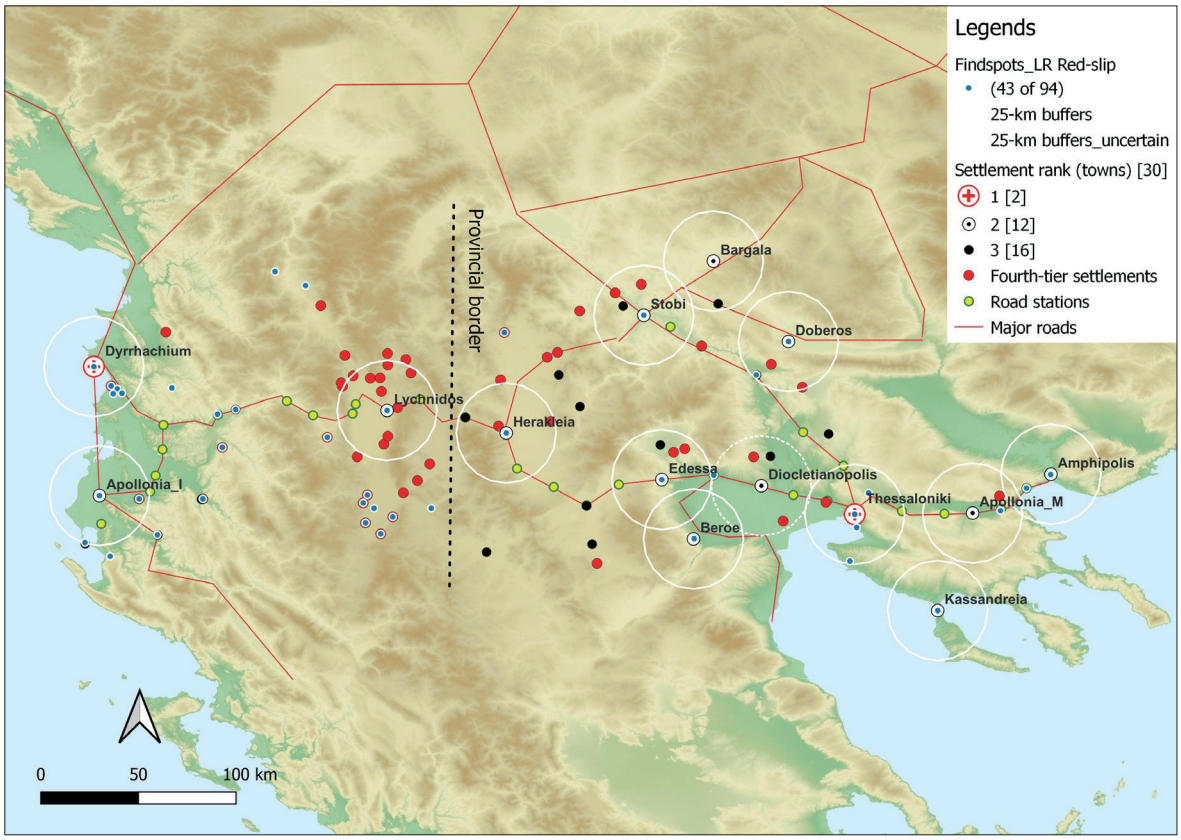


Fig. 15. Distribution of imported Late Roman Red-slip pottery.

But the most striking aspects of the distribution of the imported Red Slip tableware is its near absence from the third-tier settlements, which theoretically should have been the principal bases of supply for the countryside. However, this does not apply to the integral study area. Overall, the distribution of the findspots with Red Slip imports is not uniform. The majority are located in the western half of the study-area or the Candavian segment of the Egnatian Road. The change in density coincides with the provincial border between Macedonia and Epirus Nova. In the latter province, imported Red Slip are found in all third-tier settlements, whereas in the former, it is absent in nearly all third-tier settlements that have been identified and studied. Therefore, the theoretical role of this settlement category in the supply of imports to the countryside is not necessarily undermined. In Epirus Nova, the findspots of Red Slip imports are scattered in the most remote montane areas, whereas in Macedonia, much like in the preceding phase, they are pinned on the Egnatian and the Vardar Roads. The few exceptions are all coastal sites.

This cannot be ascribed to the subtle differences in the urban geography, although the weakened network of third-tier settlements in Lower Macedonia could have played a minor role. The most likely reason behind the resurrected dichotomy between the western and the eastern part of the study-area is the activity of the Thessalonican workshops and the popularity of the Macedonian Grey Ware. Throughout the 4th and much of the 5th century AD, it was the most popular tableware category in Lower Macedonia and the Vardar Valley.[93] Data for its distribution in many parts of the study-area are lacking, but impressions from my personal experience in the field and from the available archaeological publications indicate that it was at least as widespread as the ARSW in Epirus and in the Eastern Adriatic in general. Conversely, the rural areas in which Red Slip imports

93 For the Vardar Valley, see Ončevska-Todorovska 2008, 57–62; a comparative survey for this tableware category in Lower Macedonia is still lacking, see Karavieri 2010, 15–22.

are well-represented have rarely yielded finds of Macedonian Grey Ware. In view of the sharp dividing line between the two areas, it is tempting to bring this in connection with the new provincial border and the possible introduction of taxation on interprovincial trade, was this same divide not observed long before the creation of Epirus Nova.

Although the Egnatian Road retained its primacy in the regional urban system during Late Antiquity, it also started to lose the exclusiveness it had enjoyed in the preceding phase. The renewed spread of urbanism in areas away from the Egnatian Road was matched by the distribution of imported tableware. Combining the categories of imported Red Slip and Macedonian Grey Ware will likely result in frequences of findspots similar to those estimated for the Apulian and Attic Red-figure pottery. Both the urban geography and the spread of tableware imports signal a return to the Hellenistic-Roman pattern, even as the urban hierarchy was more complex than before.

Conclusions

During the long period of Roman Antiquity, the areas that border on the continental segment of the Egnatian Road went through a full cycle of transformation of the urban and road network. This part of the Balkan Peninsula had been connected to the outside world centuries prior to the Roman conquest and the construction of the Egnatian Road. As evidenced by the distribution of imported Red-figure vases, many parts of the study-area, including those that did not have direct access to the predecessors of the Egnatian Road, did receive small quantities of internationally traded goods. The wide dispersal of ceramic imports in remote, inland areas mirrors the diffuse urbanisation in this region in the centuries prior to and following the Roman conquest. Groups of fortified centres or *oppida*, of roughly equal size and standing appear in virtually all micro-regions in which modern fieldwork has been carried out. These micro-regional centres were unaligned to the new interregional road that traversed the study-area from west to east. For their supply with imported goods, they would have depended on the network of regional and local roads, put in place long before the arrival of Rome. This diverged road-network not only had the capacity of transporting goods over long distances, but also of spreading them widely across the adjacent areas. The lack of quantitative data obscures the likely differences in the accessibility of imports between the individual micro-regions. But in fact, this is already apparent from the higher density of findspots observed in the core-area of the Macedonian kingdom and in the hinterlands of the Greek colonies on the Adriatic coast. These areas had both a direct access to the coast and more developed urban networks than most other corners of the study-area, but from a long-term perspective, the whole region was supplied.

The construction of a single, linear road, demarcated by milestones and serviced by special facilities did not offset the existing network of local roads and towns immediately. Until the final conquest and pacification of the eastern provinces and the end of the civil wars, the Via Egnatia had been above all a military road. Primarily attuned to the geostrategic concerns of the Roman Republic, it was built to connect two major port-towns, bypassing the local centres which happened to be located off the shortest possible route. It was mainly used for the safe transport of the army and government officials.[94] As in other parts of the expanding Empire, these large infrastructural projects had a delayed but profound impact on regional society, most readily apparent in the changed urban geography in the post-Augustan era. It took nearly two centuries before the Egnatian Road attracted most of the urban sector in Roman Macedonia and became the central axis of its urban geography. By the 1st century AD, the old, branched out network of towns connected by local roads had been reduced to a small number of narrow, urban corridors. Although strictly speaking, the urban system of Roman Macedonia does not conform to the urban corridor model, mostly observed in provinces without a long urban tradition, urbanity was now chiefly limited to the Egnatian cor-

94 Fasolo 2008, 109–118.

ridor and the main north-south artery that linked Greece and the Aegean to central Europe. Famous ancient towns, although located at short distances from the main road, declined and many fell into oblivion, even if nominally they continued to function as centres of local communities. This is most strikingly illustrated in the case of Lower Macedonia, the most urbanised part of the study-area. The most important role in the new urban constellation was assumed by towns located at strategic points along the Egnatian Road, the key nodes in the long-distance traffic of goods and people and these became the bases for the Romanisation of the surrounding areas.

These developments in the urban geography are squarely matched by the distribution of imported tableware. In contrast to the preceding period, the predominant classes of imported tableware are now almost exclusively limited to the Egnatian corridor and the other major roads that crossed the province. This distribution is unrelated to settlement rank. Even low-ranking settlements and rural sites were getting their share of *terra sigillata* imports, as long as they were located on one of the main roads. Roman culture and wealth in general, were confined to narrow corridors beyond which, the demand for imported goods would have been low and supply would have been hampered by the reduced network of markets and roads.[95]

By the time of the High Empire, the Egnatian Road had nearly erased the centuries-old divide between the western and the eastern half of the study-area. The distribution of findspots of imported tableware does not show any visible differences between the spread of Italian and Eastern *terra sigillata*, although these could still emerge in the light of quantitative data. A similar trend towards uniformity can be observed in the urban developments in the area, the gradual deurbanisation of Lower Macedonia and the slow emergence of new urban centres in the mountainous, western parts of the province. Ironically, this process of maturing of the urban network was nearing to completion only in Late Antiquity, by which time new tendencies had started to emerge. As the urban network along the Egnatian road was becoming more structured than ever, the changed social and economic circumstances were giving rise to a new base of the settlement hierarchy. At first, this old-new category of fortified hilltop settlements belonged chiefly to the military and rural sectors, but with time, many of these settlements appropriated a number of urban attributes, whereas the old towns were gradually losing their urban appearance. Although the old urban hierarchy was formally maintained, true urbanity started to escape the frames of the old system, spreading into areas away from the main interregional corridors. This was an obvious step back towards the situation in the pre-Roman period, notwithstanding the important differences between these two periods.

The return of wealth and urbanity to the marginal areas of the system would have been impossible without the reactivation of the pre-Roman network of local roads. ARSW and other imports could only reach areas like the Upper Devol Valley or the Upper Drim through a series of local and regional roads that branched out from or ran parallel to the Egnatian Road. Like in the pre-conquest period, the distribution of imported goods in these areas did not necessarily depend on the presence of a developed and differentiated local urban networks. This is possibly a result of our inability to differentiate between the settlements from the bottom tier of the hierarchy, but other explanations also deserve a thought. The general impression is that, both in the first and in the final phase of the period studied, imports reached the marginal inland areas mostly in small quantities. This material was not necessarily distributed through the local markets, but was brought into the area by officers, soldiers or merchants as their personal belongings. Unfortunately, this plausible scenario cannot be tested without quantitative data from at least a few marginal units. This conclusion applies equally to the potential of the so-called administrative variant of the CPT model, clearly attested in Lower Macedonia, to supply the tributary towns with imported goods. Although in theory, this subtype of the CPT model did not offer an optimal market coverage, it could have nonetheless provided access to high-ranking services for tributary towns and rural settlements.

95 See the situation in neighbouring Epirus: Morison 2005, 12–24.

From a long-term perspective, the centralised model of urban corridors instated under the High Empire was truly exceptional. Its gradual disintegration began already in Late Antiquity, while the Egnatian corridor was still maintained and functioned as a linear road. The major historical events and processes at the time, like the establishment of the new capital of Constantinople and the declining importance of Italy, were certainly contributing factors. With the collapse of central authority at the end of Antiquity, the Egnatian Road ceased to exist as a single linear road and was decomposed into a loosely connected series of minor roads, often controlled by local warlords. The return to the state characteristic of the pre-conquest period was complete and it persisted throughout the Medieval and Ottoman periods.[96]

Sources

Polyb. *Hist.*: Polybios, *Historiae*.

References

Abadie-Reynal, C. – Shehi, E. – Barrière, M.-H. 2024: La circulation des céramiques le long de la via Egnatia: premiers résultats des travaux à Dyrrachium, Apollonia et Philippes. In: Blaževska, S. – Snively, C. S. – Gebhard, E. R. (eds): *Between East and West. Stobi and the cities of the Roman provinces in the Balkans, Sep 2018, Stobi, Macédoine*. Studies in the Antiquities of Stobi 5. Stobi, 369–385. https://hal.science/hal-04742140v1 (last accessed, 28 October 2025).

Adam-Veleni, P. 1998: Arkaioloyiká Aravissoú-Mutatio Scurrio. In: Lilimpakis-Akamatis, M. – Tsakalou-Tzanavaris, K. (eds): *Mnías Khárin. Tómos sti Mnímі Maíris Siganídou*. Thessaloniki, 1–16.

Adam-Veleni, P. 2000: Apollonia i Mygdoniki. *To Arkaioloyiko ergo stin Makedonia kai Thraki* 14, 273–290.

Adam-Veleni, P. 2003: Asprovalta. Building complex of imperial date. Country house – station – inn. In: Adam-Veleni, P. – Poulaki, E. – Tzanvari, K. (eds): *Ancient country houses on modern roads: Central Macedonia*. Thessaloniki, 109–114.

Adam-Veleni, P. 2010: La physionomie des villes du royaume de Macédoine, de l'époque archaïque à l'époque romaine. *Revue Archaeologique* 49, 170–183.

Adam-Veleni, P. – Ioanidou, E. – Mangafa, M. 1992: Ossa 1992. I keramiki tou oikismou kai ta arkhaiobotanika kataloipa. *To Arkaioloyiko ergo stin Makedonia kai Thraki* 6, 383–393.

Adam-Veleni, P. – Poulaki, E. – Tzanvari, K. (eds) 2003: *Ancient country houses on modern roads*. Thessaloniki.

Adams, J. P. 1982: Polybius, Pliny and the Via Egnatia. In: Adams, W. L. – Borza, E. N. (eds): *Philip II, Alexander the Great and the Macedonian heritage*. London–New York, 269–302.

Adams, J. P. 1986: Topeiros Thraciae: The Via Egnatia and the boundaries of Macedonia. In: *Ancient Macedonia* IV. *Papers read at the fourth international symposium held in Thessaloniki, September 21–25, 1983*. Thessaloniki, 17–42.

Adams, J. P. 1993. Trajan and Macedonian highways. In: *Ancient Macedonia* V. *Papers read at the fifth international symposium held in Thessaloniki, October 10–15, 1989*. Thessaloniki, 29–39.

Akamatis, I. 2011: Pella. In: Lane Fox, R. J. (ed.): *Brill's companion to ancient Macedon. Studies in the archaeology and history of Macedon 600 BC–300 AD*. Boston–Leiden, 393–408. https://doi.org/10.1163/9789004209237_020

Akamatis N. 2014: Local red-figure pottery from the Macedonian Kingdom: The Pella workshop. In: Schierup, S. – Sabetai, V. (eds): *The regional production of red-figure pottery: Greece, Magna Graecia and Etruria*. Gösta Enbom Monographs 4. Aarhus, 177–190. https://doi.org/10.2307/jj.608200.13

Amore, G. M. – Bejko, L. – Cerova, Y. – Gjipali, I. 2005: Via Egnatia (Albania) Project: Results of fieldwork 2002. *Journal of Roman Archaeology* 18, 336–360. https://doi.org/10.1017/S1047759400007418

96 The problem of the Via Egnatia as an official linear road in the post-antique periods is discussed in the excellent volume: Zachariadou 1996.

Atanasovski, B. 2019: Lokalitetot Gradište kaj seloto Debrešte vo Rimskiot period. *Macedoniae Acta Archaeologica* 21, 263–284. https://macedactaarchaeol.mk/index.php/acta/article/view/maced_acta_archaeol_vol_21_13 (last accessed, 28 October 2025).

Bekker-Nielsen, T. 2020: The Roman city as a central place. In: Mæhle, I. B. – Ravnå, P. B. - Seland, E. H. (eds): *Methods and models in ancient history. Essays in honor of Jørgen Christian Meyer.* Papers and monographs from the Norwegian Institute at Athens 9. Athens, 81–97. http://bora.uib.no/bora-xmlui/handle/11250/2725471?show=full (last accessed, 28 October 2025).

Bes, P. 2015: *Once upon a time in the East. The chronological and geographical distribution of terra sigillata and red slip ware in the Roman East.* Roman and Late Antique Mediterranean Pottery 6. Oxford. https://doi.org/10.2307/j.ctvr43kch

Blake, H. 1980: Technology, supply or demand? *Medieval Ceramics* 4, 4–12. https://www.academia.edu/908002/Technology_supply_or_demand (last accessed: 28 October 2025).

Blaževska, S. – Pavlovski, G. 2018. Burials from the Hellenistic period at Stobi. In: Blaževska, S. (ed.): *Studies in the antiquities of Stobi IV*. Stobi, 12–46.

Bonifay, M. 2017: The distribution of African pottery under the Roman Empire. Evidence versus interpretation. In: Wilson, A. – Bowman, A. (eds): *Trade, commerce and the state in the Roman world.* Oxford, 327–351. https://doi.org/10.1093/oso/9780198790662.003.0011

Burkhardt, A. (ed.) 1893: *Hierocles Synecdemus.* Leipzig.

Cabanes, P. – Drini, F. (eds) 1995: *Inscriptions d'Épidamne-Dyrrhachion et d'Apollonia.* Corpus des inscriptions grecques d'Illyrie méridionale et d'Épire 1. Athens.

Ceka, N. 1976: Ad Quintum. *Iliria* 6, 287–312. https://doi.org/10.3406/iliri.1976.1270

Chrysostomou, A. 2014: *Ancient Edessa. The fortification (Synopsis).* Edessa.

Chrysostomou, P. 1990. The topography of northern Bottiaia: Pella, the apoikia of Pella and their territories. In: Koukouli-Chrysanthaki, C. – Picard, O. (eds): *In memory of D. Lazaridis: City and countryside in ancient Macedonia and Thrace, proceedings of an archaeological conference, Kavala 9–11 May 1986.* Thessaloniki, 205–239.

Chrysostomou, A. – Chrysostomou, P. 2011: The Roman colony of Pella. In: Lilibaki-Akamati, M. – Akamatis, I.M. - Chrysostomou, A – Chrysostomou, P. (eds): *The Archaeological Museum of Pella.* Athens, 283–298. https://www.latsis-foundation.org/content/elib/book_18/pella_en.pdf (last accessed: 28. 10. 2025)

Ciglenečki, S. 2023: *Between Ravenna and Constantinople: Rethinking Late Antique settlement patterns.* Opera Instituti Archaeologici Sloveniae 46. Ljubljana. https://doi.org/10.3986/9789610507369

De Ligt, L. 1993: *Fairs and markets in the Roman Empire. Economic and social aspects of periodic trade in a pre-industrial society.* Dutch Monographs on Ancient History and Archaeology 11. Leiden. https://doi.org/10.1163/9789004525573

Dimo, V. – Lenhardt, P. – Quantin, F. (eds) 2007: *Apollonia d'Illyrie. 1, Atlas archéologique et historique.* Collection de l'École française de Rome 391. Athens–Rome–Paris.

Donev, D. 2015: *Rural landscapes along the Vardar Valley: Two site-less surveys near Veles and Skopje, Republic of Macedonia.* British Archaeological Reports – International Series 2731. Oxford. https://doi.org/10.30861/9781407313887

Donev, D. 2020: *The busy periphery: Urban systems of the Balkan and Danube provinces (2nd–3rd c. AD).* Archaeopress Roman Archaeology 61. Oxford. https://doi.org/10.2307/j.ctvwh8c3k

Donev, D. 2024: The urban corridors of Roman Pannonia. In: Horvat, J. – Groh, S. – Strobel, K. – Belak, M. (eds): *Roman urban landscape. Towns and minor settlements from Aquileia to the Danube.* Opera Instituti Archaeologici Sloveniae 47. Ljubljana, 33–52. https://doi.org/10.3986/9789610508281_02

Dunn, A. 1994: The transition from polis to kastron in the Balkans (III–VII cc): General and regional perspectives. *Byzantine and Modern Greek Studies* 18, 60–81. https://doi.org/10.1179/byz.1994.18.1.60

Evangelidis, V. 2021: The impact of Rome on the landscapes of Aegean Thrace: An archaeological approach. *Annuario della Scuola Archeologica di Atene* 99:1, 503–516.

Evangeligis, V. 2022: *The Archaeology of Roman Macedonia. Urban and rural environments.* Oxford. https://doi.org/10.2307/j.ctv2v6pckz

Faklaris, P. 1993: Vergina. Anaskafi acropolis 1993. *To Arkaioloyiko ergo stin Makedonia kai Thraki* 7, 61–68.

Fasolo, M. 2008: *La Via Egnatia I. Da Apollonia e Dyrrachium ad Heracleia Lyncestidos*. Viae Publicae Romanae 1. Roma. https://www.academia.edu/366736/Michele_Fasolo_La_via_Egnatia_I_Da_Apollonia_e_Dyrrachium_ad_Herakleia_Lynkestidos_Roma_2003_Google_books_ (last accessed: 28 October 2025).

Fasolo, M. – Lilčić-Adams, L. 2025: The Via Axia between the Danube and the Aegean: Infrastructural network and territorial control in north Macedonia. A Preliminary study. *Journal of Ancient Topography* 35, 235–308.

Fenn, N. – Heinzelmann, M. – Klenner, I. – Muka, B. 2010: Report of the first seasons "Dimal in Illyria" 2010. https://archaeologie.phil-fak.uni-koeln.de/sites/archaeologie/Forschungsprojekte/dimal/dimal_2010.pdf (last accessed: 28 October 2025).

Forsén, B. – Shkodra-Rrugia, B. – Korhonen, K. – Shehi, E. – Ruka, R. – Tikkala, E. 2019: Dyrrachium hinterland project: First preliminary report. In: Lamboley, J.-L. – Përzhita, L. – Skenderaj, A. (eds): *L'Illyrie méridionale et l'Épire dans l'Antiquité VI. Actes du VIe colloque international de Tirana (20–23 mai 2015)*. Paris, 301–317.

Garyfallopoulos, A. 2024: *Pottery of the Roman period in Central Macedonia*. PhD thesis, Aristotelis University, Thessaloniki.

Gounaropoulou, L. – Hatzopoulos, B. M. 1985: *Les milliaires de la voie Egnatienne entre Héraclée des Lyncestes et Thessalonique*. Meletimata 1. Athens. https://helios.eie.gr/helios/bitstream/10442/7387/2/A01.001.0.pdf (last accessed: 28 October 2025).

Hadzipolichroni-Agonostopoulou, I. 1994: Anaskafi sto Palatiano, N. Kilkis, 1994. *To Arkaioloyiko ergo stin Makedonia kai Thraki* 8, 263–268.

Hadzipolichroni-Anagnostopoulou, E. 1996: Oi arkaioloyikes erevnes sto Palatiano. *To Arkaioloyiko ergo stin Makedonia kai Thraki* 10a, 189–204.

Hatzopoulos, M. B. 1996: *Macedonian institutions under the Kings II: A historical and epigraphic study*. Meletimata 22. Athens.

Hatzopoulos, M. B. – Loukopoulou, L. B. 1989: *Morrylos, cite de la Crestonie*. Meletimata 7. Athènes–Paris.

Hayes, J. W. 1972: *Late Roman pottery*. Rome.

Herring, E. 2018: *Patterns in the production of Apulian red-figure pottery*. Cambridge.

Hobson, M. 2020: Roman towns and the settlement hierarchy of ancient North Africa: A bird's-eye view. In: De Ligt, L. – Bintliff, J. (eds): *Regional urban systems in the Roman world, 150 BCE–250 CE*. Mnemosyne Supplements 431. Leiden, 281–324. https://doi.org/10.1163/9789004414365_010

Hodder, I. – Hassall, M. 1971: The non-random spacing of Romano-British walled towns. *Man* 6:3, 391–407. https://doi.org/10.2307/2799028

Honigmann, E. 1943: The original lists of the members of the Council of Nicaea, the robber Synod and the Council of Chalcedon. *Byzantion* 16:1, 20–80. https://www.jstor.org/stable/i40174154 (last accessed: 21 March 2026).

Hoxha, G. 1995: Sigilata afrikane të periudhës së vonë antike nga qyteti i Shkodrës. *Iliria* 25, 249–266. https://doi.org/10.3406/iliri.1995.1654

Kaimaris, D. – Georgula, O. – Karadedos, G. – Patias, P. 2009: Aerial and remote sensing archaeology in Eastern Macedonia, Greece. In: *The proceedings of the 22nd CIPA symposium: "Digital documentation, interpretation & presentation of cultural heritage", held in Kyoto, Japan, 11–15 October 2009*. https://www.cipaheritagedocumentation.org/wp-content/uploads/2018/12/Kaimaris-e.a.-Aerial-and-Remote-Sensing-Archaeology-in-Eastern-Macedonia-Greece.pdf (last accessed: 21 March 2026).

Karambinis, M. 2020: Urban networks in Early Macedonia and Aegean Thrace. In: De Ligt, L. – Bintliff, J. (eds): *Regional urban systems in the Roman world, 150 BCE–250 CE*. Mnemosyne Supplements 431. Leiden, 440–481. https://doi.org/10.1163/9789004414365_015

Karavieri, A. 2010: Creating contacts: Trade and exchange along the Via Egnatia from the Roman to the Early Byzantine period. *Bolletino di Archaeologia Online*, 15–22.

King, L. J. 1985: *Central place theory*. Washington D.C.–London.

Kunow, J. 1988: Zentrale Orte in der Germania inferior. *Archäologisches Korrespondenzblatt* 18, 55–67.

Kurti, R. – Oberweiller, C. 2020: Report on the archaeological survey of the hilltop sites in the Korçë Basin. (The French–Albanian archaeological mission – Pasha 2018–2019). *Candavia* 8, 67–107.

Laurence, R. 1999: *The roads of Roman Italy: Mobility and cultural change*. London. https://doi.org/10.4324/9780203062418

Laurence, R. 2012: The creation of geography: An interpretation of Roman Britain. In: Adams, C. – Laurence, R. (eds): *Travel and geography in the Roman Empire*. London, 67–94. https://doi.org/10.4324/9780203995594

Lilčić-Adams, V. – Jakimovski, A. 2016: *Visoka i Staro Bonče. Centar na kralstvoto Pelagonija i kralskata grobnica na Pavla Čuka*. Skopje. http://uzkn.gov.mk/mk/wp-content/uploads/2023/02/visokai-staro-bonce.pdf (last accessed: 21 March 2026).

Lolos, Y. 2009: Via Egnatia after Egnatius: Imperial policy and interregional contacts. In: Malkin, I. – Constantakopoulou, C. – Panagopoulou, K. (eds): *Greek and Roman networks in the Mediterranean*. London, 264–285. https://doi.org/10.4324/9781315876580

Madzharov, M. 2009: *Roman roads in Bulgaria: Contribution to the development of the Roman road system in the provinces of Moesia and Thrace*. Veliko Turnovo.

Malamidou, V. 2005: *Roman pottery in context: Fine and coarse wares from five sites in north-eastern Greece*. British Archaeological Reports – International Series 1386. Oxford. https://doi.org/10.30861/9781841717074

Merousis, N. 2004: Settlement patterns in prehistoric Imathia and Pella, Western Macedonia, Greece. *Mediterranean Archaeology and Archaeometry* 4:1, 73–82. https://www.maajournal.com/index.php/maa/article/view/67/46 (last accessed: 21 March 2026).

Mikulčić, I. 2003: *Spätantike und frühbyzantinische Befestigungen in Nordmakedonien. Städte – Vici – Refugien – Kastelle*. Veröffentlichung der Kommission zur vergleichenden Archäologie römischer Alpen- und Donauländer der Bayerischen Akademie der Wissenschaften. Münchner Beiträge zur Vor- und Frühgeschichte, 54. München.

Milinković, M. 2007: Stadt oder „Stadt": Frühbyzantinische Siedlungsstrukturen im nördlichen Illyricum. In: Henning, J. (ed.): *Post-Roman towns: Trade and settlement in Europe and Byzantium, 2*. Berlin–New York, 159–193. https://doi.org/10.1515/9783110218831.1.159

Mirković, M. 2007: *Moesia Superior. Eine Provinz an der mittleren Donau*. Orbis Provinciarum – Sonderbände der Antiken Welt 4. Mainz.

Misalidou-Despotidou, V. – Germenis, D. 2008: Anaskafiki erevna stin archaia Kassandreia. *To Arkaioloyiko ergo stin Makedonia kai Thraki* 22, 411–418.

Moore, M. B. 1997: *Attic red-figured and white-ground pottery*. The Athenian Agora 30. Princeton, NJ. https://doi.org/10.2307/3602014

Morison, M. M. 2005: Romanization in southern Epirus: A ceramic perspective. In: Croxford, B. – Goodchild, H. – Lucas, J. – Ray, N. (eds): *TRAC 2005: Proceedings of the fifteenth annual theoretical Roman archaeology conference*. Oxford, 12–24. https://doi.org/10.16995/trac2005_12_24

Nigdelis, P. 2007: Roman Macedonia (168 BC–AD 284). In: Koliopoulos, I. (ed.): *The history of Macedonia*. Thessaloniki, 51–86.

Nikolova, E. 2011. Naodi od keramika i staklo od nekropolata od Zgropolsko Kale. *Macedoniae Acta Archaeologia* 20, 263–274. https://macedactaarchaeol.mk/index.php/acta/article/view/maced_acta_archaeol_vol_20_13 (last accessed: 21 March 2026).

Ogereau, J. M. 2023: *Early Christianity in Macedonia: From Paul to the late sixth century*. Ancient Judaism and Early Christianity 119. Leiden. https://doi.org/10.1163/9789004681200_001

Ončevska-Todorovska, M. 2008: *Docnoantička grnčarija vo Republika Makedonija*. PhD Thesis, University of Ss. Cyril and Methodius, Skopje.

Papazoglou, F. 1988: *Les villes de Macédoine à l'époque romaine*. Suppléments au Bulletin de Correspondance Hellénique 16. Athens. https://cefael.efa.gr/window.php?site_id=1&actionID=summary&serie_id=BCHSuppl&volume_number=16 (last accessed: 21 March 2026).

Plassart, A. 1921: Inscriptions de Delphes, la liste des Théorodoques. *Bulletin de correspondance hellénique* 45, 1–85. https://doi.org/10.3406/bch.1921.3046

Poulter, A. G. 1998: Field survey at Louloudies: A new late Roman fortification in Pieria. *Annuary of the British School at Athens* 93, 463–511. https://doi.org/10.1017/S0068245400003580

Raynor, B. 2016: Theorodokoi, Asylia, and the Macedonian cities. *Greek, Roman, and Byzantine Studies* 56, 225–262.

Sanev, G. 2013: Red-figure vases from FYR Macedonia. *Revue archéologique* 55, 3–55. https://doi.org/10.3917/arch.131.0003

Shehi, E. 2010: Kilns in Albania, an overview. *Rei Cretariae Romanae Acta* 41, 55–59. https://doi.org/10.32028/rcrf-acta-41-pp.55-59

Shehi, E. 2015: *Terra Sigillata en Illyrie Méridionale et en Chaonie. Importations et productions locales (IIe siècle av. J-C – IIe siècle ap. J-C).* Instrumenta, 48. Barcelona. https://diposit.ub.edu/server/api/core/bitstreams/d1fdb327-dfed-4968-92e4-c88687f7a689/content (last accessed: 21 March 2026).

Shkodra-Rrugia, B. 2008: African red slip ware: A case-study from 5th to 6th century Durrës. *Rei Cretariae Romanae Acta* 40, 19–27. https://doi.org/10.32028/rcrf-acta-40-pp.19-27

Sokolovska, V. 1976: Prilog kon proučuvanjeto na keramikata so pečateni ornamenti od Makedonija. *Macedoniae Acta Archaeologica* 2: 157–167. https://macedactaarchaeol.mk/index.php/acta/issue/view/maced_acta_archaeol_vol_2_1976 (last accessed: 21 March 2026).

Sokolovska, V. 1986: *Isar Marvinci i Povardarieto vo antičko vreme*. Skopje.

Soproni, S. 1980: Roads. In: Lengyel, A. – Radan, G. T. (eds): *The archaeology of Roman Pannonia*. Budapest, 207–217. https://real-eod.mtak.hu/12176/1/AkademiaiKiado_002252.pdf (last accessed: 21 March 2026).

Stojanović-Anderson, V. 1993: *Stobi: Results of the joint American–Yugoslav archaeological investigations, 1970–1981: Volume 1: The Hellenistic and Roman pottery*. Princeton, NJ. https://doi.org/10.1515/9781400852918

Tataki, A. 1988: *Ancient Beroea: Prosopography and society*. Meletimata 8. Athènes–Paris.

Van Oyen, A. 2015: The Roman city as articulated through *terra sigillata*. *Oxford Journal of Archaeology* 34:3, 279–299. https://doi.org/10.1111/ojoa.12059

Veleni, G. 1987: Neóteres érevnes sta ellinistiká spítia ton Petrón. *To Arkhaioloyikó érgo stin Makedonía kai Thráki* 1, 9–24.

Vranić, I. – Radojčić, N. 2023: Cultural biographies of Greek pots: Attic red-figure and other glazed pottery consumption at Kale-Krševica. In: Govedarica, B. – Vranić, I. – Kapuran, A. (eds): *A step into the past: Approaches to identity, communications and material culture in South-Eastern European archaeology. Papers dedicated to Petar Popović for his 78th birthday*. Belgrade, 221–233. https://doi.org/10.18485/arhe_step2past.2023.ch19

Wallbank, W. F. 1985: *Via illa nostra militaris:* some thoughts on the Via Egnatia. In: Wallbank, W. F. (ed.): *Selected papers: Studies in Greek and Roman history and historiography*. Cambridge, 193–210.

Zachariadou, E. A. (ed.) 1996: *The Via Egnatia under Ottoman rule (1380–1699): Halcyon days in Crete II: a symposium held in Rethymnon 9–11 January 1994*. Rethymno.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 143–163. 10.17204/dissarch.suppl.5.2026.143

Hybrid population in the city of Rome

Funerary customs and practices from the Via Appia Antica 39 curial complex

Rachele Dubbini ✉
Università degli studi di Ferrara, Ferrara, Italy
rachele.dubbini@unife.it

Barbara Bramanti
Università degli studi di Ferrara, Ferrara, Italy
brmbbr@unife.it

Jessica Mongillo
Università degli studi di Ferrara, Ferrara, Italy
jessica.mongillo@unife.it

Giulia De Palma
Université Paris Nanterre, Nanterre, France
g.depalma@parisnanterre.fr

Received 31 October 2025 | Accepted 16 March 2026 | Published 18 November 2026

Abstract: At its peak in the 2nd century CE, the Roman Empire drew freeborn migrants, enslaved individuals, and freepersons to the capital from across its vast and diverse territories. This cultural plurality is reflected in Rome's funerary archaeology, which offers crucial insights into the identities, beliefs, and daily lives of its inhabitants. This paper presents the excavation of the funerary site at Via Appia Antica 39, situated on the outskirts of the city of Rome and investigated by the University of Ferrara since 2022. The burial complex, dating to the Antonine period, features both cremation and inhumation burials within monumental structures. An integrated, on-site bioarchaeological approach has enabled the recovery of exceptionally well-preserved data—information often lost in other, even renowned, funerary contexts. Burial rituals, skeletal remains, and associated grave goods offer detailed evidence of funerary practices, body treatment, and the biological profiles of the deceased, while also illuminating their possible geographic origins and degrees of social integration. Complementary epigraphic evidence enriches the interpretation, with inscriptions confirming the diverse origins of individuals buried here. Altogether, the site provides a vivid picture of the ethnic and cultural complexity of imperial Rome's population, offering rare insight into the lives of those often marginalized in historical narratives.

Keywords: Rome, Via Appia, funerary practices, epigraphic evidence

The Via Appia Antica 39 burial complex in Rome

The archaeological excavation at the site of Via Appia Antica 39 (AA39) in Rome started in 2022, under a three-year concession from the Italian Ministry of Culture.[1] The site is located just outside

1 For more information on the project see Dubbini *et al.* 2023, also https://linktr.ee/appiantica39 (last access: 20 February 2026).

✉ Corresponding author

the Aurelian Walls between the first and second miles of the consular road, in the heart of the Almo valley, next to the river and in a critical juncture, where the road undergoes a transformation in physical, legal, and administrative terms (Fig. 1). Near the Tomb of Priscilla, the Via Appia Antica shifts indeed from its earlier configuration as a winding urban path—ascending from the valley of the Circus Maximus to the elevation of the so-called Monte d'Oro, then descending into and fully crossing the Almo valley—to that of the more linear and formally structured *via recta*, the extra-urban road.[2] This transition marks the passage from a *semita* (an urban track) to a fully extra-urban Roman road, laid out along the ridge of a natural rise composed of the oldest volcanic deposits of the Alban Hills and the so-called Capo di Bove lava flows.[3] The Almo River, moreover, marked the administrative boundary of Rome's urban space in the early Imperial period, at a distance of one thousand paces from the city: the first mile defined the legal and administrative limit of the territory belonging to the Urbs.[4] Starting from the Republican period, but especially during the Imperial era, the Almo valley thus marked the transition from the urban to the suburban space. In particular, with the massive urban expansion of Rome from the late Republican period onward, the built-up area of the *continentia* progressively extended outward. As a result, this stretch of the Via Appia closest to the city was increasingly characterised by a concentration of residential settlements and, consequently, by funerary monuments and burial complexes.[5]



Fig. 1. Positioning of the AA39 excavation in relation to the plan of Tav. 57 made by P. Rosa, *Monumenti inediti pubblicati dall'Instituto di corrispondenza archeologica* 5, 1849–1853.

2 Funiciello *et al.* 2006, 46–51 and 293, Fig. 12.33; Di Cola 2020; Marcelli 2022a.

3 Dubbini *et al.* 2023.

4 The Cataloghi Regionari appear to identify the Almo River as the boundary of the first Augustan region, that is, the area of Porta Capena. See Palombi 1999; Gozzini 2012; Dubbini 2015, 27–28. On the first mile in Rome, see Dubbini 2019.

5 Dubbini 2015, 65–71; Dubbini *et al.* 2023. Consular roads like the Via Appia were selected for their prestige, giving honour and distinction to the deceased and their families: here the tombs were aligned along the roads according to a principle of visibility, arranged in several rows and forming networks of paths secondary to the main one (von Hesberg – Zanker 1987).

Within such territorial and historical context lies the burial complex brought to light by our excavations at AA39, which can be dated, in its earliest construction phases, to the mid-2nd century CE. Compared to the broader context of Roman funerary areas that, at this time, were arranged along the major traffic routes outside Rome, showing a gradual shift from the ritual of cremation to that of inhumation between the 1st and 3rd centuries CE, AA39 exhibits both shared and distinctive traits.[6] As previous studies have pointed out, between the 1st and 2nd centuries CE, *columbaria* were reconfigured into a distinct form of funerary monument, characterised by significant changes in both stylistic features and intended audience. This reconfiguration appears to stem from a renewed desire for individual recognition and the expression of personal cult, prompting new formal choices and signalling a departure from the architectural and commemorative uniformity characteristic of standard *columbaria*. This transformation began gradually, often manifested through exceptional internal modifications of pre-existing structures.[7] This process culminated in a significant architectural transformation: over the course of the 1st century CE, subterranean and semi-subterranean *columbaria* were gradually replaced by smaller, aboveground monuments. The transition began with a shift in internal visual hierarchy—by the Tiberian period, marble cinerary urns displayed on shelves began to supplant traditional terracotta urns, disrupting the symmetrical, axial layouts of earlier structures: increasing emphasis was placed on the wall facing the entrance. At the same time, cremation practices began to decline in favour of inhumation. Monumental complexes were thus gradually replaced by smaller, mixed-use spaces combining *arcosolia* for inhumation with traditional niches with urns for cremated remains. Decorative elements like mosaics and wall paintings reflect ongoing ritual practices and evolving notions of identity and memory, part of wider cultural transformations that included early Christian burial traditions.[8]

At AA39, eight funerary buildings, an enclosure and a platform have been unearthed, arranged in several rows and located along the ridge of the slope that sloped down from the Via Appia towards the Almo River (Fig. 2). The buildings stood without interruption, literally leaning against each other, with a north-south alignment, identical to that of the Via Appia. All these structures were built against an earlier imposing tuff block wall, consisting of blocks laid end to end and on edge, with the upper surface concave, commonly referred to as *dorso di mulo* technique, and decorated with a smooth band on the northern side, which served to delimit an open area to the south of the excavation trench.[9] This wall constitutes the *terminus post quem* for the construction of the burial plot. The presence of the Almo River is fundamental to the history of the site: a slow and inexorable rise in the water level led to a crucial issue, probably as early as the end of the 3rd century CE.

6 See for example the Vatican necropolis along Via Trionfale (Liverani *et al.* 2010); the funerary area next to the Via Aurelia in Villa Doria Pamphilj (Benocci 2005, 22–25); the necropoleis of via Portuense (most recently Fogagnolo 2020, with earlier bibliography) and of Via Ostiense (Marcelli 2022b; Marcelli *et al.* 2023) and Collatina (Buccellato – Catalano 2003; Buccellato *et al.* 2008). As regards the context of the Via Appia, noteworthy are the funerary complex in Via Latina (most recently Cugno 2022, with earlier bibliography) and beneath the Basilica of St. Sebastian (Taccalite 2009) and the series of tombs discovered in Via Cilicia, just north of the Almo valley (Pagliardi – Cecchini 2016). See also the example of the Necropolis of Isola Sacra (Baldassarre *et al.* 2018).

7 A notable example is Columbarium I of Vigna Codini, where adaptations of certain niches (e.g., those of Aponia Chia and Aponius Nicia) between the 1st and 2nd centuries CE reflect a broader trend toward increased visual differentiation (Borbonus 2014).

8 The literature on this topic is extensive; see, by way of example von Hesberg 1992; Hope – Huskinson 2011; Borbonus 2014; Marcelli *et al.* 2023. See also Lombardi – Dubbini 2025.

9 This wall is probably a funerary enclosure of exceptional dimensions, which defined an open space, perhaps a garden with a funerary monument in the centre, located south of our excavation area. If this interpretation is correct, the dating of the block wall should not go beyond the beginning of the early Augustan age (Giatti 2023; Lombardi – Dubbini 2025).

Between the 4th and 5th centuries CE, the situation must have become unsustainable, leading to the abandonment of the monuments and a unified obliteration of the structures carried out with considerable filling in, mostly consisting of materials allochthonous to the funerary context, which was thus literally sealed and therefore protected. Traces of later frequentation are faint, consisting only of haphazard re-use of old structures.[10]

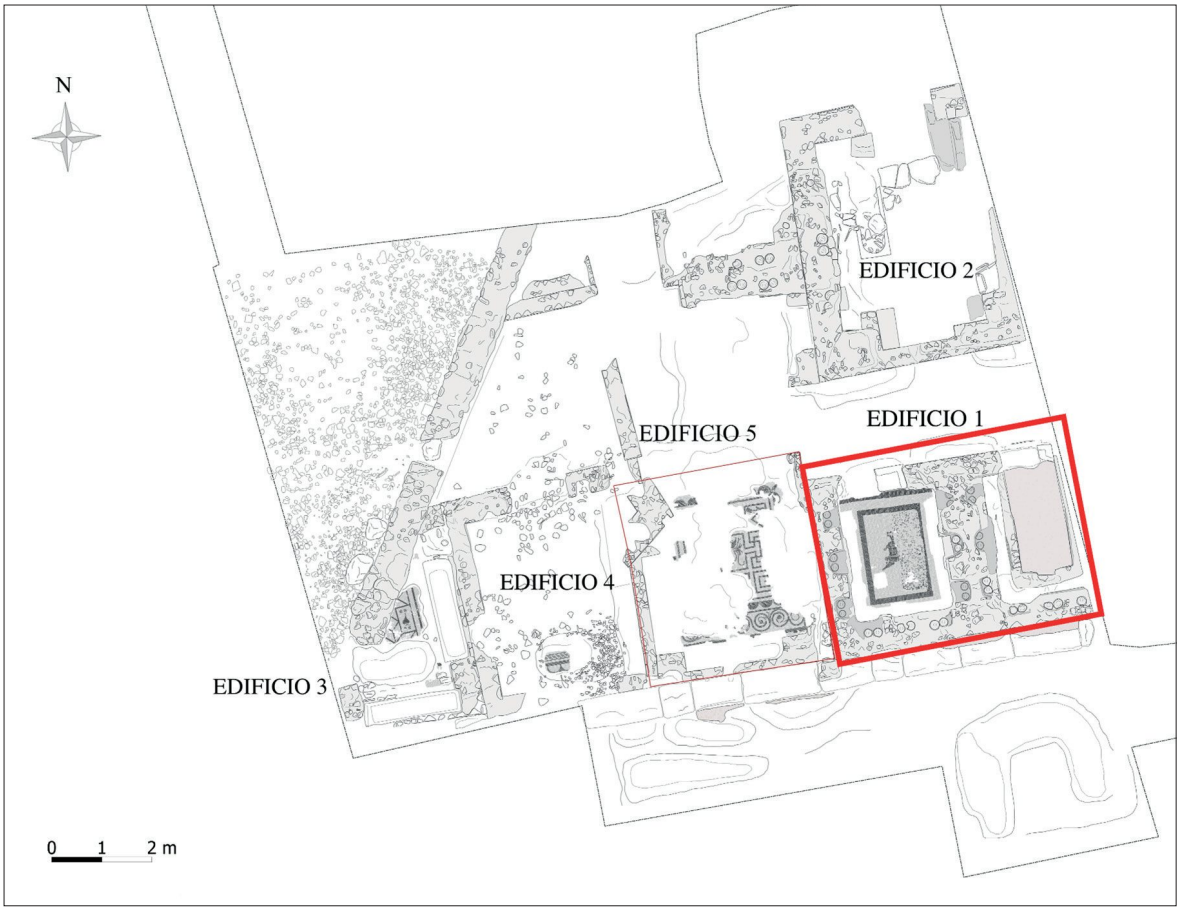


Fig. 2. Plan of AA39 site at the conclusion of the 2024 excavation campaign (elaboration by F. Turchetta and M. Lombardi).

The funerary buildings seem to have been constructed according to a pre-established plan in the same chronological context: they have the same orientation—on an axis with the Appian Way—and are of the same type with a rectangular plan and mixed burial rite (i.e. inhumation and cremation rites), with *arcosolia* opening onto the floor above the *formae* for inhumation burials and several orders of niches to house pairs of *ollae* for cremation. The earliest evidence corresponds to cinerary urns within *columbaria*, while inhumation rites became increasingly prevalent from the second half of the 2nd century CE onwards.[11] The framing of the first construction activity in the middle of the

10 The stratigraphic analysis of the buildings, as well as the study of the materials that emerged from the excavation, is still to be considered at an entirely embryonic stage. The dating proposed for the abandonment of the funerary buildings is based on a preliminary analysis of the materials found in the obliterations of the buildings. We refer to a more advanced phase of the study of the finds to provide more detailed archaeological, stratigraphic and bibliographical references.

11 Indeed, a *columbarium*, of which only two walls remain, forming an obtuse angle that suggests a complex layout, must have preceded the construction of the burial plot. The study of the complex is still ongoing.

2nd century CE is supported not only by the presence of a mixed burial rite, but above all by the chosen architectural model, which was widespread in Rome and the surrounding territory in this period:[12] a medium-sized funerary chamber with a quadrangular plan, with outer facings constructed in accurate *opus latericium*, and, generally, windows on either side of the central epitaph. The roof was probably characterised by a barrel vault or a terraced floor.[13] The interior spaces of these buildings were decorated with painted wall plasters, which—in some cases—also featured figurative motifs. The floors were adorned with black-and-white tessellated mosaics, typically centred around a figurative emblem framed by geometric patterns. In all cases, these floors were modified over time to allow for the opening of new burial spaces, resulting in the partial reconstruction of the flooring—usually with new decorative elements or inscriptions—at the points where the original surfaces had been damaged or destroyed.[14]

Bioarchaeological evidence

A contextualised bioarchaeological approach, integrating social theory and analytical methodologies, provides an effective framework for addressing anthropological questions that extend beyond purely biological description.[15] Within a necropolis, individual and collective identities emerge as dynamic and multifaceted constructions, shaped through the interaction of biological, cultural, and social factors. Although the available dataset from AA39 is still partial and does not yet permit a comprehensive demographic reconstruction, bioarchaeological analysis nonetheless reveals meaningful results. The reconstruction of individual age and sex profiles and unintentional skeletal or dental changes, that may reveal indicators of work-related stress, allow for potential inferences about age and gender identities[16] and social differentiation. Even when working with fragmentary datasets, combining osteological, funerary, and material culture evidence enables the examination of multiple, overlapping aspects of identity[17] and helps to reveal deliberate ritual practices that serve as collective expressions of belonging.[18] Funerary practices, in particular, frequently reflect community or idealised representations of identity.[19]

From an anthropological perspective, the necropolis of AA39 represents a remarkable and complex funerary context: the available community-level data could offer a more nuanced understanding of biological relationships and their role in constructing social identities in the past. The burials exhibit notable variability, including individual, multiple, and collective inhumations. Several burials appear to be reworked primary deposits, indicating deliberate ancient interventions, while secondary burials, particularly ossuary, attest to the long-term and dynamic use of the necropolis. The funerary record encompasses a wide range of burial types: simple earthen graves, sarcophagi, *cappuccina* burials, and graves incorporating *amphorae* to protect the head or torso. Multiple inhumations within *arcosolia* and *enchytrismos* for children are also documented.

12 This dating is further confirmed by a brick stamp from Building 1, which is still *in situ* and can be dated to AD 123 (Eck – Pangerl 2013).

13 See von Hesberg 1992, 47–52.

14 Dubbini *et al.* 2025.

15 Buikstra – Beck 2006; Agarwal – Glencross 2011; Torres-Rouff – Knudson 2017.

16 Sofaer 2006; Agarwal 2012; Agarwal – Wesp 2017; Zuckerman *et al.* 2019.

17 Blaizot 2017.

18 Torres-Rouff – Knudson 2017; Haddow *et al.* 2020.

19 Hodder 1982.

The continuous presence of the bioarchaeologist in the field enables the collection of essential information even prior to laboratory analysis. In the necropolis of AA39 the taphonomic and archaeothanatological analysis does not reveal any clear correlation between the typology and degree of care devoted to burial and the sex or inferred social status of the deceased. To date, over 100 burials, covering both inhumations and cremations, have been documented. Initial osteological and radiocarbon analyses indicate a demographically varied group dated between the second part of the 1st and the 4th centuries CE. Among the inhumations studied, there are approximately 28% of males, and 21% of females, and at least 51% of unidentified individuals, including subadults and fragmentary remains. Age estimates reveal a substantial proportion of subadults (42%), including individuals aged 0–10 years (23%), 10–18 years (5%), and other generic subadults (14%), while adults constitute around 58% of the sample. The cremated remains, generally contained in paired urns, appear to belong predominantly to adults.

Among the tombs discovered in 2023 in AA39, Burial 40, inside Funerary Building 1 in the south-eastern area, stands out for its exceptional character. It consists of a ceramic sarcophagus within an *arcosolium*, accompanied by the secondary deposition of a horse's head, positioned perpendicularly to the sarcophagus at its centre. This unusual assemblage invites reflection on local funerary customs and ritual symbolism. The deposition of horses, whole or partial, has long ritual roots in Europe and Asia, generally symbolic rather than alimentary; in Rome, horse meat was excluded from diet and ritual offerings.[20] Instead, the horse was tied to the military sphere and *Mars*, exemplified by the *Equus October* sacrifice, where the right-hand horse of the victorious chariot was ritually slain and its remains used in civic rituals.[21] With the expansion of the Empire, the Roman pantheon incorporated deities associated with horses, notably *Epona*, the Celtic goddess revered as protector of horses and riders, especially within military circles.[22] This religious syncretism and enduring martial symbolism facilitated the appearance of equine remains in funerary contexts, expressing aspects of identity, belief, and/or status.

Although no directly comparable cases to Burial 40 are currently documented, equine burials are attested throughout the Roman world, particularly in the Danubian Basin (Noricum–Pannonia), where they are often associated with auxiliary soldiers of provincial origin.[23] At Halbturn (Austria, Pannonia, 3rd–5th centuries CE), numerous equids remains, mainly from pits and ditches, have been interpreted as refuse deposits, although a ritual function cannot be ruled out.[24] A remarkable case from Ovilava (Wels, Austria, 2nd–3rd centuries CE) revealed two female individuals buried directly above a horse; genetic analyses identified them as mother and daughter, an exceptional example of a human–animal association.[25] In the western provinces, similar practices are known from the necropolis of Barcino (Barcelona), active between the 1st and 3rd centuries CE, where a ritual well contained an equine skull interpreted as a votive deposit.[26] In Italy, horse burials became more frequent in Late Antiquity and the Early Middle Ages, often linked to non-Roman groups such as the Lombards, as in the warrior grave at Arzignano (Vicenza, 5th–6th centuries CE)[27] and at Vicenne-Campochiaro (Molise, 7th century CE), where horse–human burials reflect military and

20 Colonnelli – Mannino 2012.

21 Plin., *HN*., 28.147; 28.159; 28.265; Rüpke 2009; Tanganelli 2018. On the relationship between the cult of Mars in Rome and the cavalry, see most recently Dubbini forthcoming.

22 Toynbee 1973.

23 Lauwerier – Hessing 1992.

24 Kunst – Doneus 2013.

25 Hagmann *et al.* 2024.

26 de Heredia Bercero 2007.

27 Reggiani – Rizzi 2007.

identity-related rituals.[28] Beyond the imperial frontiers, in the Baltic regions, equine burials played a central role in elite warrior identity from the 2nd to 4th centuries CE, with partial depositions, typically heads or forelimbs, serving as markers of status and transition.[29]

Burial 40 is defined as a 'plural' burial in this study,[30] as it appears to be both multiple (almost contemporaneously depositions) and collective in nature (reopening of the grave for new depositions over a more or less extended period of time). The deposit contained the remains of four individuals arranged in a multi-layered sequence. On the uppermost level, the most recent deposit, lay a disarticulated and partially rearticulated subadult, placed secondarily, indicating that the grave had been reopened for additional interments. Beneath this layer, an adult female oriented north–south rested above an adult male oriented south–north, both lacking the skull but partially anatomically connected. At the lowest level was a subadult (probably female) positioned north–south. No evidence suggests a significant interruption between the depositions of the two lowest individuals, nor was any intermediate soil layer observed that would indicate a chronological gap. Only the individual at the bottom retained the skull *in situ*; its slight westward displacement may reflect a deliberate repositioning, while the body was still intact, to accommodate the subsequent burials.

Archaeologists face the challenge of distinguishing between reopening to accommodate a new corpse or reopening for complex funerary rituals, or necromancy, or ancestor worship.[31] Re-use and gathered, disarticulated remains *(réductions)* are frequent as a result of over-crowding, and at this stage of research we do not exclude the desire to regroup the deceased in the afterlife. Grave reopening has been identified globally and across all archaeological periods.[32] The possible sequence of actions has been reconstructed based on the analysis of bone positioning and the direction of their displacement.[33] In the case of Burial 40, we suggest at least three episodes of reopening. The first for the burial of the female adult individual, that caused the movement of certain skeletal elements, such as the feet, and the disarticulation of the ribs of the adult male individual. The second for the reduction of the subadult remains, that caused the disarticulation of female adult individuals. We also suggest a further reopening of the burial for the removal of the skulls. Of the four individuals, only one preserves the skull. The absence of decapitation traces, together with the presence of mandibles, isolated teeth and some signs of disturbance also evident in the cervical area, indicate intentional removal after the skeletonisation of the body. The removal of the skulls probably took place at a later moment, while the final closure of the burial seems to have been accompanied by the introduction of scattered bone elements, possibly intrusive, and the deposition of the horse's head. The horse's radiocarbon dating will provide further insight into the sequence. Furthermore, two secondary cranial deposits were identified deliberately arranged on cinerary urns in the final row of the *columbarium* within the same chamber, and an additional *cranium* was recovered adjacent to the horse's head, incorporated within the fill layer sealing the structure (Figs 3–4). The three skulls correspond to two adult and one subadult individuals; however, it remains undetermined whether they derive from the same adults interred within Burial 40 or from other individuals, given the widespread occurrence of ossuary deposits throughout the necropolis. Only further analyses may help clarify potential associations.

The removal of skulls is documented in Italy between the 2nd and 4th centuries CE, as well as in Romano-British and Anglo-Saxon contexts. Such practices have been interpreted in relation to nec-

28 Bocchini 2011; Ceglia – Marchetta 2012.

29 Bliujienė *et al.* 2017.

30 Following the terminology of Boulestin – Courtaud 2022.

31 Knüsel – Schotsmans 2021.

32 Aspöck *et al.* 2020; Aspöck *et al.* 2022.

33 Aspöck 2018.

rophobic beliefs, intended to prevent the return of the deceased, or as forms of magical and ritual activity associated with transformation or protection. These behaviours reflect the persistence of complex interactions between the living and the dead in the Roman and post-Roman world. The deliberate removal of selected skulls and bones and their relocation to other places has been linked to magical or necromantic practices.[34] Comparable evidence comes from northern Italy, notably from the Spilamberto necropolis (1st–2nd century CE) and Baggiovara (6th century CE), both in the Modena area, where the absence of skulls and upper cervical *vertebrae*, together with the partial disturbance of the tomb covers, suggests post-depositional removal of the heads.[35]



Fig. 3. Burial 40. Ceramic sarcophagus accompanied by the secondary deposition of a horse's head, positioned perpendicularly to the sarcophagus at its centre (photo: J. Mongillo).

From the Roman period onward, irregular or 'anomalous' burials, such as prone inhumations, decapitations, amputations, or cases in which nails were driven through the body, are widely attested across Europe and have been interpreted as responses to fears of revenants or as expressions of necromantic ritual.[36] Surveys of atypical burials in Italy show that most examples involve prone positions, decapitations, or the placement of heavy stones on the body, with similar phenomena observed in France, Switzerland, and Roman Britain.[37] Within this wider context, the reopening of Burial 40 and the systematic absence of skulls may therefore point to intentional ritual manipulation of the dead body rather than accidental post-burial disturbance, possibly reflecting apotropaic or necromantic practices. Practices such as the display of enemy heads, post-mortem decapitation, and 'head-hunting' are attested in various contexts, often linked to themes of dominion, protection, and ritualised violence.

Within this symbolic continuum, the case of AA39 appears to constitute part of a hybrid ritual repertoire, expressing complex and possibly syncretic beliefs regarding death, transformation, and the permeability of the boundary between life and the afterlife.

Osteological analyses of the four individuals from Burial 40 provide important insights into their body composition and health (Tab. 1).

The biological profile was reconstructed following standard bioarchaeological methods. Age at death for younger individuals was estimated through the assessment of epiphyseal fusion[38] and dental eruption.[39] In adult individuals, age estimation was based on the degree of ectocranial suture

34 Graf 1999; Bailliot 2015.

35 Pancaldi 2009; Mariotti *et al.* 2010a; Mariotti *et al.* 2010b; Milella *et al.* 2011; Palazzini 2011; Pergola *et al.* 2023.

36 Taylor 2008; Mariotti *et al.* 2010a; Mariotti *et al.* 2010b; Milella *et al.* 2011; Milella *et al.* 2015.

37 Cavallini 2011; Taylor 2008.

38 Brothwell 1981; Buikstra – Ubelaker 1994; Scheuer *et al.* 2009.

39 Ubelaker 1989; AlQahtani *et al.* 2010.

obliteration, dental wear, and the morphological changes of the pubic symphysis, auricular surface of the *ilium*, and sternal end of the fourth rib, as well as the degree of ossification of the sternal end of the clavicle.[40]

Tab. 1. Biological profiles of the four individuals from Burial 40 (*Ubelaker 1989; **AlQahtani 2010; + stature/bi-iliac breadth (Ruff et al. 2005).

ID	Sex	Age at death in years (± SD)	Stature in cm (± SD)	Body Mass in kg (± SD)
272	M (?)	8 (±2)*; 9.5**	112.2 (±2.9)	23.6 (±2.3)
280	F	45–58	153.4 (±2.9)	58.7 (± 4)+
281	M	45–55	157.8 (±3.2)	59.3 (±6.4)
282	F (?)	12 (±30)*; 12.5**	146.1(±3)	42.7 (±7.4)



Fig. 4. A – Burial 40 after the removal of the equine head and overlying soil layer. The secondary position of the two most recent individuals is clearly visible, B – the first individual interred in Burial 40 (photo: J. Mongillo).

40 Todd 1920; Brothwell 1981; İşcan – Loth 1984; İşcan – Loth 1985; Lovejoy *et al.* 1985; Meindl – Lovejoy 1985; Brooks – Suchey 1990; Buckberry – Chamberlain 2002.

Sex determination followed a combined approach based on the morphological study of the skull and pelvis,[41] and, for younger individuals, on features of the *humerus,*[42] mandible, and *ilium.*[43] Body size reconstruction was carried out using the equations proposed by Ruff *et al.* (2012)[44] based on *femur* and *tibia* for stature estimation and on *femur* head for body mass. In one case stature and bi-iliac breadth was used for body mass estimation following Ruff *et al.* (2005).[45] The equations of Ruff (2007)[46] were employed for subadult body size reconstruction.



Fig. 5. A – enamel and dentin hypoplasia of mandible incisors of Individuals 282, B – complete *spina bifida occulta* (Individual 281) (photo: J. Mongillo).

Palaeopathological analysis was conducted in accordance with the principal reference works in the field.[47] Here we provide a brief description of the individuals from the more recent burials (Tab. 1):

- Individual 272 was a subadult aged approximately 8 ± 2 years, showing hypervascularization of the thoracic vertebral body and two episodes of linear enamel hypoplasia (LEH) suggesting episodes of physical stress at around 2.5 and 3.5 years.[48] A slight discrepancy between dental and diaphyseal age suggests possible growth disturbance.
- Individual 280, an adult female aged 45–58 years, exhibited a stature slightly above the contemporary average.[49] Dental and skeletal evidence included occlusal caries, mild calculus, periodontal disease, osteoarthritis of the cervical and lumbar *vertebrae*, and eburnation of the upper left sacral joint.[50] The *sternum* was markedly convex with straight mid-ribs, and the *sacrum* showed inward curvature at S4–S5, consistent with a compression fracture.[51]

41 Broca 1875; Acsádi – Nemeskéri 1970; Ferembach 1980.
42 Rogers 2009.
43 Schutkowski 1993.
44 Ruff *et al.* 2012.
45 Ruff *et al.* 2005.
46 Ruff 2007.
47 Ortner 2003; Buikstra 2010; Grauer 2011; Brothwell 2012; Appleby 2022.
48 Goodman – Rose 1990.
49 Giannecchini – Moggi-Cecchi 2008.
50 Rogers *et al.* 1991; Waldron – Rogers 1991; Rogers – Dieppe 2016.
51 Ortner 2003.

New bone formation on the tibial shaft indicates localized inflammation or trauma.[52]

- Individual 281 is an adult male aged 45–55 years (cal. ^{14}C 123–238 CE); he displayed mild dental disease, cervical *hyperlordosis*, and mild *scoliosis*. Additional conditions included complete hidden *spina bifida*, thoracic disc herniation with Schmorl's nodes, and ossification of both the thyroid gland and costal cartilage. Enthesopathy changes were observed at the insertions of the Achilles tendon, *gluteus maximus*, and *iliopsoas* (Fig. 5.B).[53]
- The last individual, 282, a probable female subadult aged 12–15 years (cal. ^{14}C: 126–240 CE), presented active *cribra orbitalia*,[54] lytic lesions on the left parietal bone, and multiple dental stress markers (severe enamel and dentin hypoplasia along with other lines of LEH) reflecting physiological stress episodes during early and late childhood. Postcranial lesions included osteolytic and enthesopathic changes at several muscle insertions, proximal tibial thickening, Harris lines, and vertebral cavitations (Fig. 5.A).

Future isotopic, DNA, and kinship analyses will aim to clarify their eventual biological relationships and mobility patterns.

The bioarchaeological investigation demonstrates how the integration of osteological, funerary, and cultural data can shed light on complex expressions of identity, belief, and ritual practice within Roman society. Burial 40, in particular, represents a rare intersection of collective interment, ritual manipulation, and symbolic animal deposition, revealing the persistence of multifaceted relationships between the living and the deceased. The presence of pathological conditions and advanced age among some individuals may, in future studies, allow inferences about care and social roles within the community. Furthermore, the youngest individual, presenting severe pathological alterations and positioned at the base of the grave, was the only one whose *cranium* remained *in situ*, possibly reflecting deliberate funerary choices or ritual practices requiring further investigation. Taken together, these findings contribute to a broader understanding of social dynamics, ritual behaviour, and cultural transformation in the Roman world.

Epigraphic evidence

The study of the epigraphic material unearthed during the excavation at AA39 has shed light on the identity and socio-cultural profile of the individuals buried in the area. These finds, currently under study,[55] can be dated between the first and the mid-3rd century CE, a period corresponding to the peak development of the urban necropolises across the entire city.[56]

Alongside *ingenui* such as C. Ofilius Ianuarius and Avidia Priscilla, attested respectively by a funerary altar[57] and a slab, both in marble, the necropolis was also used by several individuals of servile origin. Their presence is revealed both by the dedicatory *formulae* employed by the two *ingenui* mentioned above—who extended their funerary dedications to their freedmen and freedwomen and their descendants through the customary expression *libertis libertabusque posterisque eorum*—and by a substantial corpus of epigraphic evidence directly referring to persons of servile or libertine status or presumed to be such. Two women, both slaves, buried their children who had died at a very young age: Proba, mother of Secundianus, a child aged two, and another

52 Nikita 2016.

53 Mariotti *et al.* 2007.

54 Rinaldo *et al.* 2019.

55 The epigraphic finds are currently under study by the author, with the exception of a Greek metrical inscription, which has been examined by Raffaella Cantore (Università degli Studi di Ferrara).

56 For an overview of the urban necropoleis, see Manacorda 2012.

57 Lombardi – Dubbini 2025, 10, Fig. 9.

woman, whose name has been lost, mother of a *verna* of the emperor. A servile background may also be inferred for the woman commemorated by a mosaic inscription, Iul(ia) Chreste, who was likely the owner of the tomb. In this case, her status is suggested by the Greek *cognomen* Chreste, which is widely attested in Rome between the Augustan period and the 3rd century CE.[58] Similar observations apply to another *ingenuus* bearing a very common Greek *cognomen*, M. Cornelius Antiochus,[59] known from an inscription engraved on a marble slab. It is evident that among these individuals (distinguished by Greek and non-Greek *cognomina*) there were foreigners; however, in the absence of explicit indications derivable from the onomastics (*origo*), it is impossible to identify them based on the *cognomina* alone, given their wide diffusion, and even less possible to determine their geographical origin.

In one case, however, the cognomen itself offers a potential clue to the individual's origin. In the inscription of Aurelia Iabaranis (Fig. 6.A–B), we encounter the exceedingly rare surname Iabaranis (Iavaranis), a variant of which is attested twice in Numidia, in masculine form (Iavarius)[60] and feminine form (Iavarinis).[61] The rarity of this cognomen, a unicum in Rome, allows us in this case to consider it as a possible marker of the deceased's geographic origin, in addition to her servile background. Her *gentilicium*, Aurelia, may further suggest the acquisition of Roman citizenship following the *Constitutio Antoniniana* promulgated by Caracalla in 212 CE.[62] The inscription is carved on two adjoining fragments (26.9 × 7.8 × 2.5 cm; letter height 1.5 cm), corresponding to the raised portion of a low sarcophagus lid,[63] truncated at the sides; the back is smooth, except along the lower edge, where the rough surface marked the attachment to the lid's base; at the sides, along the line of fracture, the two holes for the insertion of metal clamps used to secure it are visible.. On the front, the two fragments preserve the upper and lower mouldings. At the centre lies a rectangular panel, framed by a moulding whose profile aligns at top and bottom with that of the raised portion. Within the slightly recessed epigraphic field, the following inscription is engraved:

D(*is*) *M*(*anibus*).
Aurelia`e´ Ia=
barane.

On either side of the panel, the upper and lower mouldings of the raised portion extend vertically along the panel's edges, forming circular arcs at the corners (of which only three are preserved). This is followed by two pairs of semicircular elements, separated at the centre by an ovoid element, visible only on the right side, whose surface is better preserved but presumably mirrored symmetrically on the opposite side. The motif, forming a sort of bracket shape, is uncommon in the design of sarcophagus epigraphic fields, which generally favoured linear forms defined by moulded frames. It is attested in Rome and other regions of Roman Italy in at least four examples (all with marine-themed decoration) dating to a period between the very end of the 2nd century and the mid-4th century CE.[64] Its presence is also observed at Cherchell, in Algeria—a possible area of origin

58 Solin 1996, 471.

59 Solin 1996, 244–247.

60 CIL VIII, 18409.

61 ILAlg II.3, 9779.

62 Salway 1994, 134.

63 Other examples of raised portions with a height between 7 and 8 cm: Giuliano 1988, no. 195, featuring a putto holding a garland (7.5 cm).

64 See the raised portion of the lid of the sarcophagus of T. Prifernius Crispinus, physician of the fourteenth urban cohort, from the Via Casilina, Marranella (L: 158 cm, maximum H: 21 cm, thickness: 2.2 cm); the lid, decorated with a marine-themed motif, is dated to the first half of the 4th century CE: Giuliano 1981, 106, no. 14 (L. Musso – R. Friggeri) = EDR072791 (M. Giovagnoli). See also Rumpf 1969, nos 70, 75, and 210.

of the deceased—on a strigilated sarcophagus of uncertain chronology.[65] The two fields to the right and left of the panel, also slightly recessed, present a smooth surface, except on the right, where, interrupted by the fracture, a raised curvilinear element of S-like shape is preserved, corresponding to the decoration that presumably ran along the sides of the panel. This element could suggest the spiralled tail of a marine creature—a motif particularly appreciated in sarcophagus iconography—and, as already noted, it appears in all examples featuring a panel framed similarly to that of the present sarcophagus. It is therefore within this urban production that the sarcophagus of Aurelia Iabarane should be placed. The epigraphic features, in particular the onomastics of the deceased, the frame motif, and the limited surviving decoration of the raised portion allow us to propose a preliminary dating back to the mid- to late 3rd century CE.[66]



Fig. 6. The raised portion of the lid of the sarcophagus of Aurelia Iabarane, A – front, B –back (photo: C. M. Marchetti).

Pending further investigation, it should be noted that the section of the Appian Way under study has already yielded traces of individuals of provincial origin, reflecting both the mobility of people and communities across the Empire and the multicultural character of the population of Rome. Of particular relevance to the theme of the conference is the presence, in the otherwise unknown vineyard of Giovanni Battista Leni—which Pighius situates near the second mile of the Appian Way—of the burial of a sixteen-year-old boy, M. Manlius Saturninus, originally from Segobriga.[67] He was an *ingenuus*, but likely of servile origin, as suggested both by his cognomen and by the status of the dedicator, Callistus, a freedman. The inscription, known only from a 16th-century

65 Baratte – Metzger 1985, no. 160; https://collections.louvre.fr/ark:/53355/cl010275737 (last access: 20 February 2026).

66 The area from which the raised portion originates has yielded several fragments of marine-themed and strigulated sarcophagi, currently under study; analysis may reveal new elements useful for reconstructing the sarcophagus of Aurelia Iabarane and for refining its chronology.

67 CIL VI, 21956 = EDR100515; Ricci 1992, 114, H.a,15.

edition, can be provisionally dated to a period broadly spanning the mid-1st to the end of the 2nd century CE. Moreover, it is worth noting that the investigated area has yielded Greek-language inscriptions, reflecting a Greek-speaking population: in addition to the aforementioned metrical inscription uncovered during the excavations, currently under study, we should also mention the 18th-century discovery of the *kline* monument of the young Saturninus, originating from the 'vinea Bernardi Oliverii', located outside Porta San Sebastiano[68] and situatable near the excavation area (Fig. 7).



Fig. 7. Sarcophagus of Saturninus, after a drawing by Giovanni Gaetano Bottari (Bottari 1782, 301; IGUR III, 1324 = EDR126769).

The epigraphic evidence uncovered during the research at AA39 offers a reflection of the multicultural character of imperial Rome; the picture that emerges is consistent with epigraphic data recorded along the extramural stretch of the Appian Way over the centuries.

Conclusions

The necropolis of Via Appia Antica 39 (AA39) exemplifies the dynamic processes of cultural negotiation and transformation that shaped Imperial Rome. Situated in the liminal zone between the urban and suburban areas of the city, the site offers a unique case study in funerary hybridisation—the intersection of multiple ritual, architectural, and symbolic traditions within a single mortuary context. Dating primarily to the Antonine period, the complex features both cremation and inhumation burials, elaborately decorated funerary architecture, and a range of ritual practices that blend Roman, provincial, and potentially non-Roman elements. The integration of archaeological, bioarchaeological, and epigraphic data reveals how cultural plurality and social mobility materialised through death. The site's mixed funerary rite, combining cremation and inhumation within the same monuments, situates it within a transitional phase in Roman mortuary practice between the 1st and 3rd centuries CE. This coexistence of rituals marks a period of ideological and cultural redefinition. The reuse and adaptation of *columbaria* into smaller, more individualized burial chambers demonstrate a gradual shift from collective to more personal forms of commemoration.

68 IGUR III, 1324 = EDR126769.

Over one hundred burials have been documented, representing both cremation and inhumation and encompassing a wide demographic spectrum. The assemblage displays a remarkable diversity of burial types reflecting flexible and evolving ritual practices. Among the most striking discoveries is Burial 40, located in Funerary Building 1. This deposit contained the remains of four individuals—two adults and two subadults—interred sequentially within a clay sarcophagus and accompanied by the secondary deposition of a horse's head. The stratigraphic sequence indicates repeated reopening of the grave, deliberate rearrangement of skeletal elements, and post-depositional removal of skulls. The absence of trauma on the cervical *vertebrae* suggests intentional removal after decomposition rather than decapitation at death. Comparable phenomena are attested elsewhere in Italy and the western provinces, where post-depositional manipulation of human remains—particularly skulls—has been interpreted as part of apotropaic or necromantic rituals, possibly intended to control, honour, or protect the deceased. The inclusion of equine remains further supports an interpretation in which the hybridisation of rituals drew upon multiple cultural traditions. Osteological analysis reveals variable health conditions and physiological stress markers, including growth disturbances, degenerative pathologies, and evidence of labour-related trauma. These data underscore the diversity of lived experiences and social roles within the AA39 community.

The epigraphic evidence provides equally valuable insights into the social and cultural identities of those buried at AA39. Several inscriptions attest to the presence of enslaved or freed individuals, such as the dedication by C. Ofilius Ianuarius. Others, such as that of Aurelia Iabaranis, reveal more specific indicators of geographic origin. Her rare *cognomen*, Iabaranis, is otherwise attested only in Numidia, suggesting a North African provenance. In the blending of Roman onomastic structures with provincial names, the funerary epigraphy thus mirrors the ethnic and linguistic diversity of Rome's population. The use of the Greek language in certain inscriptions further attests to the cosmopolitan composition of the community interred along the first suburban stretch of the Via Appia.

In conclusion, the case study of AA39 epitomizes the hybrid character of mid-Imperial Roman funerary culture, both materially and symbolically. Architecturally, the coexistence of cremation niches and inhumation *arcosolia* within the same buildings demonstrates the simultaneous practice of multiple rites, perhaps reflecting the presence of families or groups of diverse origins and beliefs sharing the same funerary space. Ritually, the evidence from Burial 40 stands as a paradigmatic expression of hybrid practice: the combination of collective interment, skull removal, and equine deposition reveals a fusion of Roman, provincial, and potentially 'folk-religious' elements. The deliberate reopening of graves and manipulation of remains suggests ritual performances concerned with the transformation of the deceased, their containment, or their continued influence among the living. The AA39 necropolis—a space where difference was continuously redefined, ritualized, and made visible through the material culture of death—reflects broader dynamics of social change, mobility, and identity formation in the Roman Empire. This site embodies a world in which social boundaries were porous and ritual traditions fluid, where new cultural forms emerged through the interplay of continuity and adaptation. Thus, the AA39 excavation contributes to a broader understanding of Imperial Rome as a culture of synthesis, in which the boundaries between Roman and non-Roman, life and death, individual and collective, were constantly negotiated and remade, standing as a material expression of the plural identities that animated both the living and the dead at the heart of the Roman Empire.

Funding

ABAP DD 679, 31/05/2022. 'Appia Antica 39' is an interdisciplinary project directed by Rachele Dubbini for the University of Ferrara. The archaeological excavation has been directed by Fabio Turchetta, Ditta ARCHEO, Archeologia e tecnologie. The project is financed by the foundation Patrum Lumen Sustine and the metropolitan city of Rome, which we thank for their support. Like-

wise, we would like to thank the institutions in charge of this stretch of the Appian Way, namely the Appia Antica Archaeological Park, the Appia Antica Regional Park, and the Municipality of Rome for their collaboration on the research project.

Sources

CIL VI: Bormann, E. – Henzen, G. – Huelsen, Ch. – Bang, M. – Vidman, L. – Alföldy, G (eds): *Corpus Inscriptionum Latinarum. Vol. VI: Inscriptiones urbis Romae Latinae.* Berlin, 1876–.

CIL VIII: Wilmanns, G. – Mommsen, Th. – Cagnat, R. – Schmidt, J. – Dessau, H. (eds): *Corpus Inscriptionum Latinarum. Vol. VIII: Inscriptiones Africae Latinae.* Berlin, 1881–1959.

IGUR III: Moretti, L. (ed.) 1979: *Inscriptiones Graecae Urbis Romae. Vol. III.* Roma.

ILAlg II.3: Pflaum, H.-G. (ed.) 2003: *Inscriptions latines de l'Algérie. Tome II: Inscriptions de la Confédération Cirtéenne, de Cuicul et de la tribu des Suburbures. Fasciculus 3.* Paris.

Plin. *NH*: Plinius Secundus, Gaius, *Naturalis Historia.*

References

Acsádi, G. – Nemeskéri, I. 1970: *History of human life span and mortality*. Budapest.

Agarwal, S. C. 2012: The past of sex, gender, and health: Bioarchaeology of the aging skeleton. *American Anthropologist* 114, 322–335. https://doi.org/10.1111/j.1548-1433.2012.01428.x

Agarwal, S. C. – Glencross, B. A. 2011: Building a social bioarchaeology. In: Agarwal, S. C. – Glencross, B. A. (eds): *Social Bioarchaeology.* Amsterdam, 1–11. https://doi.org/10.1002/9781444390537.ch1

Agarwal, S. C. – Wesp, J. K. (eds) 2017: *Exploring sex and gender in bioarchaeology.* Albuquerque.

AlQahtani, S. J. – Hector, M. P. – Liversidge, H. M. 2010: Brief communication: The London atlas of human tooth development and eruption. *American Journal of Physical Anthropology* 142, 481–490. https://doi.org/10.1002/ajpa.21258

Appleby, J. 2022: Differential diagnosis and rigor in paleopathology. In: Grauer, A. L. (ed.): *The Routledge handbook of paleopathology.* London, 43–63. https://doi.org/10.4324/9781003130994-4

Aspöck, E. 2018: A high-resolution approach to the formation processes of a reopened Early Bronze Age inhumation grave in Austria: Taphonomy of human remains. *Quaternary International* 474, 131–145. https://doi.org/10.1016/j.quaint.2018.02.028

Aspöck, E. – Klevnäs, A., – Müller-Scheessel, N. 2020: The archaeology of post-depositional interactions with the dead: An introduction. In: Aspöck, E. – Klevnäs, A. – Müller-Scheeßel, N. (eds): *Grave disturbances: The archaeology of post-depositional interactions with the dead.* Studies in Funerary Archaeology 14. Oxford, 1–26. https://doi.org/10.2307/j.ctv13pk784.3

Aspöck, E. – Gerdau-Radonić, K. – Noterman, A. A. 2022: Reopening graves for the removal of objects and bones: Cultural practices and looting. In: Knüsel, C. J. – Schotsmans, E. M. J. (eds): *The Routledge handbook of archaeothanatology: Bioarchaeology of mortuary behaviour.* London. https://doi.org/10.4324/9781351030625-19

Bailliot, M. 2015: Roman magic figurines from the western provinces of the Roman Empire: An archaeological survey. *Britannia* 46, 93–110. https://doi.org/10.1017/S0068113X15000112

Baldassarre, I. – Bragantini, I. – Dolciotti, A. M. – Morselli, C. – Taglietti, F. 2018: Necropoli dell'Isola Sacra. Le ricerche 1968–89: Ripercorrendo un'esperienza. In: Cébeillac-Gervasoni, M. – Laubry, N. – Zevi, F. (eds): *Ricerche su Ostia e il suo territorio* 1. Publications de l'École française de Rome. https://doi.org/10.4000/books.efr.3690

Baratte, F. – Metzger, C. 1985: *Musée de Louvre. Catalogue des sarcophages en pierre d'époques romaine et paléochrétienne.* Paris.

Benocci, C. 2005: *Villa Doria Pamphilj.* Roma.

Blaizot, F. 2017: *Les espaces funéraires de l'habitat groupé des Ruelles, à Serris (Seine-et-Marne) du VIIe au XIe siècles: Modes d'inhumation, organisation, gestion et dynamique.* Catalogue analytique des tombes 2. Thanat'Os 4. Bordeaux.

Bliujienė, A. – Stančikaitė, M. – Piličiauskienė, G. – Mažeika, J. – Butkus, D. 2017: Human–horse burials in Lithuania in the late second to seventh century AD: A multidisciplinary approach. *European Journal of Archaeology* 20, 682–709. https://doi.org/10.1017/eaa.2017.14

Bocchini, G. 2011: Rituali funerari in epoca altomedievale: Il caso dell'inumato della tomba 57 di Vicenne-Campochiaro (VII sec.). In: Montanari, E. (ed.): *Pagani e cristiani: Forme e attestazioni di religiosità del mondo antico in Emilia* X. Bologna, 39–46.

Borbonus, D. 2014. *Columbarium tombs and collective identity in Augustan Rome*. Cambridge. https://doi.org/10.1017/CBO9781139381680

Bottari, G. G. 1782: *Del Museo Capitolino, Vol. IV.* Roma.

Boulestin, B. – Courtaud, P. 2022: Words between two worlds: Collective graves and burial terminology. In: Knüsel, C. J. – Schotsmans, E. M. J. (eds): *The Routledge handbook of archaeothanatology: Bioarchaeology of mortuary behaviour.* London, 55–68. https://doi.org/10.4324/9781351030625-5

Broca, P. 1875. Instructions craniologiques et craniometriques. *Bulletins de la Société d'Anthropologie de Paris* 2, 1–203.

Brooks, S. – Suchey, J. M. 1990: Skeletal age determination based on the *os pubis*: A comparison of the Acsádi–Nemeskéri and Suchey–Brooks methods. *Human Evolution* 5, 227–338. https://doi.org/10.1007/BF02437238

Brothwell, D. R. 1981: *Digging up bones: The excavation, treatment and study of skeletal remains.* Oxford.

Brothwell, D. R. 2012: Tumors: Problems of differential diagnosis in paleopathology. In: Grauer, A. (ed.): *A Companion to Paleopathology.* West Sussex, 420–433. https://doi.org/10.1002/9781444345940.ch23

Buccellato, A. – Catalano, P. 2003: Il comprensorio della necropoli di via Basiliano (Roma): Un'indagine multidisciplinare. *Mélanges de l'École française de Rome. Antiquité* 115:1, 311–376. https://doi.org/10.3406/mefr.2003.10735

Buccellato, A. – Catalano, P. – Musco, S. 2008: Alcuni aspetti rituali evidenziati nel corso dello scavo della necropoli Collatina (Roma). In: Schneid, J. (ed.): *Pour une archéologie du rite: Nouvelles perspectives de l'archéologie funéraire.* Collection de l'École française de Rome 407. Rome, 59–88.

Buckberry, J. L. – Chamberlain, A. T. 2002: Age estimation from the auricular surface of the ilium: A revised method. *American Journal of Physical Anthropology* 119:3, 231–239. https://doi.org/10.1002/ajpa.10130

Buikstra, J. E. 2010: Paleopathology: A contemporary perspective. *A companion to biological anthropology,* 395–411. https://doi.org/10.1002/9781444320039.ch22

Buikstra, J. E. – Beck, L. A. 2006: *Bioarchaeology: The contextual analysis of human remains.* Amsterdam.

Buikstra, J. E. – Ubelaker, D. H. 1994: *Standards for data collection from human skeletal remains.* Arkansas Archaeological Survey Research Series 44. Fayetteville, NC.

Cavallini, E. 2011: *Sepolture anomale in area alpina e padana: Tipologia e interpretazioni.* MA Thesis, Università degli Studi di Trento, Trento.

Ceglia, V. – Marchetta, I. 2012: Nuovi dati dalla necropoli di Vicenne a Campochiaro. [Unpublished report]. http://www.rmoa.unina.it/3158/1/ceglia-marchetta2012.pdf (last access: 20 February 2026).

Colonnelli, G. – Mannino, M. 2012: I rituali funerari in epoca romana. Studi storico-archeologici e archeozoologici. *Antrocom Online Journal of Anthropology* 8:2, 331–340.

Cugno, S. A. 2022: Scavi e materiali archeologici del Parco delle Tombe della via Latina. In: Paolillo, F. R. – Pontisso, M. – Roascio, R. (eds): *Patrimonium Appiae. Depositi emersi*, Quingentole, 247–260.

de Heredia Bercero, J. B. 2007: La via sepulchralis de la plaza Vila de Madrid: Un ejemplo del ritual funerario durante el Alto Imperio en la necrópolis occidental de Barcino. *Quarhis: Quaderns d'Arqueologia i Història de la Ciutat de Barcelona* 3, 12–63.

Di Cola, V. 2020: La via Appia di età repubblicana da Porta Capena all'Almone. In: D'Alessio, A. – Serlorenzi, M. – Smith, J. – Volpe, R. (eds): *Roma Medio Repubblicana, dalla conquista di Veio alla Battaglia di Zama. Atti del Convegno Internazionale Roma, 5–6–7 aprile 2017.* Roma, 97–107.

Dubbini, R. 2015: *Il paesaggio della via Appia ai confini dell'Urbs. La valle dell'Almone in età antica.* Bibliotheca Archaeologica 38. Bari.

Dubbini, R. 2019: Sul valore del primo miglio a Roma antica. In Modolo, M. – Pallecchi, S. – Volpe, G. – Zanini, E. (eds): *Una lezione di archeologia globale. Studi in onore di Daniele Manacorda.* Bari, 143–147.

Dubbini, R. forthcoming: *Extra urbem sed ad campum*: The cult sites of Mars and the city of Rome. In: Rieger, A. K. – Fugger, V. (eds): *Artemis in the taberna: Religious entanglement and appropriation in urban spaces.* forthcoming.

Dubbini, R. – Clementi, J. – Fiano, F. R. – Lombardi, M. – Rizzo, E. – Turchetta, F. 2023: Laboratorio archeologico via Appia Antica 39. Un paesaggio di confine tra la città e il suburbio di Roma. *Bolletino di Archeologia On Line* 14, 305–331.

Dubbini, R. – Turchetta, F. – Clementi, J. – De Angelis, L. 2025: I primi rivestimenti parietali dallo scavo di via Appia Antica 39 a Roma. In: Angelelli, C. – Ebanista, C. – Erba, M. E. – Olevano, F. – Zulini, E. (eds): *Atti del XXX Colloquio dell'Associazione Italiana per lo Studio e la Conservazione del Mosaico: Venafro, 28 febbraio–2 marzo 2024.* Roma, 251–264.

Eck, W. – Pangerl, A. 2013: Neue Diplome mit den Namen von Konsuln und Statthaltern. *Zeitschrift für Papyrologie und Epigraphik* 187, 273–294.

Ferembach, D. 1980: Recomendations for age and sex diagnosis of skeletons. *Journal of human evolution* 9, 517–549. https://doi.org/10.1016/0047-2484(80)90061-5

Fogagnolo, S. 2020: Pavimenti a mosaico dalla necropoli della via Portuense: riesame dei caratteri decorativi di un'area funeraria di epoca medio imperiale. In: Cecalupo, C. – Erba, M. E. (eds): *Atti del XXV Colloquio dell'Associazione italiana per lo studio e la conservazione del mosaico: con il patrocinio del Ministero per i Beni e le Attività Culturali (Reggio Calabria, 13–16 marzo 2019).* Roma, 185–200.

Funiciello, R. – Heiken, G. – De Rita, D. – Parotto M. 2006: *I sette colli. Guida geologica a una Roma mai vista.* Milano.

Giannecchini, M. – Moggi-Cecchi, J. 2008: Stature in archaeological samples from central Italy: Methodological issues and diachronic changes. *American Journal of Physical Anthropology* 135, 284–292. https://doi.org/10.1002/ajpa.20742

Giatti, C. 2023: La delimitazione dello spazio funerario: funzioni e sviluppo dei recinti a Roma. In: Dally, O. – Fless, F. (eds): *Die Grenzen Roms in der Antike. Studientage 2013, 2017 und 2019 Deutsches Archäologisches Institut – I confini di Roma nell'antichità. Giornate di Studio 2013, 2017 e 2019 Instituto Archeologico Germanico.* Roma, 111–154.

Giuliano, A. (ed.) 1981: *Museo Nazionale RomanoLe Sculture I.2. Ali del Chiostro.* Roma.

Giuliano, A. (ed.) 1988: *Museo Nazionale RomanoLe Sculture I.10. Magazzini, i sarcofagi 2.* Roma.

Goodman, A. H. – Rose, J. C. 1990: Assessment of systemic physiological perturbations from dental enamel hypoplasias and associated histological structures. *American Journal of Physical Anthropology* 33, 59–110. https://doi.org/10.1002/ajpa.1330330506

Gozzini, S. 2012: Regione I. Porta Capena. In: Carandini, A. – Carafa, P. (eds): *Atlante di Roma Antica. Biografia e ritratti della città.* Milano, 359–374.

Graf, F. 1999: *Magic in the Ancient World.* Revealing Antiquity 10. Cambridge, MA.

Grauer, A. L. (ed.) 2011: *A Companion to Paleopathology.* Chichester. https://doi.org/10.1002/9781444345940

Haddow, S. D. – Schotsmans, E. M. – Milella, M. – Pilloud, M. A. – Tibbetts, B. – Betz, B. – Knüsel, C. J. 2020: Funerary practices I: Body treatment and deposition. In: Hodder, I. (ed.): *Peopling the landscape of Çatalhöyük: Reports from the 2009–2017 seasons.* Çatalhöyük Research Project Series 13 – Monograph 53. Ankara, 281 –314.

Hagmann, D. – Ankerl, B. – Kirchengast, N. – Cheronet, O. – Greisinger, M. – Miglbauer, R. – Kirchengast, S. 2024: Double feature: First genetic evidence of a mother–daughter double burial in Roman period Austria. *Journal of Archaeological Science: Reports* 55, 104479. https://doi.org/10.1016/j.jasrep.2024.104479

Hodder, I. 1982: *Symbols in action: Ethnoarchaeological studies of material culture.* Cambridge.

Hope, V. M. – Huskinson, J. (eds) 2011: *Memory and mourning: Studies on Roman death.* Oxford–Oakville, CT.

İşcan, M. Y. – Loth, S. R. – Wright, R.K. 1984: Age estimation from the rib by phase analysis: White male. *Journal of Forensic Sciences* 29:4, 1094–1104. https://doi.org/10.1520/JFS11776J

İşcan, M. Y. – Loth, S. R. – Wright, R. K. 1985: Age estimation from the rib by phase analysis: White female. *Journal of Forensic Sciences* 30:3, 853–863. https://doi.org/10.1520/JFS11018J

Knüsel, C. – Schotsmans, E. M. (eds) 2021: *The Routledge handbook of archaeothanatology: Bioarchaeology of mortuary behaviour.* London. https://doi.org/10.4324/9781351030625

Kunst, G. K. – Doneus, N. 2013: Roman graves and rural rubbish: Animal remains from the Roman cemetery of Halbturn, Austria. *Anthropozoologica* 48:2, 391–408. https://doi.org/10.5252/az2013n2a15

Lauwerier, R. C. G. M. – Hessing, W. A. 1992: Men, horses and the Miss Blanche effect: Roman horse burials in a cemetery at Kesteren, the Netherlands. *Helinium* 32:1–2, 78–109.

Liverani, P. – Spinola, G. – Zander, P. 2010: *Le necropoli vaticane. La città dei morti di Roma.* Monumenta Vaticana Selecta. Milano.

Lombardi, M. – Dubbini, R. 2025: From Earth to interface: Towards a 3D Semantic virtual stratigraphy of the funerary ara of *Ofilius Ianuarius* from the Via Appia Antica 39 burial complex. *Heritage* 8:8, 305. https://doi.org/10.3390/heritage8080305

Lovejoy, C. O. 1985: Dental wear in the Libben population: Its functional pattern and role in the determination of adult skeletal age at death. *American Journal of Physical Anthropology* 68:1, 47–56. https://doi.org/10.1002/ajpa.1330680105

Lovejoy, C. O. – Meindl, R. S. – Pryzbeck, T. R. – Mensforth, R. P. 1985: Chronological metamorphosis of the auricular surface of the ilium: A new method for the determination of adult skeletal age at death. *American Journal of Physical Anthropology* 68:1, 15–28. https://doi.org/10.1002/ajpa.1330680103

Manacorda, D. 2012: Le necropoli. In: Carandini, A. – Carafa, P. (eds): *Atlante di Roma antica. Biografia e ritratti della città.* Milano, 101–107.

Mann, R. W. – Hunt, D. R. – Lozanoff, S. 2016: *Photographic regional atlas of non-metric traits and anatomical variants in the human skeleton.* Springfield.

Marcelli, M. 2022a: L'uomo e le risorse naturali nel territorio del Parco dell'Appia. In: Paolillo, F. R. – Pontisso, M. – Roascio, S. (eds): *Patrimonium Appiae. Depositi emersi.* Quingentole, 113–124.

Marcelli, M. 2022b: Le aree sepolcrali fra il I e il III miglio della via Ostiense: Analisi storico-topografica. *Bullettino della Commissione Archeologica Comunale di Roma* 123, 213–233. https://doi.org/10.48255/0392-7636.BCAR.CXXIII.2022.16

Marcelli, M. – Alapont Martín, L. – Evans, S. – Cicone, C. 2023: The Via Ostiensis necropolis in Rome: Endurance, change, and a complex transition to the paleochristian funerary world. In: Gaëlle, G. – Boyer, C. – Anstett, É. (eds): *Death and the societies of Late Antiquity: New methods, new questions? – Les sociétés de l'Antiquité tardive face à la mort: nouvelles méthodes, nouvelles questions.* Aix-en-Provence, 301–314. https://doi.org/10.4000/books.pup.68981

Mariotti, V. – Facchini, F. – Belcastro, M. G. 2007: The study of entheses: Proposal of a standardized scoring method for twenty-three entheses of the postcranial skeleton. *Collegium Antropologicum* 31:1, 291–313.

Mariotti, V. – Milella, M. – Belcastro, M. G. 2010a: Le tombe 6, 8 e 16 della necropoli tardo-antica (V–VI sec. d.C.) di Casalecchio di Reno (BO). Analisi antropologiche. In: Belcastro, M. G. – Ortalli, J. (eds): *Sepolture anomale. Indagini archeologiche e antropologiche dall'epoca classica al Medioevo in Emilia-Romagna. Giornata di Studi (Castelfranco Emilia, 19 dicembre 2009). All'Insegna del Giglio.* Quaderni di Archeologia dell'Emilia Romagna 28. Borgo San Lorenzo, 103–120.

Mariotti, V. – Milella, M. – Belcastro, M. G. 2010b: Le tombe 8 e 13 della necropoli tardo-antica (VI sec. d.C.) di Baggiovara (Modena). Analisi della ritualità funeraria, In: Belcastro, M. G. – Ortalli, J. (eds): *Sepolture anomale. Indagini archeologiche e antropologiche dall'epoca classica al Medioevo in Emilia-Romagna. Giornata di Studi (Castelfranco Emilia, 19 dicembre 2009). All'Insegna del Giglio.* Quaderni di Archeologia dell'Emilia Romagna 28. Borgo San Lorenzo, 121–130.

Meindl, R. S. – Lovejoy, C. O. 1985: Ectocranial suture closure: A revised method for the determination of skeletal age at death based on the lateral–anterior sutures. *American Journal of Physical Anthropology* 68:1, 57–66. https://doi.org/10.1002/ajpa.1330680106

Milella, M. – Belcastro, M. G. – Mariotti, V. 2011: Pratiche e rituali funerari devianti nell'Italia romana e tardo antica. In: Labate, D. – Locatelli, D. (eds): *L'insediamento etrusco e romano di Baggiovara (Mo).*

Le indagini archeologiche e archeometriche. Quaderni di Archeologia dell'Emilia Romagna 27. Borgo S. Lorenzo, 99–102.

Milella, M. – Mariotti, V. – Belcastro, M. G. – Knüsel, C. J. 2015: Patterns of irregular burials in Western Europe (1st–5th Century A.D.). *PLOS ONE* 10(6): e0130616. https://doi.org/10.1371/journal.pone.0130616

Nikita, E. 2016: *Osteoarchaeology: A Guide to the macroscopic study of human skeletal remains.* London.

Ortner, D. J. (ed.) 2003: *Identification of pathological conditions in human skeletal remains.* London. https://doi.org/10.1016/B978-0-12-528628-2.X5037-6

Pagliardi, M. N. – Cecchini, M. G. 2016: Roma (Via Appia). Via Appia Antica I miglio: i ritrovamenti presso il Cavalcavia di via Cilicia. *Notizie degli Scavi di Antichità* 9:23–24, 44–138.

Palazzini, C. 2011: La necropoli tardoantica. In Labate, D. – Locatelli, D. (eds): *L'insediamento etrusco e romano di Baggiovara (Mo). Le indagini archeologiche ed archeometriche.* Quaderni di Archeologia dell'Emilia Romagna 27. Borgo S. Lorenzo, 65–72.

Palombi, D. 1999: Regiones quattordecim (topografia). In: Steinby, E. M. (ed.): *Lexicon Topographicum Urbis Romae, Vol. IV.* Roma, 199–204.

Pancaldi, P. 2009: Una sepoltura anomala da Spilamberto (Modena). *Pagani e Cristiani. Forme ed attestazioni di religiosità del mondo antico in Emilia* 8, 317–320.

Pergola, P. – Dellù, E. – Roascio, S. (eds) 2023: *Sit tibi terra gravis: Sepolture anomale tra età medievale e moderna. Atti del Convegno Internazionale di Studi, Albenga (SV), Palazzo Oddo, 14–16 ottobre 2016.* Archaeologies, histories, islands and borders in the Mediterranean 12. Albenga.

Reggiani, P. – Rizzi, J. 2007: I resti del cavallo rinvenuti nella tomba di via Canove ad Arzignano (Vicenza). In: Fiore, I. – Malerba, G. – Chilardi, S. (eds): *Atti del 3° Convegno Nazionale di Archeozoologia (Siracusa, 2000).* Verona, 459–468.

Ricci, C. 1992: Hispani a Roma. *Gerión. Revista de Historia Antigua* 10, 103–143.

Rinaldo, N. – Zedda, N. – Bramanti, B. – Rosa, I. – Gualdi-Russo, E. 2019: How reliable is the assessment of porotic hyperostosis and cribra orbitalia in skeletal human remains? A methodological approach for quantitative verification by means of a new evaluation form. *Archaeological and Anthropological Sciences* 11, 3549–3559. https://doi.org/10.1007/s12520-019-00780-0

Rogers, T. L. 2009: Sex determination of adolescent skeletons using the distal humerus. *American Journal of Physical Anthropology* 140:1, 143–148. https://doi.org/10.1002/ajpa.21060

Rogers, J. – Dieppe, P. 2016: Palaeopathology of osteoarthritis. In: Doherty, M. – Hunter, D. J. – Bijlsma, H. – Arden, N. – Dalbeth, N. (eds): *Oxford textbook of osteoarthritis and crystal arthropathy.* Oxford, 13–20. https://doi.org/10.1093/med/9780199668847.003.0002

Rogers, J. – Waldron, T. – Watt, I. 1991: Erosive osteoarthritis in a medieval skeleton. *International Journal of Osteoarchaeology* 1:2, 151–153. https://doi.org/10.1002/oa.1390010212

Ruff, C. B. 2007: Body size prediction from juvenile skeletal remains. *American Journal of Physical Anthropology* 133:1, 698–716. https://doi.org/10.1002/ajpa.20568

Ruff, C. B. – Niskanen, M. – Junno, J. A. – Jamison, P. 2005: Body mass prediction from stature and bi-iliac breadth in two high latitude populations, with application to earlier higher latitude humans. *Journal of Human Evolution* 48:4, 381–392. https://doi.org/10.1016/j.jhevol.2004.11.009

Ruff, C. B. – Holt, B. M. – Niskanen, M. – Sládek, V. – Berner, M. – Garofalo, E. – Garvin, H. M. – Hora, M. – Maijanen, H. – Niinimäki, S. – Salo, K. – Schuplerová, E. – Tompkins, D. 2012: Stature and body mass estimation from skeletal remains in the European Holocene. *American Journal of Physical Anthropology* 148:2, 601–617. https://doi.org/10.1002/ajpa.22087

Rumpf, A. 1969: *Die Meerwesen auf den antiken Sarkophagreliefs.* Rome.

Rüpke, J. 2009: Equus October und ludi Capitolini: Zur rituellen Struktur der Oktober-Iden und ihren antiken Deutungen. In: Dill, U. – Walde, C. (eds): *Antike Mythen. Medien, Transformationen und Konstruktionen.* Berlin–New York, 96–121. https://doi.org/10.1515/9783110217247.2.96

Salway, B. 1994: What's in a Name? A Survey of Roman Onomastic Practice from c. 700 B.C. to A.D. 700. *Journal of Roman Studies* 84, 124–145. https://doi.org/10.2307/300873

Scheuer, S. – Black, S. – Schaefer, M. 2009: *Juvenile osteology: A laboratory and field manual.* London.

Schutkowski, H. 1993: Sex determination of infant and juvenile skeletons: I. Morphognostic features. *American Journal of Physical Anthropology* 90:2, 199–205. https://doi.org/10.1002/ajpa.1330900206

Sofaer, J. R. 2006: Gender, bioarchaeology and human ontogeny. In: Gowland, R. – Knüsel, C. (eds): *The social archaeology of funerary remains.* Oxford, 155–167.

Solin, H. 1996: *Die stadtrömischen Sklavennamen: ein Namenbuch. Drei Teile. I. Lateinische Namen; II. Griechische Namen; III. Barbarische Namen.* Forschungen zur antiken Sklaverie Beiheft 2. Stuttgart.

Taccalite, F. 2009: *I colombari sotto la Basilica di San Sebastiano fuori le mura.* Roma.

Tanganelli, F. 2018: Dei, uomini, cavalli nella società greca e romana: Fonti letterarie ed epigrafiche. In: Camin, L. – Paolucci, F. (eds): *A cavallo del tempo. L'arte di cavalcare dall'antichità al Medioevo. Catalogo della Mostra (Firenze, 26 giugno – 14 ottobre 2018).* Firenze, 46–59.

Taylor, T. 2008: *The buried soul: How humans invented death.* London.

Todd, T. W. 1920: Age changes in the pubic bone: I. The male white pubis. *American Journal of Physical Anthropology* 3:3, 285–334. https://doi.org/10.1002/ajpa.1330030301

Torres-Rouff, C. – Knudson, K. J. 2017: Integrating identities: An innovative bioarchaeological and biogeochemical approach to analysing the multiplicity of identities in the mortuary record. *Current Anthropology* 58:3, 381–409. https://doi.org/10.1086/692026

Toynbee, J. M. C. 1973: *Animals in Roman life and art.* London.

Ubelaker, D. H. 1989: *Human skeletal remains: Excavation, analysis, interpretation.* Washington D.C.

von Hesberg, H. 1992: *Römische Grabbauten.* Darmstadt.

von Hesberg, H. – Zanker, P. (eds) 1987: *Römische Gräberstraßen. Selbstdarstellung – Status – Standard. Kolloquium in München vom 28. bis 30. Oktober 1985.* München.

Waldron, T. – Rogers, J. 1991: Inter-observer variation in coding osteoarthritis in human skeletal remains. *International Journal of Osteoarchaeology* 1:1, 49–56. https://doi.org/10.1002/oa.1390010107

Zuckerman, M. K. – Kamnikar, K. R. – Osterholtz, A. J. – Herrmann, N. P.– Franklin, J. D. 2019: Applying the index of care to the Mississippian period: A case study of treponematosis, physical impairment, and probable health-related caregiving from the Holliston Mills site, TN. *International Journal of Osteoarchaeology* 29:5, 843–853. https://doi.org/10.1002/oa.2805

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 165–235. 10.17204/dissarch.suppl.5.2026.165

Once again about 'Sarmatian'-type fibulae (Almgren Group VII, Form 210 and similar) in the Chernyakhiv culture

Evgeniy Gorokhovskiy
Independent researcher, Kyiv, Ukraine
evgeniy.gorokhovsky@gmail.com

Oksana Gopkalo ✉
Institute of Archaeology of the National Academy of Sciences of Ukraine, Kyiv, Ukraine
oksana_gopkalo@ukr.net

Received 1 April 2026 | Accepted 5 September 2026 | Published 18 November 2026

Abstract: This paper examines the origin of fibulae classified as Almgren Group VII, with a high catchplate and an upper chord, also called 'Sarmatian' type, found in the area of the Chernyakhiv culture. It aims to confirm the probable origin of such brooches within the area of the Chernyakhiv culture on the basis of an extensive series of parallels. The paper presents an analysis of the history and methodology of the study of the type, a typological classification and dating of brooches with a high catchplate and an upper chord within the Chernyakhiv culture, and, based on a comparative analysis with a wealth of parallels, formulates a hypothesis concerning their origin. It is supplemented by a catalogue of finds (Appendix) and illustrations. Given the distinct morphological characteristics of this variant, the question of origin should be evaluated separately for each series, with reference to a wide range of analogies from other, primarily neighbouring, archaeological cultures. Overall, all 'Sarmatian' fibulae found on sites of the Chernyakhiv culture are linked to the development of jewellery-making technologies in the Danubian Roman provinces, particularly Dacia and their dissemination, along with completed products, in the period after the Marcomannic Wars and during the reign of the Severan dynasty (AD 193–235).

Keywords: A VII 'Sarmatian' fibulae, Danube Region, Chernyakhiv culture

In the archaeological literature on Roman period antiquities of Central and Eastern Europe, 'Sarmatian-type' fibulae is the term commonly used for a diverse and heterogeneous group of brooches belonging to O. Almgren's Group VII (henceforth referred to as A VII 'Sarmatian' or simply 'Sarmatian' fibulae). These brooches were widespread over a vast territory from the upper reaches of the Elbe and the Rhine to the Oka Basin, and from the southern Baltic coast to the Danube and the Northern Pontic region.

Their common feature is an upper chord on the spring, fastened to the head and supported by a projection that may take various forms (a knob, pin, plate, or hook), or passed through an additional hole on a vertical plate designed to hold the axis of the spring (spring plate).[1]

1 Kolník 1965, 195–196, 198–199; Mączyńska 1999; Mączyńska 2003; Mączyńska 2011, 67–72, Tab. 28; Cociş 2004, 133–135; Cociş 2009; Cociş *et al.* 2010, 205–207; Cociş– Bârcă 2012; Cociş– Bârcă 2013; Cociş– Bârcă 2014; Grumeza 2014, 66; Istvánovits – Kulcsár 2018, 288, 291, 254. kép; Nagy 2025, 2.

✉ Corresponding author

This study investigates the origin and distribution of these artefacts within the territory of the Chernyakhiv culture and attempts to determine the typological and chronological connections between these items and comparable finds from sites associated with neighbouring archaeological cultures in Eastern and Central Europe.

History and methods of research into 'Sarmatian' fibulae

O. Almgren classified two-piece brooches with an elongated (so-called crossbow) spring with an arched chord and a high catchplate into his Group VII.[2] Such finds are characteristic of the Chernyakhiv culture and are found in large numbers on related sites. They were discovered at many settlements and burial grounds, mostly within the forest-steppe zone.[3] Together with available stray finds from this area, the total number of known specimens exceeds 180 (Fig. 1).[4] The history of these finds, held in museums, research institutions, and private collections, as well as their research from the late 19th to the early 21st centuries, was presented in a previous article, together with a new classification framework[5] and a catalogue of 122 specimens.[6]

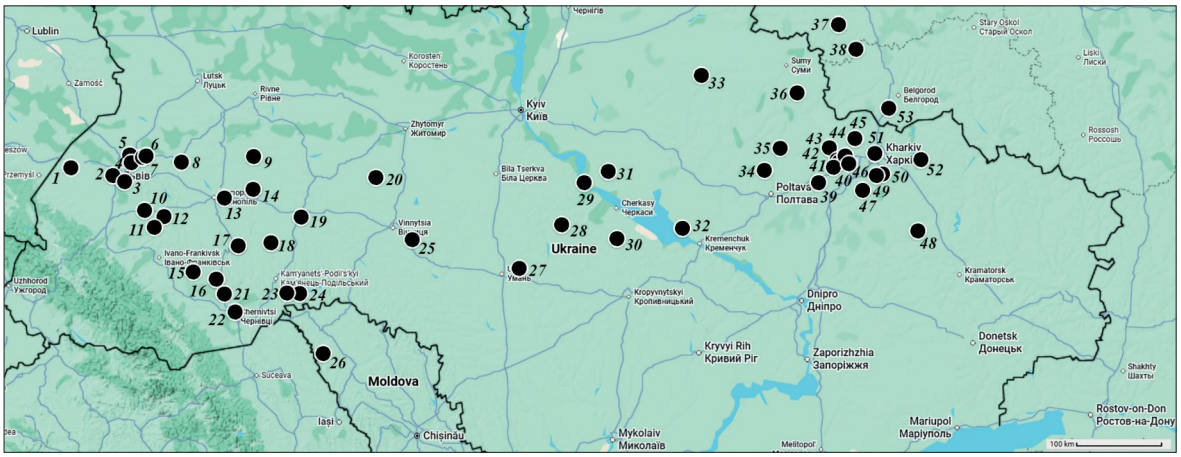


Fig. 1. Sites of the Chernyakhiv culture with A VII 'Sarmatian' fibulae. 1 – Horosnytsia, 2 – Sokil'nyky, 3 – Cherepyn, 4 – Staryi Yarychiv, 5 – Zhovtantsi, 6 – Ripniv, 7 – Neslukhiv, 8 – Zahirtsi, 9 – Lepesivka, 10 – Priozerne (Psary), 11 – Demyaniv, 12 – Verkhnya Lypytsia, 13 – Cherneliv-Ruskyi, 14 – Toky, 15 – Nezvisko, 16 – Horodnytsia, 17 – Zhabyntsi, 18 – Werbychka, 19 – Ruzhychanka, 20 – Petrykivtsi, 21 – Verenchanka, 22 – Rohizna, 23 – Luka-Vrublevetska, 24 – Komariv, 25 – Poberezhne, 26 – Khucha, 27 – Lehedzyne, 28 – Zhuravka, 29 – Pekari, 30 – Mykhailivka, 31 – Kovrai, 32 – Hradyz'k, 33 – Matyashiv Yar, 34 – Vasylivka, 35 – Bil'sk, 36 –Boromlya, 37 – Vydrin, 38 – Peny, 39 – Zavhorodne, 40 – Stari Valky, 41 – Mizyaky, 42 – Viytenky, 43 – Khrushchova Mykytivka, 45 – Ridnyi Krai, 46 – Ohultsi, 47 – Ryabukhino, 48 – Pasiky, 49 – Kostyantivka, 50 – Vodyane, 51 – Velyka Danylivka, 52 – Martova, 53 – Holovino.

The initial characterisation of specific features, fundamentally important for precise typological identification and classification, was provided by O. Almgren in his description of Form 210 (henceforth A 210), 'brooches with a separate foot', within Series 1, 'brooches with a knob on the foot'.

2 Almgren 1897, 90–98, 198–208, Taf. 9; Almgren 1923, 253–254.

3 Ambroz 1966, 72–74, Tab. 21.3; Gorokhovskiy – Gopkalo 2004, 122, 125–128, Rys. 11; Mączyńska 2011, 69, 306–309, nos 107–114, 118, 120, 123–125, 127–130, 161–181, Tab. 28.

4 A catalogue of the finds is provided in the Appendix. This number does not include the numerous unregistered finds recovered through illicit metal detecting, photographs of which occasionally appear on online trading platforms and collectors' marketplaces. See, for example, the Violity website.

5 See more details below.

6 Gorokhovskiy – Gopkalo 2004, 103–128, except for a few finds from the left bank of the Dnipro, the publication of which (Lyubichev – Didyk 2002) was not known to us at that time.

Almgren's list of such brooches includes finds primarily from the territory of Austro-Hungarian Galicia between the San River basin, such as a cemetery and settlement at Leżajsk near Jarosław,[7] and the Middle Dniester region, such as a grave find from Horodnytsia and a stray find from Zhabyntsi.

The defining features of these artefacts include a typical profiled body with a sharp break at the junction between the arched bow and the straight foot, the latter often noticeably longer than the 'high' catchplate.[8] The various attributes characteristic of specific variants of Form A210, as described in Almgren's catalogue and presented in the accompanying plates, include a length ranging from 30 to 50 mm; an one- or two-spring construction; the presence or absence of a projection ('knob') on the head; diverse bow forms (strongly or slightly curved, symmetrical or asymmetrical in profile, smooth or faceted, with a variety of geometric cross-sections); decorative elements such as applied wire rings (ranging from two or three to as many as ten, smooth or ribbed), as well as embossed grooves, ridges, and similar details (Fig. 2.A210).[9]

O. Almgren found the general origin of these pan-European fibula variants in prototypes in the Northern Black Sea region, particularly the Bosporan Kingdom and the North Caucasus, represented by Forms 192, 200, and 204 (Fig. 3.A192, A200, A204).[10]

Shortly after the publication of Almgren's book, K. Hadaczek discovered artefacts similar to Form 210 in other regions of Galicia during excavations of a settlement near the village of Neslukhiv in the Western Bug River region and a cemetery near the village of Psary in the Dniester region (Fig. 2.3–5).[11] The first of the discovered items featured a flat, trapezoidal projection on the head and two applied rings, one at the base of the bow and another at the end of the foot, while the other two closely resembled the finds from Leżajsk and Horodnytsia (Fig. 2.1–2). The cultural attribution of these sites, along with other Roman period graves previously found in the same region near the villages of Horodnytsia, Terebovlia, Uvysla, and elsewhere, was determined by analogies with the find material from the cemeteries of Romashky and Chernyakhiv in the Middle Dnipro River region, excavated by V. Khvoika.[12]

About half a century later, E. Symonovych formulated the view that high-catchplate 'Chernyakhiv fibulae' from the Middle and Upper Dniester region (i.e. a settlement near the village of Luka-Vrublevetska and graves in cemeteries at Horodnytsia and Psary) are similar to brooches with an upper chord characteristic of 3rd-century AD Sarmatians in Hungary, studied by M. Párducz.[13]

Following M. Smishko, E. Symonovych dated the finds from Horodnytsia and Psary to the second half or the end of the 3rd century AD[14] and the artefacts from Luka-Vrublevetska to the 4th or possibly even to the late 4th–early 5th centuries AD. Accepting Almgren's theory, he saw their origin in the Northern Black Sea region, identifying some 'provincial Roman fibulae at the turn of the era' discov-

7 The description of the find circumstances, together with the published associated material—pottery, Roman coins, other types of 3rd–4th-century AD brooches, bucket-shaped pendants, and spindle whorls—suggests that the find originated either from a cremation burial or from the cultural layer of a settlement (Rogawski 1856, 64–84, Fig. 1.33).

8 'Height' refers to the width of the catchplate from the edge to the foot of the brooch, while 'length' is the total length of the brooch.

9 Almgren 1897, 91, 96–97, 198–199, Taf. 9.210.

10 Almgren 1897, 92–93, Taf. 9.192, 200, 204.

11 Hadaczek 1904, 14, Tab. 1.1; Hadaczek 1912, 28–30, Tab. 10.

12 Hadaczek 1912, 28–32; Khvoika 1901.

13 Symonovich 1955, 27–29, 30–31, Rys. 8.16–18, Rys. 9.3–5. M. Párducz's series of studies on 'crossbow brooches with high catchplate' discovered at Sarmatian sites in Hungary was published from the early 1930s through the mid-1950s: Párducz 1931, 167–168, Pl. 14.6; Párducz 1956, 145 (Grave 165, no. 1), 159–160 (bibliography and catalog of finds are provided in notes 161–175), Pl. 25.10.a–b, Pl. 26.7.a–b.

14 Smishko 1952, 77. References to M. Párducz's series of studies are provided above in Note 13.

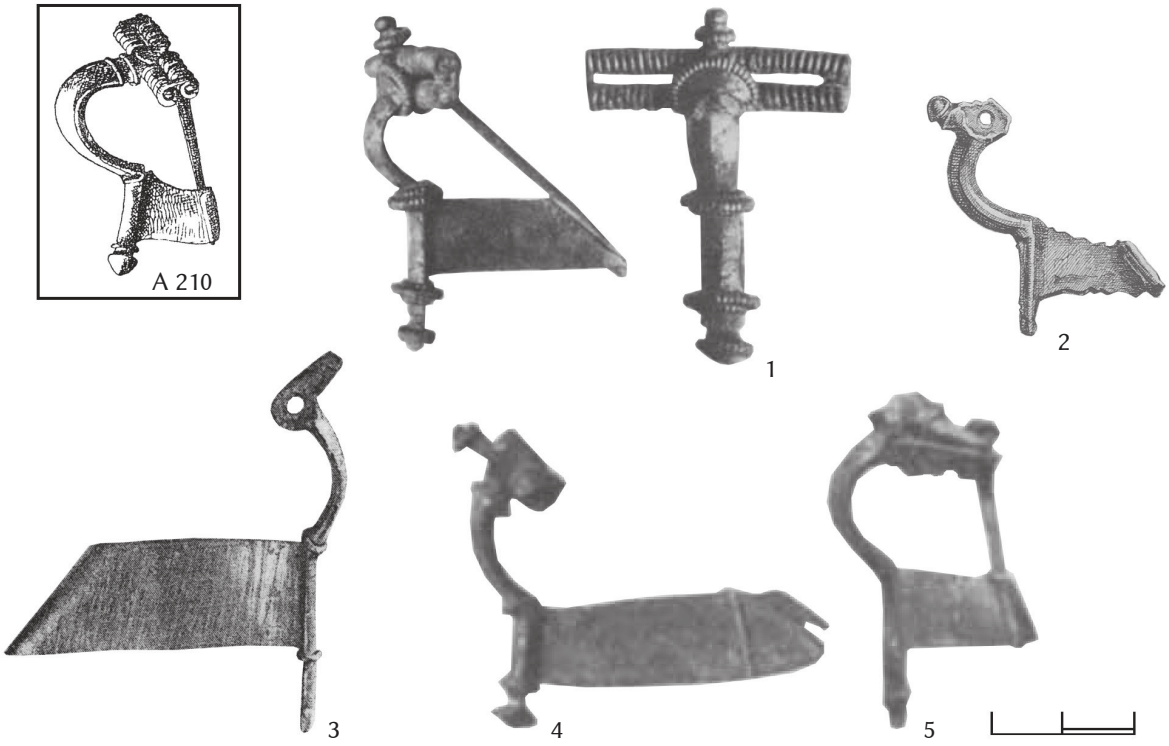


Fig. 2. Form A 210 fibulae. 1 – Horodnytsia (Kopernicki 1878, Tab. 3.C), 2 – Leżajsk (Rogawski 1856, Fig. 1.33), 3 – Neslukhiv (Hadaczek 1904, Tab. 1.1), 4–5 – Psary (Åberg 1936, 265, Fig. 5).

ered in Graves 12, 65, and 70 at Olbia in 1902, as well as objects from the Lipitsa and Przeworsk culture complexes of the Upper Dniester and Western Bug regions (Fig. 4.1–3) as prototypes.[15]

The number of Group A VII brooches found in sites of the Chernyakhiv culture had increased significantly by the mid-20th century, their distribution area expanding from the Lower Danube to the Seversky Donets basin.[16]

At approximately the same time, T. Kolník, following E. Symonovych noted the typological similarity between the Chernyakhiv fibulae of Form A210, with an upper chord, and some brooches from Western Sarmatian features in the Middle Danube region, dating to the late 2nd–3rd centuries AD. He also found parallels in the coeval find material of south-western Slovakia, the Przeworsk culture in Poland, Poieneşti in north-eastern Romania, and several other regions.

T. Kolník supported M. Párducz's hypothesis about the autochthonous origin and uninterrupted local evolution of Group A VII brooches in the Middle Danube region, which had dissimilar origins and developed independently from the high-catchplate two-piece fibulae of northern Europe. He designated these artefacts as 'Sarmatian' fibulae.[17]

Regarding the question of origin, he concurred with his Hungarian colleague, linking the genesis of these artefacts to the influence of provincial Roman culture in the Middle Danube region. He referred to prototypes manufactured in Pannonia—specifically, to a brooch published by I. Kovrig[18]—also discovered at barbarian sites in the region, including a cemetery at Bešenov and other sites.[19]

15 Symonovich 1955, 30–32, Rys. 9.1–2.

16 Ambroz 1966, 72–74, Tab. 21.3.

17 Kolník 1965, 189–190, 194–199, Obr. 5.1,3,4,6,8, Obr. 7.4–8,10.

18 Kovrig 1937, 50, Tab. 6.54.

19 Kolník 1965, 194, 198, Obr. 7.1–2.

T. Kolník also identified a distinct variant featuring a broad trapezoidal head within Group A VII, which he interpreted as representing a transition between Roman prototypes with similar heads and 'Sarmatian' brooches (Fig. 4.10).[20]

Almost simultaneously, A. Ambroz—who was not yet familiar with T. Kolník's work at the time—classified Western Sarmatian high-catchplate brooches and those from sites of the Chernyakhiv culture into separate series within a single 'Eastern' subgroup, along with similar finds from Poland and the Czech Republic.[21] Typologically, these brooches were juxtaposed with those in the 'Western' subgroup, characterised by an S-shaped body and a knob on the foot (A193), or by the absence of a knob at the end of the foot—variants typical of the archaeological record of the Elbe basin in present-day Czech Republic, Germany, and Denmark.[22]

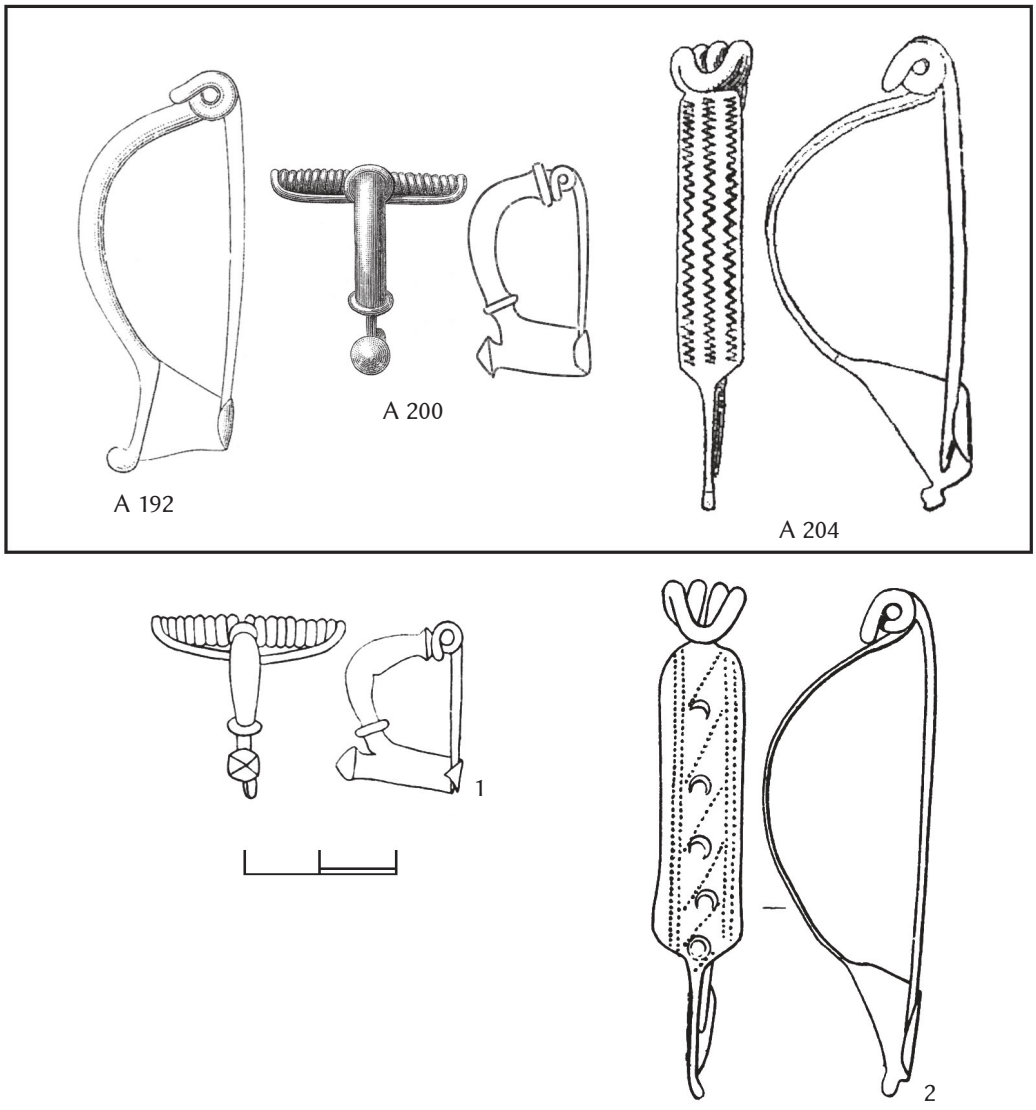


Fig. 3. Prototypes of Group A VII fibulae in the Black Sea region and the North Caucasus (Almgren's Forms 192, 200, and 204 and analogies in A. Ambroz's classification). 1 – Group 11, Pontic strongly profiled fibulae of Series II, strongly profiled fibulae with a bead on the head and no catchplate hook, Kumbul'ta village, North Ossetia (Ambroz 1966, Tab. 8.19), 2 – Group 12, brooches with a spring, smooth bow, and a knob at the end of the catchplate (Ambroz 1966, Tab. 5.9).

20 Kolník 1965, 194, 198, Obr. 7.3.

21 Ambroz 1966, 72–74, Tab. 12.3,13–17,20–21.

22 Ambroz 1966, 72, 74.

He also criticised the theories of O. Almgren and E. Symonovich regarding the origin of high-catchplate brooches. He argued that the Bosporan, Caucasian, and Olbian finds mentioned in their works are not the prototypes of this group and questioned their typological classifications and the proposed datings.

Firstly, the Pontic and Caucasian fibulae from Kerch and Galiat, illustrated in Almgren's plate as probable prototypes of the pan-European forms of Group VII (Fig. 3.A200, A204),[23] were respectively attributed to Variant 4a of Group 12 ('Spring fibulae with a smooth body and a knob at the end of the flat catchplate, large, with a barely indicated knob and a flat bow'), dated to the second half of the 2nd–3rd centuries AD,[24] as well as to Variant 3a of Series II, Group 11 ('Strongly profiled fibulae of the Pontic types with a bead on the head and without a chord hook'), dated to the 3rd century AD (Fig. 3.1–2).[25]

Secondly, among the Olbian brooches from the Middle and Upper Dniester regions, regarded by E. Symonovich as prototypes of the high-catchplate fibulae of the Chernyakhiv culture, only the specimen from Grave 12/1902 can in fact be considered provincial Roman.[26] He classified it into Group 10, Subgroup 2, 'Western-type two-piece strongly profiled fibulae with a single bead, no plate above the spring, a ridge on the bow, and a high catchplate', which includes items identical to those produced in Pannonia and also found in Dacia, among the western Sarmatians, and in Slovakia. This variant was presumably dated to the 2nd–early 3rd centuries AD (Fig. 4.1,4).[27] In contrast, the two other fibulae discovered in Graves 65/1902 and 70/1902[28] were produced locally and belong to Variant II-1 of Series II, Group 11, Pontic-style, strongly profiled fibulae with a bead on the head and no chord hook, dated to the 2nd century AD (Fig. 4.2–3,5).[29]

In discussing the origin of high-catchplate fibulae of the Chernyakhiv culture and their parallels, A. Ambroz noted that the actual prototypes of these variants have not yet been identified. However, the widespread distribution of these objects west of the Upper Dniester, contrasted with their rarity further east, indicates that they developed in the southern part of Eastern Europe from the west.[30]

In the late 1980s and early 1990s, E. Gorokhovsky raised the question of fundamental typological differences within Group A VII, distinguishing brooch variants characteristic of the Chernyakhiv culture from forms of the same group found in the Przeworsk and Wielbark cultures in Poland, north-western Ukraine, and south-western Belarus. Previously, Ambroz classified these finds into the same category as comparable forms from Chernyakhiv and Danubian sites, thus creating a single 'eastern subgroup.' Instead, E. Gorokhovsky proposed distinguishing two morphologically independent subgroups: a 'north-eastern' (Vistula–Pripyat) subgroup corresponding to the Przeworsk–Wielbark area, and a 'south-eastern' (Danube–Dnipro) subgroup, which, alongside the Chernyakhiv forms, includes finds from provincial Roman sites inthe Lower and Middle Danube

23 Almgren 1897, Taf. 9.200,204.

24 Ambroz 1966, 44, no. 2. In the cited work by A. Ambroz, the fibula is not explicitly assigned to Almgren's Form 204. Nevertheless, he presents illustrations identical to those published by F. Martin in his study of the Kerch fibulae in the Stockholm Museum and by B. Salin in his monograph (Salin 1904, 6, Abb. 8). Significantly, B. Salin identifies the original source of the illustration as the same one cited by O. Almgren (Almgren 1897, 242, no. 204; Salin 1904, 363, no. 8).

25 Ambroz 1966, 43, no. 25, with reference to Form A200.

26 Pharmakovskiy 1906, 117, no. 12, Rys. 63; Symonovich 1955, 30, Rys. 9.1.

27 Ambroz 1966, 38, no. 1.

28 Pharmakovskiy 1906, 130–131, 133, Rys. 70, Rys. 72; Symonovich 1955, 30, Rys. 9.2.

29 Ambroz 1966, 42, nos 2–3.

30 Ambroz 1966, 73.

region and those characteristic of the barbarian cultures of this region (Carpo-Dacian, western Sarmatian, and others) in the territory of Romania, Hungary, and Slovakia.[31]

M. Mączyńska's work marks the beginning of a new chapter in the study of Group A VII 'Sarmatian' brooches. She attempted to clarify their origin, distribution, and chronology, and to identify possible production centres.[32] She published catalogues comprising approximately 200 finds from about 150 sites across ten countries, including Austria, Hungary, Germany, Denmark, Moldova, Poland, Romania, Slovakia, Ukraine, and the Czech Republic.[33]

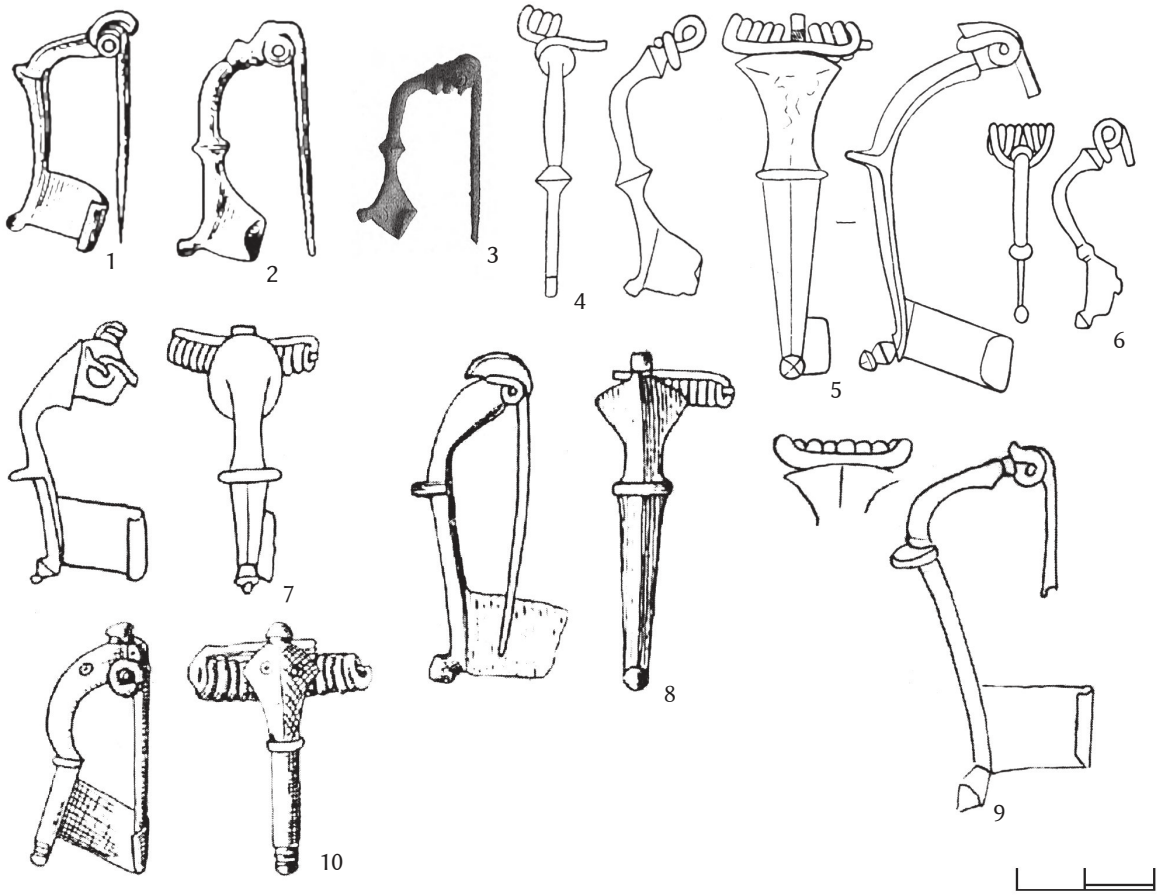


Fig. 4. Prototypes of high-catchplate fibulae according to E. Symonovich and T. Kolník. 1 – Olbia, Grave 1902/12 (Symonovich 1955, Fig. 9.1), 2 – Olbia, Grave 1902/70 (Symonovich 1955, Fig. 9.2), 3 – Olbia, Grave 1902/65 (Pharmakovskiy 1906, 131, Fig. 70), 4 – Olbia, Grave 1902/65 (Ambroz 1966, Tab. 8.13). Analogies to these fibulae according to A. Ambroz: 5 – Olbia, Grave 1902/12 (Ambroz 1966, 38, Tab. 7.13), 6 – Kamunta village, North Ossetian ASSR (Ambroz 1966, 42, Tab. 8.9), 7, 10 – unknown provenance (Kolník 1965, Obr. 7.1,3), 8 – Bešeňov, Grave 70 (Kolník 1965, Obr. 7.2), 9 – Hungary, no data available on the findspot (Kovrig 1937, 50, Tab. 6.54).

31 Gorokhovskiy 1987, 62–63; Gorokhovskiy 1988, 42–43; Baran *et al.* 1990, 49–52.

32 Mączyńska 1999; Mączyńska 2003.

33 Mączyńska 1999, 92–99; Mączyńska 2003, 321–328. At the same time, finds from Chernyakhiv settlements and cemeteries in Galychyna, Northern Bukovyna, Podillya, and Romanian Moldova were included in the section titled *The Mixed Cultural Zone in Eastern Poland, Western Ukraine, Transylvania, and Moldova*. There, they were presented alongside artefacts from several Przeworsk settlements and cemeteries, as well as from sites of the Carpathian Barrow culture. By contrast, the section entitled *Chernyakhiv/Sântana-de-Mureş Culture* contained only four finds: one additional specimen from Romanian Moldova (Leţcani) and three others from the Middle Dnipro region (Zhuravka) and the upper Siverskyi Donets basin (Velyka Danylivka and Holovino).

The chronological position of these brooches, found on sites attributed to various cultural groups in different regions, ranges from the second half of the 2nd century AD, corresponding to H. J. Eggers and K. Godłowski's Phase B2/C1 and C1a for Central Europe, represented by 'barbarian' find materials in the northern Danube region (Slovakia, Moravia, and Lower Austria) and specimens recovered from sites of the Przeworsk and Wielbark cultures in present-day Poland, up to the early 4th century (Phase C2), represented by several sites in south-eastern Romania.[34]

Regarding the origin of these artefacts, M. Mączyńska supported, elaborated, and refined the hypothesis of E. Symonovich, also supplementing his catalogue of finds from Olbia with analogies from other northern Pontic sites, including additional finds from Olbia—which he interpreted as prototypes for the type—and a brooch from Grave 4/1947 in a cemetery of Scythian Neapolis. She also interpreted several finds from Hungary and the Carpo-Dacian cemetery at Văleni in Romanian Moldova, as well as brooches originating from provincial Roman sites in Dacia (Transylvania) and the large hoard of Wielbark- and Przeworsk-style jewellery discovered at Lubiana (Gdańsk district, Poland) in eastern Pomerania (Fig. 5.1–11) in the same context.[35]

She mentioned that A. Ambroz had refuted Symonovich's theory that some high-catchplate brooches from Olbia may have served as prototypes for the type under discussion, while also disagreeing with his criticism and pointing out that A. Ambroz himself had failed to offer an alternative hypothesis about the type's origin.[36] Unfortunately, in her discussion of the Olbian prototypes of 'Sarmatian' brooches and the find from Scythian Neapolis,[37] M. Mączyńska relied on schematic and poorly informative drawings published by A. Furmans'ka[38] and V. Babenchikov.[39] Moreover, she failed to take into account Ambroz's typological classification of these finds, the publication of which included detailed descriptions and high-quality drawings of the actual objects.

Thus, on her plate titled *Prototypes of 'Sarmatian' brooches*, she presents four finds from Olbia.[40] Two of these[41] are schematic renderings of the above-mentioned brooches from Graves 70/1902 and 12/1902, first published by B. Farmakovskiy, redrawn by A. Furmans'ka[42] and E. Symonovich, and classified and dated by A. Ambroz. A third brooch from Olbia,[43] similar to the one presented by M. Mączyńska,[44] also comes from the aforementioned Grave 65/1902 and belongs to Series II, Group 11, Variant II-1, comprising strongly profiled North Pontic types with a bead on the head and without a chord hook, dated to the 2nd century AD.[45] The fourth find from Olbia[46] comes from a building excavated in 1938. A. Ambroz assigned it to Group 10, Subgroup 3, western-type two-piece strongly profiled brooches with two ribs on the bow, two bow crests, and a high catchplate, a variant with analogies in Roman Novae in Lower Moesia. This specimen was found together with 2nd–3rd-century AD coins from Antoninus Pius (AD 138–161) to Caracalla (AD 198–217) and is regarded as a very rare provincial product.[47]

34 Mączyńska 1999, 92–99.

35 Mączyńska 1999, 88, 100, 102, Rys. 1.2–4, Rys. 3, Rys. 9.4–10; Mączyńska 2003, 305, 308, Taf. 1.2–4, Taf. 3, Taf. 9.4–10.

36 Mączyńska 1999, 88.

37 Mączyńska 1999, 102, Tab. 3.1–5; Mączyńska 2003, 308, Taf. 3.1–5.

38 Furmanska 1953, 83, 86, Tab. 4.11–12, Tab. 5.1–3, 5.

39 Babenchikov 1957, 123, Tab. 2.2.

40 Mączyńska 1999, 102, Tab. 3.2–5.

41 Mączyńska 1999, Tab. 3.2–3.

42 Furmanska 1953, 83, Tab. 4.11–12.

43 Mączyńska 1999, Tab. 3.5, after Furmanska 1953, 86, Tab. 5.1.

44 Mączyńska 1999, Tab. 3.2.

45 Ambroz 1966, 42, no. 2.

46 Mączyńska 1999, Tab. 3.4, after Furmanska 1953, 83, Tab. 5.5.

47 Ambroz 1966, 39, no. 2.

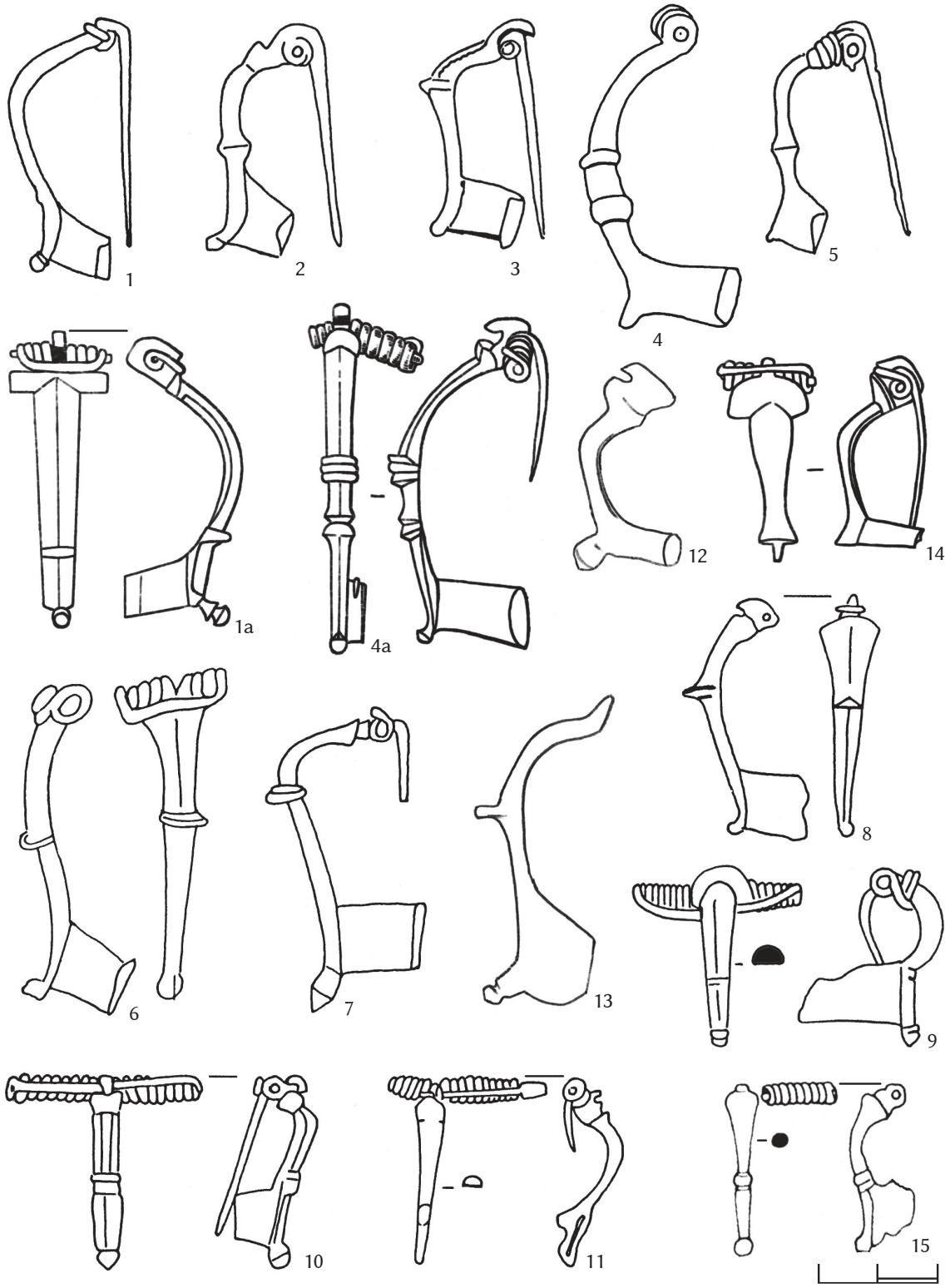


Fig. 5. Prototypes of 'Sarmatian' fibulae according by M. Mączyńska. 1 – Scythian Neapolis, Grave 4/1947 (Babenchikov 1957, 123, Fig. 2.2), 1a – Scythian Neapolis, Grave 4/1947 (Ambroz 1966, Tab. 7.2), 2–5 – Olbia (Furmanska 1953, 86), 4a – Olbia (Ambroz 1966, Tab. 7.18), 6 – Tiszafüred (Vaday 1989, 260, 274, Taf. 76.6), 7 – unknown provenance, Budapest History Museum, 8 – Öcsöd-Bábocka (Vaday 1989, 260, 274, Taf. 111.4), 9 – Văleni, Grave 290 (Ioniță – Ursachi 1988, Fig. 32.43), 10 – Văleni, Grave 540 (Ioniță – Ursachi 1988, Fig. 46.38), 11 – Văleni, Grave 489 (Ioniță – Ursachi 1988, Fig. 43.9), 12 – Olbia (Furmanska 1953, Tab. 5.2), 13 – Olbia (Furmanska 1953, Tab. 5.3), 14 – Olbia, Grave1902/105 (Ambroz 1966, Tab. 6.18), 15 – Văleni, Grave 483 (Ioniță – Ursachi 1988, Fig. 43.10).

In addition to the finds from Olbia presented in the plate, M. Mączyńska mentions two further local brooches published by A. Furmans'ka[48] (Fig. 5.12–13).[49] Like the previous examples, both were categorised by A. Ambroz, who interpreted the first one—Find no. 140 from the 1902 excavations, found together with a 2nd-century AD coin—as a typical provincial knee brooch from the 2nd–3rd centuries AD.[50] Akin to the brooch from Grave 12/1902,[51] the second brooch, found in Grave 1a/1906 in Trench A-2, was assigned to Group 10, Subgroup 2, comprising western-type two-piece strongly profiled brooches with a single bead and no plate above the spring, a bow crest, and a high catchplate.

V. Babenchikov[52] also interpreted the brooch from Grave 4/1947 in Scythian Neapolis as a prototype of Group A VII 'Sarmatian' brooches.[53] A. Ambroz assigned this specimen to Group 10, Subgroup 1, comprising western-type two-piece strongly profiled brooches with a bead on the bow, a plate above the spring, and a high catchplate, similar to products of the Danubian provincial workshops.[54]

M. Mączyńska also interpreted three similar finds from Hungary as prototypes of the type. Two came from Sarmatian cemeteries in the Tisza–Danube Interfluve, namely Tiszafüred and Öcsöd-Bábocka in Szolnok County,[55] and one is of unknown provenance.[56] The latter, which I. Kovrig considered a key specimen of a Pannonian brooch variant she defined, was also interpreted by T. Kolník as a prototype of Group A VII brooches.

M. Mączyńska mentions a brooch from Grave 540 of the Văleni cemetery as 'related' to the type in focus[57] together with several other specimens seen as prototypes of 'Sarmatian'-type brooches from the same site, including ones found in Graves 296, 483, and 489.[58]

According to Mączyńska's hypothesis, finds reflecting the material culture of Dacia province played a major role in the development of Group A VII brooches. She emphasises that these artefacts, "mostly originating from provincial Roman settlements, may be regarded as prototypes of the 'Sarmatian' brooches of Central Europe"[59] (Fig. 6).

M. Mączyńska concludes that Group A VII 'Sarmatian' brooches originate in south-eastern Romania (Wallachia) and eastern Hungary, where they developed from provincial, Pannonian and Dacian prototypes, and from where they spread to other regions of Central and Eastern Europe. 'Sarmatian' brooches were most likely developed under provincial Roman influence by Dacian and Sarmatian populations and spread northwards, where some were also produced. However, they

48 Furmanska 1953, 86–87, Tab. 5.2–3.

49 Mączyńska 1999, 88.

50 Ambroz 1966, 28, no. 2a.

51 Ambroz 1966, 42, no. 3.

52 Babechnikov 1957, 123, Tab. 2.2.

53 Mączyńska 1999, 102, Tab. 3.1.

54 Ambroz 1966, 38, no. 2, Tab. 7.12.

55 Mączyńska 1999, 88, 102, Tab. 3.6,8, after Vaday 1989, Taf. 76.6, Taf. 111.4.

56 Mączyńska 1999, Tab. 3.7, after Kovrig 1937, Tab. 6.54.

57 Mączyńska 1999, 88, 102, Tab. 3.10, after Ioniţa – Ursachi 1988, 148, Fig. 46.38.

58 Mączyńska 1999, 88, 102, Tab. 3.9,11, after Ioniţa – Ursachi 1988, 134, 145, Fig. 32.43, Fig. 43.9. The brooch from Grave 483 is illustrated in the publication of the cemetery (Ioniţă– Ursachi 1988, 145, Fig. 43.10). Owing to an apparent misunderstanding, M. Mączyńska assigned all of the finds she cited from the Văleni cemetery to Type 4 according to the classification proposed by the excavators. In fact, the brooches from Graves 483, 489, and 540 were classified by the authors of the site publication as Type 3, whereas only the specimen from Grave 296 was assigned to Type 4 (Variant 4a). This type is also represented by the brooch from Hrave 574, which belongs to Variant 4b (Mączyńska 1999, 88; Ioniţă–Ursachi 1988, 61, 150, 157, Fig. 48.33, Fig. 55.3–4).

59 Mączyńska 1999, 88, citing Gudea – Lucacel 1979, Pl. 4.34,35,37,38,40,41; Crişan 1979, Pl. 8.2,3.

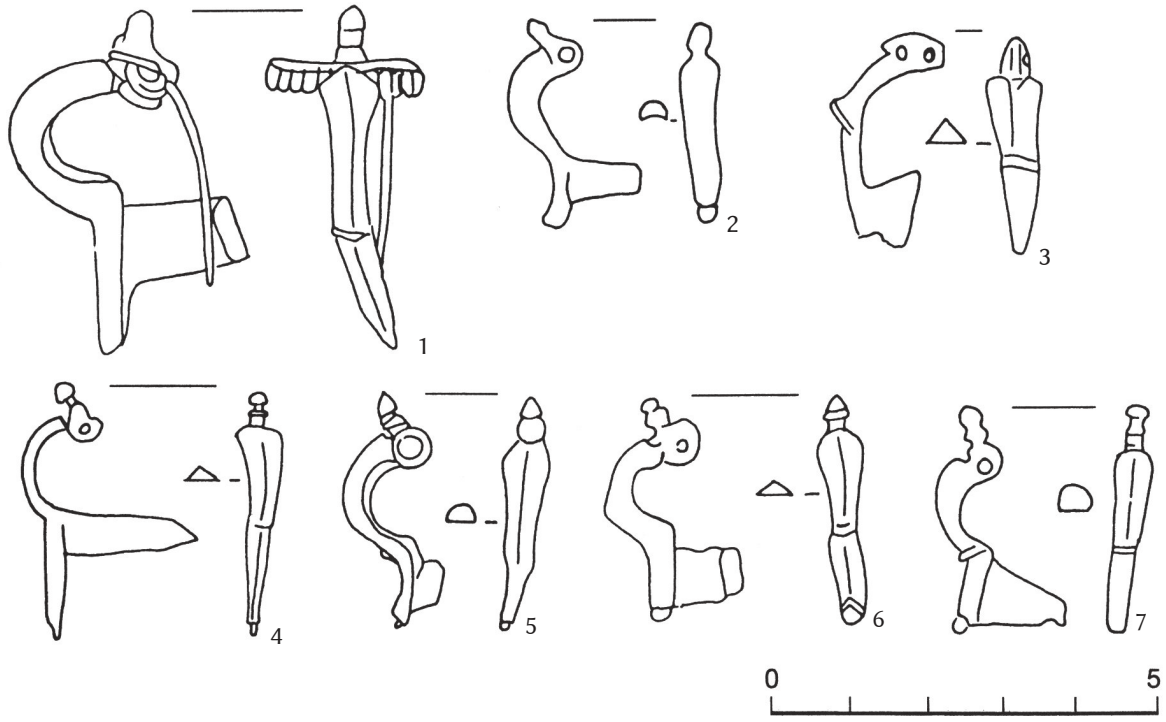


Fig. 6. Prototypes of 'Sarmatian' fibulae according to M. Mączyńska. 16 – Veţel (Crişan 1979, 310, Pl. 8.2; Mączyńska 1999, Tab. 9.4), 17–21 – Northern Dacia (Mączyńska 1999, Tab. 9.5–10).

could also develop slightly east of that, as evidenced by early examples from Olbia and Scythian Neapolis—although only a very small number of finds corroborate this version. The distribution of 'Sarmatian' brooches indicates a northward spread from the Sarmatian dwelling area in present-day Hungary and from the province of Dacia. She further emphasises, "Not all 'Sarmatian' brooches should be considered imports from the Lower and Middle Danube region. They were likely produced by itinerant craftsmen, as indicated by their distribution in the Przeworsk and Wielbark cultures."[60] Thus, she raises the possibility of production outside the Danube region, i.e., by communities inhabiting the Vistula Basin. This makes one of Mączyńska's suggestions particularly interesting, namely that some items in the Lubiana hoard, containing not only Wielbark- but also Przeworsk-style brooches—the latter perhaps 'looted' by the Wielbark people—might also be considered prototypes of the type in focus (Fig. 7).[61]

Taken together, Mączyńska's theory on the origin of Group A VII 'Sarmatian' brooches is a synthesis of the hypotheses of O. Almgren and E. Symonovich concerning the influence of ancient jewellery art in the North Pontic Greek cities in the Roman period on the genesis and diffusion of these artefacts among the barbarian tribes of Northern, Central, and Eastern Europe, and Kolník's opinion that the impetus behind the appearance of this kind of jewellery among barbarians across Europe was connected with the jewellery traditions of the Roman provinces in the Middle and Lower Danube region. At the same time, she sees the Carpo-Dacian and Western Sarmatian communities of the Danube region as having played a decisive role in the spread of these jewellery types.

In our previous study on the history of the research, collection, classification, and mapping of Group A VII brooches within the Chernyakhiv culture,[62] considerable attention was paid to items interpreted as 'Sarmatian' by T. Kolník and M. Mączyńska, including a comprehensive structural, morphological,

60 Mączyńska 1999, 90, 110–111, Map 1.

61 Mączyńska 1999, 89–90, Tab. 1.1–4.

62 Gorokhovskiy – Gopkalo 2004.

and stylistic characterisation of these finds and all other high-catchplate brooches from the sites concerned. On this basis, a new classification was developed, comprising typological series defined by specific sets of recurring morphological and stylistic traits, including occasional individual variants, as well as unique ('non-series') brooches, which are rare finds on sites of the culture.[63]

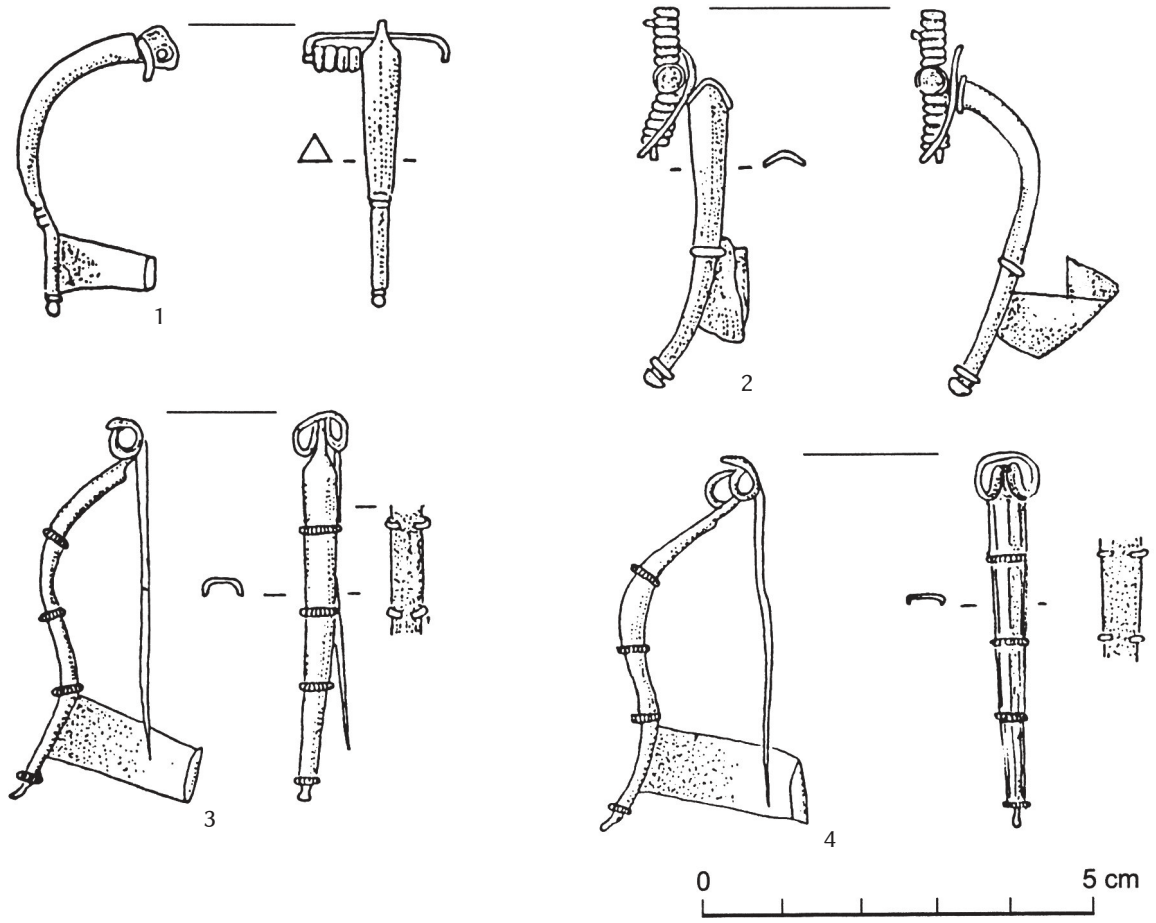


Fig. 7. Prototypes of 'Sarmatian' fibulae according to M. Mączyńska. 22–25 – Lubyana hoard (Mączyńska 1999, Tab. 1.1–4).

Based on the presence or absence of an upper chord, Group A VII 'Sarmatian' brooches found on sites of the Chernyakhiv culture could be categorised into two major series: most belong to the Neslukhiv series, followed by the Horodnytsia series.[64] In addition, this technical solution appears on individual brooches from cemeteries and settlements at Boromlya, Lepesivka, and Nezvisko.[65] Whether it also appears in the third (Dnipro) and fourth largest series (Lepesivka) remains unknown[66] as the springs and chords of most specimens did not survive.

The distribution of 'Neslukhiv' brooches shows distinct concentrations within the Chernyakhiv culture: one in the north-western part between the upper courses of the Western Bug, the Dniester, and the Southern Bug, as well as in the Middle Dniester region, and another in the north-eastern

63 Gorokhovskiy – Gopkalo 2004, 112–121, Rys. 1–10.

64 See the eponymous finds and 'classical' specimens in Fig. 2.2–5. Detailed characteristics in this paper are presented in Chapter *Typology and chronology of the 'Sarmatian' fibulae in the Chernyakhiv culture.*

65 Gorokhovskiy – Gopkalo 2004, 114, 116–117, 121, Rys. 1.2,8, Rys. 4, Rys. 5.1–2,4, Rys. 9.1.

66 Gorokhovskiy – Gopkalo 2004, 118–119, Rys. 6–7. The 'monstrous' brooches from Chernyakhiv contexts in Group A VII, Series 5 (Gorokhovskiy – Gopkalo 2004, 119–120, Rys. 8) are not examined in this paper, as they do not belong to 'Sarmatian' brooches.

part, at the upper courses of the Seym and the Siverskyi Donets rivers. By contrast, such items between these areas are scarce.[67]

'Sarmatian' brooches in the north-western concentration were found at settlements such as Neslukhiv, Cherepyn, Ripniv, Demyaniv, and Luka-Vrublevetska, and in cemeteries at Psary and Cherneliv-Ruskyi. In the north-east, they occur exclusively in settlements, including Holovino, Ridnyi Krai, Viytenky, and more.[68] The concentration of such brooches north-east of the Dnipro's left bank and in the Upper Donets region was connected with the migration of Chernyakhiv groups from the upper Western Bug and Dniester regions in the mid–3rd century AD.[69]

Artefacts similar or identical to those in the 'Neslukhiv' series within the Chernyakhiv culture were used primarily south and south-west of the Dniester, mainly at the Lower and Middle Danube, i.e. the Roman *limes* in Lower Moesia and Dacia, in communities of the Poieneşti–Virtişcoiu and Militari-Chilia cultures, as well as Western Sarmatian and other groups in the Tisza Basin, the Tisza–Danube Interfluve, and south-western Slovakia. Based on that, the origin of the type was sought in the provincial jewellery art of the Danubian frontier. One of the most important arguments in support of that is a bronze casting mould for two 'Neslukhiv' brooches, which is kept today at the Natural History Museum Vienna.[70] This, however, made the term 'Sarmatian' brooch obsolete, as it does not reflect the real origin of the type.[71]

'Horodnytsia' brooches, whose principal stylistic feature is a striking ornament consisting of ribbed appliqué rings, have been found primarily in the north-western part of the Chernyakhiv culture, i.e. the forest-steppe zone in the Dniester and Southern Bug regions and on the left bank of the river Dnipro. Their origin is a rather complex question. A small number of similar and identical items have been published from sites mainly farther to the south-west, attributed to the Carpathian Barrow Culture, in northern and eastern Romania, as well as a few examples from Slovakia and other Danubian regions. Single specimens are also known from sites of the Wielbark and Przeworsk cultures in western Belarus and south-eastern Poland. Their unquestionable similarity to Almgren Type 211 brooches—likewise richly decorated with appliqué ribbed rings, varieties of which were popular mainly with communities of the West Baltic and Wielbark cultures—was noted already by O. Almgren in the discussion of certain variants of Type 210. However, this similarity alone is too weak a basis for discussing typological continuity or the derivation of Chernyakhiv fibulae from northern European types. Presumably, 'Horodnytsia' brooches were produced by local goldsmiths of the Chernyakhiv culture under the influence of the late Roman "*mit Ringgarnitur*" decorative trend of Europe.[72]

Brooches of the Dnipro series, distributed east of the Horodnytsia brooches in a relatively narrow zone on the right bank of the Dnipro, as well as on the left bank and in the Upper Donetsk region, are related to the same ornamental style. These brooches may be interpreted with a high degree of certainty as items of East European origin, associated with a specific 'north-eastern' jewellery trend within the Chernyakhiv culture.[73]

The genesis of the relatively rare brooches in the Lepesivka series, likewise typically decorated *mit Ringgarnitur*, has been linked to the influence of the jewellery traditions of the Wielbark culture.[74]

67 Gorokhovskiy – Gopkalo 2004, 121–122, Rys. 11; Baran – Gopkalo 2006, 43, Rys. 18.

68 Gorokhovskiy – Gopkalo 2004, 115; Baran – Gopkalo 2006, 43, Rys. 18.

69 See Gorokhovskiy – Gopkalo 2004, 111 with references.

70 Gorokhovskiy – Gopkalo 2004, 121–123, Rys. 12.1.

71 Gorokhovskiy – Gopkalo 2004, 122.

72 See Gorokhovskiy – Gopkalo 2004, 122–124, with references.

73 Gorokhovskiy – Gopkalo 2004, 124.

74 See Gorokhovskiy – Gopkalo 2004, 124, with references.

Individual Group A VII 'Sarmatian' fibulae include a settlement find from Nezvysko, with parallels in the Przeworsk culture, and another one from House VIII at Lepesivka; the latter has a semicircular shield-shaped head, akin to those known from sites of the Poieneşti-Virtişcoiu culture, and more.[75]

In summary, the classification of Group A VII 'Sarmatian' fibulae found at sites of the Chernyakhiv culture and their comprehensive comparative analysis with similar artefacts from other cultural contexts have demonstrated a connection between the largest series, Neslukhiv, and the jewellery traditions of the Roman province of Dacia and its barbarian Carpo-Dacian and Sarmatian surroundings, as well as the presence of two local trends of the European *mit Ringgarnitur* decorative style within the Chernyakhiv culture, represented by the Horodnytsia and Dnipro series.

The substantial monograph by S. Cociş on the fibulae of Roman Dacia, published in the same year as our article, is pivotal, especially in light of the conclusion that most Group A VII brooches in the Chernyakhiv culture developed under provincial Roman influence, represented, above all, by products of Dacian jewellery workshops. Cociş's catalogue includes 34 'Sarmatian' brooches categorised as 'Type 32', subdivided into seven variants, and dated to the late 2nd–first half of the 3rd century AD. He interprets them as local products, i.e. integral components of the material culture of the Roman province of Dacia, and does not address the question of their possible barbarian origin.[76]

In her comprehensive monograph published in 2011 on the vast collection of diverse brooches and other items in the Lubiana hoard, M. Mączyńska devoted a large chapter to Group A VII 'Sarmatian' brooches.

She discusses the type based on a catalogue and a distribution map—a significantly updated version of those published by her in 1999 and 2003—incorporating discoveries from the mid- and late 2000s. These are primarily materials published by the present authors in 2004, including a casting mould in the Vienna Museum's collection.[77] In addition to fibulae with a preserved upper chord—categorised in this paper into the Neslukhiv and Horodnytsia series or described as individual forms—she defined types with a lower chord or missing spring as 'Sarmatian', referred to here as part of the 'Dnipro' or 'Lepesivka' series.[78]

The analytical part of the chapter is devoted to the characterisation of prototypes and transitional forms, as well as to dating, distribution, production, and origin. Compared to M. Mączyńska's earlier articles from 1999 and 2003, it relies on a wealth of new data, especially finds of casting moulds from a Germanic settlement at Pasohlávky in Moravia, the material of a Przeworsk cemetery at Prusiek in south-eastern Poland, and other findings.

However, in this re-evaluation, she did not alter her previous hypothesis on the Daco-Sarmatian origin of the type under discussion and its development under the influence of the material culture of the Danubian provinces.[79]

Simultaneously with Mączyńska's book, L. Schulte published a comprehensive monograph dedicated to Group A VII brooches found across Europe. The discussion includes a detailed overview of the research history of the type, as well as chapters devoted to typology, chronology, manufacturing, and wearing styles.[80] The catalogue comprises 3,260 items from 22 countries ranging from Great Britain,

75 Gorokhovskiy – Gopkalo 2004, 124.

76 Cociş 2004, 133–135, 211–212, nos 1592–1625, Pl. 113–114; Cociş 2009; Cociş *et al.* 2010, 205–207.

77 Mączyńska 2011, 67–72, 301–309, Taf. 28.

78 Mączyńska 2011, 306, 308–309, nos 113, 163–164, 167, 175–176, 179, 182, 184; Gorokhovskiy – Gopkalo 2004, 118–119, Rys. 6.2–5,7, Rys. 7.

79 Mączyńska 2011, 67–68, 70–72.

80 Schulte 2011a.

the Netherlands, and France to Belarus, Ukraine, and Russia, as well as from Norway, Sweden, and Finland to Serbia, Romania, and Moldova.[81] The typological classification proposed by the author divides the studied material into three subgroups: A VII.1: knee brooch variants, A VII.2: brooches with an S-shaped bow, and A VII.3 (= Almgren's Series 3): brooches with an unarticulated foot and a bow that transitions directly into the catchplate.[82] He repeatedly mentions 'Sarmatian' fibulae in the text, typological classification, and even in the descriptions of individual specimens as a subject of scholarly debate.[83] However, unlike Kolník, he does not define it within the typological framework as a separate unit but assigns every variant, including those with a lower chord, to one of the more than thirty forms identified within the largest subgroup, A VII.2. This subgroup comprises 2,254 finds accounting for about 59.5% of the recorded items.[84] Both the 'Sarmatian' and lower-chord brooches from the Chernyakhiv culture, including sites in Ukraine, Moldova, Romania, and Russia, are classified, together with finds from other regions associated with different archaeological cultures, into ten forms, sometimes with several variants and individual subtypes. These are Forms 6, 15–18, 22–23, 26, 27, 29, as well as the general 'Form 22–30' presented without further differentiation. Distinctions are made based on various criteria, primarily bow profile and size, and less frequently on structural features and stylistic characteristics.[85] Finds from different regional cultures, often with less than uniform features, are assigned to the same categories as Chernyakhiv brooches.[86]

Thus, Form 6, comprising large fibulae with a parabolic bow, includes not only the typical Dnipro series brooch[87] from Building 8 in the settlement of Bukreevka in the Seym River region, but also entirely different fibulae from Denmark (Funen Island), Germany, Austria, Poland, and the Czech Republic.[88] Although Form 15 includes, as a separate form, the 'Horodnytsia' brooch[89] from Grave 24 of Ruzhychanka, it comprises mainly A196–197 fibulae, entirely dissimilar to this find and typical primarily for Scandinavia and the adjacent parts of Germany.[90]In addition to a fibula from Pit 16 in the settlement of Nezvisko,[91] Form 22,[92] comprising brooches with a semicircular bow, includes both distinct and barely similar finds from Denmark and Germany, as well as typologically close ones from the Przeworsk culture.[93] Form 23, comprising brooches with a strongly curved bow, includes a 'Horodnytsia' fibula from a cemetery at Psary (Fig. 2.4), while most finds classified here are smaller, barely similar, and come from sites of the Wielbark, Przeworsk, and other Central European cultures.[94]

Unlike the previous categories, Form 26, brooches with a short bow, is subdivided into four variants (a–d). It comprises a significant number of finds from sites of the Chernyakhiv culture, including Velyka Danylivka, Boromlya, Horodnytsia, Luka-Vrublevetska, Petrykivtsi, Ripniv, Ridnyi

81 Schulte 2011b.

82 Schulte 2011a, 47–153.

83 Schulte 2011a, 21–22, 73; Schulte 2011b, 302–304.

84 Schulte 2011b, 72, 80, 84, 119–120, 126, Abb. 49, Abb. 52, Abb. 78–79, Abb. 83.

85 Schulte 2011a, 79–80, 102–114, 117–120, 124–131, 133, Abb. 49.9, Abb. 67.6, Abb. 74.2–3, Abb. 82.4–6, Abb. 83.2,7–8, Abb. 84.1–3; Schulte 2011b, 233, 283–284, 286, 302–305.

86 Schulte 2011a, 79–80, 95, 98–114, 117–120, 124–131, 133, Abb. 49, Abb. 67, Abb. 74, Abb. 82–84.

87 Gorokhovskyi – Gopkalo 2004, 118, Rys. 6.2.

88 Schulte 2011a, 80, Abb. 49.

89 Gorokhovskyi – Gopkalo 2004, 117, Rys. 5.3.

90 Schulte 2011a, 98–102, Abb. 63–67.

91 Gorokhovskyi – Gopkalo 2004, 121, Rys. 9.1.

92 Forms 16–18, comprising exclusively 'monstrous' A VII Series 4 fibulae, are not considered 'Sarmatian' and are not discussed here.

93 Schulte 2011a, 119, Abb. 78.

94 Schulte 2011a, 120, Abb. 79.

Krai, and more. However, these items are classified here into the Neslukhiv, Horodnytsia, Dnipro, and Lepesivka series, respectively, while one, the brooch recovered from House VIII at Lepesivka, is an individual specimen.[95] Moreover, identical and similar finds that were not classified here are also known from Romania, Hungary, and Slovakia.[96] Form 27, brooches with a slightly curved bow and a chord hook, consists almost entirely of 'Neslukhiv' fibulae from Zhuravka, Ripniv, Rohizna, Ruzhychanka, and Khucha,[97] in addition to two specimens from Austria and Hungary, respectively, and an individual piece from Boromlya.[98] A wide variety of brooches, often resembling those from sites of the Chernyakhiv culture but found in Austria, Hungary, Poland, Romania, or the Czech Republic, represent the bulk of Form 29 and comprise brooches with an upper chord and a uniformly curved bow.[99] In addition, this category includes fibulae found at sites of the Chernyakhiv culture, for example, at the settlements of Horodnytsia, Ripniv, and Cherepin.

In summary, L. Schulte assigned 'Dnipro' and 'Horodnytsia' brooches to Forms 6, 15, and 23, all three comprising principally Western, Northern, and Central European variants, to which these Chernyakhiv brooches are entirely alien. At the same time, the variants from the Middle and Lower Danube region, which are identical or similar to the 'Dnipro', 'Horodnytsia', and 'Neslukhiv' brooches, and the rare individual specimens from Lepesivka and Boromlya were assigned Forms 26, 27, and 29, respectively.

Largely in accordance with Almgren's opinion, presented in the postscript to the second edition of his 1923 monograph, L. Schulte derived A VII.2 brooches in general from three early Roman (2nd-century AD) prototypes. The first major type group is single- and two-piece 'military' wire brooches with a catchplate and their variants, found in Roman camps along the Rhaetian *limes* in Upper Germany (Saalburg, Niederbieber, Osterburken, Zugmantel) and in the neighbouring Rhine River region in western and south-western Germany.[100] The second group comprises provincial Roman and barbarian knee brooches,[101] while the third is barbarian strongly profiled (so-called 'tubular') fibulae with wide heads.[102] In light of that, L. Schulte identified the most archaic variants, distinguishing them as Sub-form A VII.2.1–6, comprising specimens primarily from the western part of the distribution area,[103] but also including, in addition to numerous genuinely Western European finds from various regions of Germany, finds from Central Europe: a 'Sarmatian' brooch from Bezno in the Czech Republic and a strongly profiled fibula from Danków in Poland, both assigned to the 'transitional' Sub-form A VII.2.1,[104] as well as the above-mentioned 'Dnipro' brooch from Boromlya.[105] Other subforms within Form A VII.2 were clearly defined based on a regional-cultural concept, which resulted in categories like the 'Elbe-Germanic circle' (Forms 7–14), 'Scandinavian' (Forms 15–19(20)), 'Central European and adjacent Eastern European' (Forms 21–25), strictly 'Eastern European' (Forms 26–27), and 'Lower Austrian'forms (Forms 28–31). Consequently, most brooches from Chernyakhiv sites he knew about (and referred to as 'Sarmatian') were interpreted as 'Eastern European', with identical and close parallels in Romania, Hungary, Slovakia, and Lower Austria.

95 Gorokhovskiy – Gopkalo 2004, 114–119, Rys. 2–7.
96 Schulte 2011a, 125–126, Abb. 82–83.
97 Gorokhovskiy – Gopkalo 2004, 114, Rys. 2.2–3,11.
98 Schulte 2011a, 127, Abb. 84.
99 Schulte 2011a, 129–130, Abb. 86–87.
100 Schulte 2011a, 72–74, Abb. 44.1–2.
101 Schulte 2011a, 56–57, Abb. 29.1–3.
102 Schulte 2011a, 72–74, Abb. 44.3.
103 Schulte 2011a, 73–80, Abb. 44.3–12, Abb. 45–49.
104 Schulte 2011a, 74, Abb. 44.6,12.
105 Schulte 2011a, 80, Abb. 49.9.

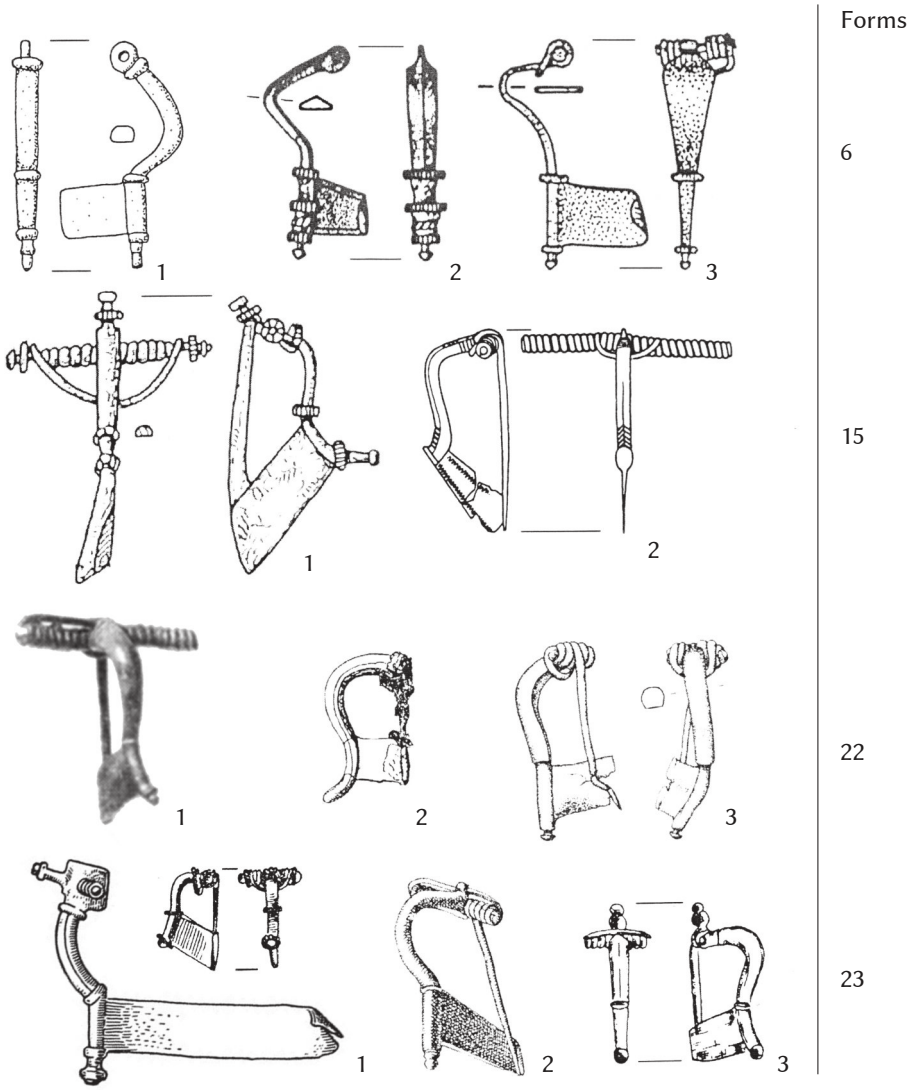


Fig. 8. Fibulae from Chernyakhiv sites as classified by L. Schulte. 6.1 – Bukreevka (no. 2928), 6.2 – Gaukönigshofen (no. 470), 6.3 – Drösing (no. 2514), 15.1 – Ruzhychanka (no. 3175), 15.2 – Slusegård (no. 35d), 22.1 – Nezvisko, 22.2 – Siemohnen (no. 2098), 22.3 – Krumpa (no. 1407), 23.1 – Psary, 23.2 – Gronowo (no. 2664), 23.3 – Zwierzewo (no. 2858a), 23.4 – Krapkowice (no. 2688).

That L. Schulte assigned some brooches found in Chernyakhiv contexts to the Western, Northern, and Central European circle may be a result of his insufficient knowledge of the find material; he clearly did not rely on the study published by the authors of this paper, and his catalogue of Chernyakhiv culture finds is far from complete.[106] The typological definitions he proposes for the items in the catalogue are based exclusively on literary sources, primarily drawings and photographs, often of such poor quality as to be entirely unsuitable for further research.[107] Therefore,

106 Gorokhovskiy – Gopkalo 2004, 125–128, no. 1–122; Schulte 2011b, 233, 302–306, no. 2105–2115, 3115–3199.

107 The consequences of L. Schulte's reliance on inaccurate or schematic publications of Eastern European fibula finds may be illustrated by several examples. First, the fibula from Sokal was included in Subgroup A VII.2 ('Transitional' Form 1) (Schulte 2011a, 265; Schulte 2011a, 305, no. 3177) is based on an illustration in D. Kozak (Kozak 1993, Tab. 22.8) that inadvertently combines two different strongly profiled Early Roman fibulae: the 'tubular' fibula from Sokal and a Northern European S-shaped fibula with a broad ribbon bow from Zvenyhorod. Consequently, neither belongs to Group A VII (Smishko 1932, 83, 187, Tab. 3.9–10; Ambroz 1966, 38–39, Tab. 7.6,20). ▸

using his typology in discussions of brooches of the Chernyakhiv culture, especially Group A VII 'Sarmatian' types, is highly problematic.[108]

Only a year after the publication of Mączyńska and Schulte's studies, S. Cociş and V. Bârcă started a series of articles devoted to Group A VII.1 'Sarmatian' fibulae from the Middle and Lower Danube region.[109] Published over the following twelve years, these papers include overviews of research history, analyses of production centres, a revised classification scheme, chronological studies, ethnocultural interpretations, and comparative analyses with parallels from other regions, including the area of the Chernyakhiv culture in south-eastern Europe.[110] The catalogues compiled in the course of this research include 110 items from 68 sites in present-day Romania and the adjacent parts of Hungary and Eastern Slovakia.[111]

The first part of this series[112] consists of two thematically and structurally similar articles devoted to the production centres of the fibulae in question, identified from finds of casting moulds, semi-finished products, and rejects[113] discovered in the Roman province of Dacia and the Barbaricum of Central and Eastern Europe.[114] Thematically, these studies are closely connected with an earlier paper by one of the authors[115] and later publications by the same researchers, including a section in Cociş's monograph entitled *Workshops for the Production of Fibulae in Dacia and Other Danubian Provinces of the Roman Empire (1st century BC – 3rd century AD)*,[116] two articles by V. Bârcă on a casting mould of a Group A VII 'Sarmatian' fibula, discovered in Hungary,[117] and brief reports on new finds of a casting mould for a similar object from Romania and a semi-finished piece from the Czech Republic.[118]

The second part forms a two-part series. The first article assesses Group A VII.1 'Sarmatian' fibulae from Dacia and barbarian sites in the Tisza Basin, while the second evaluates comparable objects

▸ Second, the fibula from Mytkiv, included among the brooches of Form 21 ('with a footplate') (Schulte 2011a, 117–118, Abb. 77.1), is more plausibly identified as a rare variant of the provincial Roman knee fibula corresponding to the type defined by I. Kovrig (Kovrig 1937, 120–122, Taf. 10.105, Taf. 23, top row, far right).
Third, the fibulae from a grave at Horodnytsia are listed in Schulte's catalogue as finds from two different complexes (Schulte 2011a, 303, nos 3133–3134). This duplication stems from an inaccurate drawing in the first publication of the site (Kopernicki 1878, 55–59, Tab. 97), later reproduced schematically by M. Tikhanova (Tikhanova 1957, 184–185, Rys. 11). The same fibulae, reproduced again in a distorted form by V. Grosu (Grosu 1990, 136), are listed elsewhere in Schulte's catalogue as finds from Moldova (Schulte 2011a, 233, no. 2111). Similar examples could easily be multiplied.

108 Critical remarks regarding Schulte's monograph are presented in the work of V. Bârcă (Bârcă 2023, 204).

109 Cociş – Bârcă 2012; Cociş– Bârcă 2013; Cociş – Bârcă 2014; Cociş – Bârcă 2020; Bârcă – Cociş 2022; Bârcă – Cociş 2023.

110 Together with comparable finds from Sântana de Mureş–Chernyakhiv sites in Romania, these fibulae form an important part of the source material used by S. Cociş and V. Bârcă in their studies (see below).

111 Cociş – Bârcă 2014, 209–211; Cociş – Bârcă 2020, 153–155.

112 Its structure largely mirrors that of Cociş's monograph on the fibulae of Roman Dacia: Chapter 2 discusses the workshops in which they were produced, while Chapter 3 addresses their classification and dating (Cociş 2004, 8).

113 Such items are generally interpreted as semi-finished products, although the possibility that some represent production rejects cannot be excluded. As this issue falls outside the scope of the present study, the terminology employed by the authors of the studies discussed below is adopted here.

114 Cociş – Bârcă 2012; Cociş – Bârcă 2013.

115 Cociş 2009.

116 Cociş 2019, 28–34.

117 Bârcă 2019; Bârcă 2023.

118 Bârcă – Cociş 2023, 29, 48, Fig. 7.

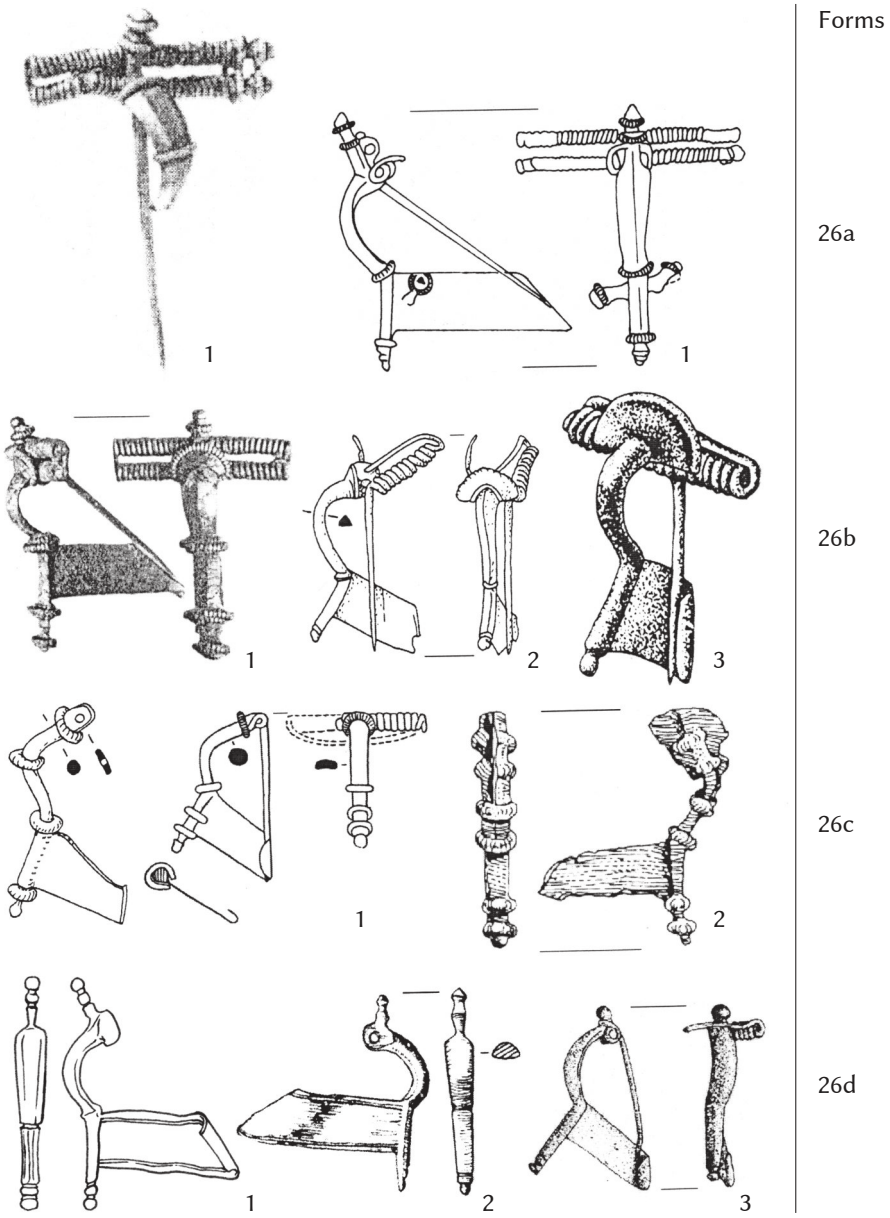


Fig. 9. Fibulae from Chernyakhiv sites as classified by L. Schulte. 26a.1 – Nezvisko (no. 3153), 26a.2 – Mătăsaru (no. 2893), 26b.1 – Horodnytsia (no. 3133a), 26b.2 – Lepesivka (no. 3142), 26b.3 – Virtişcoiu (no. 2926), 26c.1 – Lepesivka (no. 3141), 26c.2 – Olbia-Parutino (no. 3157a), 26c.3 – Palterndorf (no. 2538), 26d.1 – Ripniv, 26d.2 – Werbychka (no. 3187), 26d.3 – Kungehyes (no. 3222).

discovered in eastern and south-eastern Romania,[119] including a comprehensive discussion of research history, classification, chronology, and ethnocultural interpretation; both papers are supplemented by catalogues, e.g., of newly discovered specimens from Dacia.[120]

The third part comprises two articles that summarise principal arguments and conclusions, while also expanding them through the inclusion of evidence for newly identified production centres and new finds of Group A VII.1 'Sarmatian' fibulae from Roman Dacia and the barbarian territories of the Middle Danube region.[121]

119 Cociş – Bârcă 2014; Cociş – Bârcă 2020.

120 Opreanu *et al.* 2020, 72–73; Cociş *et al.* 2022, 94; Cociş *et al.* 2024, 82–83.

121 Bârcă – Cociş 2022, 258–259, Figs 5–6; Bârcă – Cociş 2023, 29, 47–48, Figs 6–7.

In the first part of this series of articles, data were presented from 10 archaeological sites dating to the late 2nd–3rd centuries AD, discovered in Central and Eastern Europe between the Elbe and Siverskyi Donets basins. The material from these sites provides evidence for the production of Group A VII 'Sarmatian' fibulae; their spatial distribution is illustrated in the corresponding cartographic schemes.[122]

First, this evidence includes one half of a bronze casting mould from a room excavated within the *vicus* of the Roman city of Porolissum—a major military, industrial, and commercial centre on the north-western frontier of the province of Dacia—and, secondly, finds of bronze and clay casting mould halves from settlements belonging to various barbarian cultures in the Middle Danube and Elbe regions: Kleinhöflein (Austria), Pasohlávky (Czech Republic), Neunheilingen (Germany), and a burial at the Przeworsk culture cemetery of Prusiek in south-eastern Poland.[123]

Semi-finished products of various bronze fibulae of the 'Sarmatian type' were found at Central European settlements such as Bernhardsthal (Austria), Zvončín (Slovakia), and Grodzisko Dolne (south-eastern Poland), as well as at the Chernyakhiv culture sites of Ohultsi and Pasiky in north-eastern Ukraine.[124]

In addition, a half of a bronze casting mould of unknown provenance, preserved in the Vienna Museum of Natural History, and a semi-finished product from Hungary housed in the Mainz museum collection may be mentioned,[125] as well as a half of a clay casting mould from the Sarmatian settlement of Ecser (Hungary), fragments of a bronze casting mould from the Roman settlement of Sânmihaiu Almaşului, located near Porolissum, and a semi-finished bronze fibula from the settlement of Drnholec-Holenice in the Czech Republic.[126]

Summarising their research, S. Cociş and V. Bârcă note that such craft complexes probably operated at numerous barbarian settlements, although they do not exclude the hypothesis that Series 1, Group A VII 'Sarmatian' fibulae may have been produced by itinerant craftsmen. According to their observations, the documented principal production area of these objects, apart from the workshop at the Roman town of Porolissum, is associated with the Germanic world or with regions under Germanic influence. Consequently, they reject any direct association of these fibulae with the Sarmatian world, suggesting instead that the Sarmatians borrowed the type from Germanic peoples. They saw the origin of Group A VII, Series 1 'Sarmatian' fibulae in the Przeworsk culture, from which they believed they had spread southwards and eastwards.[127]

These ethnocultural theoretical conclusions, with only minor adjustments[128] are reiterated in the subsequent sections of the series, including its concluding articles.[129] They are also reflected in the works of V. Bârcă devoted to the interpretation of a casting mould for a similar fibula from Ecser, dated to the 3rd century AD. He argues that such items were crafted at the site by a craftsman who had arrived from the Germanic world, in an area inhabited by Sarmatian and Yazygian populations.[130]

122 Cociş – Bârcă 2012, 91–94, Fig. 7; Cociş– Bârcă 2013, 164–173, Fig. 7.

123 Cociş – Bârcă 2012, 91–92, 98–100, 102, Fig. 1.2–4, Fig. 2.1, Fig. 3.1,4, Fig. 5; Cociş– Bârcă 2013, 164–168, 170–171, Fig. 1.2–4, Fig. 2.1, Fig. 3.1,4, Fig. 5, with further literature. Later, Prusiak was removed from the list of workshops and the corresponding maps of their locations, as the type of fibula cast in this mould was not classified as 'Sarmatian' (Bârcă – Cociş 2022, 259, Fig. 6).

124 Cociş – Bârcă 2012, 92–93, 99–100, Fig. 2.2,4–7, Fig. 3.2–3, Cociş – Bârcă 2013, 164, 166–168, 170, Fig. 2.2,4–7, Fig. 3.2–3, and references.

125 Cociş – Bârcă 2012, 91–92, 99, Fig. 2.3; Cociş – Bârcă 2013, 164, 166, 168, Fig. 2.3.

126 Bârcă – Cociş 2022, 259, Fig. 6.6,12–13; Bârcă – Cociş 2023, 29–30, 48, Fig. 7.6,12–13.

127 Cociş – Bârcă 2012, 95; Cociş – Bârcă 2013, 161.

128 See in detail below.

129 Bârcă – Cociş 2022, 250, 252.

130 Bârcă 2019, 199; Bârcă 2023, 119.

The new classification of fibulae of Group A VII, published in the second part of the series of articles by S. Cociş and V. Bârcă,[131] was primarily based on six principal distinguishing features, each of which served as the basis for identifying a specific typological unit within the overall typological framework.

The first three features concern the structural characteristics of the objects: the position of the chord, the method of its attachment to the head, and the number of springs, between one and three. The following three features relate to the metal from which the object was manufactured (bronze, silver, or iron), the presence or absence of decoration, and the size of the item. Other attributes characteristic of the examined objects, including certain morphological features, are mentioned in the descriptions of individual classification units but are not treated as criteria for identification.

Guided by the principle of differentiating fibulae with a high catchplate, as proposed by T. Kolník,[132] the authors divided the examined material into two variants: A, with a lower chord, and B, with an upper chord.

Within variant B, the objects were further differentiated based on the method of chord attachment into two subvariants: B1, with the chord fixed to a head without a distinct projection, and B2, with the chord attached to a head featuring a projection (the so-called 'button'). The latter are the focus of their study. More specific subvariants within this category were distinguished based on the remaining features.[133]

Fibulae from the territory of Roman Dacia, including those associated with barbarian metalworking at its north-western periphery, i.e. the Sarmatian culture of the Tisza region, and the so-called 'Daco-Vandal' brooches from northern Romania and eastern Slovakia, were classified according to this scheme.[134] Finds from Dacia and Sarmatian sites in western Romania and eastern Hungary were equally assigned to Subvariant B2a1a1, dated to the last two decades of the 2nd century to the mid-3rd century AD, corresponding to Phases B2/C1–C1b in the Central European chronological system by H. J. Eggers and K. Godłowski.[135]

Other subvariants were also represented by finds from northern Romania and eastern Slovakia. Among the analogies cited for these were Group A VII fibulae from the Chernyakhiv culture, classified into subvariants proposed by S. Cociş and V. Bârcă.

Subvariant B2b1a1 is represented by a single fibula from the settlement of Humenné in eastern Slovakia (Fig. 12.16), dated to Phase C1b (AD 210/220–250/260). Its analogies from the Chernyakhiv

131 Cociş – Bârcă 2014, 195–197.

132 For more details, see above.

133 According to the number of springs: B2a one spring, B2b two springs, B2c three springs. According to raw material: B2a1, B2b1, and B2c1 bronze, B2a2, B2b2, and B2c2 silver, B2a3, B2b3, and B2c3 iron. Based on the presence or absence of decoration: B2a1a and B2a1b single-spring bronze brooches, B2a2a, B2a2b single-spring silver fibulae, B2a3a, B2a3b single-spring iron fibulae, B2b1a and B2b1b two-spring bronze fibulae, B2b2a and B2b2b two-spring silver fibulae, B2b3a and B2b3b two-spring iron fibulae, B2c1a and B2c1b three-spring bronze fibulae, B2c2a and B2c2b three-spring silver fibulae, B2c3a and B2c3b three-spring iron fibulae.
Subvariants identified based on the size of the bow and the footplate: B2a1a1 and B2a1a2 non-decorated single-spring bronze items, B2a1b1 and B2a1b2 decorated single-spring bronze items, B2a2a1 and B2a2a2 non-decorated single-spring silver items, B2a2b1 and B2a2b2 decorated single-spring silver items, B2a3a1 and B2a3a2 non-decorated single-spring iron items, B2a3b1 and B2a3b2 decorated single-spring iron items, B2b1a1 and B2b1a2 non-decorated two-spring bronze items, B2b1b1 and B2b1b2 decorated two-spring bronze items, B2b2a1 and B2b2a2 non-decorated two-spring silver items, B2b2b1 and B2b2b2 decorated two-spring silver items, B2c1a2 non-decorated three-spring bronze items, B2c1b1 and B2c1b2 decorated three-spring bronze items.

134 Cociş – Bârcă 2014, 197–206, 209–211, Figs 1–3, Fig. 6.

135 Cociş – Bârcă 2014, 197–199, 203, Fig. 1, Fig. 2.1–14.

culture include a stray find from Kovrai in the western part of the left bank of the Dnipro (Fig. 12.12);[136] besides, such fibulae are known from contexts associated with the Przeworsk culture in eastern Romania and the south-eastern part of the present-day Czech Republic.[137]

Subvariant B2b2b1a, two-spring silver fibulae, are known from northern Romania, including the settlement of Zalău and the cemetery of Medieşu Aurit, likewise dated to Phase C1b. Their analogies from Chernyakhiv sites include finds from Horodnytsia, Petrykivtsi, Nezvysko, Hryhorivka, and Boromlya (Fig. 14.30–34);[138] besides, such brooches are known from sites of the Przeworsk culture in eastern Romania.[139]

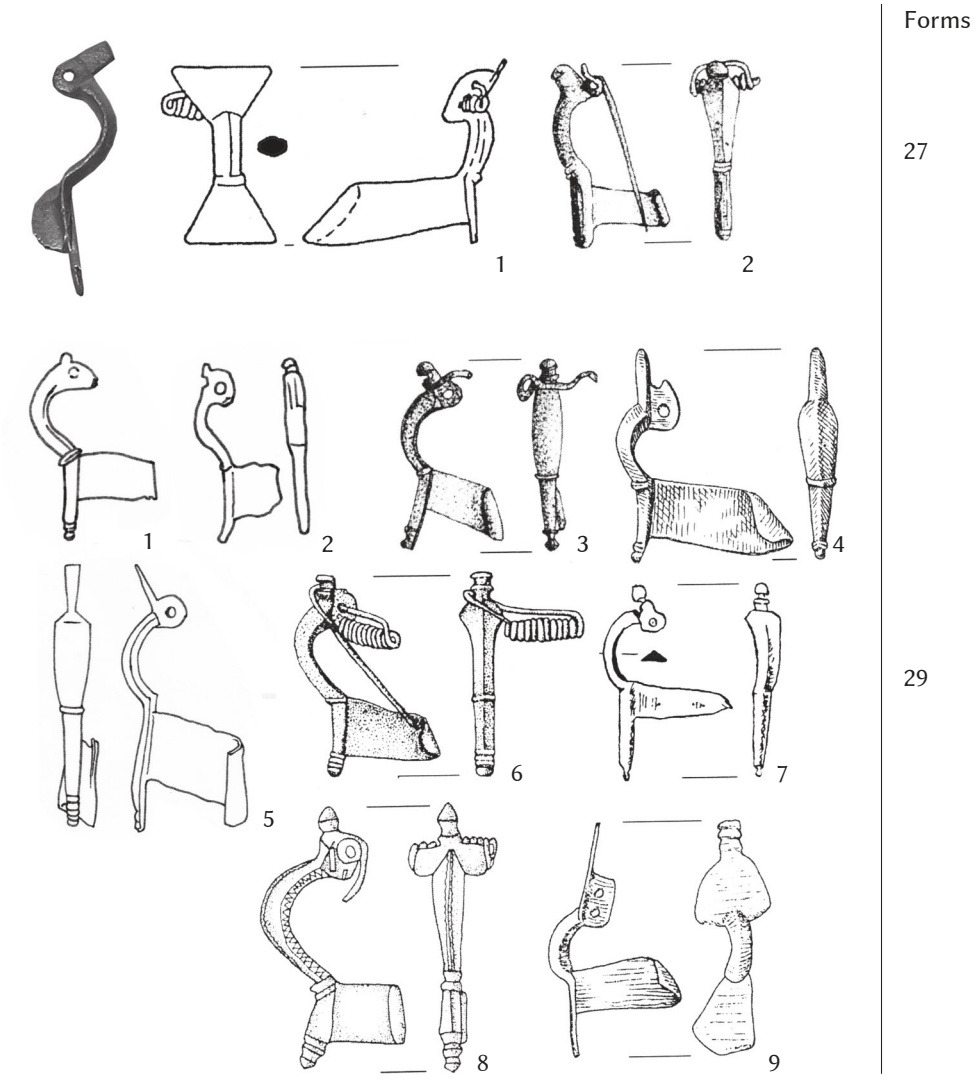


Fig. 10. Fibulae from Chernyakhiv sites as classified by L. Schulte. 27.1 – Ripniv, 27.2 – Boromlya (no. 3118), 27.3 – Jászberény (no. 3218), 29.1 – Horodnytsia, 29.2 – Sokil'nyky, 29.3 – Ripniv, 29.4 – Törökszentmiklós (no. 3241), 29.5 – Udeni (no. 2921), 29.6 – Cucorăni (no. 2881), 29.7 – Moigrad (no. 2898), 29.8 – Lorch (no. 2597), 29.9 – Târgşoru Vechi (no. 2918).

136 These refer to random finds published by M. Lyubichev and V. Didyk (Lyubichev – Didyk 2002, Fig. 4.4–5), which, according to our classification, belong to the 'Neslukhiv' series.

137 Cociş – Bârcă 2014, 199, 203–204, nos 94–97, Fig. 2.13.

138 They belong to different categories, the 'Horodnytsia' and 'Dnipro' series, in our classification (Gorokhovskiy – Gopkalo 2004, 117–119, 122–127, Rys. 5.1–2,4, Rys. 6.8,9), mentioned above and discussed further below.

139 Cociş – Bârcă 2014, 200, 203–204, notes 94–97, Fig. 3.2–3.

A B2c2b2a subvariant (three-spring silver fibulae) was published from the settlement of Culciu Mare in the same region (Fig. 14.39), tentatively dated to the second half of the 3rd century AD. It is analogous to a brooch from Petrivske in the upper reaches of the Siverskyi Donets River (Fig. 14.35).[140] The two items differ in details but feature a similar basic design. Additional parallels were found among brooches from eastern Germany and Lower Austria.[141]

Brooches from eastern and south-eastern Romania were classified and dated within the same typochronological framework. They come from sites associated with the Chernyakhiv culture in western Moldova and Muntenia (Wallachia), the Poieneşti–Vârteşcoiu and Militari–Chilia cultures, and the Sarmatians. S. Cociş and V. Bărcâ correlated the subvariants in their framework with

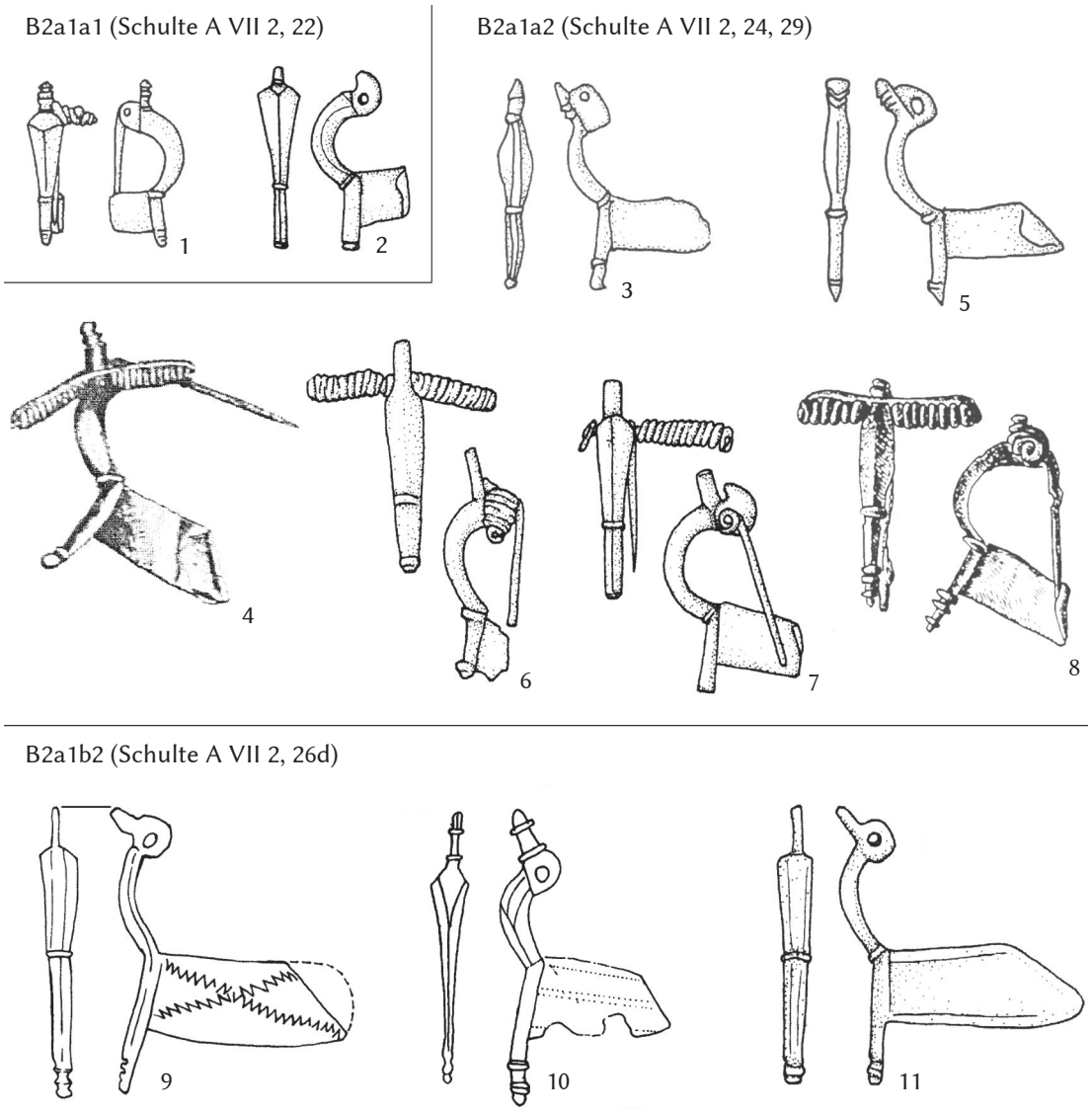


Fig. 11. 1 – Leţcani (Cociş – Bârcă 2020, Pl. 1.2), 2 – Cucorăni (Cociş – Bârcă 2020, Pl. 1.1), 3 – Dobrovăţ (Cociş – Bârcă 2020, Pl. 1.5), 4 – Lunka (Dragomir 2001, 93, 193, Fig. 50.1), 5 – Poieneşti (Cociş – Bârcă 2020, Pl. 1.7), 6 – Sohodor (Cociş – Bârcă 2020, Pl. 1.8), 7 – Poieneşti (Cociş – Bârcă 2020, Pl. 1.4), 8 – Hlinaia (Cociş – Bârcă 2020, Pl. 15.2), 9 – Demyaniv, settlement, 1987, above Building 4 (Gorokhovskiy – Gopkalo 2004, Rys. 2.12), 10 – Werbychka (Mączyńska 2003, Taf. 6.6), 11 – Barboşi (Cociş – Bârcă 2020, Pl. 2.12).

140 A random find of a rare variant from the 'Dnipro' series (Gorokhovskiy – Gopkalo 2004, 118, 122, 127, no. 96, Rys. 6.10, Rys. 11.60).

141 Cociş – Bârcă 2014, 200, 205–206, nos 127–129, Fig. 3.4.

pecific categories by L. Schulte, referring to them in their article as 'types'.[142] The mentioned parallels include Group A VII 'Sarmatian' fibulae from eastern Chernyakhiv contexts.

The fibula from Grave 23 of the Chernyakhiv culture cemetery at Leţcani was assigned to Subvariant B2a1a1 (Schulte's Type A VII 2.22) and interpreted as an archaic item incorporated in a considerably later assemblage, dated to the late 4th or early 5th century AD.[143] The actual chronological position of this variant was determined based on such a find from House 11 at the settlement of Cucorăni (the 'Carpic' Poieneşti–Vârteşcoiu culture). The related assemblage was dated by fragments of Shelov Type D or Vnukov Type C IVD narrow-necked, light amphorae to between the last quarter of the 2nd and the second half or third quarter of the 3rd century AD; however, said assemblage also displays features characteristic of the earlier Shelov Type C, or Vnukov Type C IVC variant, specifically its late variant C IVC2, dated to the second half of the 2nd century AD.[144]

Accordingly, the brooch from Cucorăni was dated to the end of Phase C1a and Phase C1b, while the respective subvariant was regarded as having remained in fashion between the last two decades of the 2nd century and the mid-3rd century AD. Analogies from sites of the Przeworsk culture further support this interpretation,[145] Roman Dacia, and barbarian assemblages from the Tisza and Middle Danube regions.[146]

Subvariant B2a1a2 (Schulte type A VII 2, 24, 29) comprises fibulae from two Chernyakhiv sites in western Moldova, the settlement of Dobrovăţ and the cemetery of Lunca (Fig. 11.3–4). The former is dated to the 4th century AD, whereas the latter is dated to the 3rd century AD.[147] In addition, several further brooches from sites of the Poieneşti–Vârteşcoiu and Militari–Chilia cultures of the late 2nd to early 4th centuries AD, discovered in western Moldova and Muntenia, were also assigned to this variant, including finds from the settlements of Cucorăni (House 7),[148] Uden,[149] and others,[150] from Grave 15 of the Sohodor cemetery, and from the Sarmatian Grave 2 in Borrow 8 near the village of Hlinnaia in eastern Moldova.[151]

This category includes specimens that differ considerably in essential morphological features, particularly the shape of the bow, which may be oval, trapezoidal, or of other forms (Fig. 11.5–8). However, this diversity casts doubt on the validity of assigning them to the same variant.

Subvariant B2a1b2 (Schulte's Type A VII 2, 26d) is represented by a single specimen found in a Roman settlement at Bărboşi in the Lower Danube region.[152] Its closest analogies are brooches from the Upper

142 Cocış – Bârcă 2020, 140–150.

143 Cocış – Bârcă 2020, 141, 165, 175, Pl. 1.1, Pl. 11.3.

144 Cocış – Bârcă 2020, 140–141, Notes 32–43, 165, Pl. 1.1.

145 In the discussion of parallels from Przeworsk sites, the authors mention Table 7 in Mączyńska's article, but without specifying which object in the table they are referring to (Cocış – Bârcă 2020, 141, note 50), which makes it unclear which particular forms of 'Sarmatian' fibulae they consider analogous to subvariant B2a1a1 (Schulte Type A VII 2, 22). This is particularly problematic because said table contains thirteen very diverse items (Mączyńska 2003, 316, Taf. 7).

146 Cocış – Bârcă 2020, 141, Notes 50–52.

147 Cocış – Bârcă 2020, 142, 165, Notes 59–60, Pl. 1.5.

148 This fibula, like the previously described find from House 11, was found together with Shelov Type D – Vnukov C IVD amphora fragments, which exhibit archaic features characteristic of the late variant of Shelov Type C – Vnukov C IVC (C IVC2) amphorae. This variant is dated no later than the end of the 2nd century AD, when it was replaced by Shelov Type D – Vnukov C IVD vessels (Cocış – Bârcă 2020, 142, note 58).

149 A coin of Emperor Galerius Maximian, dated to AD 302–303, was discovered at the settlement.

150 House 21 in Băicăneşti, Văleni, Murgăneşti, Piatra Neamţ-Dărmăneşti, Poieneşti, and Şirna.

151 Cocış – Bârcă 2020, 142–143, 165–166, 179, Pl. 1.3–4,6–8, Pl. 2.9–11, Pl. 15.2.

152 Cocış – Bârcă 2020, 143, Note 75, 166, Pl. 2.12.

and Middle Dniester regions, one discovered in a house at the Chernyakhiv settlement of Demyaniv and stray finds from Werbyczna.[153] These were classified as the same subvariant (Fig. 11.9–10).

The distribution of this subvariant and Subvariant B2a1b1 is characterised by a concentration in western and eastern Ukraine, as well as a presence in eastern Poland.[154] Guided by studies on the chronological position of brooches of the Chernyakhiv culture, 'massive' brooches of this subvariant were in use between AD 230 and 320, appearing in phase C1b and remaining in fashion until the beginning of Phase C3.[155] Corresponding finds from Moldova and Wallachia (Muntenia)[156] are believed to be coeval.

Subvariant B2a1b4 brooches (Fig. 12) are represented by finds from the eponymous settlement and cemetery at Poieneşti of the 'Carpic' culture, the settlement of Piatra Neamţ-Dărmăneşti, and a Sarmatian burial in Borrow 2 at Pânceşti. Analogies date these finds to Phases C1b–C2.[157] They are compared with brooches from Roman Dacia and its barbarian periphery,[158] as well as with specimens found in Przeworsk and Chernyakhiv cultural contexts.[159]

Mentioned analogies from a Chernyakhiv context include the aforementioned stray finds from Kovrai (Fig. 12.12), which S. Cociş and V. Bârcă in a previous article compared with a fibula of a different subvariant (B2b1a1) from the settlement of Humenné in eastern Slovakia (Fig. 12.16). The latter displays clear morphological differences both from the Kovrai finds and eastern Romanian examples classified as Subvariant B2a1b4: the shape and section of the Romanian specimens resemble more those of fibulae found in Chernyakhiv sites at the left bank of the Dnipro.

They cite a less convincing analogy, a specimen from the settlement of Grodzisko Dolne (south-eastern Poland), attributed to the Przeworsk culture, which has a narrower bow and is consequently less massive than the fibulae from Kovrai, Pânceşti, and Poieneşti (Fig. 12.13, Fig. 12.12,14,15).

This example clearly illustrates the significant methodological shortcomings of Cociş and Bârcă's classification, which does not rely on basic bow form and major details, i.e. elements determined already by the casting mould, but a set of structural, metric, and other attributes instead, which, as demonstrated, does not preclude inconsistencies, such as the classification of identical fibulae into different typological categories.

Subvariant B2b1a2 (Fig. 12.18–19) includes two-spring bronze fibulae from Structure 4 in a settlement of the Chernyakhiv culture at Bârlad-Valea Seacă and from Grave 215 in the 'Carpic' cemetery of Găbăra-Moldoveni.[160]

Judging from the published illustration,[161] the heavily burnt brooch from Găbăra-Moldoveni, unlike the specimen from Bârlad, was decorated with applied ribbed rings, similar to the morphologically

153 Cociş – Bârcă 2020, 143, Notes 76–77.

154 Essentially matching the distribution of the 'Neslukhiv' series (Gorokhovskyi – Gopkalo 2004, 121–122, Rys. 11, Baran – Gopkalo 2006, 43, Rys. 18). See also Cociş – Bârcă 2020, 143, Notes 79–81.

155 Cociş – Bârcă 2020, 143.

156 S. Cociş and V. Bârcă disagree with Gh. Bichir, who dates such fibulae not only to the 3rd century AD but, based on A VII-type brooches from the unpublished Chernyakhiv settlement of Ioneşti and other similar sites, also to the entire 4th century AD (Cociş – Bârcă 2020, 143, 149, Notes 78 and 156).

157 Cociş – Bârcă 2020, 145–146, 167, 177, Fig. 3.16,17–20, Fig. 13.3–4.

158 Unfortunately, specific analogies are not presented, which would be very important, as they did not mention Subvariant B2a1b4 brooches from Dacia and its north-western barbarian periphery in the previous study of the series (Cociş – Bârcă 2020, 146, Notes 116–117; Cociş – Bârcă 2014, 204).

159 Cociş – Bârcă 2020, 146, Notes 114–117.

160 Cociş – Bârcă 2020, 146–147, 168, 177, Pl. 4.21–22, Pl. 7.1–6.

161 Bichir 1973, Pl. 169.4.

related two-spring silver fibulae which, according to the classification of S. Cociş and V. Bârcă, belong to a different subvariant, B2b2b1a.[162]

The authors correctly observe that such bronze objects are rare in the barbarian world and are probably simplified imitations of silver specimens. Based on analogies, they propose a dating to Phases C1b–C2.[163]

A considerable number of fibulae from eastern Romania[164] discussed in the second article of the two-part series by S. Cociş and V. Bârcă could not be assigned unequivocally to a particular typological category because of the presence of two perforations in the spring support plates, intended for the attachment of the axes of the now-missing springs. They determined such brooches as be-

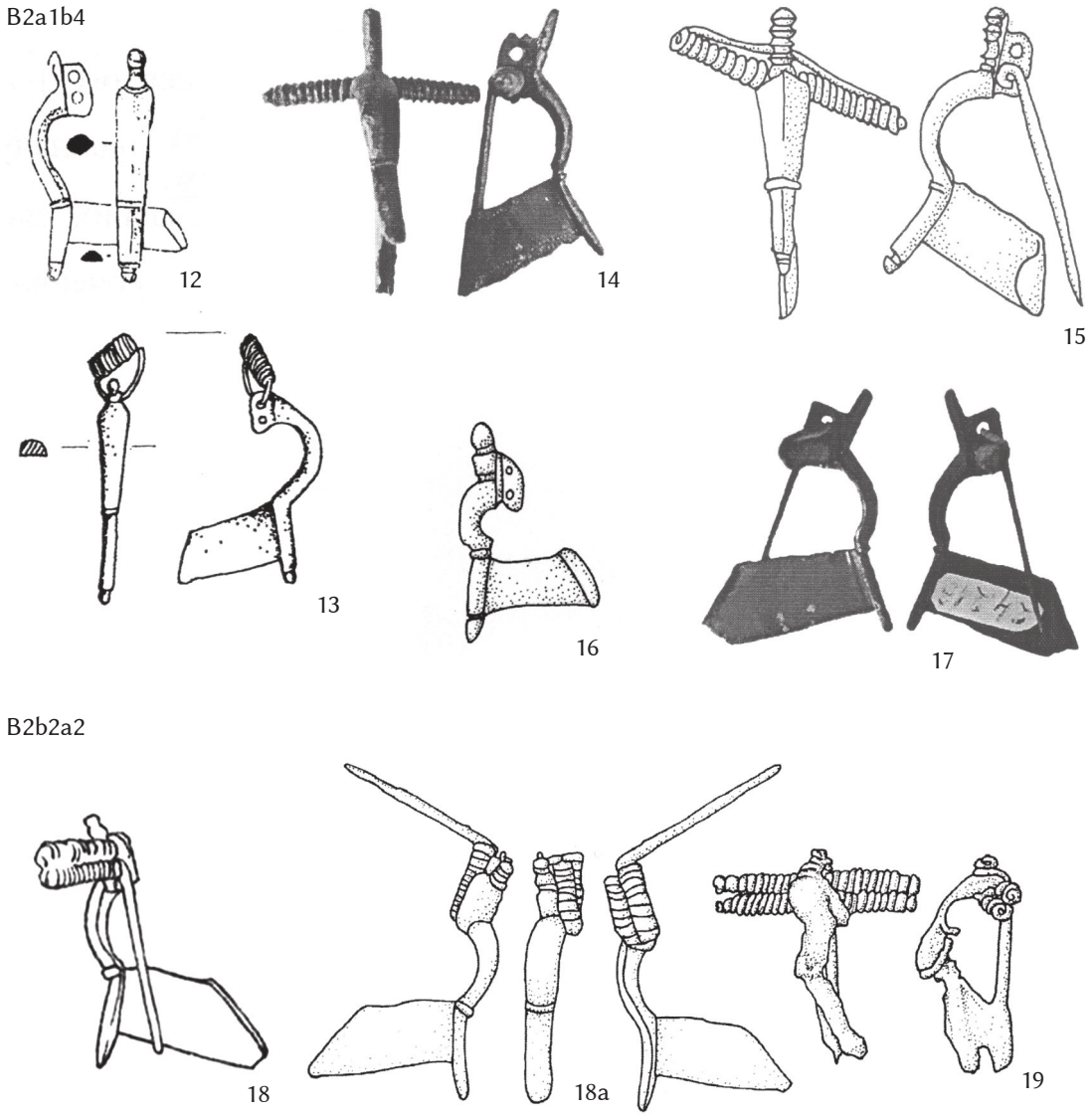


Fig. 12. 12 – Kovrai (Lyubichev – Didyk 2002, Rys. 4.4), 13 – Grodzisko Dolne (Podgórska-Czopek 2009, Tab. 12.2), 14 – Panceşti (Cociş – Bârcă 2020, Pl. 3.16a), 15 – Poieneşti (Cociş – Bârcă 2020, Pl. 3.18,20), 16 – Humenne (Cociş – Bârcă 2014, Fig. 2.15), 17 – Panceşti (Cociş – Bârcă 2020, Pl. 3.16), 18–18a – Bârlad-Valea Seacă (Palade 1980, Fig. 18.6; Cociş – Bârcă 2020, Pl. 4.21), 19 – Gabăra-Moldoveni (Cociş – Bârcă 2020, Pl. 4.22).

162 Cociş – Bârcă 2014, 200, 205, Pl. 3.2–3.

163 Cociş – Bârcă 2020, 147

164 Seventeen objects.

longing either to the single-spring Subvariant B2a1b4, in which the chord passed through the upper perforation, or to the two-spring Subvariant B2b1a2.[165]

Among these finds, four fibulae excavated in Chernyakhiv settlements deserve particular attention: three from Bârlad–Valea Seacă and one from Tecuci-Rateş.[166] An almost complete brooch and a body and catchplate fragment of another (Fig. 13.20–21) were found in Houses 8 and 18, respectively; the features were interpreted as the remains of bone workshops.

Assumedly, the reworked brooch fragment from House 18 was intended for remelting to produce bronze rivets for composite bone combs. House 8 also contained two silver Roman coins issued byAntoninus Pius (AD 138–161) and Marcus Aurelius (AD 161–180), while Pit 1 yielded the foot fragment of a brooch with a high catchplate with two perforations and a coin issued by Philip the Arab (AD 244–249).[167]

The remaining objects discussed by S. Cociş and V. Bărcâ in this context come from settlements of the Militari–Chilia and Poieneşti–Vârteşcoiu cultures (Bucharest–Străuleşti, Mătăsaru, and others),[168] the Lipia-Maidan cemetery,[169] Grave 15 in the Sohodor cemetery, and a Sarmatian grave in Borrow 2 at Pânceşti.[170]

Of particular interest is the discovery of a semi-finished fibula from the settlement of Bucharest-Străuleşti (Militari–Chilia culture), which was also interpreted as a possible model for a casting mould.[171]

Despite their fragmentary state, S. Cociş and V. Bărcâ date many objects of uncertain typological affiliation by analogy to the period between the third decade of the 3rd century and the first decade of the 4th century AD, that is, to the interval between Phase C1b and the early part of Phase C3.[172]

This section of the study, in addition to the previously discussed section devoted to Subvariant B2a1b4, highlights another methodological shortcoming of the applied classification: it is unsuitable for the classification of incomplete specimens without a spring, even though the bow is available for a comprehensive morphological analysis.

At the time, we proposed a typological identification of the brooch from House 8 at the settlement of Bârlad-Valea Seacă, whose morphological features closely match those of 'Neslukhiv' brooches of the Chernyakhiv culture.[173] Based on the presence of these features, primarily an elongated trapezoidal bow, parallels include not only the finds from Pânceşti, Sohodor, and Şirna (Fig. 13.23–24), which appear among the brooches discussed in the same part by S. Cociş and V. Bârcă, but also fibulae assigned to other subvariants from the same Sohodor site, Bărboşi, and Poieneşti.[174]

Following the same methodological approach, another variant may be distinguished within the 'Neslukhiv' series. This includes the brooch from Tecuci-Rateş, characterised by a rounded head

165 Cociş – Bârcă 2020, 147–150, 167–174, Pl. 3.16a, Pl. 4.23–27, Pl. 5, Pl. 6.35–36, Pl. 8–10.

166 Cociş – Bârcă 2020, 147–149, 168, 170, Pl. 4.23–25, Pl. 6.36, Pl. 8–9.

167 Cociş – Bârcă 2020, 147, Notes 126–134.

168 Bârlad-Prodana, Gura-Idrichi, Măluşteni, Poieneşti, and Şirna. Piatra Neamţ-Dărmăneşti, Târgşor, and Şirna.

169 In association with a coin from Viminacium, dated to AD 241–242, minted during the reign of Emperor Gordian III.

170 Cociş – Bârcă 2020, 148–150, 168–170, 174, Pl. 4.26–27, Pl. 5, Pl. 6.35, Pl. 10.

171 Cociş – Bârcă 2020, 148.

172 Cociş – Bârcă 2020, 150.

173 Gorokhovskyi – Gopkalo 2004, 115–117, Rys. 4.3.

174 Cociş – Bârcă 2020, 165–167, 169, Pl. 1.8, Pl. 2.12, Pl.3.17–19.

giving the bow, tapering towards its lower part, an almond-shaped outline, as well as by a very tall projection of decorative character (Fig. 13.27). Comparable features may be observed in the head and bow of the blank from Bucharest-Străuleşti and the fibula from Bârlad-Prodana (Fig. 13.28–29).[175]

The two-spring silver fibulae with applied rings from the Mătăsaru settlement of the Militari–Chilia culture were assigned to the same subvariant, B2b2b1a, as the above-mentioned brooches from the Zalău settlement and the Medieşu Aurit cemetery. They were likewise assigned, according to Schulte's classification as referred to by the authors, to 'Schulte's Type A VII 2.26.'[176]

They mention, as analogies, both silver and bronze brooches from sites of the Przeworsk and Wielbark cultures in Poland and from sites of the Chernyakhiv culture in the area between the Upper Dniester region and the Siverskyi Donets River, such as Horodnytsia, Petrykivtsi, Nezvysko, Hryhorivka, and Boromlya.[177] Based on these analogies, they date the finds to Phase C2, suggest

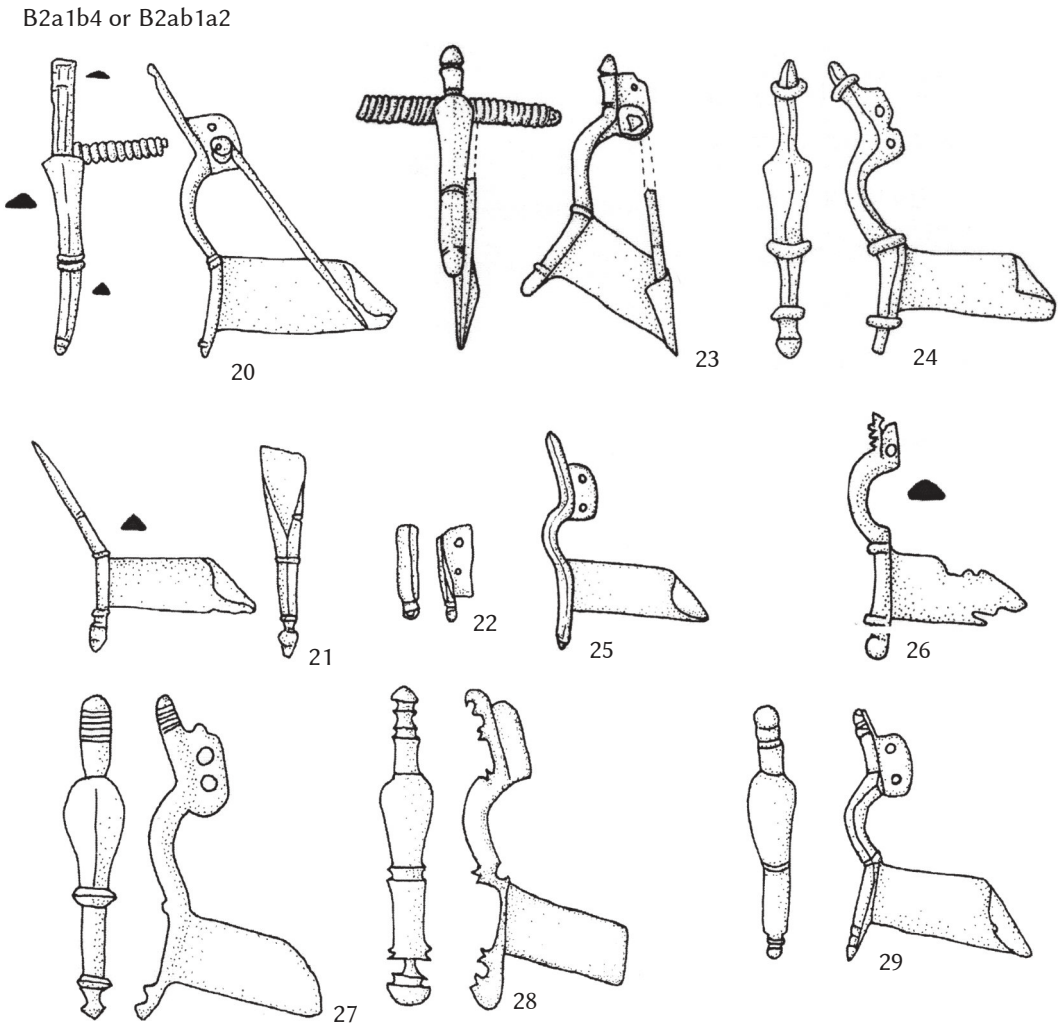


Fig. 13. 20–22 – Bârlad-Valea Seacă (Cociş – Bârcă 2020, Pl. 4.23–25), 23 – Sohodor (Cociş – Bârcă 2020, Pl. 5.33), 24 – Şirna (Cociş – Bârcă 2020, Pl. 5.34), 25 – Măluşteni (Cociş – Bârcă 2020, Pl. 5.28), 26 – Târgşor (Cociş – Bârcă 2020, Pl. 6.35), 27 – Tecuci-Rateş (Cociş – Bârcă 2020, Pl. 6.36), 28 – Bucureşti-Străuleşti (Cociş – Bârcă 2020, Pl. 4.27), 29 – Bârlad-Prodana (Cociş – Bârcă 2020, Pl. 4.26).

175 The finds from Piatra Neamţ Dărmăneşti and Poieneşti, characterised by a bow of uniform width, represent another variant of the fibulae mentioned by S. Cociş and V. Bârcă (Cociş – Bârcă 2020, 169, Notes 30, 32, Pl. 5).

176 Cociş – Bârcă 2020, 150, Pl. 6.38.

177 Cociş – Bârcă 2020, 150, Notes 171–173.

that they belonged to members of the social elite, and regard them as products of Northern European origin.[178]

By classifying every aforementioned brooch from Chernyakhiv sites into a single subvariant, B2b2b1a, S. Cociş and V. Bârcă fail to take into account the fact that these objects are morphologically heterogeneous and belong to two distinct typological series—the 'Horodnytsia' and 'Dnipro' series—which differ in their areas of distribution and, consequently, in their origins.

The variant represented by finds from Horodnytsia, Petrykivtsi, Nezvysko, and similar sites is characteristic primarily of the western area of the Chernyakhiv culture, extending from the Dniester region to the right bank of the Dnipro River. By contrast, the fibulae from Hryhorivka and Boromlya represent a variant characteristic predominantly of the left bank of the Dnipro River, the Donets Basin, and a relatively narrow riverine zone along the right bank of the Dnipro.[179]

Here, we observe the same methodological shortcoming in the classification proposed by S. Cociş and V. Bârcă as has already been noted about the fibulae assigned to Subvariants B2a1a2 and B2a1b4, and those lacking an unequivocal typological attribution and potentially belonging either to Subvariant B2a1b4 or to B2b1a2. Specifically, the classification fails to account for essential morphological features characterising the bows and the additional elements of the brooches.

In the conclusions of the second study of the series, they date Group A VII, Series 1 fibulae from eastern and south-eastern Romania generally within Phase C1 band the early part of Phase C3 (AD 230–320/330). They also suggest that these objects most probably appeared in the region as early as the beginning of the 3rd century AD, during the late Phase C1a.

They interpret the appearance of these artefacts in this territory as indicating the migration of certain Germanic groups from the Upper Dniester region and areas north of it, and regard them as evidence for the emergence of an early Chernyakhiv population in the lands east and south of the Carpathians.[180]

However, they do not take into account the opinions of scholars studying the Chernyakhiv culture, who believe that the population associated with the Cherepyn–Demyaniv sites in the Upper Dniester region was not Germanic but Slavic.[181]

In the third and concluding part of their series of articles devoted to the study of fibulae of Group A VII Series 1 upper-chord brooches from Romania and the neighbouring regions, S. Cociş and V. Bârcă summarised the conclusions published in their works between 2012 and 2020.

According to these conclusions, the artefacts in question, dated between the last decades of the 2nd century and the first decades of the 4th century AD, are of Przeworsk and Wielbark origin and are evidence of the incursions and settlement of Germanic groups in the territories surrounding the province of Dacia, beginning in the last quarter of the 2nd century AD.

They also interpret certain subvariants from eastern and south-eastern Romania as indicating the arrival of populations associated with the early phase of the Sântana de Mureş–Chernyakhiv culture in these regions.[182]

Throughout the 2000s and 2010s, M. Lyubichev devoted several studies to the origin of Group A VII fibulae from sites in the Dnipro–Donets interfluve.[183] His conclusions served as one of the grounds

178 Cociş – Bârcă 2020, 151. In the first study of the series devoted to this find group, they date these fibulae to Phase C1b (Cociş – Bârcă 2014, 205).

179 Gorokhovskiy – Gopkalo 2004, 117–119, 122–124, Rys. 5–6, 11; Baran – Gopkalo 2006, 43, Rys. 18.

180 Cociş – Bârcă 2020, 152–153.

181 See below for details.

182 Bârcă – Cociş 2022, 252; Bârcă – Cociş 2023, 25, 36–37.

183 Lyubichev – Didyk 2002; Lyubichev 2003; Lyubichev 2008; Lyubichev 2010; Lyubichev 2019.

upon which S. Cociş and V. Bârcă abandoned the term 'Sarmatian' and began referring to fibulae with a high catchplate and an upper chord as 'Germanic'.

The principal arguments advanced by M. Lyubichev in his 2003 article were analysed in our study and subjected to criticism.[184]

The discussion was further developed in the context of the so-called Boromlya horizon at the left bank of the Dnipro River,[185] which is characterised, among other features, by the presence of Group A VII fibulae. The widely cited concept of the 'Boromlya horizon', proposed by Lyubichev, developed from Nekrasova's identification of the earliest stage of the Chernyakhiv culture expansion into the forest-steppe zone of the left bank of the Dnipro River[186] and from Shchukin's recognition of a distinct cultural and chronological horizon characterised, among other features, by the presence of Group A VII fibulae.[187]

Thus, the 'Boromlya horizon' is a historiographical construct whose content requires extensive and detailed definition—a task beyond the scope of this study. It should nevertheless be emphasised that the origin and ethnocultural attribution of the sites assigned by M. Lyubichev to the 'Boromlya horizon' remain the subject of ongoing scholarly debate.

E. Symonovich, for example, attributed the Late Roman settlements at the north-eastern part of the left bank of the Dnipro River, characterised by large quantities of distinctive hand-formed pottery and fibulae of the type in focus, to the Chernyakhiv culture.[188]

A. Nekrasova proposed distinguishing between two chronological stages in the process of 'Chernyakhovisation' of the forest-steppe on the left bank of the Dnipro River. Based on amphorae and Group A VII fibulae, she dated the first stage, represented by five archaeological features—two houses at Ridnyi Krai-3, a house and a working pit at Boromlya-2, and House 8 in Bukreevka-2—a settlement layer at Besedivka, and a cremation burial in a Type D amphora in a cemetery at Novoselivka, to the second half of the 3rd and the 4th centuries AD.

Noting the similarities between the early Chernyakhiv complexes of the Left Bank and the sites of the Upper Dniester region, she raised the hypothesis that a Slavic group from the Dniester region moved into the left bank area of the Dnipro River in the second half of the 3rd century AD, mixed with the local communities associated with the Kyiv culture, and introduced the traditions of Chernyakhiv-style wheel-thrown pottery.[189]

A. Oblomsky interpreted these archaeological assemblages as belonging to the 'Seim–Donets' variant of the Kyiv culture.[190]

In his 2005 monograph, M.B. Shchukin distinguished a specific cultural-chronological 'Boromlya horizon', comprised of settlements characterised not so much by hand-formed pottery evoking Wielbark and Przeworsk traditions as by vessels resembling those of the Demyaniv–Cherepyn group, the flagship finds of which include Group A VII fibulae.[191]

He raised the possibility of a distinct chronological horizon with high-catchplate fibulae, which he termed the 'Boromlya horizon' and interpreted as reflecting an eastward migration of groups from

184 Gorokhovskiy – Gopkalo 2004, 111, 112, 125.

185 Lyubichev 2008, 51.

186 Nekrasova 1990a; Nekrasova 1990b, 59–60.

187 Shchukin 2005, 132–133.

188 Symonovich 1983.

189 Nekrasova 1990a; Nekrasova 1990b, 59–60.

190 Oblomsky 2003, 32–40.

191 Shchukin 2005, 132–133.

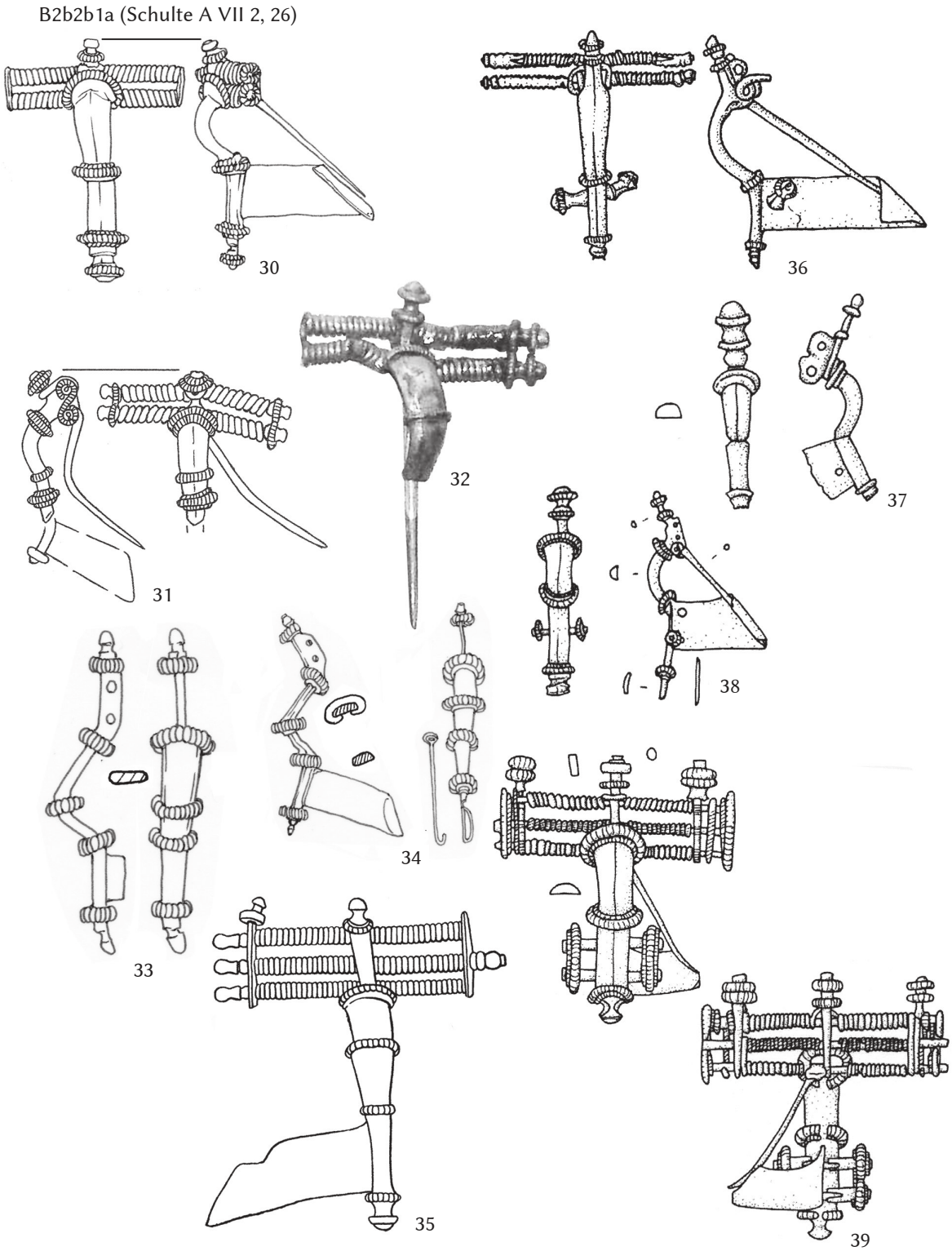


Fig. 14. 30 – Horodnytsia, grave (Kopernicki 1878, Tab. 3.C; Almgren 1897, 198–199; Åberg 1936, 265, Fig. 1), 31 – Petrykivtsi, cemetery, cultural layer (Magomedov – Levada 1997, Rys. 1.9), 32 – Nezvysko, settlement, House 1 (Smirnova 1964, 202, 203, Rys. 5.9–10), 33 – Boromlya, settlement, cultural layer (Gorokhovskiy – Gopkalo 2004, Rys. 6.8), 34 – Hrygorivka, settlement, stray find (Gorokhovskiy – Gopkalo 2004, Rys. 6.9), 35 – Petrivs'ke (Gorokhovskiy – Gopkalo 2004, Rys. 6.10), 36 – Mătăsaru (Cociş – Bârcă 2020, Pl. 6.38), 37 – Zalău (Cociş – Bârcă 2014, Fig. 3.2), 38 – Medieşul Aurit (Cociş – Bârcă 2014, Fig. 3.3), 39 – Culciu Mare (Cociş – Bârcă 2014, Fig. 3.4).

the Upper and Middle Dniester region as far as the Upper Don, driven by pressure from Wielbark (Dytynychi wave) and Przeworsk populations.[192]

Unlike M. Shchukin, M. Lyubichev interprets the 'Boromlya horizon' as referring exclusively to sites in the forest-steppe zone in the Dnipro–Donets area, defining them as 'a group of settlements that existed here during Phases C1b–C2 and appeared as a result of the migration of part of the population associated with Demyaniv–Cherepyn-type sites in the Upper Dniester region, incorporating certain elements, but not part of the Chernyakhiv culture'.[193]

According to his interpretation, Group A VII fibulae are important indicators of said migration, and the migrants inherited them from their ancestors—a population associated with the Zubrytska culture—which, in turn, adopted the type from the Wielbark culture.[194]

However, only a single high-catchplate fibula is known from the Zubrytska cultural context, found at the Sokilnyky site.[195] Since the settlement also has a Chernyakhiv layer and the fibula was recovered from a cultural layer rather than a closed feature, it most likely belongs to the Chernyakhiv horizon. Therefore, it is included in our analysis.

Ultimately, the main cause of disagreement was correctly identified as a difference in methodological approaches to interpreting the same sites, which were understood either as settlements of the Kyiv culture or as communities arriving from the Western Bug and Dniester regions.[196]

Nevertheless, the debate concerning the ethnic attribution of the population behind the so-called Boromlya horizon continued. I. Gavritukhin suggested that the people behind this horizon could be the Heruli, whom Jordanes located near Lake Maeotis and described as subjects of Ermanaric.[197]

Based on numismatic evidence, the pottery record, and written sources, researchers studying Roman imports in the Chernyakhiv culture suggested identifying the population of the 'Boromlya horizon' with the 'Borani' tribe mentioned in the *Historia Nova* of Zosimus, completed by AD 498.[198]

Returning, however, to the theory of M. Lyubichev—cited by Romanian archaeologists to support the Przeworsk origin of Group A VII 'Sarmatian' fibulae[199]—a statement of his must be quoted here: "To a considerable extent, it was precisely the analysis of finds of Almgren's Group VII high-catchplate fibulae that made it possible to raise the question of the origin of the 'Boromlya horizon', as this type is part of its definition. A thesis was advanced regarding the existence of a so-called 'chain of fibulae' between the Dniester region and the Dnipro–Donets areas where these fibulae appear in concentrations, and interpreted it as marking the route of migration of Proto-Slavs from one region to their kinsmen in another, leaving behind Kartamyshevo-2–Ternovka-2 and Shyshyno-5–Shmyrevo-type sites [of the Kyiv culture—author's note]."[200]

Thus, the genesis of Group A VII 'Sarmatian' fibulae has remained a subject of heated debate. M. Mączyńska, a scholar who delved into the study of the type in context with the Przeworsk and Wielbark cultures, sees their origin in Roman Dacia and the barbarian Carpo-Dacian and Sarmatian cultures of the Middle and Lower Danube. By contrast, scholars studying the same Danubian finds,

192 Shchukin 2005, 133.
193 Lyubichev 2008, 51.
194 Lyubichev 2003, 75.
195 Kozak 2008, 292, Rys. 139,12.
196 See Oblomsky 2021 with further literature.
197 Gavritukhin 2011, 57.
198 Myzhgyn – Didenko 2021.
199 Cociş – Bârcă 2020, 139.
200 Lyubichev 2003, 77; Lyubichev 2008, 51; Lyubichev 2019, 144.

S. Cociş and V. Bârcă, attribute them primarily to the Przeworsk culture and, to a certain extent, the Wielbark and Chernyakhiv cultures, which they identify with Germanic peoples.

Accordingly, this issue remains far from resolved and, in our view, requires further in-depth analysis of the available evidence, as it is directly linked to the problem of interpreting the Group A VII ‘Sarmatian’ fibulae in the Chernyakhiv culture.

Typology and chronology of the ‘Sarmatian’ fibulae in the Chernyakhiv culture

Any hypothesis on the genesis of Group A VII fibulae—a type used by communities associated with various archaeological cultures, among which the Chernyakhiv culture occupies a prominent place—should be based on a detailed classification and a methodologically sound comparative analysis with analogies and probable prototypes.

Group A VII fibulae in the Chernyakhiv culture were manufactured from non-ferrous metal alloys, principally copper alloys and silver. Their bodies were mould-cast, which determined the fundamental characteristics of the finished object, including basic design, structure, proportions, and relief ornaments. This must be taken into accountboth when developing a classification, that is, a list and hierarchy of attributes, and when classifying these artefacts.

Group A VII fibulae are two-part constructions consisting of a body and a spring mechanism. The body comprises the head, bow, foot, and catchplate, whereas the spring mechanism includes the pin, spring, chord, and spring axis. The method of joining the body and the spring mechanism, whereby the spring axis is inserted into a perforation in the spring support, and the chord is secured in one way or another, frequently to a projection on the head, determines the structure of the fibula.

The body may be described with its general shape, profile, and the proportions of its principal components. In some cases, the main elements are separated by cast ribs. Most commonly, such ribs separate the bow from the foot or accentuate the form of the catchplate at its upper and lower edges.

The headplate may be simple or complex, the latter incorporating a projection and a spring support. The bow is characterised by its profile, shape, and cross-section. The foot is defined by its form and by the presence or absence of a decorative terminal, either in the form of a knob or as relief ornamentation. The catchplate may be rectangular or trapezoidal; it is also characterised by its proportions and the presence or absence of engraved decoration.

‘Sarmatian’ fibulae, with an upper chord, have a complex headplate with a projection. The projection may be decorative or functional, serving to secure the chord. In examples from the Chernyakhiv culture, the projection may take the form of a spike, plate, knob, or button.

Cylindrical or truncated pyramidal spikes are sometimes engraved and feature aserrated surface or relief decoration. Some brooches have prismatic faceted projections.

Semicircular, subtriangular, trapezoidal headplates, sometimes with a notch for the chord, forming the so-called ‘bird-head’ type, are either parallel to the body, while a trapezoidal, ‘paddle-shaped’ projection may be perpendicular to it.

Regardless of the presence of a projection and a support for one, two, or three springs, the form of the head is determined by the mould.

High-catchplate fibulae from the Chernyakhiv culture may be classified into three distinct series based on recurring combinations of these attributes: the ‘Neslukhiv’, ‘Horodnytsia’, and ‘Dnipro’ series. In addition, some brooches correspond to the definition of ‘Sarmatian’ fibulae but do not fit into either; these are referred to here as ‘non-series’ fibulae.

Neslukhiv series

'Neslukhiv' fibulae were made exclusively from copper alloys. In addition to a high catchplate, a complex head, and a headplate with a projection—obligatory features of the series—these brooches also exhibit several characteristics predetermined by the mould.

Their bodies are slightly curved and elongated trapezoidal; the bow and the foot are of equal length. Although size may vary within the series, their proportions remain constant.

The cross-section of the bow is predominantly faceted, triangular, rhomboid, or polygonal. The mould predetermined the width of the bow, whereas the cross-section of the casting may be modified. The foot is either plain and undecorated or ornamented with ribs and grooves. The transition from the bow to the foot and to the catchplate is accentuated by ribs cast with the body of the fibula.

The mould also determined the shape of the head projection and the character of the spring support. These elements are sometimes modified after casting.

In a previous study, variants of these brooches were distinguished based on the form of the head projection:

a) with a truncated conical or pyramidal spike (Zhuravka) (Fig. 16.1);
b) with a beaded projection (Ripniv) (Fig. 16.7);
c) with a serrated projection (Demyaniv, Holovino) (Figs 8–9);
d) with a narrow trapezoidal plate-like projection, spatula-shaped in profile (Luka-Vrublevetska, Ripniv) (Fig. 19.1,3–4);
e) with a narrow projection, beak-shaped or trapezoidal in profile (Luka-Vrublevetska, Neslukhiv, Ruzhychanka, Demyaniv) (Fig. 17.4,6–8);
f) with a narrow semicircular plate featuring a notch for attaching the chord—the so-called 'bird-head' type (Riabukhine, Zavhorodnie) (Fig. 17.2–3);
g) with a semicircular projection (Horodnytsia settlement, Sokilnyky);
h) with a mushroom-shaped knob (a fibula of unknown provenance in the collection of the Lviv Historical Museum and Ridnyi Krai-3) (Fig. 18.3,5).

The vast majority of 'Neslukhiv' fibulae have been discovered in the Western Bug basin, the Upper and Middle Dniester region, the eastern, left bank of the Dnipro River, and the upper reaches of the Siverskyi Donets.[201]

The chronology of the 'Neslukhiv' series is established by dated assemblages discovered at sites in both the western and eastern areas of the Chernyakhiv culture. Such fibulae were found together with fragments of ancient light pottery amphorae of Shchukin's[202] 'Tanais' type or Shelov's Type D in House IV in Cherepyn, a settlement in the upper Western Bug basin,[203] as well as House 1 at Ridnyi Krai-3 and Holovino on the left bank of the Dnipro River.[204]

According to the latest typological and chronological framework developed by S. Didenko, these amphorae correspond to variants D1, D2, and D3, dated to AD 200–260.[205]

201 Gorokhovskyi – Gopkalo 2004, 121–122, Rys. 11; Baran – Gopkalo 2006, 43, Rys. 18; Lyubichev 2019, 252–253, Rys. 52.

202 Shchukin 1968, 42–43, Fig. 1.a.

203 In our earlier article, the fibula from Cherepyn was mistakenly assigned to a different category—the 'Horodnytsia' series—based on a highly schematic drawing in the publication and a brief description mentioning its decoration with applied rings (Gorokhovskiy – Gopkalo 2004, 118, 127, no. 118). Next, M. Lyubichev (Lyubichev 2010, 145), drawing on classification, attributed it to the 'Dnipro' series, although no such finds were known from west of the Dnipro's right bank. The issue could be clarified thanks to photographs kindly provided by I. Gavrytukhin in 2013, for which we are grateful.

204 Shelov 1978, 17–18, Fig. 7.

205 Baran 1981, Pl. 38.8–11,16; Lyubichev 2010, 145, 148–149, Fig. 7.16,19; Lyubichev 2019, 93; Didenko 2018, 47, 50, 258, 261, nos 3 and 17.

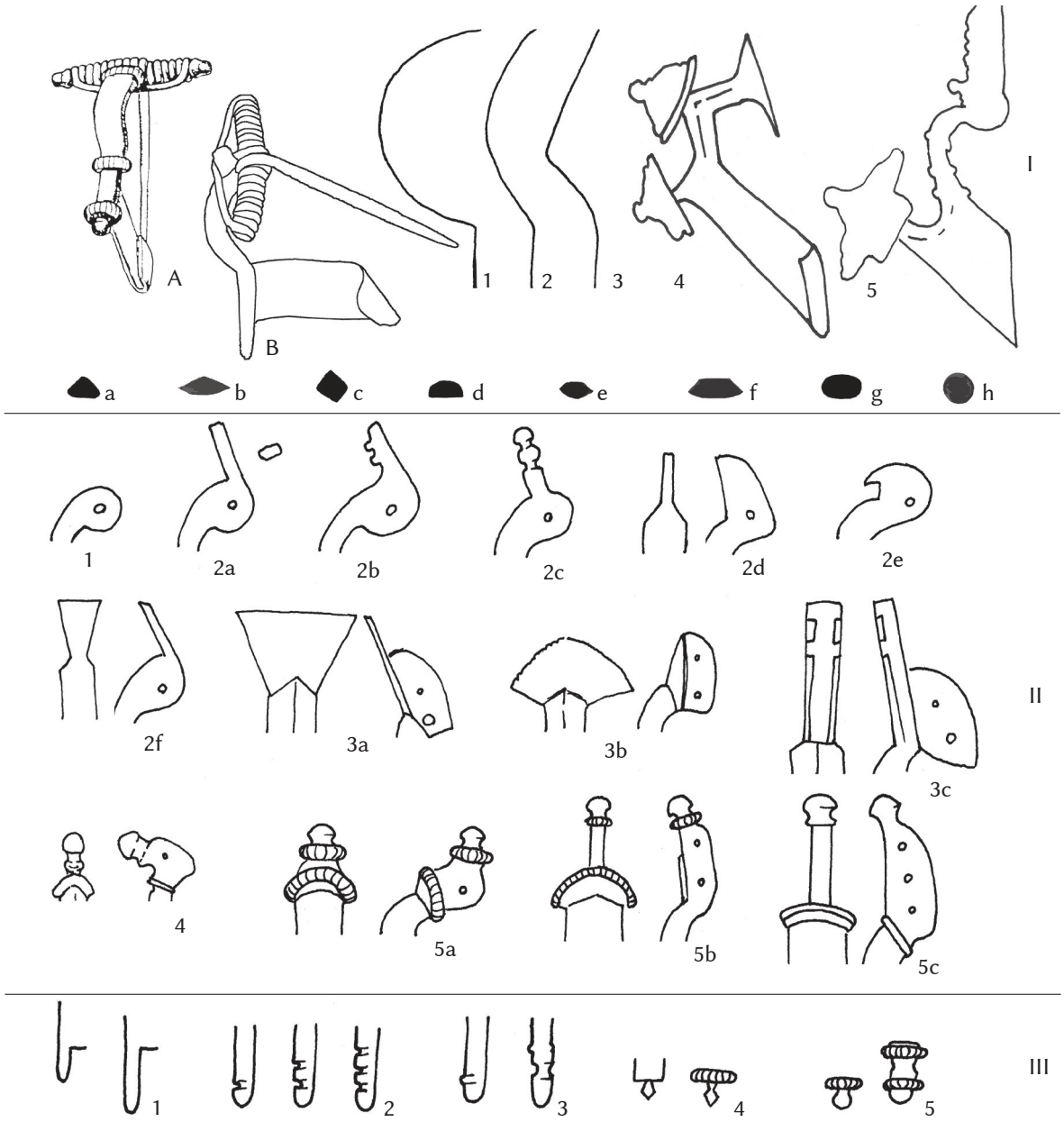


Fig. 15. Structural features of A VII fibulae in the Chernyakhiv culture.

Several structures at the Cherepyn settlement yielded Type D *amphorae*. Houses VI and XI and Building A contained sherds of Subtype D1 vessels (AD 200–230), and D1–D3-subtype *amphora* fragments (AD 200–260) were retrieved from House IV, where the fibula was discovered, and Building A.

In addition, Houses VI and XI yielded fragments of *terra sigillata* produced by workshops of the Comitialis III style (last decade of the 2nd century to the first quarter of the 3rd century AD) and the Helenius style (first half of the 3rd century AD), according to the typology of S. Didenko.[206]

Jointly, the *terra sigillata* and the *amphorae* date these contexts to the late 2nd–first half or mid-3rd century AD. The fact that House XI, which yielded the *terra sigillata*, is adjacent to House IV, where the fibula was discovered, corroborates this dating.

206 Didenko 2018, Fig. 144.5–7.

Another supporting argument is an iron key recovered from the same assemblage, which belongs to a type known in the Northern Black Sea region from funerary contexts dating to the late 2nd and 3rd centuries, particularly the first half of the 3rd century AD. Its close parallels are known from Grave 11 in a cemetery of the Chernyakhiv culture at Ruzhychanka.[207]

The keys from Ruzhychanka[208] were discovered in one of the earliest graves of the cemetery,[209] associated with the Chernyakhiv culture, the archaic 'Ruzhychanka' grave horizon, corresponding to the second third–third quarter of the 3rd century AD.[210]

A. Kokowski classified such keys as Type E and dated them broadly within Phases B2–C3 of the Central European framework for the Roman period, corresponding to the 2nd–4th centuries AD.[211]

The grave also contained an iron shield handle and fragments of a hemispherical glass phiale decorated with a relief X motif. The shield handle, classified as Type 9 in M. Jahn's typology, is dated to the Late Roman period, i.e., the 3rd–4th centuries AD.[212]

Parallels to the phiale[213] are known from Chernyakhiv cemeteries, including Grave 96 in Cherneliv-Ruskyi and Grave 105 in Romankivtsi; they may be identified as Eggers Forms 205, 212, 213, 215, or 216, generally dated to Phases C1a–C2, corresponding to the late 2nd–early 4th century AD.[214]

Recently, V. Shchepachenko identified it as D. Foy et al.'s Type IN 110 or IN 117 and cited analogies from 3rd-century AD contexts in Selonge (France) and Niederbieber (Germany), thereby specifying the grave's dating in Ruzhychanka to AD 250/260–300/320.[215]

Unfortunately, his conclusion and the interpretation of the graves at Cherneliv-Ruskyi and Romankivtsi contain several misunderstandings, methodological shortcomings, and factual errors.[216]

207 Lyubichev 2010, 148–149, Fig. 7.18; see also Lyubichev 2019, 92 with further literature.

208 Vinokur 1979, 114, 117, Fig. 7.2–4; Gorokhovskyi 1988, 36, Fig. 8; Gopkalo 2012, 331, 344, Notes 6–8, 355, 382, Fig. 1.11–13, Ill. 10.6–8.

209 Gorokhovskyi 1988, 45; Gopkalo 2012, 337, 341.

210 Gorokhovskyi 1987, 62–64, 66–67; Gorokhovskyi 1988, 36–37, 42–43, 45.

211 Gopkalo 2012, 331.

212 Gopkalo 2012, 332, 344, Note 3, 382, Ill. 10.3.

213 Vinokur 1979, 114, 117, Fig. 7.1; Gorokhovskyi 1987, 62, 66, Fig. 1.1; Gorokhovskyi 1988, 36, 42, Rys. 6; Gopkalo 2012, 331, 344, Note 1, 355, 382, Fig. 1.5, Ill. 10.1.

214 Gorokhovskyi 1988, 42; Gopkalo 2012, 331; cp. Eggers 1955, 202–203, Fig. 4.61a; Nikitina 2008, 77–78, 202, Fig. 15.4, with reference to Eggers Forms 217–222.

215 Shchepachenko 2024a, 65–66; Shchepachenko 2024b, 175, 195–196, Note 17, 201, Fig. 1.9,11–14.

216 The author mistakenly dated Grave 11 in Ruzhychanka to the second half of the 3rd – first quarter of the 4th century AD (Shchepachenko 2024a, 65), with references to Gopkalo's articles (Gopkalo 2011, 73 and, mistakenly, Gopkalo 2013, 341, 331—as these pages actually belong to Gopkalo 2012). No such dating was presented in the cited studies, which do not discuss absolute chronology at all. He repeats the mistake in Shchepachenko 2024a, 66, when referring to the same publication (Gopkalo 2011, 73, 84) in the context of the dating of Grave 105 in Romankivtsi.
A further problematic aspect concerns the dating of Grave 96 in Cherneliv-Ruskyi and Grave 105 in Romankivtsi (Shchepachenko 2024a, 61, 66; Shchepachenko 2024b, 174–175), which he allegedly dated using a chronological framework developed by E. Gorokhovskyi. Although the author states that he follows Gorokhovskyi's chronological system (Shchepachenko 2024b, 174, note 25), its application appears inconsistent, as the two graves are assigned, without further justification, to the second ('Berezhanka') phase (Shchepachenko 2024b, 174–175). In fact, E. Gorokhovskiy explicitly attributed both graves to the first ('Ruzhychanka') phase, together with Grave 11 in the eponymous cemetery (Gorokhovskyi 1988, 45).
A similar problem concerns the fibula with a bent foot from Grave 96 in Cherneliv-Ruskyi. Although E. Gorokhovskyi classified it as Variant A5, Shchepachenko interpreted it as a chronological marker of ▸

Concerning the absolute dating of the Ruzhychanka phiale through analogies, it must be emphasised that its only close parallel is the phiale from Niederbieber, since the bowl from Selonge, while it features a similar ornamentation, has an entirely different shape. The *terminus ante quem* for the Niederbieber find is AD 260, corresponding to the destruction of the Roman military camp at the Upper German–Raetian *limes*.[217]

The dating of analogous phiales, such as those from Cherneliv-Ruskyi (Eggers Type 216) and Romankivtsi, based on finds from classical and barbarian sites across Western and Eastern Europe, also corresponds to this dating. The production and distribution of such glass bowls in the north-western provinces of the Roman Empire, particularly in Gaul and Upper Germany, began no later than the first half of the 3rd century AD, when they also appeared in the Danubian provinces and the Northern Black Sea region.[218]

The *terminus ante quem* for their widespread distribution in the southern part of Eastern Europe is established primarily by finds from ancient cities and neighbouring territories that suffered catastrophic destruction in the mid-3rd century AD, notably building complexes destroyed around AD 240 at Gorgippia and, somewhat later, at Tanais, Olbia, and the Alma-Kermen hillfort in Crimea;[219] for a general overview of the chronology of Black Sea sites destroyed between the AD 230s/240s and AD 260s/270s.[220]

Accordingly, there are no convincing grounds for narrowing down the dating of the Chernyakhiv complexes from Cherneliv-Ruskyi and Romankivtsi to the second half of the 3rd and the early 4th century AD, or even more to AD 270–330, especially when such dating is based on the presence of a fibula with a bent foot and a circular wire buckle with a thin faceted body and rhomboid cross-section.[221]

Grave 104 in the Cherneliv-Ruskyi cemetery contained a 'Neslukhiv' brooch and a two-part omega-shaped buckle, one of the chronological indicators of the early Chernyakhiv culture, and in particular of the archaic 'Ruzhychanka' grave horizon, dated to the second third–third quarter of the 3rd century AD.[222]

A similar buckle from Grave 261 in the same cemetery was discovered together with a comb with a triangular back. Although the dating of such combs is broader, the two graves may be coeval.[223]

▸ the 'Berezhanka' phase (Shchepachenko 2024a, 61, Note 6). Gorokhovskyi, however, regarded this fibula as characteristic of the earlier 'Ruzhychanka' phase (Gorokhovskyi 1988, 42).
Another discrepancy concerns the bronze buckle from Grave 105 in the Romankivtsi cemetery. V. Shchepachenko highlights its resemblance to 'items of series *Ж* or *З* according to Gorokhovskyi' and uses this parallel to date it to the late 3rd or the early 4th century AD (Shchepachenko 2024a, 66; Shchepachenko 2024b, 175). In fact, buckles of series *Ж* and *З* belong to the Late Chernyakhiv period, mainly to the final ('Zhuravka') horizon, dated to the last third of the 4th and the first third of the 5th century AD, and cannot be used to date the Romankivtsi find (Gorokhovskyi 1988, 41, 45, Figs 82, 88).
An examination of these interpretations and the accompanying bibliographical references suggests that the chronological position of Chernyakhiv assemblages with glass *phiales* is based primarily on an article by O. Petrauskas (Petrauskas 2017, 126–127, Taf. 1). In our view, reliance on this study alone would have been preferable to incorporating arguments based on inaccurate citations or misinterpretations of other scholars' work.

217 Ritterling 1911; Eggers 1955, 210–211, 215–218, no. 29, Abb. 7.29, Abb. 8.29.

218 For a list of sites and literature, see Puklina 2018, 68–73; Shchepachenko 2024b, 175, Note 38.

219 Puklina 2018, 68–73.

220 See Gorokhovskyi *et al.* 1985, 25–26, 28, Rys. 1.4.

221 Shchepachenko 2024a, 61, 66; Shchepachenko 2024b, 174–175.

222 Gorokhovskiy 1987, 62–64, Rys. 1.2,5; Gorokhovskiy 1988, 36–37, 42–43, 45, Rys. 5; Gereta 2013, 46, 168, Rys. 61.2–3.

223 Gereta 2013, 78–79, 235, Rys. 127.6–7.

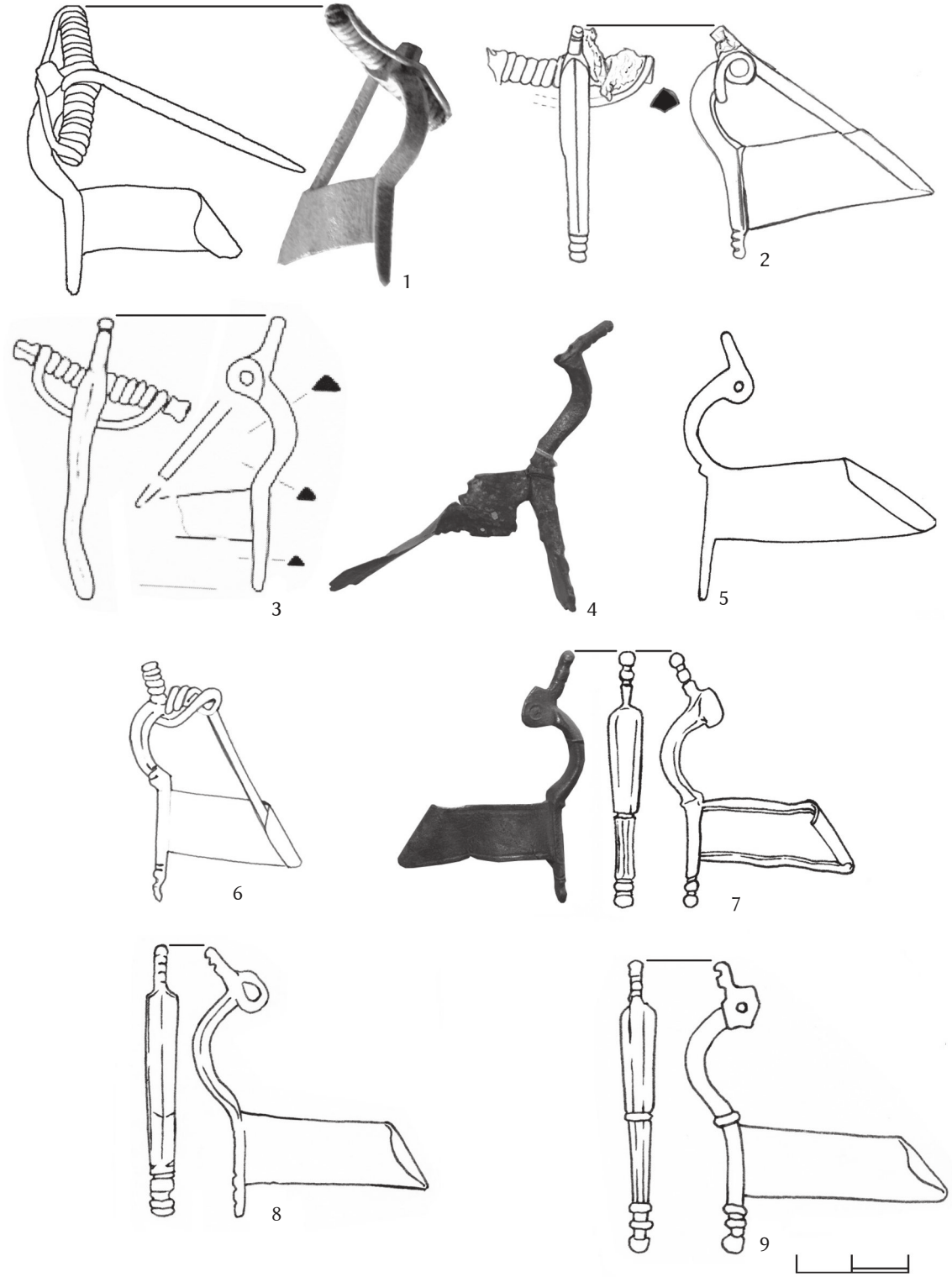


Fig. 16. 'Neslukhiv' fibulae. 1 – Zhuravka, Grave 33, 2 – Cherneliv-Ruskyi, Grave 261, 3 – Poberezhne-1a, cemetery, cultural layer, 4 – Demyaniv, settlement, cultural layer from the 1987 excavation, 5 – Demyaniv, settlement, 1987 excavation, above Building 4, 6 – Cherneliv-Ruskyi, cemetery, Grave 104, 7 – Ripniv, settlement, Excavation 2 in 1960, House 22, 8 – Demyaniv, settlement, excavated in 1968–1970, House 4, 9 – Holovino, settlement, cultural layer.

In summary, every associated settlement feature and grave belongs to the early Chernyakhiv culture, dated to the first half–third quarter of the 3rd century AD. Thus, 'Neslukhiv' brooches are important chronological indicators.[224]

Analogies with a determined chronological position corroborate this dating. 'Neslukhiv' brooches are rare in the find material of the Chernyakhiv culture in Romania;[225] the known specimens have both standard and unique features.

A fibula representing a special variant, No. 10, of the 'Neslukhiv' series was discovered in House 8, a bone workshop, in the Chernyakhiv settlement of Bârlad–Valea Seacă in Romanian Moldova.[226] Its most distinctive stylistic feature is the projection on the head, in the shape of an elongated faceted prism, which clearly imitates the shape and ornamentation of the foot elements of Roman hinged and T-fibulae of the first half–third quarter of the 3rd century AD.[227] Accordingly, this feature may be regarded as a chronological indicator.[228]

Another fibula from Feature 4 in the same settlement has a unique two-spring mechanism, which has no parallel within the 'Neslukhiv' series.[229]

Another piece of corroborating evidence is a bronze casting mould discovered in a building complex dated to the first half of the 3rd century AD in the Roman city of Porolissum, the capital of the military-administrative district of Dacia Porolissensis, originally established as a military camp in the province of Upper Dacia. The mould was used for producing fibulae identical to some specimens found in Chernyakhiv contexts;[230] moreover, several of the almost twenty Group A VII fibulae from Porolissum and other Roman Dacian sites represent direct analogies to fibulae from the Chernyakhiv culture. Comparable examples are also known from the Poieneşti–Vârteşcoiu culture, whose territory partially adjoined that of the Chernyakhiv culture.

The discovery of a semi-finished 'Neslukhiv' fibula at Ohultsi in the upper Siverskyi Donets basin attests, in the opinion of S. Cociş and V. Bârcă, to the local production of such brooches during

224 A fibula of the same series from the settlement of Luka-Vrublevetska, associated with a surface building uncovered in Trench III/XIV in 1957 (the so-called woodworker's dwelling), was formally found together with a fibula with a bent foot and a smooth three-sided bow, similar to those from complexes of the second ('Berezhanka') grave horizon, dated to the last third of the 3rd–first third of the 4th century AD (Tikhanova 1977, 70, 74, Fig. 4.2–3; Gorokhovskiy 1988, 35, 37, 43, Fig. 28).
However, it is premature to treat these finds as a single assemblage, since they were discovered at a considerable distance from one another—approximately 5.5 m apart and at different depths (33 cm and 63 cm, respectively)—and only one of them was found within the debris of the dwelling (Tikhanova 1977, 71, Fig. 2.A3, Ж).
The analysis of dated parallels provides additional arguments for the dating of the series. Finds of Group A VII 'Neslukhiv' fibulae are rare in the find material of Chernyakhiv period sites in Romania.

225 An overview of such brooches with sites of the Poieneşti–Virtişcoi and Militari–Chilia cultures, and those of Sarmatians in eastern and south-eastern Romania, can be found in Cociş – Bârcă 2020, 138, Note.

226 Palade 2004, 58–59, 319, Fig. 32.3; Popuşoi 1996.

227 Gorokhovskiy – Gopkalo 2004, 115–117, Rys. 4.3; Gorokhovskyi *et al.* 1985, 32–34, 39, nos 57–64, Rys. 7.2, Rys. 8; Cociş 2004, 154, 413, Pl. 159.2138–2139.

228 A Roman T-shaped hinged fibula with a foot shape and ornamentation imitated by the projection on the head of the Bârlad fibula was found in a hoard at Chauševo in northern Bulgaria together with a coin of Gordian III (AD 238–244). Another such brooch was discovered at the Roman military camp of Zugmantel on the Rhine, abandoned by the Romans around AD 260 (Gorokhovskyi *et al.* 1985, 39, no. 61).

229 Palade 1980, 247, Fig. 18.6; Palade 2004, 69.

230 Gudea – Tamba 2008, Figs 4–5.

Phase C1 band reflects the migration of certain Germanic groups towards the north-east from the last quarter of the 2nd century AD onwards.[231] However, as noted above, this hypothesis requires considerably more evidence.

'Horodnytsia' series

'Horodnytsia' fibulae were made from silver or copper alloys and are characterised by a knob or button on the head and by a bow ornamented with a series of applied wire rings, most of them ribbed. The bow is slightly curved, might be faceted or smooth, and has a corresponding triangular, trapezoidal, or semicircular (segment- or lens-shaped) cross-section.

Based on a combination of structural, morphological, and metric features, including the characteristics of the spring mechanism, the configuration of the constituent elements, and their dimensions, 'Horodnytsia' fibulae may be classified into three variants:

a) Massive two-spring fibulae with an upper chord, a broad, faceted bow (6–8 mm), and an overall length of 40–50 mm (Horodnytsia, House 1 in Nezvysko, a layer in the Petrykivtsi cemetery) (Fig. 20.1,4).
b) Single- and two-spring fibulae with either a lower or an upper chord, structurally similar to the preceding variant. All are relatively small, with a narrow, faceted or semicircular bow up to 5 mm and an overall length of approximately 40 mm (Priozerne 1,[232] Grave 24 in Ruzhychanka, Grave 5 in Toky, Grave 130 in Cherneliv-Ruskyi) (Fig. 20.3,5,6).
c) Massive single-spring[233] fibulae with a segment- or lens-sectioned, ca. 8 mm broad bow and a total length over 40 mm[234] (stray settlement finds from Kostyantivka and Pasiky). A single perforation in the spring plate indicates this construction, although the form of the chord remains unknown because there is no find with a spring mechanism.

Variant A and B brooches are dated by grave finds, such as Grave 24 in Ruzhychanka, Grave 5 in Toky, and Grave 130 in Cherneliv-Ruskyi. These assemblages yielded an Eggers Type 189 glass cup,[235] a bent-foot fibula of variant A1 (Cherneliv-Ruskyi, grave 130), a comb with a low subtriangular back (Ruzhychanka, grave 24), and a bead of Group 1 according to O. Gopkalo.[236]

Accordingly, these complexes correspond chronologically to the above-mentioned burials containing fibulae of the 'Neslukhiv' series and may be dated to the early, 'Ruzhychanka' horizon in cemeteries of the Chernyakhiv culture, corresponding to the second third–third quarter of the 3rd century AD.[237]

Comparable glass cups are characteristic particularly of the early and mid-3rd century AD, although they occasionally occur in somewhat later assemblages. Consequently, the dating proposed by H. J. Eggers to the second half of the 2nd century AD, within Phase C1,[238] is now outdated.

Grave 5 at Petrykivtsi contained a foot-and-catchplate fragment of a fibula tentatively assigned to the 'Horodnytsia' series and a military brooch with a spiked foot, characteristic of Wielbark culture assemblages of Subphase C1b, dated to the late first quarter—second third of the 3rd century AD.[239]

231 Cociş – Bârcă 2014, 206–209, Fig. 7.8–9.
232 Details of the chord and bow cannot be discerned in the published photos.
233 Indicated by a single hole in the spring plate, the chord of the spring is missing.
234 The exact length cannot be measured because the head and foot ends have broken off.
235 Horodnytsia; see Eggers 1951, 151, no. 2052.
236 Gopkalo 2008, 103–104, Fig. 3.5.
237 Gorokhovskiy 1987, 62–67, Rys. 2.1; Gorokhovskiy 1988, 36–37, 42–43, 45, Rys. 1–2, Rys. 11.
238 Eggers 1955, 202–203.
239 Magomedov – Levada 1993, 92–93, 180, Rys. 39.4,7; Belyavets 2007, 316, 319, Rys. 7.6,1–2.

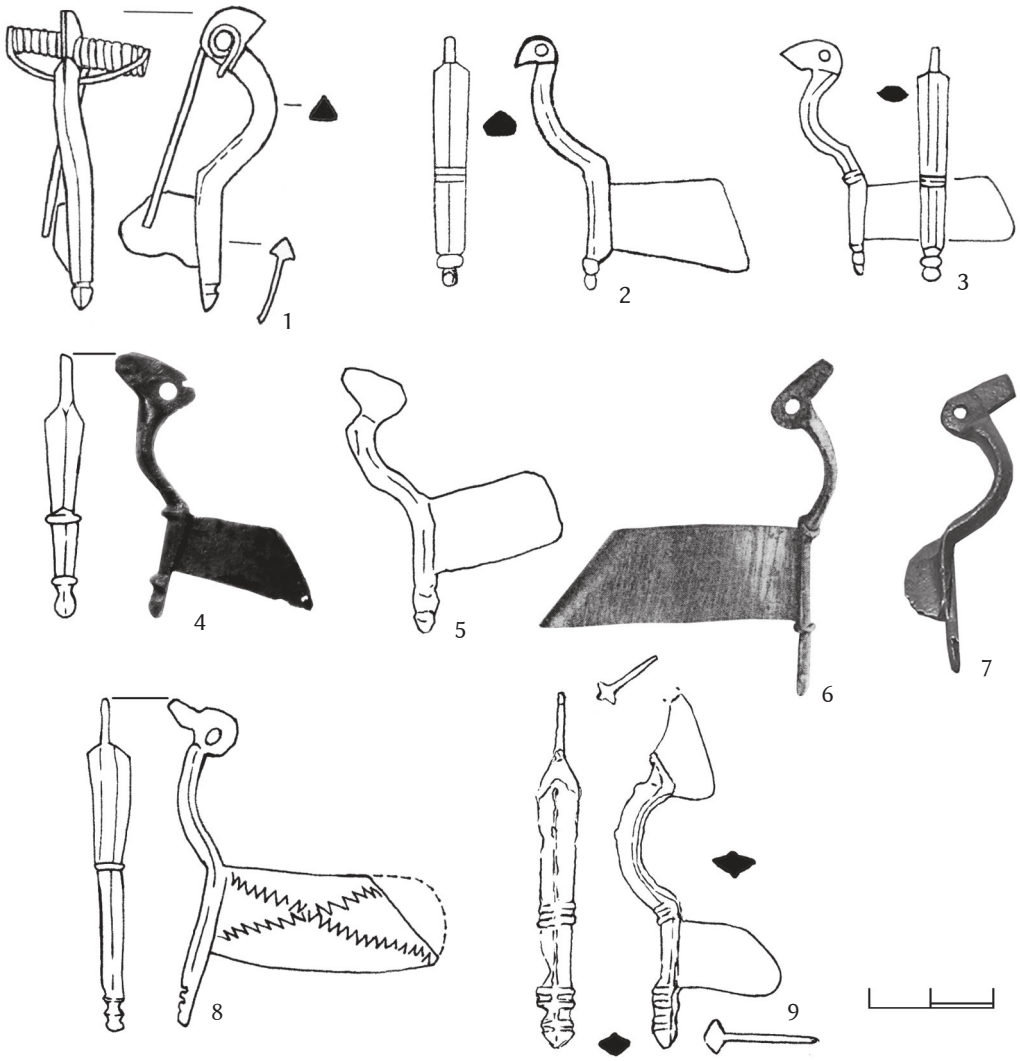


Fig. 17. 'Neslukhiv' fibulae. 1 – Lehedzyne, cemetery, cultural layer from the 2010 excavation, 2 – Zavhorodne, settlement, stray find, 3 – Ryabukhino-1, settlement, stray find, 4 – Luka-Vrublyevetska, settlement, excavation III/XIV, surface house, 5 – Ruzhychanka, cemetery, Grave 13, 6 – Neslukhiv, settlement, stray find, 7 – Ripniv, settlement, Excavation 2 in 1959, stray find, 8 – Demyaniv, settlement, 1968–1970 excavations, House 4, 9 – Ohultsi, settlement, stray find, semi-finished product.

A pair of two-spring fibulae analogous to the find from Toky are known from Grave 36 at Petrovichi in western Belarus, a cemetery of the Wielbark culture. The grave also contained a bent-foot brooch,[240] a comb with a low subtriangular back, a large assemblage of beads, and other grave goods dated generally to Subphase C1b, possibly extending into the beginning of phase C2, corresponding to the late first quarter—second half of the 3rd century AD.[241]

V. Belyavets compares this fibula with Almgren's Form 161 and A. Kokowski's Variant ZM-25 of the Masłomęcz group, assigning it to Subphase C1a, corresponding to the end of the 2nd century and

240 V. Belyavets draws a parallel to Almgren's Form 161 and Kokowski's ZM–25 variant of the Masłomęcz group, assigned to Subphase C1a, corresponding to the end of the 2nd – first decades of the 3rd century AD (Belyavets 2007, 316, 321, Fig. 8.3). It must be noted, however, that this is a brooch variant typical to the Wielbark culture, with a quadrangular, rhomboid-sectioned bow adorned along the outer edge with a row of small incisions imitating stamped 'goose-foot' patterns. Similar brooches are occasionally also found in Chernyakhiv contexts, but those are usually younger.

241 Belyavets 2007, 316, 318, 321, Fig. 8.1–2.

the first decades of the 3rd century AD.[242] It should be noted, however, that this is a typical Wielbark fibula variant characterised by a quadrangular bow of rhomboid cross-section, its outer edge adorned with a row of small incised 'goose-foot' patterns. Similar brooches also occasionally occur in Chernyakhiv assemblages, though in later contexts.

An additional indication of the archaic position of the complexes containing these fibulae within the relative chronology of the Chernyakhiv cemeteries is their location within the earliest sections of the burial grounds.[243]

Thus, there are sufficient grounds for synchronising both dated variants of the 'Horodnytsia' series with the fibulae of the 'Neslukhiv' series and for regarding them as a second important chronological indicator of early Chernyakhiv antiquities of the 3rd century AD, especially in relation to burial assemblages dating to the second third and third quarter of the century.

Describing a fibula from Romania associated with a Militari–Chilia complex and analogous to the second variant of the series under consideration, Gh. Bichir suggested that such objects remained in use until the beginning of the 4th century AD.[244] However, no reliable evidence currently supports such a late chronology for Chernyakhiv culture sites.

The chronology of the third variant of the Horodnytsia series remains uncertain owing to the absence of securely dated assemblages. It may only be tentatively assumed that, on typological grounds, these fibulae are somewhat later than the first two variants.

Unique ('non-series') variants

Group A VII brooch finds from the Chernyakhiv culture include several specimens that represent rare forms and cannot be assigned to any typological series.

Variant 1 – represented by a find from Pit 16 at the Nezvysko settlement in the Dniester region (Fig. 21.3). Its basic design and the dimensions of the bow resemble Almgren's Form 193, but it has an upper chord threaded through a perforation in the spring plate above the spring.

A. K. Ambroz described it as a unique brooch from southern Eastern Europe, characterised by an 'S-shaped bow and a button at the end of the foot'. He compared it with Central European fibulae from the Elbe region, characteristic of sites in the Czech Republic, Germany, and Denmark, while emphasising the preliminary character of this identification, which was based solely on a published photograph.[245]

Direct examination of the original fibula allowed a substantial refinement of classification.[246] The closest parallels for the object are found not in the Elbe region but in the find material of the Przeworsk culture, dated to the late 2nd and early 3rd centuries AD, whose characteristic features include the same decoration of the head with several grooves.[247]

A similar fibula, unfortunately known only from a schematic drawing, originates from the Chernyakhiv settlement of Horodnytsia in the Dniester region.[248]

Variant 2 – represented by a stray find from Pekari in the Middle Dnipro region (Fig. 21.6). This relatively large and massive fibula is characterised by a pronounced semicircular or crescent-shaped

242 Belyavets 2007, 316, 321, Fig. 8.3.

243 See, for example, Gopkalo 2012, 337–339.

244 Bichir 1984, 46–47, Pl. 39.1.

245 Ambroz 1966, 74, Tab. 21.3.

246 Gorokhovskyi – Gopkalo 2004, 121, 124, Rys. 9.1.

247 Mączyńska 1999, 106, Tab. 7.3,6, Tab. 8.1–2.

248 Gorokhovskiy – Gopkalo 2004, 121, 124, Rys. 9.2.

bow, a ribbed foot, and spherical knobs on both the head and the foot. Based on the slot in the head, it possessed an upper chord of the so-called 'West Sarmatian' type.[249]

Similar brooches are known from contexts dated to the second half or the end of the 2nd century, or to the turn of the 2nd and 3rd centuries AD, in Slovakia.[250]

Variant 3 – represented by a fibula from the Verkhnya Lypytsia settlement (Fig. 21.5). It has a crescent-shaped bow, a ribbed foot, and spherical knobs on both the head and the foot. However, it is smaller and less massive than the specimen from Pekari, having a slender bow of circular cross-section and a somewhat elongated foot.

Its characteristics likewise recall the archaic forms of Almgren's Group A VII fibulae and suggest that it is broadly contemporary with the fibula from Pekari.

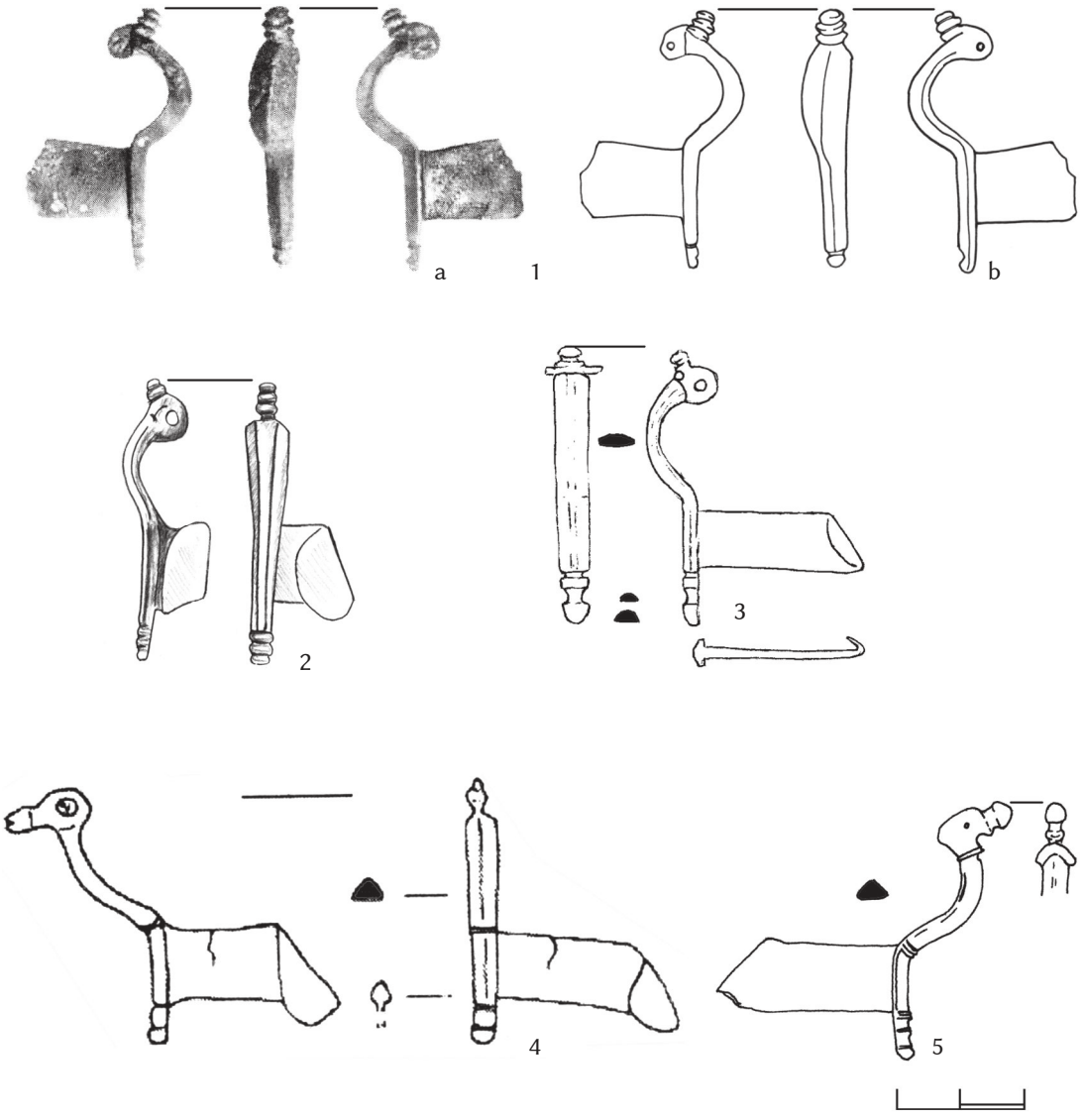


Fig. 18. 'Neslukhiv' fibulae. 1 – Zhovtantsi, stray find, 2 – Verenchanka-Captain Zota Street, settlement, cultural layer, 3 – Ridnyi Krai-3, settlement, 1984 excavation, House 1, 4 – Viytenky, cemetery, surface find, 5 – unknown provenance.

249 Ambroz 1966, 72.

250 Kolník 1964, 416, Obr. 1.3; Kolník 1965, 190, 194, 198, 218, Obr. 5.1, Obr. 7.5.

Variant 4 – represented by a fibula from House VIII at the Lepesivka settlement in Volhynia (Fig. 21.1). It is characterised by a head with a semicircular, shield-like plate decorated with incisions around the edge; it also has an upper chord passing through a perforation in the spring plate above the spring. Its bow and foot resemble certain 'Neslukhiv' brooches. Its parallels are currently known only from sites of the Poieneşti–Vârteşcoiu culture in Romanian Moldova, dated to the late 2nd and 3rd centuries AD.[251]

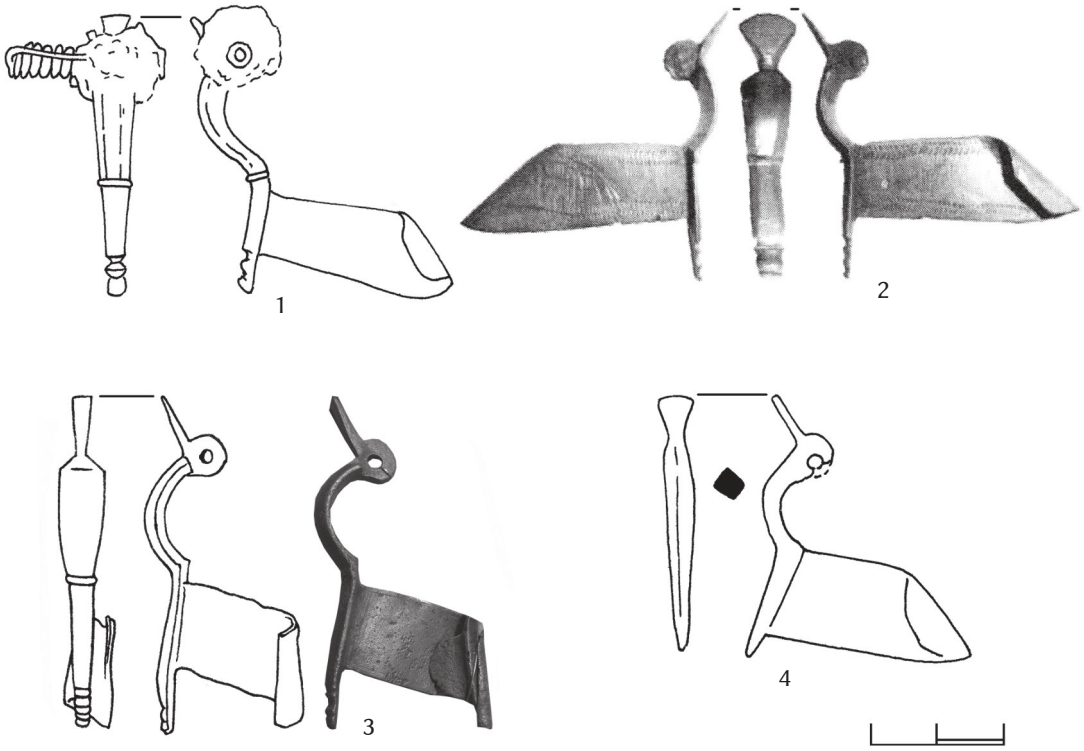


Fig. 19. 'Neslukhiv' fibulae. 1 – Luka-Vrublyevetska, settlement, House 2, 2 – Zhovtantsi, stray find, 3 – Ripniv, settlement, cultural layer from Excavation 2 in 1959, Square 14 *Б*, 4 – Luka-Vrublyevetska, settlement, House 1.

Variant 5 – represented by a so-called 'symmetrical' fibula from House 3 at Boromlya (Fig. 21.2). Its trapezoidal shield-shaped headplate and footplate are identical; they are connected by a narrow, faceted bow. Its spring mechanism, with an upper chord, resembles that of the Lepesivka fibula.

This brooch was also described as 'butterfly-shaped' and compared with various brooches from Wielbark cemeteries at Pruszcz Gdański and Oksywie in Poland, the richly furnished 'princely' grave at Stráže in Slovakia, and settlement finds from Târgşor and Dărmăneşti in Romania.[252]

Of these, only the find from Dărmăneşti, a site of the Poieneşti–Vârteşcoiu culture, may be regarded as a close analogy to the Boromlya fibula.[253] Gh. Diaconu dated this object to AD 220–250, together with a similar brooch from Târgşor, and suggested that such objects may have remained in use between AD 250 and 300.

The house complex at Boromlya also contained fragments of Type D light pottery *amphorae* with an elongated biconical body, closely resembling and probably contemporary with those from House 1

251 Bichir 1973, 87, Pl. 171.4–6.

252 Lyubichev 2010, 145, 147, Fig. 6.II.1.

253 Măţasă *et al.* 1961, 345–346, Fig. 6.2.

and from a Late Sarmatian grave at Gradeshka on the Lower Danube, dated to the late 3rd and early 4th centuries AD.[254] These finds outline the chronological position of the brooch from Boromlya.

The origin of Group A VII 'Sarmatian' fibulae in the Chernyakhiv culture

Group A VII high-catchplate fibulae are a key chronological and ethnic indicator in early Chernyakhiv find materials. Accordingly, the question of their origin is directly linked to the broader problem of the culture's genesis. As noted in Chapter I, the main aspects of the origin of Group A VII fibulae in a Chernyakhiv context were examined by the present authors in a 2004 study. The material discovered and published since the mid-2000s allows us to reassess our earlier observations and conclusions, particularly regarding fibulae of the 'Sarmatian' type, a substantial part of Group A VII within the Chernyakhiv culture. These finds, published, for example, in studies devoted to the topic by M. Mączyńska, include items matching the 'Neslukhiv', 'Horodnytsia', and 'Dnipro' series or are interpreted as isolated (non-series) variants in our classification.[255]

Given the distinct morphological characteristics of these subtypes and variants, the origin of each series should be considered separately, with reference to a broad range of analogies from other, primarily neighbouring, archaeological cultures.

'Neslukhiv' series

Analogies to 'Neslukhiv' brooches in the Chernyakhiv culture, including distant ones featuring certain morphological differences, are known primarily from sites in the Lower and Middle Danube region, including the Roman province of Dacia and its extensive multi-ethnic barbarian periphery.

During the 2nd to early 4th centuries AD, the eastern part of this periphery was inhabited by groups associated with the Poieneşti–Vârteşcoiu and Militari–Chilia archaeological cultures, identified as the Carpi and the so-called 'Free Dacians' known from written sources. Along the eastern frontier, in the interfluve of the Prut and Siret rivers, Chernyakhiv sites with 'Neslukhiv' brooches in their find material occur in direct proximity to those of the Poieneşti–Vârteşcoiu culture.[256]

To the north-west of the Dacian borders, in the upper Tisza basin, archaeological sites with heterogeneous assemblages combining local and intrusive Przeworsk elements, commonly described as 'Dacian–Vandalic', coexisted with sites of the Przeworsk culture.[257] South-west of these areas, adjacent to the Dacian *limes*, lay the territory of the Sarmatians of the Tisza region and the Tisza–Danube interfluve, forming the eastern sector of the barbarian periphery of Lower Pannonia.

The northern frontiers of this Roman province, together with those of neighbouring Upper Pannonia, were inhabited by Germanic tribes, the Quadi and Marcomanni, who, together with the Sarmatians, the Vandals, and other Danubian barbarian groups, repeatedly invaded Roman territories during the second half of the 2nd century AD, in the period of the so-called Marcomannic Wars.[258] Coeval sites of the Przeworsk culture have also been found within Sarmatian territory.[259]

254 Gudkova – Redina 1999, Rys. 2.1.

255 Mączyńska 1999, 96–98, 110–111, Map 1: 89–95, 99, 102, 105–107, 109–115; Mączyńska 2011, 69, 306–309, notes 107–114, 118, 120, 123–125, 127–130, 161–181, Abb. 28; Gorokhovskyi – Gopkalo 2004, 115–119, 121–124. References are also provided here to the catalogue in the appendix (Gorokhovskyi – Gopkalo 2004, 125–128).

256 Cociş – Bârcă 2020, 180, Pl. 16,4, 8, 12, 14, 25. See also the corresponding sections in the preceding chapters of this article.

257 Gindele 2010; Istvánovits – Kulcsár 2018, 265, 225–226 kép; Soós 2019.

258 Tejral 2017; Istvánovits – Kulcsár 2018, 227–318, 187, 188, 199, 232–233, 242 kép.

259 Istvánovits – Kulcsár 2018, 296, 259 kép.

The over thirty finds of high-catchplate brooches with an upper chord from sites in Roman Dacia are key to the question under discussion.[260] The proportions of relatively small specimens are constant; besides, they have subtriangular or trapezoidal bows attached often at a sharp angle to the foot, sometimes accentuated by a rib. Notably, such brooches in numbers are only known from Dacia among the Roman.[261]

Most such brooches—ca. twenty—are known from Porolissum, where a casting mould attests to their local production (Fig. 22.1). Brooches that may have been produced in the related workshop—possibly including specimens cast in the mould discovered—were also found at the marketplace adjacent to Porolissum (Fig. 22.2).[262]

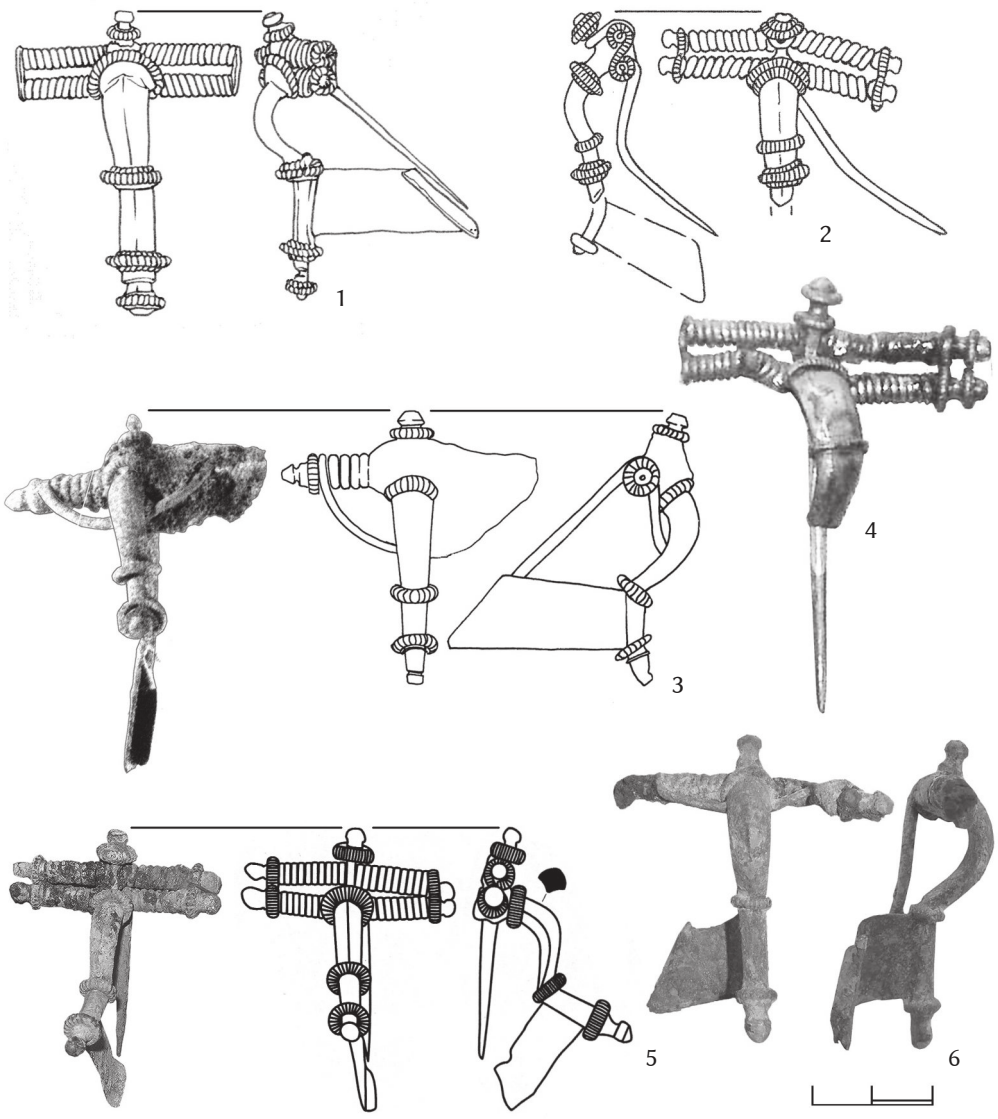


Fig. 20. 'Horodnytsia' fibulae. 1 – Horodnytsia, grave, 2 – Petrykivtsi, cemetery, cultural layer, 3 – Ruzhychanka, cemetery, Grave 24, 4 – Nezvysko, settlement, House 1, 5 – Toky, cemetery, Grave 5, 6 – Cherneliv-Ruskyi, cemetery, Grave 130.

260 Cociş 2004, 133–135, 211, 367–368, notes 1594–1617, Pl. 113.1594–1605, Pl. 114.1606–1616; Bârcă 2023, 210, Fig. 9.1–8.

261 Isolated specimens of similar fibulae, representing individual variations, are known from Bărboşi in Lower Moesia (Sanie 1981, Pl. 47.10), Viminacium in Upper Moesia (Redžić 2007, 55–56, Tab. 26.289), and Lauriacum in Noricum (Jobst 1975, 75–76, 174, no. 193, Taf. 26.193).

262 Opreanu *et al.* 2020, 73, Fig. 4.23, interpret these fibulae as likely belonging to barbarian women sold into slavery.

Comparable items, cast in the same or similar moulds and bearing with two perforations for securing the axes of two springs or a single axis and the upper chord in the headplateare known from several sites north-west and east of the Dacian *limes*, including a fibula from the settlement of Humenné in eastern Slovakia (Fig. 22.3),[263] three finds from the settlement of Bârlad-Prodana of the Poieneşti–Vârteşcoiu culture in Romanian Moldavia (Fig. 22.5),[264] Grave 15 of the Sohodor cemetery (Fig. 22.4),[265] and Building 4 in the Chernyakhiv settlement of Bârlad-Valea Seacă (Fig. 22.6).[266]

A semi-finished or defective, unfinished specimen of the same variant was published from an unknown location in Hungary (Fig. 22.7).[267]

Other brooches from Roman Dacia, especially the amphitheatre at Porolissum[268] and the fort of Ilişua[269]represent further analogies and possibly direct prototypes of the 'Neslukhiv' series.

Analogies to the 'Neslukhiv' series were also found east of the Dacian *limes* at sites belonging to the Poieneşti–Vârteşcoiu and Militari–Chilia cultures, including Cucorăni (Fig. 11.7),[270] Grave 1410 in Poieneşti (Fig. 12.15),[271] Sohodor (Fig. 11.6, Fig. 13.23),[272] Târgşor (Fig. 13.26),[273] and others.

Similar fibulae are also known from cultural layers and features of several barbarian (Germanic) settlements situated near the northern frontiers of the two Pannonias, such as Ipolytölgyes in Hungary[274] and Chotín VII (Fig. 23.6),[275] Veľký Meder,[276] Hamuliakovo (Fig. 23.3,5),[277] Bratislava-Trnávka,[278] Bratislava-Devínska Nová Ves,[279] Zohor (Fig. 23.3),[280] as well as at some distance from the Pannonian *limes* at Branč (Fig. 23.2)[281] in south-western Slovakia. They are also known from southern Moravia (Drnholec-'Holenická pole') (Fig. 23.9)[282] and Kletnice (Fig. 23.10).[283]

263 Strakošová 1992, Obr. 52.3; Cociş – Bârcă 2014, Fig. 2.15.

264 Bichir 1973, 103; Cociş – Bârcă 2020, Pl. 4.26.

265 Cociş – Bârcă 2020, Pl. 5.33.

266 Palade 1980, Fig. 18.6; Cociş – Bârcă 2020, Pl. 4.21,7.

267 Behrens 1954, Abb. 10.2.

268 Bajusz – Cociş 1995, Pl. 2.14.

269 Gaiu – Cociş 2001, 90–91, Pl. 2.10; Cociş *et al.* 2010, Pl. 2.23.

270 Croitoru 2011, Fig. 24.670.

271 Spânu 2019, Pl. 64.3–4.

272 Croitoru 2011, Fig. 19.613.

273 Cociş – Bârcă 2020, Pl. 6.35.

274 Erdeli – Lamiová-Schmiedlová 1971, Obr. 5.3.

275 Romsauer *et al.* 2019, Obr. 48.2–3.

276 Varsik 2011, Abb. 5.4–5.

277 Iván – Ölvecky 2014, Fig. 8.8–9.

278 Varsik 2003, Abb. 8.7; Abb. 18.3.

279 Elschek 1997b, Obr. 20.6.

280 Elschek 1997a, Obr. 16.3.

281 Vladár 1962, Obr. 86.2; Kolník *et al.* 2007, Obr. 13.1. At the settlements of Branč and Chotín VII in south-western Slovakia (Romsauer *et al.* 2019, Obr. 61.1–8), as well as at Hroznová Lhota II, Želetice, and Ostrožská Nová Ves V in southern Moravia (Zeman 2017, Obr. 8.19–20.22), Group A VII fibulae comparable to those of the Chernyakhiv culture occur together with spindle whorls of Type B112 according to B. Magomedov. The latter are likewise known from the Chernyakhiv settlements of Cherepyn, Ripniv, Bovshiv, and Demyaniv, as well as from the settlement of Bârlad-Valea Seacă discussed above (Magomedov 2015, 126–127, Fig. 5).

282 Komoróczy *et al.* 2019, Obr. 19.15.

283 Klanicová – Komoróczy 2008, Obr. 6. These were accompanied by finds of *terra sigillata* from Rheinzabern, Westerndorf, and even Pfaffenhofen, dating to the late 2nd–first half of the 3rd century AD. According to J. Tejral, their use may have continued beyond the mid-3rd century AD (Tejral 2011, 55).

V. Bârcă and S. Cociş[284] clearly delineated the 'barbarian' production region of Group A VII fibulae between the outer spurs of the Western Carpathians and the Eastern Alps based on five sites clustered along the Danube bend in south-western Slovakia, south-eastern Bohemia (southern Moravia), and at both banks of the Morava River; however, these workshops produced typologically different items in the late 2nd and 3rd centuries AD. Local production is attested by a bronze casting mould at the settlement of Kleinhöflein[285] in Lower Austria,[286] pottery casting moulds in a jewellery workshop at the settlement of Pasohlávky in southern Moravia, and semi-finished items or rejects[287] and finished products[288] found at other sites. Assumedly, the workshop at Pasohlávky emerged near the Pannonian frontier, opposite the Roman fort at Mušov, owing to the proximity of barbarian craftsmen to a local metal source.[289]

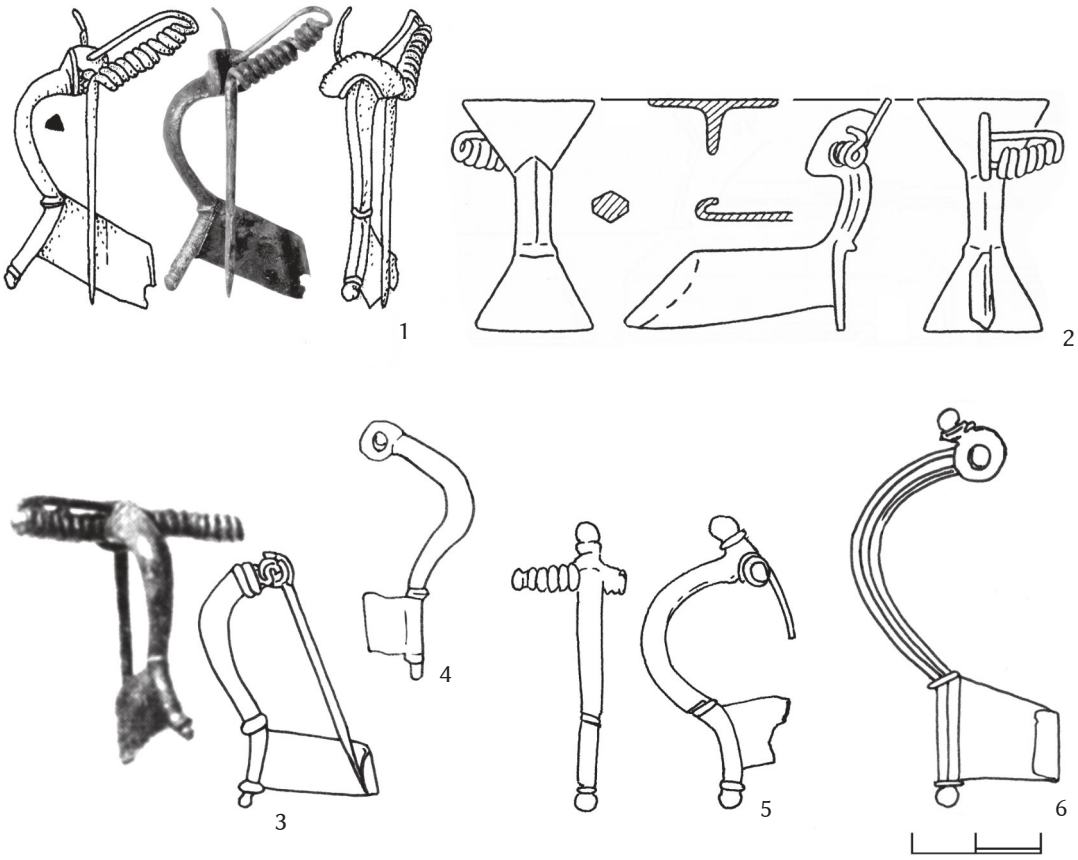


Fig. 21. Unique ('non-series') fibulae. 1 – Lepesivka, settlement, House VIII, 2 – Boromlya, settlement, House 3, 3 – Nezvisko, settlement, Pit 16, 4 – Horodnytsia, settlement, cultural layer, 5 – Verkhnya Lypytsia, cultural layer, 6 – Pekari, stray find.

284 Bârcă – Cociş 2022, 259, Fig. 6.2–5, 13; Bârcă 2023, 209, Fig. 8.2–5.13.

285 It was found together with a fragment of *terra sigillata* dating to the late 2nd–early 3rd century AD (Kren – Pollak 2008, Abb. 41.5).

286 Kren – Pollak 2008, Abb. 41.1.

287 Semi-finished high-catchplate brooches and/or rejects are known from the settlements of Bratislava-Devínska Nová Ves and Zvončin in south-western Slovakia (Bazovský 2009, Obr. 1.10–11), Drnholec-'Holenická pole' in southern Moravia (Komoróczy *et al.* 2019, Obr. 21), and a 4.25 cm long specimen from Bernhardsthal in Lower Austria (Stuppner 1990, 236, Abb. 917).

288 A fibula from Neurissen, cast in a mould from a workshop at Pasohlávky (Klanicová – Komoróczy 2008; Klanicová 2010; Tejral 2011, Abb. 14.6), has a *terminus post quem* provided by construction materials from a dismantled section of the baths of the Roman fort, dating to around the AD 180s.

289 Bazovský 2009, 436.

This production circle, provisionally termed the 'Moravian Circle', likely supplied not only the inhabitants of Germanic settlements in the region but also communities west and north of that with jewellery.

In morphological terms, the 'Neslukhiv' series and their Danubian analogies are unrelated to the Germanic fibulae cast in the moulds found at Kleinhöflein and Pasohlávky or comparable ones, as those have longer bows and shorter, sometimes outwardly bent, feet. By contrast, they resemble considerably more brooches cast in the mould found in the Porolissum workshop and those made using the bronze mould of unknown provenance in the collection of the Vienna Natural History Museum.[290]

Roman bronze casting moulds apparently served for producing items in large series, clearly intended also for consumers beyond the provinces. Barbarian craftsmen rarely used such moulds, preferring more accessible, cheaper pottery moulds instead. The find material of the 'Moravian Circle' and other finds of moulds and semi-finished (or defective) items from other locations in the Danubian Barbaricum suggest this. The discovery of a clay casting mould at Ecser 7 (Hungary)[291] indicates that 'Sarmatian' fibulae were also manufactured locally by Sarmatian communities at the eastern periphery of Roman Pannonia. It is particularly worth highlighting that the finds from Porolissum include parallels or prototypes of fibulae with a very broad subtriangular, trapezoidal, or almond-shaped bow, characteristic of Sarmatian sites in the Tisza River basin and the Tisza–Danube interfluve.[292]

It should also be borne in mind that the specialised knowledge and practical skills required for the production of cast fibulae could only be acquired through prolonged training and practical experience. Mastery of the technology of non-ferrous metal alloys, the techniques employed in their processing, and the complex sequence of manufacturing operations involving a variety of specialised tools necessarily depended upon the transmission of knowledge and professional skills from master to apprentice. Moreover, given the regulated nature of production in the Roman world, including the age- and gender-based division of labour, it is difficult to envisage that such a specialised and technically demanding craft as jewellery manufacture could have been practised by untrained self-taught artisans. Production skills were therefore most probably transmitted within hereditary professional workshops specialising in fibulae, where the various stages of the manufacturing process were presumably divided among craftsmen. These workshops were, in all likelihood, provincial Roman in character.

Earlier, while studying fibulae of the 'Sarmatian' type from south-western Slovakia, T. Kolník suggested that their prototypes were late provincial Roman strongly profiled fibulae with a high catch-plate, especially Type A84 and related forms, characteristic of the Middle and Lower Danubian provinces and widely used by barbarians in Central and Eastern Europe during the second half of the 2nd century AD.[293] He also sees certain 'hybrid' or 'transitional' forms as deriving directly from these types.[294]

290 Gschwantler – Winter 1991, 134, Abb. 7. The authors associate the mould with provincial Roman artefacts from Austria (the territory of Noricum or Pannonia). L. Schulte suggested that it could also be found in Hungary (Schulte 2011a, 309, no. 3250). However, given that the museums of Vienna hold numerous provincial Roman finds from the former Austro-Hungarian region of Transylvania, this specimen could also be found in the territory of Roman Dacia, where such fibulae were proven to have been produced in a workshop in Porolissum.

291 Istvánovits – Kulcsár 2016, 124, Fig. 3.1; Istvánovits – Kulcsár 2018, 291, 254. kép 1.

292 Cociş 2004, Pl. 113.1594,1598; Pl. 114.1606–1616; Opreanu *et al.* 2020, 73, Fig. 4.21; Vaday 1989, Abb. 12.11,15; Cociş – Bârcă 2014, Fig. 2.4–5,7,10; Istvánovits – Kulcsár 2018, 291, 254. kép 3; Nagy 2023, Abb. 69, 92, 177, 187.

293 Kolník 1965, 194, Obr. 7.2.

294 Kolník 1965, 194, Obr. 7.3.

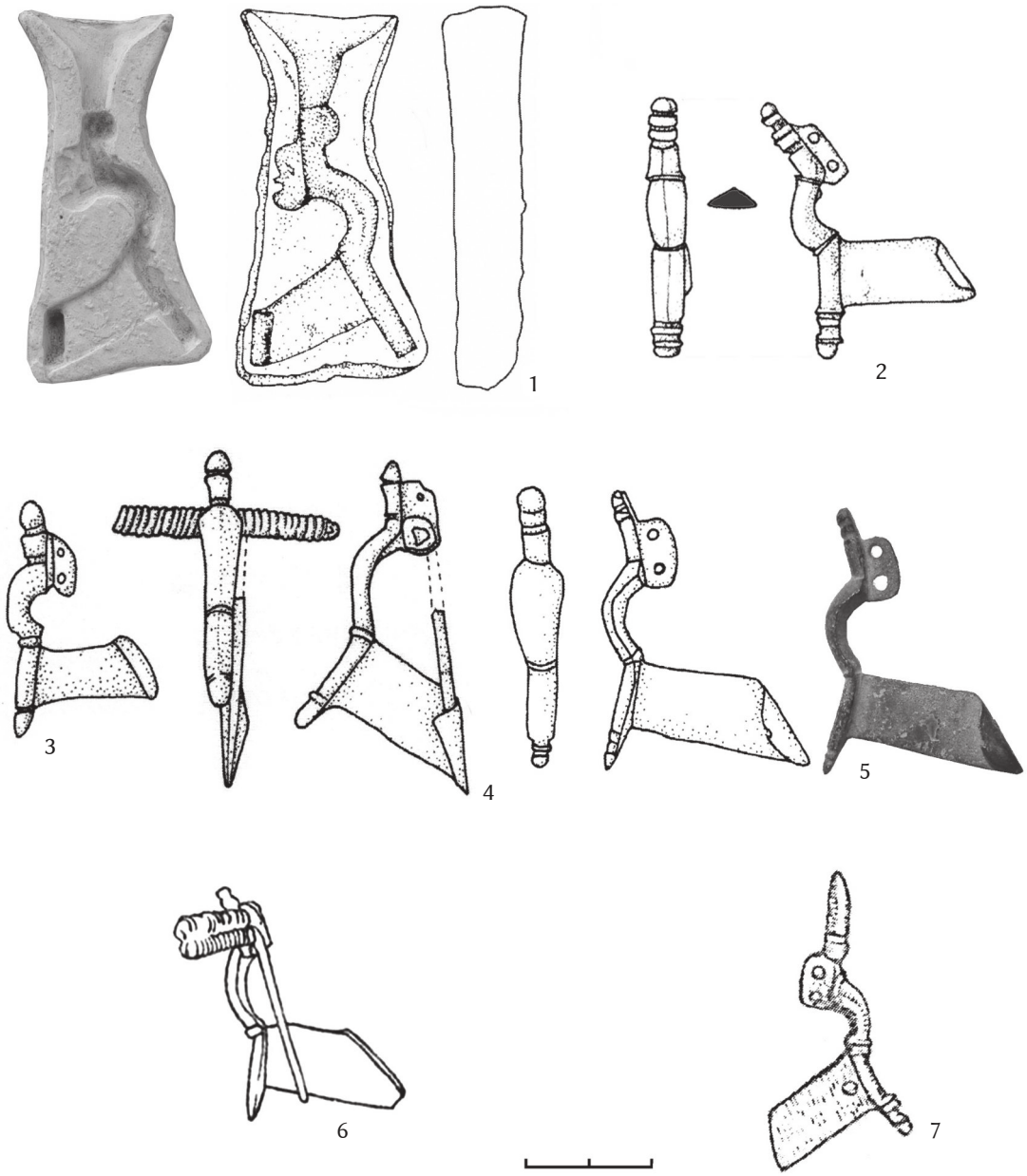


Fig. 22. The mould from Porolissum and fibulae that could be cast in it. 1 – The mould from Porolissum (Gudea – Tamba 2008, Figs 4–5), 2 – Porolissum *vicus* (Opreanu *et al.* 2020, Fig. 4.23), 3 – Humenne (Strakošová 1992, Obr. 52.3; Cociş – Bârcă 2014, Fig. 2.15), 4 – Sohodor, Grave 15 (Cociş – Bârcă 2020, Pl. 5.33), 5 – Bârlad-Prodana (Cociş – Bârcă 2020, Pl. 4.26), 6 – Bârlad-Valea Seacă (Palade 1980, Fig. 18.6), 7 – Hungary (Leibniz Römisch-Germanisches Zentralmuseum Mainz, Inv. no. O21579) (Behrens 1954, Abb. 10.2).

His observation is now supported by a series of finds of such hybrid-transitional fibulae from the Danube region (Fig. 24). High-catchplate fibulae in Dacia include specimens that clearly reproduce the design of the strongly profiled A84 fibulae and related forms, most notably the distinctive expanded head and the bow with concave sides.[295] Comparable finds are known both from the Roman provinces and their barbarian periphery, including a brooch of unknown provenance published by T. Kolník from the collection of the Bratislava museum (Fig. 24.2), finds from the marketplace at Porolissum (Fig. 24.1), the Sarmatian cemetery of Madaras in Hungary (Fig. 24.3), the Poieneşti-

295 Cociş 2004, Pl. 24–38, Pl. 113.1597,1604–1605, Pl. 114.1607,1610,1615; Opreanu *et al.* 2020, 73, Fig. 4.22.

Vârteşcoiu settlement at Cucorăni in north-eastern Romania (Fig. 24.4), and the Roman necropolis of Viminacium in Upper Moesia (Fig. 24.5). Nearly all of these fibulae feature an identical spring mechanism, with an upper chord threaded through an additional perforation in the headplate to secure the spring mechanism, which may indicate a common source of origin.

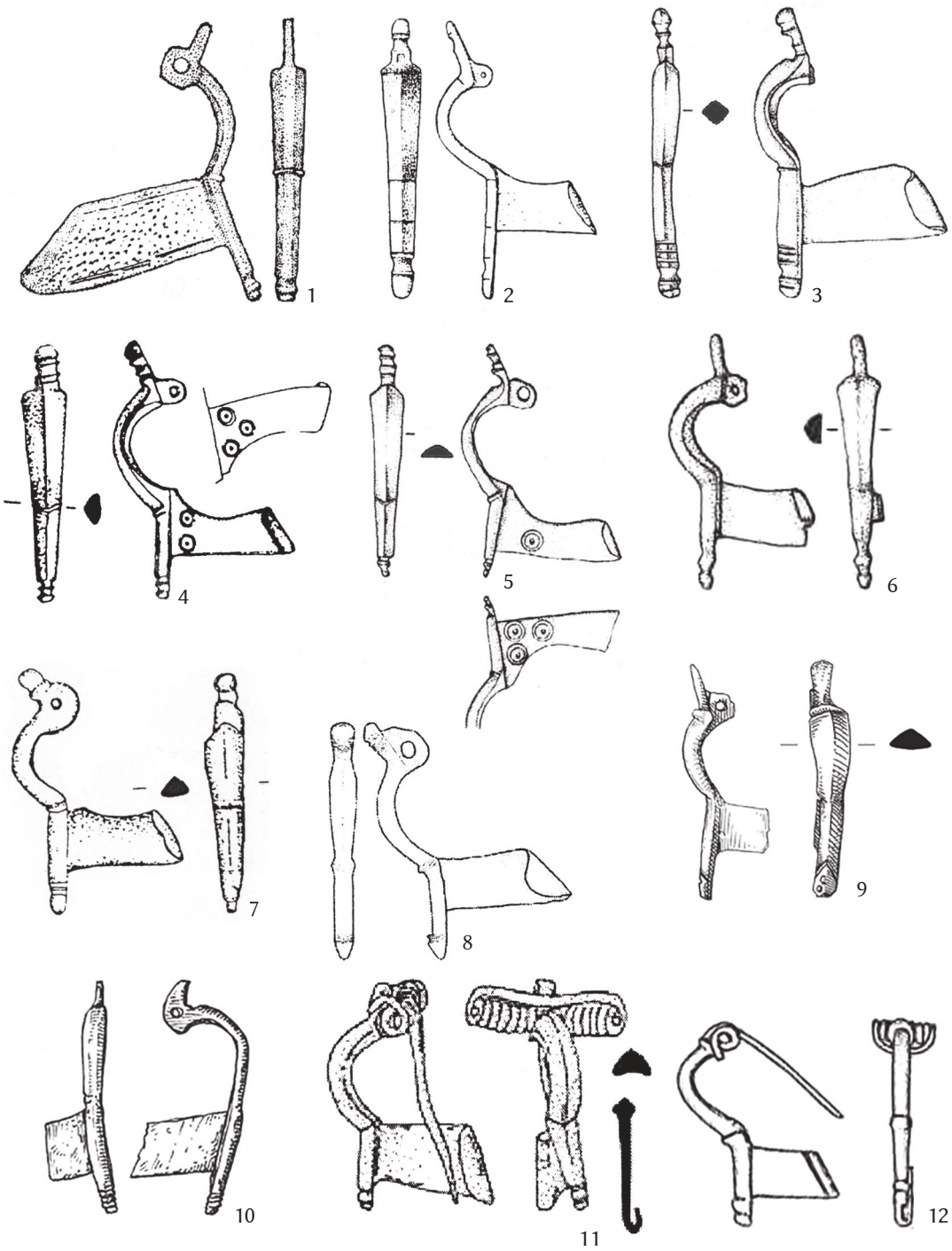


Fig. 23. 1 – Barboşi (Sanie 1981, Pl. 47.10), 2 – Branč (Vladar 1962, Obr. 86.2; Kolnik *et al.* 2007, Obr. 13.1), 3 – Hamuliakovo (Iván – Ölvecky 2014, 8. kép), 4 – Bratislava-Devínska Nová Ves (Elschek 1997a, Obr. 20.6), 5 – Vel'ky Meder (Varsik 2011, Abb. 5.5), 6 – Chotín VII (Romsauer *et al.* 2019, Obr. 48.2), 7 – Zohor (Elschek 1997a, Obr. 16.3), 8 – Poienești, Feature 1163 (Spânu *et al.* 2018, Fig. 7.2), 9 – Drnholec 'Holenická pole' (Komoróczy *et al.* 2019, Obr. 19.15), 10 – Kletnice, Feature K691 (Klanicová – Komoróczy 2008, Obr. 6), 11 – Strážnice I (Zeman 2017, Obr. 28.3), 12 – Chotin VII (Romsauer *et al.* 2019, Obr. 48.3).

The processes behind the 'hybridisation' of features culminating in the emergence of the 'Sarmatian' fibula type cannot be reconstructed in every detail. Nevertheless, it is entirely plausible that craftsmen at the barbarian periphery of the Danubian provinces modified high-catchplate fibulae in attempts to recreate or imitate earlier, traditional, prestigious, and 'fashionable' forms, thus creating the transitional variants described above. These variants may be regarded as intermediate stages in a typological sequence that begins with A84 fibulae and related forms. Diverse high-catchplate fibula variants emerged simultaneously in different parts of the Danube region, each with a specific set of design solutions that may be regarded as regional or 'ethnic'.

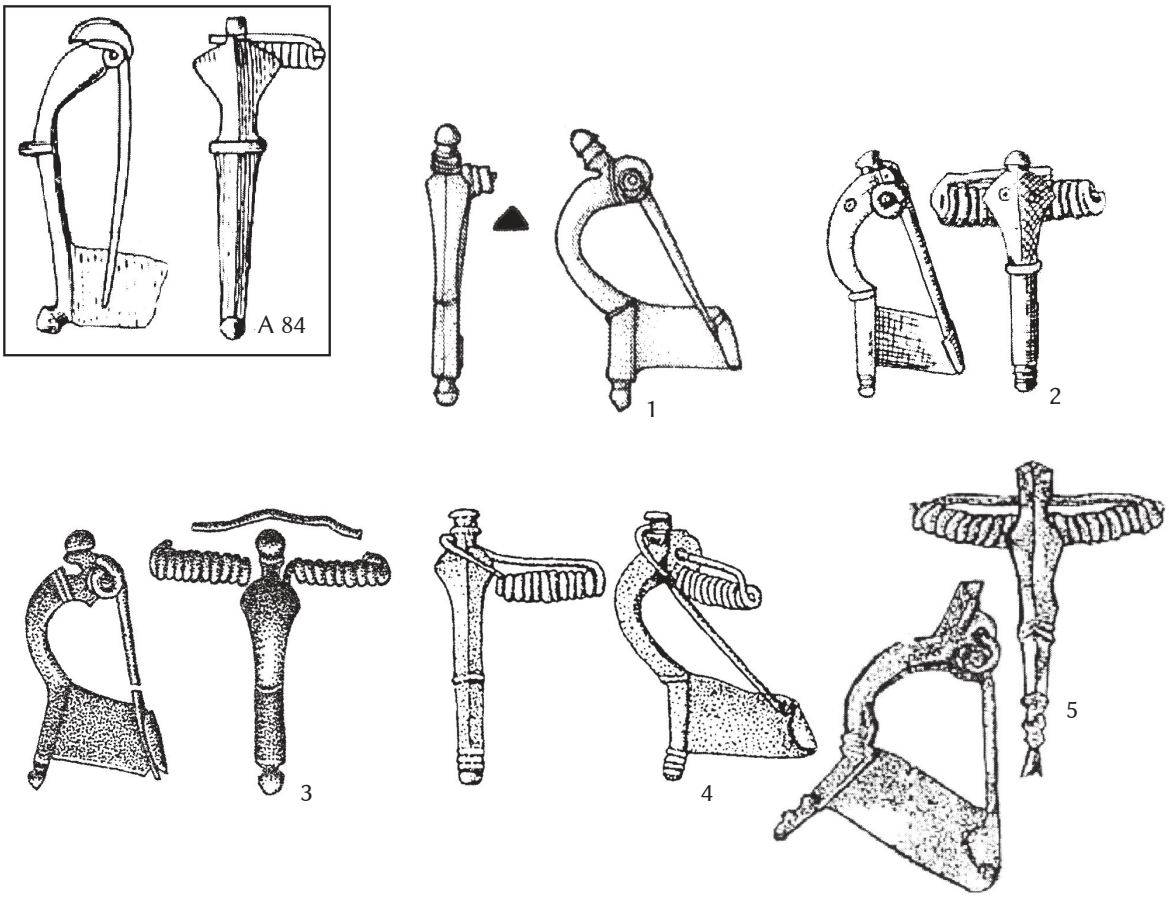


Fig. 24. 'Transitional' strongly profiled A 84 variants and high-catchplate brooches resembling 'Sarmatian' fibulae. 1 – Porolissum 'Sub Ferice' (Opreanu *et al.* 2020, Fig. 4.22), 2 – unknown provenance, Museum of History in Bratislava (Kolnik 1965, Obr. 7.3), 3 – Madaras, Grave 393 (Kőhegyi – Vörös 2011, Tab. 90.7), 4 – Cucorani (Teodor 1975, Fig. 46.1), 5 – Viminacium, Grave G-854 (Redžić 2007, Tab. 26.289).

A clear example of this phenomenon is fibulae from Sarmatian sites with broad subtriangular (or trapezoidal), almond-shaped, and oval bows.[296] As noted above, the basic design of these fibulae was determined by the casting mould. This suggests that the design of these fibulae was shaped largely by master jewellers who possessed the necessary expertise, were thoroughly familiar with the traditions of provincial Roman jewellery manufacture, and were well acquainted with the contemporary range of products, including luxury items.

Accordingly, the hypotheses discussed above, which attribute the emergence of high-catchplate fibulae in Roman Dacia and its barbarian periphery, including the area of the Chernyakhiv culture, to the activities of Germanic craftsmen associated with the Przeworsk and Wielbark cultures of

296 Vaday 1989, Abb. 12.10,12,18; Nagy 2023, Abb. 69, 92, 177, 187.

Central Europe, do not seem well-founded. Central European barbarians, like their southern and south-eastern neighbours, were primarily recipients of the levelling fashion of the Danubian 'melting pot of peoples', which drew heavily upon provincial Roman prototypes. Morphologically, the overwhelming majority of Group A VII 'Sarmatian' fibulae from Przeworsk and Wielbark contexts differ fundamentally from the 'Neslukhiv' series and their Lower and Middle Danubian analogies. Northern and Central European specimens are typically characterised by narrower bows of almost uniform width and by several other distinctive features.[297]

Such high-catchplate fibulae with narrow bows are likewise characteristic of Germanic contexts in the Middle Danube region from the late 2nd century to the second third of the 3rd century AD.[298] These were the products of craftsmen operating within the so-called 'Moravian' centre. The number of such finds considerably exceeds that of the Chernyakhiv 'Neslukhiv' analogies discovered in the same region. The latter, in our view, are more plausibly associated with craftsmen working within, or strongly influenced by, the artisanal traditions of Roman Dacia.

A few Przeworsk fibulae with broad bows, whose forms resemble Danubian brooches, are relatively crude and represent coarse imitations of southern prototypes.[299]

Parallels to the 'Neslukhiv' brooches in the Przeworsk culture are known primarily from the San River region in south-eastern Poland, such as the early find of an A 210 brooch from Leżajsk. Excavations at the settlement of Grodzisko Dolne[300] brought to light evidence of the production of such brooches, including a semi-finished specimen found in Feature 120,[301] which closely resembles a finished object found in House 1 at Luka-Vrublevetska, a settlement of the Chernyakhiv culture (Fig. 19.4). The question of similarity between the find material of such sites in south-eastern Poland and the Chernyakhiv sites in the Lviv and Ivano-Frankivsk regions of Ukraine—including the settlements of Cherepyn, Ripniv, Bovshiv, Demyaniv, and Kuropatnyky—extends over the scope of this paper and, thus, remains a topic for further study.[302]

Individual ('non-series') brooches

Analogies to the two unique 'Sarmatian' brooches from Chernyakhiv contexts, classified as non-series specimens, have so far been found exclusively at sites of the Poieneşti–Vârteşcoiu culture in the Lower Danube region. A practically identical parallel to the symmetrical brooch from Boromlya was published from the settlement of Piatra Neamţ-Dărmăneşti.[303] Another unique brooch, the one with semicircular headplates from Lepesivka, has close analogies at the settlement of Virtişcoiu,[304] while another similar fibula is also from the cemetery of Văleni.[305]

297 Mączyńska 1999, 100–101, 106–107, Tab. 1.5–8, Tab. 2.1–2.4, Tab. 7.1,3,5, Tab. 8.1.

298 Tejral 2006, Abb.10. 2–5,7–8; Tejral 2011, 50, 55, Abb. 24.2–5,7–8.

299 Mączyńska 1999, Tab. 7.9–13, Tab. 8.5.

300 Podgórska-Czopek 2009.

301 Podgórska-Czopek 2009, Tab. 11.5.

302 It is noteworthy that from the late 5th century, both of these regions formed part of the unified Prague culture, which by the mid-6th century encompassed extensive territories on the northern periphery of the Carpathian Basin. In the east, within the Tisza River region, this includes the Zakarpattya region of Ukraine, adjoining areas of northern Romania and northeastern Hungary, as well as eastern Slovakia. In the west, it comprises western Slovakia, Moravia, and Lower Austria. To the south, these sites extend to the so-called Sarmatian Roman-era ramparts in the east and the Roman *limes* along the Danube in the west (Fusek 2015, 155–156).

303 Mătasă *et al.* 1961, 345, Fig. 6.2.

304 Bichir 1973, Pl. 171.5–6.

305 Ioniţă – Ursachi 1988, Fig. 32.43.

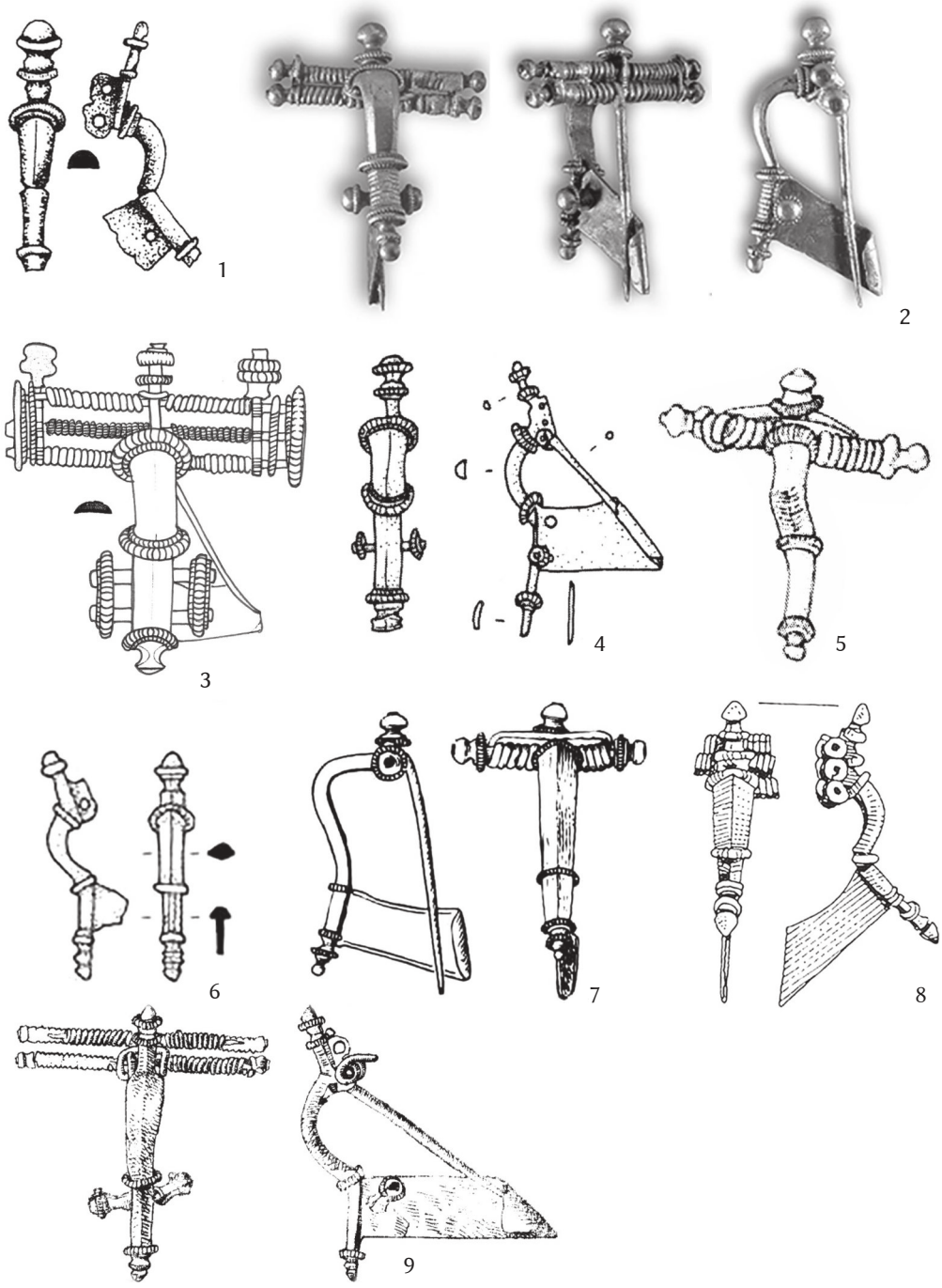


Fig. 25. Analogues to'Horodnytsia' fibulae from the Carpathian Basin. 1 – Zalău (Matei – Stanciu 2000, Pl. 337.2), 2 – Nagykőrös-Felsőgógány (Nagy 2023, 7. kép 1), 3 – Culciu Mare-Boghilaz (Gindele 2010, Abb. 65.9, Taf. 61), 4 – Medieşul Aurit (Cociş – Bârcă 2014, Fig. 3.3), 5 – Zemplín, Grave 160 (Budinsky-Krička – Lamiová-Schmiedlová 1990, Pl. 20.27), 6 – Blatnice pod Svatým Antonínkem I (Zeman 2017, Obr. 34.4), 7 – Očkov, Grave 108 (Kolnik 1965, Obr. 7.4), 8 – Enzersfeld, Parcels 2836 and 2837 (Karl – Karl 1997, 843, Abb. 703), 9 – Mătăsaru (Bichir 1984, Pl. 39.1).

'Horodnytsia' series

Analogies to the silver and bronze 'Horodnytsia' brooches, each decorated with a set of applied wire rings, and forms resembling the 'Neslukhiv' series, are concentrated primarily at sites attributed to various cultures and cultural groups in the Middle and Lower Danube region.

Some of these sites, such as Zalău in Romania (Fig. 25)[306] and Nagykőrös-Felsőgógány in Hungary (Fig. 25.2),[307] are situated close to the north-western section of the Dacian *limes*. Others, located farther from the Roman frontier, are in north-western and south-eastern Romania, including the cemetery at Medieşu Aurit (Fig. 25.4)[308] and Mătăsaru, a settlement of the Militari–Chilia culture (Fig. 25.9).[309] Parallels are also known from Grave 108 in the Dacian–Przeworsk cemetery of Zemplín (Fig. 25.5)[310] and Grave 108 in Očkov (Fig. 25.7)[311] in south-eastern and western Slovakia, Blatnice pod Svatým Antonínkem I in southern Moravia (Fig. 25.6),[312] and Enzersfeld in Lower Austria (Fig. 25.8).[313]

This series includes one- and two-spring silver and bronze fibulae corresponding to the first (Fig. 20.1–2,4) and second variants (Fig. 20.3,5–6) of the 'Horodnytsia' series.

Particularly noteworthy are the most elaborate examples. A unique gilded silver two-spring brooch with a circular head adorned with radial grooves is known from Nyíregyháza in north-eastern Hungary.[314] An equally impressive three-spring fibula was discovered at the settlement of Culciu Mare-Boghilaz in north-western Romania (Fig. 25.3),[315] situated at the exit of the Carpathians onto the Pannonian Plain. An even more ornate analogue was found in Grave 10 of a Roman period barbarian cemetery at Rákoscsaba-Péceli Road, near the Pannonian *limes* and Aquincum, on the western bank of the Danube, near Budapest.[316]

Given the relatively small number of 'Horodnytsia' brooches from Chernyakhiv sites and those in the Lower Danube region, it cannot be determined if the former derived from the latter or both emerged simultaneously during the mid-to-late 3rd century AD as part of a broader, pan-European *mit Ringgarnitur* style, which drew inspiration from provincial Roman jewellery traditions.

One possible route for the spread of this style from south-west to north-east may be traced through the distribution of findspots along the south-western and north-eastern slopes of the Carpathians. R. Gindele believes that the sites in north-western Romania, north-eastern Hungary, and eastern Slovakia represent a single historical and ethnic unit within the western Carpathian region in the Upper Tisza basin, inhabited during the Roman period by a mixed Dacian–Vandal population.[317]

On the opposite side of the mountains, in the Pre-Carpathian region, similar finds are concentrated at Chernyakhiv sites, including Psary, Horodnytsia, and Nezvysko, as well as at sites of the Carpathian Kurgan culture, such as Myshyn, Nyzhnii Strutyn, and Markivtsi.[318] Hypothetically, the distribution of these groups of sites may reflect migration routes crossing the Carpathians into the area of the emerging Chernyakhiv culture. One such route may have crossed the Yablunytskyi Pass, a channel of communication between Transcarpathia and the Pre-Carpathian region.

The origin of the 'Dnipro' series is most likely connected to the prototypes of the 'Horodnytsia' series. 'Dnipro' fibulae are numerous, highly standardised, and confined to a clearly defined

306 Matei – Stanciu 2000, Pl. 337.2.
307 Nagy 2023, 7. kép 1.
308 Cociş – Bârcă 2014, Fig. 3.3.
309 Bichir 1984, Pl. 39.1.
310 Budinsky-Krička – Lamiová-Schmiedlová 1990, Pl. 20.27.
311 Kolník 1965, Obr. 7.4.
312 Zeman 2017, Obr. 34.4.
313 Karl – Karl 1997, 843, Abb. 703.
314 Nagy 2023, 7. kép 2.
315 Gindele 2010, Abb. 65.9, Taf. 61; Nagy 2023, 7. kép 3.
316 Nagy 2023, 5. kép 2.
317 Gindele 2010, 9–10.
318 Ambroz 1966, 73; Vakulenko 2010, 134, Fig. 74.7,9,10.

Chernyakhiv territory: the middle Dnipro Right Bank, the forest-steppe zone on the left bank of the Dnipro, and the upper basin of the Siverskyi Donets River. It is therefore reasonable to assume that they are local products and younger than their prototypes.

Overall, 'Sarmatian' brooches in the Chernyakhiv culture seem to be associated with the development and dissemination of jewellery-making technologies and products originating in the Danubian Roman provinces, particularly Dacia, during the period following the Marcomannic Wars and under the Severan dynasty (AD 193–235).

Acknowledgments

The authors would like to express their sincere gratitude to the following colleagues for their generous assistance: Valéria Kulcsár (Budapest–Szeged) and Eszter Istvánovits (Nyíregyháza), for providing access to the catalogue of Group A VII fibulae from Sarmatian and other archaeological sites in Hungary, together with the relevant literature; Vadim Belyavets (Minsk–Warsaw), for granting access to previously unavailable Belarusian, Polish, German, and other archaeological publications relevant to the subject of this study; Nadiia Kotova (Kyiv–Vienna), for providing access to the majority of Austrian publications related to the topic of this article; and Igor Gavritukhin (Moscow), for generously sharing his sketches of Group A VII fibulae housed in various museums and research institution collections in Ukraine and Russia, produced between the late 1990s and the early 2010s.

Appendix

Catalogue of high-catchplate Group A VII brooches from sites of the Chernyakhiv culture[319]

'Neslukhiv' series

1. Baranove, Mizyaky-1 (Баранове, Мізяки-1), settlement, surface find, copper alloy, L = 38 mm, private collection (Bakumenko *et al.* 2006, 77, Rys. 7.11).

2. Bil'sk (Більськ (урочище Озеро)), settlement, cultural layer, copper alloy, L = 44 mm, Bil'sk Historical and Cultural Reserve, KB 773, A-482/8 (Luhovyi – Kovalenko 2020, 112, 114, Rys. 5.4, Rys. 7.3).

3. Cherepyn (Черепин), settlement, House 4, copper alloy, L = 40 mm, Lviv Historical Museum, Inv. no. A-2690, 29044 (Baran 1961, 69, Tab. 17.9; Baran 1981, 206, 213, Tab. 31.9, Tab. 38.16).

4. Cherneliv-Ruskyi (Чернелів-Руський), cemetery, Grave 104, copper alloy, L = 45 mm, Ternopil Regional Museum of Local Lore (Gereta 2013, 46, 167, Rys. 61.3) (Fig. 16.6).

5. Cherneliv-Ruskyi (Чернелів-Руський), cemetery, Grave 261, copper alloy, L = 41 mm, Ternopil Regional Museum of Local Lore (Gereta 2013, 78, 235, Rys. 128.7) (Fig. 16.1).

6. Demyaniv (Дем'янів), settlement, the excavations of 1968–1970, House 4, copper alloy, L = 44 mm, Ivano-Frankivsk Regional History Museum (Baran 1971, 105, 110, 112, Rys. 5.18; Baran 1981, 204, Tab. 29.18; Baran – Gopkalo 2006, Rys. 14.15, Tab. 17.2).

7. Demyaniv (Дем'янів), settlement, the excavations of 1968–1970, House 4, copper alloy, L = 52 mm, Ivano-Frankivsk Regional History Museum (Baran 1971, 105, 110, 112, Rys. 5.16; Baran 1981, 204, Tab. 29.16; Baran – Gopkalo 2006, Rys. 14.17, Tab. 17.1) (Fig. 16.8).

319 Information in each entry is structured as the following: 1) Catalogue number; 2) findspot: current administrative unit or a name commonly accepted in literature, with clarifications, alternative names, etc. in parentheses; 3) find context: stray find, surface find, cultural layer, site type, feature type and number; 4) material: gold, silver, copper alloy, non-ferrous alloy, iron, with more precise classification where available, such as alloys of Groups 1–6 by E. Chernykh and T. Bartseva (Chernykh – Bartseva 1972), brass, bronze, cast bronze, mixed bronze as per O. Bugay (Lyubychev *et al.* 2020); 5) L = length in millimeters; 6) current repository (museum, research institution, private collection) with inventory number of find number where available; 7) and source of information.

8. Demyaniv (Дем'янів), settlement, the excavations of 1987, cultural layer, copper alloy, L = 47 mm, Ivano-Frankivsk Regional History Museum (Baran – Gopkalo 2006, Tab. 21.1) (Fig. 16.4).

9. Demyaniv (Дем'янів), settlement, the excavations of 1968–1970, cultural layer, copper alloy, deformed fragment, L = 35 mm, Ivano-Frankivsk Regional History Museum (Baran 1971, 110, 112, Rys. 5.24; Baran 1981, 204, Tab. 29.24; Baran – Gopkalo 2006, Rys. 14.16, Tab. 26.5).

10. Demyaniv (Дем'янів), settlement, the excavations of 1987, above Building 4, copper alloy, L = 40 mm, Ivano-Frankivsk Regional History Museum (Baran – Gopkalo 2006, Rys. 14.14, Tab. 22.13) (Fig. 16.5).

11. Holovino (Головіно), settlement, cultural layer, above Building 5, copper alloy, L = 52 mm, Belgorod State Historical and Regional Studies Museum, КП 38704 (Oblomsky 2003, 44, 45, Rys. 51.37, Rys. 68.1; Gorokhovskiy – Gopkalo 2004, 126, Rys. 2.6, no. 35; Lyubichev 2019, Rys. 53.18) (Fig. 16.9).

12. Horodnytsia (Городниця), settlement, cultural layer, copper alloy, L = 45 mm, Lviv Historical Museum (Smishko 1952, 78, Rys. 24.6; Gorokhovskiy – Gopkalo 2004, 126, no. 39, Rys. 3.1).

13. Hradiz'k (Градизьк), a collection of stray finds, copper alloy, L = 44 mm, Scientific Department 'Archaeological Museum' of the Institute of Archaeology of the National Academy of Sciences of Ukraine (Gorokhovskiy – Gopkalo 2004, 126, no. 41, Rys. 2.4).

14. Khorosnytsia (Хоросниця), settlement, cultural layer near the structure (house), copper alloy, L = 45 mm (Voitseshchuk *et al.* 2015, 131–133, photo 9).

15. Khrushchova Mykytivka (Хрущова Микитівка), settlement, surface finds, copper alloy, L = 35 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University (Lyubichev *et al.* 2022).

16. Khrushchova Mykytivka (Хрущова Микитівка), settlement, surface find, copper alloy, L = 40 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University (Lyubichev *et al.* 2022).

17. Khrushchova Mykytivka (Хрущова Микитівка), settlement, surface finds, copper alloy, L = 37 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University (Lyubichev *et al.* 2022).

18. Khucha (Shapteban'), settlement, surface find, copper alloy, L = 40 mm, Institute of History of the Academy of Sciences of Moldova (Rikman 1975, 238, Rys. 29.14).

19. Kovrai (Коврай), stray find from the erosion of the shore, copper alloy, L = 46 mm, private collection (Lyubichev – Didyk 2002, 341, 342, Rys. 4.4; Lyubichev 2019, Rys. 53.4).

20. Kovrai (Коврай), stray find from the erosion of the shore, copper alloy, L = 46 mm, private collection (Lyubichev – Didyk 2002, 341, 342, Rys. 4.5; Lyubichev 2019, Rys. 53.5).

21. Kovrai (Коврай), stray find from the erosion of the shore, copper alloy, L = 45 mm, private collection (Lyubichev – Didyk 2002, 341, 342, Rys. 4.6; Lyubichev 2019, Rys. 53.6).

22. Kovrai (Коврай), stray find from the erosion of the shore, copper alloy, L = 42 mm, private collection (Lyubichev – Didyk 2002, 341, 342, Rys. 4.7; Lyubichev 2019, Rys. 53.7).

23. Komariv (Комарів), settlement, copper alloy, Chernivtsi Regional Museum of Local Lore (Petrauskas – Osaulchuk 2023, Rys. 13).

24. Kostyantivka-1 (Костянтівка), settlement, surface find, copper alloy, fragment, L = 43 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University (Lyubichev 2019, Rys. 55.5).

25. Kostyantivka-1 (Костянтівка), settlement, surface find, copper alloy, L = 41 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University (Lyubichev 2019, Rys. 55.6).

26. Lehedzyne (Легедзине), cemetery, the excavations of 2010, cultural layer, copper alloy, L = 50 mm, State Historical and Cultural Reserve 'Trypillia Culture', village Lehedzyne (Magomedov *et al.* 2010, 42, 68, 82, Rys. 24.4) (Fig. 17.1).

27. Luka-Vrublyevetska (Лука-Врублевецька), settlement, House 1, copper alloy, L = 40 mm (Symonovych 1955, 26, 27, Rys. 8.16; Ambroz 1966, 73, Series 2, no. 116; Gorokhovskiy – Gopkalo 2004, 126, no. 67, Rys. 2.7) (Fig. 19.4).

28. Luka-Vrublyevetska (Лука-Врублевецька), settlement, House 2, copper alloy, L = 40 mm (Symonovych 1955, 26, 27, Rys. 8.17; Ambroz 1966, 73, Series 2, no. 117; Gorokhovskiy – Gopkalo 2004, 126, no. 68).

29. Luka-Vrublyevetska (Лука-Врублевецька), settlement, House 2, copper alloy, L = 40 mm (Symonovych 1955, 26, 27, Rys. 8.18; Ambroz 1966, 73, Series 2, no. 118; Gorokhovskiy – Gopkalo 2004, 126, no. 69) (Fig. 19.1).

30. Luka-Vrublyevetska (Лука-Врублевецька), settlement, excavation III/XIV, surface house, copper alloy, L = 37–42 mm[320] (Tikhanova 1977, 70, 74, Rys. 4.2; Gorokhovskiy – Gopkalo 2004, 126, no. 70, Rys. 2.10) (Fig. 17.4).

31. Martova (Мартова), settlement, surface find, copper alloy, L = 48 mm, Chuhuiv Local History Museum (Lyubichev – Didyk 2002, Rys. 4; Bakumenko *et al.* 2006, 72, Rys. 7.4; Lyubichev 2019, Rys. 53.20).

32. Matyashiv Yar-3 (village Mykolaivka) (Матяшів Яр-3 (Миколаївка), Kyiv culture settlement, cultural layer, copper alloy, L = 40 mm (Zharov – Terpylovskyi 2006, 94, 97, Rys. 5.3; Lyubichev 2019, Rys. 53.11).

33. Mykhailivka (Михайлівка), stray find, copper alloy, L = 39 mm, Lviv Historical Museum No. 2693 (Gorokhovskiy – Gopkalo 2004, 127, no. 76).

34. Neslukhiv (Неслухів), settlement, surface find, copper alloy, L = 48 mm, Lviv Historical Museum (until 1941) (Hadaczek 1904, Tab. 1.1) (Fig. 17.6).

35. Ohultsi (Огульці), settlement, surface find, copper alloy, L = 37 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University or private collection (Lyubichev 2019, Rys. 54.1).

36. Ohultsi (Огульці), settlement, surface find, copper alloy, L = 35 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University or private collection (Lyubichev 2019, Rys. 54.2).

37. Ohultsi (Огульці), settlement, surface find, copper alloy, L = 36 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University or private collection (Lyubichev 2019, 256, Rys. 54.9).

38. Ohultsi (Огульці), settlement, surface find, copper alloy, semi-finished product, L = 54 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University or private collection (Bakumenko *et al.* 2006, 93, Rys. 7.7; Lyubichev 2019, Rys. 54.8) (Fig. 17.9).

39. Ohultsi (Огульці), settlement, surface find, copper alloy, L = 40 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University or private collection (Bakumenko *et al.* 2006, 71, Rys. 7.7; Lyubichev 2019, Rys. 54.7).

40. Ohultsi (Огульці), settlement, surface finds, copper alloy, foot fragment, L = 19 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition ofthe V. N. Karazin Kharkiv National University or private collection (Bakumenko *et al.* 2006, 94, Rys. 8.1; Lyubichev 2019, Rys. 54.5).

41. Ohultsi (Огульці), settlement, surface find, copper alloy, foot fragment, L = 19 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition ofthe V. N. Karazin Kharkiv National University or private collection (Bakumenko *et al.* 2006, 94, Rys. VIII.2; Lyubichev 2019, Rys. 54.6).

42. Pasiky (Паськи), settlement, surface find, copper alloy, L = 45 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University or private collection (Lyubichev 2003, Rys. 4; Bakumenko *et al.* 2006, 74, Rys. 7.6; Lyubichev 2019, Rys. 53.29).

43. Peny-1 (Пены), settlement, surface find, copper alloy, L = 48 mm, Kursk State Regional Archaeological Museum (Radyush 2010, 205, Tab. 9.9).

44. Poberezhne-1a (Побережне), cemetery, cultural layer, copper alloy, L = 45 mm, Scientific collections of the Institute of Archaeology of the National Academy of Sciences of Ukraine (Petrauskas *et al.* 2022, 171, 172, 193, no. 30, Abb. 12.1) (Fig. 16.3).

320 The text of the publication indicates that the fibula is 49 mm long; however, the scales shown in its photo in the report and in the publication's illustration suggest that it is actually smaller.
After this article was completed and submitted to the editorial board of the journal *Dissertationes Archaeologicae*, the authors became aware of two additional publications on fibulae from this series. The first describes a stray find Ivano-Frankivsk region, Ivano-Frankivsk (former Halytskyi) district in Ukraine (near the villages of Zalukva, Krylos, or Knyazhe) (Fihol 1997, 197; the second from the bottom in the photograph of the fibulae). The second publication also describes a stray find, presumably associated with the Chernyakhov culture settlement of Rădoaia XII, located in the localities of Rădoaia, Sîngerei District, Republic of Moldova. It is similar to the fibula from the Bîrlad-Valea Seacă site in Romania (Fig. 22.5) (Vornic – Matveev 2026, 338, 339, Fig. 2.1).

45. Priozerne (Psary) (Приозерне (Псари)), cemetery, copper alloy, L = 44 mm, Lviv Museum of the Dzieduszycki Family (until 1939) (Hadaczek 1912, 29, Tabl. 10; Åberg 1936, 265, Fig. 5).

46. Ridnyi Krai-3 (Рідний Край), settlement, the excavations of 1984, House 1, copper alloy, L = 42.5 mm, Archaeological Museum of the V. N. Karazin Kharkiv National University (Bashkatov *et al.* 1997, 116, Tab. 5.1) (Fig. 18.3).

47. Ripniv (Ріпнів), settlement, cultural layer from Excavation 2 in 1959, Group 2 alloy, fragment (part of the catchplate is missing), L = 47 mm, Archaeological Museum of the Ivan Franko National University of Lviv (Baran 1964, 221, 246, Rys. 6.15; Chernykh – Bartseva 1972, 80, 116, no. 5194, Rys. 14.27; Baran 1981, 210, Tab. 35.15) (Fig. 17.7).

48. Ripniv (Ріпнів), settlement, cultural layer from Excavation 2 in 1959, Square14 Б, Group 4 alloy, fragment, L = 50 mm, Archaeological Museum of the Ivan Franko National University of Lviv (Baran 1964, 221, 246, Rys. 6.10, Chernykh – Bartseva 1972, 80, 116, no. 5199, Rys. 14.25; Baran 1981, 210, Tab. 35.10) (Fig. 19.3).

49. Ripniv (Ріпнів), settlement from Excavation 2 in 1960, House 22, Group 3 alloy, L = 45 mm,[321] Archaeological Museum of the Ivan Franko National University of Lviv (Baran 1964, 221, 234, 246, Rys. 6.11; Chernykh – Bartseva 1972, 80, 116, no. 5201, Rys. 14.26; Baran 1981, 210, Tab. 35.11) (Fig. 16.7).

50. Rohizna-1 (Рогізна), settlement, surface find, copper alloy, L = 40 mm (Tymoshchuk – Vinokur 1964, 194, Rys. 5.4).

51. Ruzhychanka (Ружичанка), cemetery, Grave 13, copper alloy, L = 38 mm, Kamianets-Podilskyi State Historical Museum Reserve (Vinokur 1979, 114–115, 118, 121, Rys. 2.6; Gopkalo 2012, 332, Rys. 2.3) (Fig. 17.5).

52. Ryabukhino-1 (Рябухіно), settlement, surface finds, copper alloy, L = 38 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University or private collection (Lyubichev – Didyk 2002, 339, Rys. 3.2; Lyubichev 2003, Rys. 4; Bakumenko *et al.* 2006, 75, Rys. 7.8; Lyubichev 2019, Rys. 53.23) (Fig. 17.3).

53. Sokilnyky-1 (Сокільники), settlement, surface finds, copper alloy, L = 35 mm (Kozak 1984, 43, Rys. 45.5; Gorokhovskiy – Gopkalo 2004, 127, no. 110, Rys. 3.2).

54. Staryi Merchik (Старий Мерчік), settlement, surface find, copper alloy, L = 40 mm (Lyubichev – Didyk 2002, 339, Rys. 3.1; Lyubichev 2019, Rys. 53.26).

55–58. (4 specimens). Staryi Yarychiv-3 (Старий Яричів), settlement, surface finds, copper alloy, L = 37–44 mm (Osaulchuk *et al.* 2016, Rys. 1.5–8).

59. Stari Valky (Старі Валки), settlement, surface find, copper alloy, L = 49 mm (Bakumenko *et al.* 2006, 71, Rys. 7.3; Lyubichev 2019, Rys. 53.27).

60. Stari Valky (Старі Валки), settlement, surface find, copper alloy, L = 44 mm (Bakumenko *et al.* 2006, 74, Rys. 7.5; Lyubichev 2019, Rys. 53.28).

61. Unknown provenance, copper alloy, L = 40 mm, Lviv Historical Museum (Gorokhovskiy – Gopkalo 2004, 116, Rys. 3.3) (Fig. 18.5).

62. Vasulivka (Василівка), settlement, surface find, copper alloy, fragment, L = 34 mm, Center for the Protection and Research of Archaeological Monuments of the Department of Culture of the Poltava District State Administration (Poltava) (Shcherban' 2000, 82, Rys. 2; Lyubychev 2019, Rys. 53.10).

63. Velyka Danylivka (Велика Данилівка), settlement, surface find, copper alloy, fragment (lower part), L = 20 mm, Museum of Archaeology of V. N. Karazin Kharkiv National University (Shramko 1962, Rys. 98.2; Zaitsev 1964, 47, 49, Rys. 2.5; Gorokhovskiy – Gopkalo 2004, 125, no. 1).

64. Velyka Danylivka (Велика Данилівка), settlement, surface find, copper alloy, L = 35 mm, Museum of Archaeology of the V. N. Karazin Kharkiv National University (Shramko 1962, Rys. 98.1; Zaitsev 1964, 47, 49, Rys. 2.8; Gorokhovskiy – Gopkalo 2004, 125, no. 2, Rys. 2.13).

65. Verenchanka-Captain Zota Street (Веренчанка), settlement, cultural layer, copper alloy, L = 37 mm, Chernivtsi Regional Museum of Local Lore 53296, A-2747 (Pivovarov – Ilkiv 2012, 476, Rys. 1.12) (Fig. 18.2).

66. Vydrin (Видрін), settlement, surface find, copper alloy, L = 43 mm (Radyush 2015, 29–31, Rys. 8.7; Lyubichev 2019, Rys. 53.1).

67. Viytenky (Війтенки), cemetery, surface find, copper alloy (copper), L = 42 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University, 368/2013 (Lyubichev *et al.* 2020, Rys. 2.42) (Fig. 18.4).

321 The text of the publication states that the length of the fibula is 50 mm, whereas the scale included in its illustration in the publication indicates that it is smaller.

68. Viytenky-1 (Війтенки), settlement, Trench A, surface find, copper alloy, L = 48 mm, private collection (Bakumenko *et al.* 2006, 70, Rys. 7.1; Lyubichev 2019, 256, Rys. 54.10).

69. Viytenky-1 (Війтенки), settlement, Trench A, surface find, copper alloy, L = 45 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University (Lyubichev 2019, 257, Rys. 55.1).

70. Viytenky-1 (Війтенки), settlement, Trench A, surface find, copper alloy, L = 45 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University (Lyubichev 2019, 257, Rys. 55.2).

71. Viytenky-2 (Війтенки), settlement, surface find, copper alloy, L = 36 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University (Lyubichev 2019, 257, Rys. 55.3).

72. Viytenky (Війтенки), settlement, surface find, copper alloy, L = 36 mm, private collection (Bakumenko *et al.* 2006, 77, Rys. 7.10; Lyubichev 2019, 256, Rys. 54.11).

73. Viytenky (Війтенки), settlement, surface find, copper alloy (cast bronze), fragment, L = 36 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University (Lyubichev *et al.* 2020, Rys. 2.41).

74. Vodiane-2 (Водяне), settlement, surface find, copper alloy, L = 50 mm, Archaeological Laboratory of the German-Slavic Archaeological Expedition of the V. N. Karazin Kharkiv National University (Lyubichev 2019, Rys. 55.4).

75. Werbyczna, a collection of stray finds, copper alloy, L = 53 mm, State Archaeological Museum in Warsaw (Piętka-Dąbrowska 1961, 220, Tab. 47.14; Gorokhovskiy – Gopkalo 2004, 125, no. 27).

76. Werbyczna (Вербична), a collection of stray finds, copper alloy, L = 48 mm, State Archaeological Museum in Warsaw (Piętka-Dąbrowska 1961, 220, Tab. 47.12; Gorokhovskiy – Gopkalo 2004, 125, no. 17).

77. Werbyczna, a collection of stray finds, copper alloy, L = 48 mm, State Archaeological Museum in Warsaw (Piętka-Dąbrowska 1961, 220, Tab. 47.8; Gorokhovskiy – Gopkalo 2004, 125, no. 15).

78. Zahirtsi (Загірці), Ukraine, settlement, surface find, copper alloy, L=39 mm, part of the catchplate is absent (Lazurko – Tkach 2012, 59, Rys. 8.3).

79. Zavhorodne[322] (Завгороднє), settlement, surface find, copper alloy, L = 44 mm, Kharkiv Historical Museum (Lyubichev – Didyk 2002, 339, Rys. 3.3; Lyubichev 2003, 76, Rys. 4; Gorokhovskiy – Gopkalo 2004, 126, no. 56, Rys. 2.5; Bakumenko *et al.* 2006, 76, Rys. 7.9; Lyubichev 2019, Rys. 53.24) (Fig. 17.2).

80–84. (5 specimens). Zhovtantsi (Жовтанці), stray finds, copper alloy, L = 45–50 mm, Historical and Local History Museum of the City of Vynnyky (Onyshchuk 2018, 100, 353, photos 42.2–6; photos 99.1–2) (Fig. 18.1, Fig. 19.2).

85. Zhuravka (Журавка), cemetery, Grave 33, Group 3 alloy, L = 38 mm, State Historical Museum (Moscow) (Chernykh – Bartseva 1972, 96, no. 2532, Rys. 14.23; Gorokhovskiy – Gopkalo 2004, 126, no. 55, Rys. 2.2) (Fig. 16.1).

'Horodnytsia' series

1. Cherneliv-Ruskyi (Чернелів-Руський), cemetery, Grave 130, copper alloy, L = 45 mm, Ternopil Regional Museum of Local History (Gereta 2013, 53, 185, Rys. 79.6) (Fig. 20.6).

2–3. (2 specimens). Horodnytsia (Городниця), grave, silver, L = 50 mm, Archaeological Museum in Kraków (Kopernicki 1878, Tab. 3.C; Almgren 1897, 198–199; Åberg 1936, 265, Fig. 1) (Fig. 20.1).

4. Kostyantivka-1 (Костянтівка), settlement, surface find, silver, L = 38 mm (Lyubichev 2019, Rys. 55.7).

5. Nezvysko (Незвисько), settlement, House 1, silver, fragment, The State Hermitage Museum (St. Petersburg) (Smirnova 1964, 202, 203, Rys. 5.9–10; Ambroz 1966, 73) (Fig. 20.4).

6. Pasiky (Пасіки), settlement, surface finds, copper alloy, fragment, L = 46 mm (Bakumenko *et al.* 2006, 79, Rys. 7.13).

7. Peny-2 (Пены), settlement, surface finds, copper alloy, L = 39 mm, Institute of Archaeology of South-Eastern Rus' at Kursk State University (Radyush 2008, 184–186, Rys. 3.3; Radyush 2010, 205, Tab. 9.10; Lyubichev 2019, Rys. 53.15).

322 The authors of the publication pointed out an error in the image of this brooch in our 2004 work (Bakumenko *et al.* 2006, 76). This remark has been taken into account in the present study.

8. Petrykivtsi (Петриківці), cemetery, cultural layer, silver, fragment, L = 33 mm, Vinnytsia Regional Museum of Local History no. A-5391 (Magomedov – Levada 1997, Rys. 1.9; Gorokhovskiy – Gopkalo 2004, 127, no. 94; Magomedov 2022, Rys. 2.43.5) (Fig. 20.2).

9. Priozerne (Psary) (Приозерне (Псари), cemetery, copper alloy, L = 44 mm, Lviv Museum of the Dzieduszycki Family (until 1939) (Hadaczek 1912, 29, Tab. 10; Åberg 1936, 265, Fig. 4).

10. Ruzhychanka (Ружичанка), cemetery, Grave 24, copper alloy, L = 40 mm, Kamianets-Podilskyi State Historical Museum Reserve (Vinokur 1979, 114–115, 118, 121, Rys. 15.2; Gopkalo 2012, 332, Rys. 2.4, Ill. 21.1) (Fig. 20.3).

11. Toky (Токи), cemetery, Grave 5, copper alloy, L = 38,5 mm, Ternopil Regional Museum of Local History *KB* 17529 A 1879 (Gereta 1989, Rys. 7.5A; Tylishchak 2014, 199–201, Rys. 2.2) (Fig. 20.5).

12. Unknown provenance in Ukraine, Halychyna (Galicia), stray find, copper alloy, Lviv Ossolineum Institute (until 1897) (Almgren 1897, 199).

13. Zhabyntsi (Жабинці), stray find, copper alloy, Archaeological Museum in Kraków (Almgren 1897, 198).

Unique ('non-series') fibulae

1. Boromlya (Боромля), settlement, House 3, copper alloy, L = 36 mm, Scientific Collection of the Institute of Archaeology of the National Academy of Sciences of Ukraine (Nekrasova 2006, 96, Rys. 24.9; Gorokhovskiy – Gopkalo 2004, 125, no. 3, Rys. 4.2) (Fig. 21.2).

2. Horodnytsia (Городниця), settlement, cultural layer, copper alloy, L = 35 mm (Smishko 1952, 78, Rys. 24.8; Gorokhovskiy – Gopkalo 2004, 126, no. 39, Rys. 9.2).

3. Lepesivka (Лепесівка), settlement, House VIII, copper alloy, L = 39 mm, The State Hermitage Museum (St. Petersburg) (Tikhanova *et al.* 1999, Fig. 2.12) (Fig. 21.1).

4. Nezvysko (Незвисько), settlement, Pit 16, copper alloy, L = 40 mm, The State Hermitage Museum (St. Petersburg) (Smirnova 1964, 202, 203, Rys. 5.9–10; Gorokhovskiy – Gopkalo 2004, 127, no. 77, Rys. 5.4) (Fig. 21.3).

5. Pekari (Пекарі), stray find, copper alloy, L = 62 mm, National Museum of the History of Ukraine B1572 (16805) (Gorokhovskiy – Gopkalo 2004, 127, no. 92, Rys. 10.1) (Fig. 21.6).

6. Verkhnya Lypytsia (Верхня Липиця), a site of Lipitsa and Chernyakhiv cultures, cultural layer, copper alloy, L = 46 mm, Ivano-Frankivsk Regional History Museum (Gorokhovskiy – Gopkalo 2004, 126, no. 28, Rys. 10.2) (Fig. 21.5).

List of archaeological sites

Baranove, Mizyaky-1, Ukraine, Kharkiv region, Bohodukhiv district, settlement

Bil'sk, Ukraine, Poltava region, Poltava (former Kotelevskyi) district, settlement

Boromlya, Ukraine, Sumy region, Okhtyrka district, settlement

Cherepyn, Ukraine, Lviv region, Lviv (former Biberskyi) district, settlement

Cherneliv-Ruskyi, Ukraine, Ternopil region, Ternopil district, cemetery

Demyaniv, Ukraine, Ivano-Frankivsk region, Ivano-Frankivsk (former Halytskyi) district, settlement

Holovino, Russian Federation, Belgorod region, Belgorod (former Oktyabrskyi) district, settlement

Horodnytsia, Ukraine, Ivano-Frankivsk region, Kolomyia (former Horodenkivskyi) district, solitary burial

Horodnytsia, Ukraine, Ivano-Frankivsk region, Kolomyia (former Horodenkivskyi) district, settlement

Hradyz'k, Ukraine, Poltava region, Kremenchuk (former Hlobyne) district, collection of stray finds

Khorosnytsia, Ukraine, Lviv region, Yavoriv district, settlement

Khrushchova Mykytivka, Ukraine, Kharkiv region, Bohodukhiv (former Valkivskyi) district, settlement

Khucha (Shapteban'), Republic of Moldova, Rîşcani district, settlement

Komariv, Ukraine, Chernivtsi region, Dnistrovskyi (former Kelmentsi) district, settlement

Kostyantivka-1, Ukraine, Kharkiv region, Chuhuiv (former Zmiivskyi) district, settlement

Kovrai, Ukraine, Cherkasy region, Zolotonosha (former Chornobai) district, eroded cultural layer of a settlement

Lehedzyne, Ukraine, Cherkasy region, Zvenyhorodka (former Talnivskyi) district, cemetery
Lepesivka, Ukraine, Khmelnytskyi region, Shepetivka (formerly Bilohirsk) district, settlement
Luka-Vrublevetska (Luka-Vrublivetska), Ukraine, Khmelnytskyi region, Kamianets-Podilskyi district, settlement
Martova, Ukraine, Kharkiv region, Chuhuiv (former Pechenizkyi) district, settlement
Matyashiv Yar-3 (Mykolaivka), Ukraine, Sumy region, Romny district, Kyiv culture settlement
Mykhailivka, Ukraine, Cherkasy region, Cherkasy (former Kanivskyi) district, stray find
Neslukhiv, Ukraine, Lviv region, Lviv (former Kamianka-Buzkyi) district, settlement
Nezvisko, Ukraine, Ivano-Frankivsk region, Kolomyia (former Horodenkivskyi) district, settlement
Ohultsi, Ukraine, Kharkiv region, Bohodukhiv (former Valkivskyi) district, settlement
Pasiky, Ukraine, Kharkiv region, Chuhuiv (former Zmiivskyi) district, settlement
Pekari, Ukraine, Cherkasy region, Cherkasy (former Kaniv) district, stray find
Peny, Russian Federation, Kursk region, Belovsky (former Kurchatov) district, settlement
Petrykivtsi-1, Ukraine, Vinnytsia region, Khmilnytskyi district, cemetery
Poberezhne-1a, Ukraine, Vinnytsia region, Vinnytsia district, cemetery
Priozerne (Psary), Ukraine, Ivano-Frankivsk region, Ivano-Frankivsk (former Rohatynskyi) district, cemetery
Ridnyi Krai, Ukraine, Kharkiv region, Bohodukhiv (former Zolochivskyi) district, settlement
Ripniv, Ukraine, Lviv region, Lviv (former Kamianka-Buzkyi) district, settlement
Rohizna-1, Ukraine, Chernivtsi region, Chernivtsi district, settlement
Ruzhychanka, Ukraine, Khmelnytskyi region, Khmelnytskyi district, cemetery
Ryabukhino-1, Ukraine, Kharkiv region, Kharkiv (former Novovodolazkyi) district, settlement
Sokil'nyky, Ukraine, Lviv region, Lviv (former Pustomytivskyi) district, settlement
Staryi Merchik, Ukraine, Kharkiv region, Bohodukhiv (former Valkivskyi) district, settlement
Staryi Yarychiv-3, Ukraine, Lviv region, Lviv (former Kamianka-Buzkyi) district, settlement
Stari Valky, Ukraine, Kharkiv region, Bohodukhiv (former Valkivskyi) district, settlement
Toky, Ukraine, Ternopil region, Ternopil district, cemetery
Vasylivka, Ukraine, Poltava region, Poltava (former Dikanskyi) district, settlement
Velyka Danylivka, Ukraine, Kharkiv region, Kharkiv district, settlement
Verenchanka, Ukraine, Chernivtsi region, Chernivtsi district, settlement
Verkhnya Lypytsia, Ukraine, Ivano-Frankivsk region, Ivano-Frankivsk (former Rohatyn) district, settlement
Viytenky-1, Ukraine, Kharkiv region, Bohodukhiv (former Valkivskyi) district, settlement
Vodyane-2, Ukraine, Kharkiv region, Chuhuiv (former Zmiivskyi) district, settlement
Vydrin, Russian Federation, Kursk region, Bol'shesoldatsky district, settlement, cemetery
Werbychka, Werbychna, Ukraine, Khmelnytskyi region, Khmelnytskyi (former Horodotskyi) district, collection of stray finds
Zahirtsi, Ukraine, Lviv region, Zolochivs'kyi (former Brodivs'kyi) district, settlement
Zavhorodne, Ukraine, Kharkiv region, Izium (former Balakliyskyi) district, settlement
Zhabyntsi, Ukraine, Ternopil region, Chortkiv (former Husyatynskyi) district, stray find
Zhovtantsi, Ukraine, Lviv region, Lviv (former Kamianka-Buzkyi) district, settlement
Zhuravka, Ukraine, Cherkasy region, Cherkasy (former Horodyshchenskyi) district, cemetery

References

Åberg, N. 1936: Till belysande av det gotiska kulturinslaget i Mellaneuropa och Skandinavien. *Fornvännen* 31, 264–277.

Almgren, O. 1897: *Studien über nordeuropäische Fibelformen der ersten nachchristlichen Jahrhunderte mit Berücksichtigung der provinzialrömischen und südrussischen Formen.* Stockholm.

Almgren, O. 1923: *Studien über nordeuropäische Fibelformen der ersten nachchristlichen Jahrhunderte, mit Berücksichtigung der provinzialrömischen und südrussischen Formen.* Leipzig.

Ambroz, A. K. 1966: *Fibuly yuga Yevropeyskoy chasti SSSR II v.do n.e. – IV v.n.e.* (Fibulae of the southern part of the European USSR, 2-nd century BC – 4-th century AD). Moskva.

Babenchikov, V. P. 1957: Nekropol' Neapolya Skifskogo (The necropolis of Scythian Neapolis). In: Shul'ts, P. N. (ed.): *Istoriya i arkheologiya drevnego Kryma.* Kiyev, 94–141.

Bajusz, I. – Cociş, S. 1995: Fibule din amfiteatrul Roman de la Porolissum. *Acta Musei Porolissensis* 19, 39–47.

Bakumenko, K. I. – Beydin, G. V. – Grigoryants, M. N. – Didyk, V. V. 2006: Fibuly rimskogo vremeni verkhov'yev Vorskly i Severskogo Dontsa (Roman-period fibulae from the upper Vorskla and Siverskyi Donets regions). In: Zinukhov, A. N. (ed.): *Drevnosti rimskogo vremeni na Slobozhanshchine.* Khar'kov.

Baran, V. D. 1961: *Poselennia pershykh stolit nashoi ery bilia sela Cherepyn* (A settlement dating to the first centuries AD near the village of Cherepyn). Kyiv.

Baran, V. D. 1964: Pamyatniki chernyakhovskoy kul'tury basseyna Zapadnogo Buga (Sites of the Chernyakhov culture in the Western Bug Basin). *Materialy i issledovaniya po arkheologii SSSR* 116, 213–252.

Baran, V. D. 1971: Poselennia cherniakhivskoho typu poblyzu s. Demianiv u Verkhnomu Podnistrovi (A Chernyakhiv-type settlement near the village of Demianiv in the Upper Dniester region). *Arkheolohiia* 1, 103–113.

Baran, V. D. 1981: *Cherniakhivska kultura (za materialamy Verkhnoho Dnistra ta Zakhidnoho Buhu)* (The Chernyakhiv culture: Based on materials from the Upper Dniester and Western Bug regions). Kyiv.

Baran, V. D. – Gorokhovskiy, E. L. – Magomedov, B. V. 1990: Chernyakhovskaya kul'tura i gotskaya problema (The Chernyakhiv culture and the gothic problem). In: Tolochko, P. P. (ed.): *Slavyane i Rus' (v zarubezhnoy istoriografii).* Kiyev, 30–78.

Baran, V. D. – Gopkalo, O. V. 2006: *Cherniakhivski poselennia baseinu Hnyloi Lypy* (Chernyakhiv settlements in the Hnyla Lypa basin). Kyiv.

Bârcă, V. 2019: Notes on a clay mould for brooch casting recently discovered in the Great Hungarian Plain. *Journal of Ancient History and Archaeology* 6.3, 119–133. https://doi.org/10.14795/j.v6i3.446

Bârcă, V. 2023: Zametki o forme dlya otlivki fibul tipa Al'mgren, gruppa VII, seriya I iz Velikoy Vengerskoy ravniny (Notes on a mould for casting Almgren-type fibulae, Group VII, Series I, from the Great Hungarian Plain). In: Yarovoy, E. V. (ed.): *Arkheologicheskiye pamyatniki Yevrazii ot neolita do srednevekov'ya. K 80-letiyu Iona Pyslaru.* Moskva, 199–215.

Bârcă, V. – Cociş, S. 2022: Fibuly gruppy Al'mgren VII, seriya I, variant s knopkoy na golovke i vysokim priyëmnikom s territorii Rumynii (Almgren Group VII, Series I fibulae of the variant with a knob on the head and a high catchplate from Romania). In: Mastykova, A. V. – Khayredinova, E. A. (eds): *Mogil'nik rimskogo vremeni Frontovoye 3: varvary na granitsakh imperii.* Moskva, 248–259.

Bârcă, V. – Cociş, S. 2023: Fibulele de tip Almgren grupa VII, seria I, varianta cubuton la cap şi coardă înaltă de teritoriul României (provincia Dacia şi lumea Barbară). *Terra Sebus – Acta Musei Sabesiensis* 15, 25–48.

Bashkatov, Yu. Yu. – Degtyar', A. K. – Lyubichev, M. V. 1997: Selishche pozdnerimskogo vremeni Rodnoy Kray 3 v basseyne Severskogo Dontsa (The Late Roman-period settlement of Rodnoy Kray 3 in the Siverskyi Donets Basin). *Drevnosti* 1996. Kharkov, 111–121.

Bazovský, I. 2009: Doklady výroby spôn v naddunajskom barbariku. In: Karwowski, M. – Droberjar, E. (eds): *Archeologia barbarzyńców 2008: powiązania i kontakty w świecie barbarzyńskim. Materiały z IV Protohistorycznej Konferencji. Sanok, 13-17 października 2008.* Collectio Archaeologica Ressoviensis 13. Rzeszów, 433–438.

Belyavets, V. 2007: K izucheniyu pamyatnikov vel'barskoy kul'tury v Belarusi (Toward the study of Wielbark culture sites in Belarus). In: Fudziński, M. – Paner, H. (eds): *Nowe materiały i interpretacje: stan dyskusji na temat kultury wielbarskiej.* Gdańsk, 293–344.

Behrens, G. 1954: Zur Typologie und Technik der provinzialrömischen fibeln. *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 1, 220–236.

Bichir, Gh. 1973: *Cultura carpică.* Bucureşti.

Bichir, Gh. 1984: *Geto-dacii din Muntenia în epoca romană.* Bucureşti.

Budinsky-Krička, V. – Lamiová-Schmiedlová, M. 1990: A late 1st century BC – 2nd century AD cemetery in Zemplin. *Slovenská archeológia* 38:2, 245–344.

Chernykh, E. N. – Bartseva, T. B. 1972: Splavy tsvetnykh metallov (Non-ferrous metal alloys). In: Bartseva, T. B. – Voznesenskaya, G. A. – Chernykh, E. N. 1972: Metall chernyakhovskoy kul'tury. *Materialy i issledovaniya po arkheologii SSSR* 187. Moskva, 50–117.

Cociş, S. 2004: *Fibulele din Dacia romană* (The brooches from Roman Dacia). Biblioteca Ephemeris Napocensis 3. Cluj-Napoca.

Cociş, S. 2009: Atelierele şi producţia de fibule de tip 'sarmatic' (Varianta cu buton la cap şi coardă înaltă). In: Ţentea, O. – Opriş, I. C. (eds): *Near and beyond the Roman frontier. Proceedings of a colloquim held in Târgovişte, 16–17 october 2008.* Bucureşti, 151–163. https://doi.org/10.46535/ca.16.06

Cociş, S. 2019: *The brooch workshops from Dacia and the other Danubian provinces of the Roman Empire (1st c. BC – 3rd c. AD).* Patrimonium Archaeologicum Transylvanicum 16. Cluj-Napoca.

Cociş, S. – Bârcă, V. 2012: Ateliere şi producţia de fibule de tip 'sarmatic' (Almgren grupa VII, seria I). *Revista Bistriţei* 26, 89–104.

Cociş, S. – Bârcă, V. 2013: The workshops and production of 'sarmatian' brooches (Almgren group VII series I). *Dacia* 57, 161–175.

Cociş, S. – Bârcă, V. 2014: The 'Sarmatian' brooches (headknob and full catchplate variant, Almgren group VII, series I) in the Dacia province and the barbarian environment of the Tisza River basin. *Dacia* 58, 189–214.

Cociş, S. – Bârcă, V. 2020: Brooches of type Almgren group VII, series I, variation with headknob and vertical catchplate, from East and Southeast Romania (The Barbarian world). *Ephemeris Napocensis* 30, 137–180. https://doi.org/10.33993/ephnap.2020.30.137

Cociş, S. – Gaiu, C. – Zăgreanu, R. 2010: Fibule din Dacia intracarpatică. *Revista Bistriţei* 24, 203–244.

Cociş, S. – Lăzărescu, V. – Socaciu, S. 2022: Cercetările arheologice din castrul şi vicus-ul de la Sutor (2001–2021). Archaeological research in the camp and vicus of Sutor (2001–2021). *Cercetări Archeologice* 29.1, 83–130. https://doi.org/10.46535/ca.29.1.05

Cociş, S. – Panczel, S.-P. – Sidó, K. 2024: The typology and production of brooches of the Eastern limes of Dacia Superior on the Brâncoveneşti-Călugăreni sector. *Journal of Ancient History and Archeology* 11.1, 80–100. https://doi.org/10.14795/j.v11i1.1006

Crişan, I. 1979: Fibule romane din colecţiile Muzeului de Istorie al Transilvaniei. *Acta Musei Porolissensis* 3, 275–320.

Croitoru, C. 2011: *Roman discoveries in the east Carpatian Barbaricum (1st century B.C. – 5th century A.D.).* Brăila.

Didenko, S. V. 2018: *Antychnyi keramichnyi import u cherniakhivskii kulturi na terytorii Ukrainy* (Ancient ceramic imports in the Chernyakhiv culture in Ukraine). PhD Dissertation, Instytut arkheolohii NAN Ukrainy, Kyiv.

Dragomir, I. 2001: *Necropola birituală Sântana de Mureş–Cerneahov de la Lunca, regiunea de sud a Moldovei.* Galaţi.

Eggers, H. J. 1951: *Der römische import im freien Germanien* 1. Hamburg.

Eggers, H. J. 1955: Zur absoluten chronologie der Römischen kaiserzeit im Freien Germanien. *Jahrbuch des Römisch-Germanischen Zentralmuseums* 2, 196–238. https://doi.org/10.11588/jrgzm.1955.0.31095

Elschek, K. 1997a. Archeologický výskum v Zohore v roku 1995. *Archeologické výskumy a nálezy na Slovensku v roku 1995.* Nitra, 40–43.

Elschek, K. 1997b: Prieskum v Bratislave-Devínskej Novej Vsi v roku 1995. *Archeologické výskumy a nálezy na Slovensku v roku 1995.* Nitra, 43–44.

Erdeli, I. – Lamiová-Schmiedlová, M. 1971: Osada z doby rimskiej v Ipolytölgyes v Madarsku. *Východoslovenský pravek* 2, 51–72.

Fihol', M. 1997. *Mystetstvo starodavn'oho Halycha.* Kyyiv.

Furmans'ka, A. 1953: Fibuly z rozkopok Olvii (Fibulae from the excavations at Olbia). *Arkheolohiia* 8, 76–94.

Fusek, G. 2015: Drevneye slavyanskoye naseleniye na territorii Slovakii (The ancient Slavic population in the territory of Slovakia). *Stratum plus* 5, 151–162.

Gaiu, C. – Cociş, S. 2001: Fibule romane de la Ilişua. *Revista Bistriţei* 15, 90–95.

Gavritukhin, I. 2011: Cut glass beakers within the context of studies in the connections between the South of Eastern Europe and Scandinavia in the late period of Roman influence and the Great Migration Period. In: Khrapunov, I. N. – Stylegar, F. A. (eds): *Inter ambo maria. Contacts between Scandinavia and the Crimea in the Roman Period 2.* Kristiansand–Simferopol, 39–70.

Gereta, I. 1989: Novyye mogil'niki Chernyakhovskoy kul'tury v Zapadnoy Podolii i vel'barskaya kul'tura (New Chernyakhiv culture cemeteries in Western Podolia and the Wielbark culture). In: Gurba, J. – Kokowski, A. (eds): *Kultura Wielbarska w młodszym okresie rzymskim* 2, 283–297.

Gereta, I. 2013: *Chernelevo-Ruskyi mohylnyk* (Cemetery Cherneliv-Ruskiy). Kyiv–Ternopil.

Gindele, R. 2010: *Die Entwicklung der kaiserzeitlichen Siedlungen im Barbaricum im nordwestlichen Gebiet Rumäniens.* Satu Mare.

Gopkalo, O. V. 2008: *Busy i podveski chernyakhovskoy kul'tury* (Beads and pendants of the Chernyakhov culture). Kiyev.

Gopkalo, O. V. 2011: Otnositel'naya khronologiya muzhskikh pogrebeniy chernyakhovskoy kul'tury. K postanovke problemy (The relative chronology of male burials of the Chernyakhiv culture: Toward a formulation of the problem). In: Petrauskas, O. V. – Shyshkin, R. H. (eds): *Cherniakhivska kultura: materialy doslidzhen.* Kyiv–Lutsk, 66–96.

Gopkalo, O. V. 2012: Chernyakhovskiy mogil'nik Ruzhichanka (The Chernyakhiv cemetery at Ruzhychanka). In: Vorontsov, A. M. – Gavritukhin, I. O. (eds): *Lesnaya i lesostepnaya zony Vostochnoy Yevropy v epokhi rimskikh vliyaniy i Velikogo pereseleniya narodov. Konferentsiya 3.* Tula, 330–400.

Gorokhovskiy, E. 1987: Ranniy etap chernyakhovskoy kul'tury (k probleme etnicheskoy definitsii) (The early phase of the Chernyakhov Culture: On the problem of ethnic definition). In: Gurba, J. (ed.): *Kultura Wielbarska w młodszym okresie rzymskim. Streszczenia referatów.* Lublin, 61–67.

Gorokhovskiy, E. L. 1988: Khronologiya chernyakhovskikh mogil'nikov Lesostepnoy Ukrainy (Chronology of the Chernyakhov cemeteries in the forest-steppe of Ukraine). In: Rybakov, B. A. (ed.): *Trudy V Mezhdunarodnogo kongressa arkheologov-slavistov, Vol. 4.* Kiyev, 34–46.

Gorokhovskiy, E. L. – Gopkalo, O. V. 2004: Fibuly VII gruppy O. Al'mgrena v areale chernyakhovskoy kul'tury (Almgren Group VII fibulae in the area of the Chernyakhov culture). In: Kozak, D. N. (ed.): *Arkheolohiia davnikh slovian.* Kyiv, 103–130.

Gorokhovskyi, E. L. – Zubar, V. M. – Havryliuk, N. A. 1985: Pro pizniu datu deiakykh antychnykh horodyshch Olviiskoi khory (On the late dating of some ancient hillforts in the Chora of Olbia). *Arkheolohiia* 49, 25–41.

Grosu, V. I. 1990: *Khronologiya pamyatnikov sarmatskoy kul'tury Dnestrovsko-Prutskogo mezhdurech'ya* (The chronology of Sarmatian culture sites in the Dniester–Prut Interfluve). Kishinev.

Gschwantler, K. – Winter, H. 1991: Bronzewerkstätten in der Austria Romana. Ein Forschungsprojekt. *Römisches Österreich* 17/18, 107–142.

Gudea, N. – Lucăcel, V. 1979: Fibule romane în Muzeul de Istorie şi Artă din Zalău. *Acta Musei Porolissensis* 3, 321–378.

Gudea, N. – Tamba, D. 2008: Despre o jumătate de tipar bivalve, din bronz, pentru turnal fibule, prin metoda cerii pierdute. *Revista Bistriţei* 22, 95–100.

Gudkova, A. V. – Redina, E. F. 1999: Sarmatskiy mogil'nik Gradeshka v nizov'yakh Dunaya (The Gradeshka Sarmatian cemetery in the Lower Danube region). *Starozhytnosti Pivnichnoho Prychornomoria i Krymu 7.* Zaporizhzhia, 177–191.

Grumeza, L. 2014: *Sarmatian cemeteries from Banat (late 1st – early 5th centuries AD).* Cluj-Napoca.

Hadaczek, K. 1904: *Grabarka Niesłuchowska III. Teka konserwatorska. Rocznik Koła c.k. Konserwatorów Starożytnych Pomników Galicyi Wschodniej* III.1, 1–14.

Hadaczek, K. 1912: Kultury dorzecza Dniestru w epoce cesarstwa rzymskiego. *Materiały antropologiczno-archeologiczne i etnograficzne* 12, 23–33.

Ioniţă, I. – Ursachi, V. 1988: *Văleni o mare necropolă a dacilor liberi.* Iaşi.

Istvánovits, E. – Kulcsár, V. 2016: Zaimstvovannyye elementy v kul'ture sarmatov Vengerskoy nizmennosti (Borrowed elements in the culture of the Sarmatians of the Hungarian Plain). In: Luk'yashko, S. I. (ed.): *Antichnaya tsivilizatsiya i varvarskiy mir Ponto-Kaspiyskogo regiona: materialy Vserossiyskoy nauchnoy konferentsii s mezhdunarodnym uchastiyem, posvyashchennoy 70-letiyu B. A. Rayeva (Kagal'nik, 20-21 oktyabrya 2016 g.).* Rostov-na-Donu, 119–124.

Istvánovits, E. – Kulcsár, V. 2018: *'...aligha állhat nekik bármely csatarend ellent': Egy elfelejtett nép, a szarmaták.* Monográfiák a Szegedi Tudományegyetem Régészeti Tanszékéről 6. Nyíregyháza–Szeged.

Iván, R. – Ölvecky, R. 2014: Germán települések a közép Duna menti római határvidéken. In: Balázs, P. (ed.): *Firkák III. Fiatal Római Koros Kutatók III. konferenciakötete.* Szombathely, 205–220.

Jobst, W. 1975: *Die römischen Fibeln aus Lauriacum.* Forschungen in Lauriacum 10. Linz.

Karl, A. – Karl, V. 1997: Enzersfeld. *Fundberichte aus Österreich* 36, 843.

Khvoika, V. 1901: Polya pogrebeniy v Srednem Pridneprov'ye (raskopki V. V. Khvoyki v 1899–1900 godakh) (Burial Fields in the Middle Dnieper Region (Excavations by V. V. Khvoika in 1899–1900)). *Zapiski Rossiyskogo arkheologicheskogo obshchestva* 12.1–2, 172–190.

Klanicová, S. 2010: Nálezy terry sigillaty v oblasti pod Pavlovskými vrchy (jižní Morava) a jejich vypovídací hodnota pro zkoumání římsko-barbarských vztahů. *Přehled výzkumů* 51, 139–155.

Klanicová, S. – Komoróczy, B. 2008: Terra sigillata z germánských sídlištních objektů na lokalitě Klentnice. *Zborník Slovenského národného múzea* 2, 283–298.

Kolník, T. 1964: Honosné spony z mladšej doby rímskej vo svetle nálezov z juhozápadného Slovenska. *Slovenská archeológia* 12:2, 409–446.

Kolník, T. 1965: K typológii a chronológii niektorých spon z mladšej doby rímskej na Jugozápadnon Slovensku. *Slovenská archeológia* 13:1, 183–236.

Kolník, T. – Varsik, V. – Vladár, J. 2007: *Branč Germánska osada z 2. až 4. Storočia.* Nitra.

Komoróczy, B. – Vlach, M. – Zelikova, M. – Sedlaček, J. – Růžičkova, P. 2019: Revize stavu archeologickych komponent v trati Drnholec 'Holenicka pole' pomoci prospekčnich a malo invazivnich vyzkumnych metod. *Přehled výzkumů* 60:2, 9–57.

Kopernicki, I. 1878: Poszukiwania archeologiczne w Horodnicy nad Dniesrem, wspólnie z p. Władysławem Przybysławskim, członkiem Komisji antropologicznej i archeologicznej dokonane w roku 1877. *Zbiór Wiadomości do Antropologii Krajowej* 2, 19–72.

Kovrig, I. 1937: *A császárkori fibulák főformái Pannoniában.* Dissertationes Pannonicae II.4. Budapest.

Kozak, D. N. 1984: *Pshevorska kultura u Verkhnomu Podnistrovi i Zakhidnomu Pobuzhzhi* (The Przeworsk culture in the Upper Dniester and Western Bug regions). Kyiv.

Kozak, D. N. 1993: Pshevorskaya kul'tura (The Przeworsk culture). In: Rusanova, I. P. – Symonovich, E. A. (eds): *Arkheologiya SSSR. Slavyane i ikh sosedi v kontse I tysyacheletiya do n.e. – pervoy polovine I tysyacheletiya n.e.* Moskva, 53–66.

Kozak, D. N. 2008: *Venedy* (Venedi). Kyiv.

Kőhegyi, M. – Vörös, G. 2011: *Madaras-Halmok.* Szeged.

Kren, H. – Pollak, M. 2007–2008: Kleinhöflein. *Fundberichte aus Österreich* 46, 681–682.

Lazurko, O. – Tkach, E. 2012: Doslidzhennia v s. Zahirtsi na Bridshchyni (Research in the village of Zahirtsi in the Bridshchyna region). *Lvivskyi arkheolohichnyi visnyk* 3, 57–68.

Luhovyi, R. – Kovalenko, O. 2020: Arkheolohichni doslidzhennia v ur. Ozero bilia s. Bilsk Kotelevskoho r-nu v 2019 r. (Archaeological investigations at the Ozero Tract near the village of Bilsk, Kotelva District, in 2019). In: Korost, I. I. (ed.): *Arkheolohichni doslidzhennia Bilskoho horodyshcha 2019.* Kyiv–Kotelva, 111–121.

Lyubichev, M. V. 2003: K voprosu o vremeni poyavleniya pamyatnikov chernyakhovskoy kul'tury na Dnepro-Donetskom vodorazdele (On the date of the emergence of Chernyakhov culture sites in the Dnieper–Donets watershed). *Rossiyskaya arkheologiya* 3, 71–81.

Lyubichev, M. V. 2008: Etnokul'turnyy podtekst rasprostraneniya fibul gruppy Al'mgren VII vostochneye Dnepra (The ethnocultural context of the distribution of Almgren Group VII fibulae east of the Dnieper). *Drevnosti 2008.* Khar'kov, 36–47.

Lyubichev, M. V. 2010: O khronologii gorizonta Boromlya (datirovka fibul gruppy VII O. Al’mgrena v kompleksakh Tsentra’noy i Vostochnoy Yevropy) (On the chronology of the Boromlia horizon: Dating of Almgren Group VII fibulae in the assemblages of Central and Eastern Europe). *Drevnosti 2010*. Khar’kov, 136–155.

Lyubichev, M. V. 2019: *Rannyaya istoriya dnepro-donetskoy lesostepi I–V vekov* (The early history of the Dnieper–Donets forest-steppe in the Ist – Vth centuries AD). Khar’kov.

Lyubichev, M. V. – Didyk, V. V. 2002: Ob odnoy gruppe fibul pozdnerimskogo vremeni v Dnepro-Donetskoy lesostepi (On a group of Late Roman Period fibulae from the Dnieper–Donets forest-steppe). *Stratum plus* 4, 335–343.

Lyubichev, M. V. – Bugay, A. N. – Shultze, E. 2020: Yestestvennonauchnyye issledovaniya metallicheskikh izdeliy pozdnerimskogo vremeni: pervyye rezul’taty analiza nakhodok iz Voytenkov (Vostochnaya Ukraina) (Scientific analyses of Late Roman period metal objects: Preliminary results of the analysis of finds from Voitenki (Eastern Ukraine)). In: Lyubichev, M. V. – Myzhgyn, K. V. (eds): *Ostrogothica* 3. Khar’kov, 479–501.

Lyubichev, M. – Filatov, D. – Rusnak, V. – Varachova, K. – Goguns’ka, V. – Shultze, E. – Myzhin, K. 2022: Doslidzhennia pamiatok piznorymskoho chasu na terytorii Kharkivskoi oblasti (Investigations of Late Roman period sites in the Kharkiv region). *Arkheolohichni doslidzhennia v Ukraini 2020 r.* Kyiv, 288–289.

Mączyńska, M. 1999: O tak nazyvayemykh ‘sarmatskikh’ fibulakh v Sredney i Vostochnoy Yevrope (On the so-called ‘Sarmatian’ fibulae in Central and Eastern Europe). In: Levada, M. E. (ed.): *Sto let chernyakhovskoy kul’ture*. Kiyev, 87–111.

Mączyńska, M. 2003: Die sogenannten ‘sarmatischen’ Fibeln in Mittel und Osteuropa. In: Carnap-Bornheim, C. (ed.): *Kontakte-Kooperation-Konflikt. Germanen und Sarmaten zwischen dem 1. und 4. Jahrhundert nach Christus*. Neumünster, 303–332.

Mączyńska, M. 2011: Der frühvölkerwanderungszeitliche Hortfund aus Łubiana, Kreis Kościerzyna (Pommern). *Bericht der Römisch-Germanische Kommission* 90, 7–481.

Magomedov, B. V. 2015: *Keramicheskiye pryaslitsa chernyakhovskoy kul’tury* (Ceramic spindlewhorls of the Chernyakhov culture). Kiyev.

Magomedov, B. V. 2022: *Pamiatky cherniakhivskoi kultury Vinnytskoi oblasti* (Sites of the Chernyakhov culture in the Vinnytsia region). Kyiv.

Magomedov, B. V. – Didenko, S. V. – Kozhemiachenko, V. B. 2010: Mogil’nik chernyakhovskoy kul’tury u s. Legedzino. Raboty 2010 goda (The cemetery of the Chernyakhov culture by village Legedzino. Excavation in 2010). In: Kruts, V. A. – Korvin-Piotrovskiy, A. G. – Menotti, F. – Ryzhov, S. N. – Chernovol, D. K. – Chabanyuk V. V.: *Tripol’s’koye poseleniye-gigant Tal’yanki. Issledovaniya 2010 g*. Kiyev, 32–93.

Magomedov, B. V. – Levada, M. E. 1993: Rozkopky cherniakhivskoho mohylnyka v s. Petrykivtsi (Excavations of the Chernyakhov culture cemetery at Petrykivtsi). In: Kozak, D. N. – Klochko, V. I. – Videiko, M. Yu. – Toshchev, H. M. (eds): *Arkheolohichni doslidzhennia na Ukraini 1992 roku*. Kyiv, 92–93.

Magomedov, B. V. – Levada, M. E. 1997: Cherniakhivskyi mohylnyk Petrykivtsi 1 (The Petrykivtsi 1 Chernyakhov culture cemetery). In: Videiko, M. Yu. (ed.): *Arkheolohichni doslidzhennia v Ukraini 1993 roku*. Kyiv, 80–81.

Mătasă, C. – Zamoşteanu, I. – Zamoşteanu, M. 1961: Săpăturile de la Piatra Neamţ. *Materiale şi cercetări archeologice* 7, 339–349. https://doi.org/10.3406/mcarh.1961.1646

Matei, A. – Stanciu, I. 2000: *Vestigii din epoca romană (sec. II–IV p. Chr.) în spaţiul nord-vestic al României* (Funde der römischen Kaiserzeit (2.-4. Jh. n. Chr.) im Nordwestgebiet Rumäniens). Zalău.

Myzhgyn, K. – Didenko, S. 2021: Borany Zosima, Bosporskoye tsarstvo i pokhod na Trapezund (The Borani of Zosimus, the Bosporan Kingdom, and the campaign against Trapezus). In: Matera, M. – Karasiewicz-Szczypiorski, R. (eds)*: Pontica et Caucasica II: Interdisciplinary research on the antiquity of the Black Sea*. Warsaw, 311–336. https://doi.org/10.31338/uw.9788323555681.pp.311

Nagy, M. 2023: *Das jüngerkaiserzeitliche Gräberfeld von Budapest-Rákoscsaba, Péceliút (2.-4. Jahrhundert n. Chr.): ein grenznaher Fundortim Barbaricum gegenüber Aquincum II*. Monumenta Archaeologica Barbarorum inter Pannoniam Daciamque 1/2. Budapest. https://doi.org/10.62150/MABiPD.1.2.2023

Nagy, M. 2025: *A Rákoscsaba-Péceli úti császárkori barbár temető magas tűtartós fibulái. Északi kapcsolatú magas tűtartós fibulák az Alföldön.* Szentendre.

Nekrasova, A. N. 1990a: K voprosu o nachal'nom etape rasprostraneniya chernyakhovskikh drevnostey v Dneprovskom Lesostepnom Levoberezh'ye (On the initial spread of Chernyakhov antiquities in the Dnieper forest-steppe left bank region). In: Suprunenko, O. B. (ed.): *Okhorona i doslidzhennia pam'iatok arkheolohii Poltavshchyny*. Poltava, 150–151.

Nekrasova, A. N. 1990b: O khronologicheskikh razlichiyakh chernyakhovskikh drevnostey v Dneprovskom lesostepnom Levoberezh'ye (On the chronological variation of Chernyakhov antiquities in the Dnieper forest-steppe left bank region). In: Sedov, V. V. (ed.): *VI Mezhdunarodnyy kongress slavyanskoy arkheologii (Tezisy sovetskoy delegatsii)*. Moskva, 62–64.

Nekrasova, A. N. 2006: Pamyatniki chernyakhovskoy kul'tury Dneprovskogo Levoberezh'ya (Chernyakhov culture sites of the Dnieper left bank region). In: Levada, M. E. – Samoylenko, L. G. (eds): *Goty i Rim*. Kiyev, 87–200.

Nikitina, G. 2008: *Chernyakhovskaya kul'tura Podnestrov'ya (po rezul'tatam analiza arkheologicheskikh istochnikov)* (The Chernyakhov culture of the Dniester region: Based on an analysis of archaeological sources). Moskva.

Oblomsky, A. 2003: *Dneprovskoye lesostepnoye Levoberezh'ye v pozdnerimskoye i gunnskoye vremya (seredina III – pervaya polovina V vv.n.e.)* (The Dnieper forest-steppe left bank region in the Late Roman and Hunnic Periods (mid-3rd to first half of the 5th century AD)). Moskva.

Oblomsky, A. 2021: Dve kontseptsii ranneslavyanskoy arkheologii. Prevratnosti metoda (Two concepts of early Slavic archaeology: The vicissitudes of method). *Stratum plus* 4, 299–320.

Onyshchuk, J. I. 2018: *Naselennia Zakhidnoi Volyni ta Zakhidnoho Podillia u pershii polovyni I tys.n.e.: kulturno-istorychnyi aspekt* (The population of Western Volyn and Western Podilia in the first half of the first millennium AD: Cultural and historical aspect). Lviv.

Opreanu, C. – Cociş, S. – Lăzărescu, V. 2020: Barbarian brooches in Roman context: Analysis of the finds from the frontier marketplace at Porolissum (Romania). In: Rubel, A. – Voß, H.-U. (eds): *Experiencing the frontier and the frontier of experience: Barbarian perspectives and Roman strategies to deal with new threats*. Oxford, 67–93. https://doi.org/10.2307/j.ctv1ddcm17.9

Osaulchuk, O. – Silaiev, O. – Salo, B. – Nazar, I. 2016: Doslidzhennia na poselenni Staryi Yarychiv 3 (Investigations at the Staryi Yarychiv 3 settlement). *Arkheolohichni doslidzhennia v Ukraini 2015 r.* Kyiv, 101–103.

Palade, V. 1980: Élèments gèto–daces dans le site Sîntana de Mureş–Cerneahov de Bîrlad-Valea Seacă. *Dacia* 24, 223–253.

Palade, V. 2004: *Aşezarea şi necropola de la Bârlad-Valea Seacă secolele III–V*. Bucureşti.

Párducz, M. 1931: A Nagy Magyar Alföld rómaikori leletei. *Dolgozatok* 7, 74–162.

Párducz, M. 1956: Beiträge zur Geschichte der Sarmaten in Ungarn im II und III Jahrhundert. *Acta Archaeologica Academiae Scientiarum Hungaricae* 7:1, 139–182.

Petrauskas, O. 2017: Übergang von der Stufe C_2 zu C_3 in der Černjachov-Kultur (Auf dem Beispiel der Glasschalen mit Ringboden). *Ephemeris Napocensis* 27, 123–154.

Petrauskas, O. – Didenko, S. – Slobodjan, T. 2022: Ein Grab mit Hemmoorer Eimer bei Poberežne, Region Winnyzja, in der ukrainischen Podillja. *Germania* 100, 151–198. https://doi.org/10.11588/ger.2022.100.98950

Petrauskas, O. – Osaulchuk, O. 2023: Desiat rokiv doslidzhen v Komarovi: pidsumky ta perspektyvy (Ten Years of Research at Komariv: Results and Prospects). Pidhurets, K. – Korniienko, V. – Zotov, I. (eds): *Hotskyi shliakh: spilna istorychna rekonstruktsiia ta virtualna podorozh v mynule*. Volodymyr, 28–56.

Pharmakovskiy, B. V. 1906: Raskopki v Ol'vii 1902–1903 gg. (Excavations at Olbia in 1902–1903). *Izvestiya Imperatorskoy Arkheologicheskoy Komissii* 13. Sankt-Peterburg.

Piętka-Dąbrowska, T. 1961: Przyczynki do znajomości okresu od I do VI w. n.e. z międzyrzecza Dniepru i Bugu. *Wiadomości archeologiczne* 27:2, 217–239.

Podgórska-Czopek, J. 2009: *Grodzisko Dolne, stanowisko 22 – wielokulturowe stanowisko nad Dolnym Wisłokiem.Część II. Okresy rzymski i wczesnosłowiański*. Rzeszów.

Popuşoi, E. (ed.) 1996: *Expoziţia 'Rădăcini ale civilizaţiei străromâneşti în Muntenia de Răsărit, Moldova de Sud şi Centrală in sec. III – XI p. Ch': catalog*. Vaslui.

Puklina, O. O. 2018: Sklyani fiali rymskoho chasu z Olvii (Glass phialae of the Roman period from Olbia). *Arkheolohiia i davnia istoriia Ukrainy* 28, 68–77. https://doi.org/10.37445/adiu.2018.03.06

Pivovarov, S. V. – Il'kiv, M. V. 2012: Doslidzhennia na terytorii Chernivetskoi obl. u 2010–2011 rr. (Archaeological research in the Chernivtsi region in 2010–2011). *Arkheolohichni doslidzhennia v Ukraini v 2011 r.* Lutsk, 476–477.

Radyush, O. A. 2008: Novyye pamyatniki III – V vv. v Kurskom Poseym'ye (New sites of the 3rd–5th centuries in the Kursk Seim region). In: Vorontsov, A. M. – Gavritukhin, I. O. (eds): *Lesnaya i lesostepnaya zony Vostochnoy Yevropy v epokhi rimskikh vliyaniy i Velikogo pereseleniya narodov. Konferentsiya 1.* Tula, 181–207.

Radyush, O. 2010: Issledovaniya poseleniya III – IV vv. n.e. u pos. im. Karla Libknekhta (Peny) v Kurskom Poseym'ye (Investigations of the 3rd – 4th-century AD settlement near the settlement of Karl Liebknecht (Peny) in the Kursk Seim region). In: Shcheglova, O. – Kazanskiy, M. – Novakovskiy, V. (eds): *Germania-Sarmatia II.* Kaliningrad–Kursk, 179–213.

Radyush, O. 2015: Issledovaniya pamyatnikov rubezha pozdney antichnosti i rannego srednevekov'ya (III–V vv. n. e.) v verkhov'yakh reki Sudzha (Investigations of sites dating to the transition from Late Antiquity to the Early Middle Ages (3rd–5th Centuries AD) in the Upper Sudzha River region). In: Razdol'skiy, A. (ed.): *Sudzha i sudzhane v otechestvennoy i zarubezhnoy istorii i kul'ture: sbornik statey i materialov.* Kursk, 18–39.

Redžić S. 2007: *Nalazi rimskih fibula na nekropolama Viminacijuma.* Beograd.

Rikman, E. A. 1975: *Etnicheskaya istoriya naseleniya Podnestrov´ya i prilegayushchego Podunav´ya v pervykh vekakh nashey ery* (The ethnic history of the population of the Dniester region and the adjacent Danube region in the first centuries AD). Moskva.

Ritterling, E. 1911: Das Kastell Niederbieber. *Bonner Jahrbücher* 120, 259–278. https://doi.org/10.11588/bjb.1911.0.46348

Rogawski, K. 1856: *O wykopaliskach leżajskich: rzecz archeologiczna.* Kraków.

Romsauer, P. – Hećková, J. – Repka, D. 2019: *Chotín VII. Sídlisko z doby Halštatsky, rímskej a stredoveku.* Nitra.

Salin, B. 1904: *Die altgermanische Thierornamentik: typologische Studie über Germanische Metallgegenstände aus dem IV. bis IX Jahrhundert, nebst einer Studie über irische Ornamentik.* Stockholm.

Sanie, S. 1981: *Civilizaţia Romană la est de Carpaţi şi romanitatea pe teritoriul Moldovei (secolele II î.e.n. – III e.n.).* Iaşi.

Schulte, L. 2011a: *Die Fibeln mit hohem Nadelhalter (Almgren Gruppe VII).* Neumünster.

Schulte, L. 2011b: *Die Fibeln mit hohem Nadelhalter (Almgren Gruppe VII). Katalog.* Neumünster.

Shchepachenko, V. 2024a: *Sotsialno-ekonomichnyi rozvytok naselennia piznoromskoho chasu – pochatku doby Velykoho pereselennia narodiv na terytorii Ukrainy: za materialamy sklyanoho posudu cherniakhivskoi kultury* (Socio-economic development of the population in the territory of Ukraine during the Late Roman period and the Early Migration period: A study based on glass vessels of the Chernyakhiv culture). PhD Dissertation, Kharkivskyi natsionalnyi universytet imeni V. N. Karazina Ministerstva osvity i nauky Ukrainy, Kharkiv.

Shchepachenko, V. 2024b: Roman glassware from the area of the Chernyakhiv/Sântana de Mureş culture: Typology, chronology and distribution. *Journal of Ancient History and Archaeology* 11:3, 172–213. https://doi.org/10.14795/j.v11i3.1042

Shchukin, M. B. 1968: Voprosy khronologii chernyakhovskoy kul'tury i nakhodki amfor (Problems of the Chronology of the Chernyakhov culture and amphora finds). *Sovetskaya arkheologiya* 2, 41–51.

Shchukin, M. B. 2005: *Gotskiy put'. Goty, Rim i chernyakhovskaya kul'tura* (The Gothic road: Goths, Rome, and the Chernyakhov culture). St Peterburg.

Shelov, D. B. 1978: Uzkogorlyye svetloglinyanyye amfory pervykh vekov nashey ery (Narrow-necked light-clay amphorae of the first centuries AD). *Kratkiye soobshcheniya Instituta arkheologii AN SSSR* 156, 16–21.

Shcherban', A. L. 2000: Znakhidky starozhytnostei I tys. n.e. na poselenni poblyzu Dykanky (Antiquities of the 1st millennium AD discovered at a settlement near Dykanka). *Arkheolohichnyi litopys Livoberezhnoi Ukrainy* 1–2, 82, 83.

Shramko, B. A. 1962: *Drevnosti Severskogo Dontsa* (Antiquities of the Seversky Donets region). Khar'kov.

Smirnova, G. I. 1964: Poseleniye u s. Nezvisko v pervyye veka novoy ery (The settlement near the village of Nezvisko in the first centuries AD). *Materialy i issledovaniya po arkheologii SSSR* 116, 196–212.

Smishko, M. 1932: *Kultury wczesnego okresu epoki cesarstwa rzymskiego w Małopolsce Wschodniej*. Lwów.

Smishko, M. Yu. 1952: Ranneslavyanskaya kul'tura Podnestrov'ya v svete novykh arkheologicheskikh dannykh (The early Slavic culture of the Dniester region in light of new archaeological evidence). *Kratkiye soobshcheniya Instituta istorii material'noy kul'tury* 44, 67–82.

Soós, E. 2019: The settlements of the Przeworsk culture in Hungary. *Acta Archaeologica Carpatica* 54, 227–258. https://doi.org/10.4467/00015229AAC.19.013.11890

Spânu, D. 2019: *Poieneşti. Necropola din secolele II–III. Cu contribuţii de Mircea Babeş, Nicolae Miriţoiu şi Mihaela Culea.* Cluj-Napoca.

Strakošová, I. 1992: Záchranný výskum v Humennom. *Archeologické výskumy a nálezy na Slovensku v roku 1990.* Nitra, 95, 96.

Stuppner, A. 1990: Bernhardsthal. *Fundberichte aus Österreich* 29, 236.

Symonovich, E. A. 1955: O datirovke poseleniya pervykh vekov nashey ery v Luke-Vrublevetskoy (On the dating of the settlement at Luka-Vrublevetskaia to the first centuries AD). *Kratkiye soobshcheniya Instituta istorii material'noy kul'tury* 57, 23–32.

Symonovych, E. O. 1983: Pivnichno-skhidne pohranychchia pamiatok cherniakhivskoi kultury (The northeastern frontier of Chernyakhiv culture sites). *Arkheolohiia* 44, 71–85.

Tejral, J. 2006: Die germanische Gießereiwerkstatt in Pasohlávky (Bez. Břeclav). Ein Beitrag zur Frage der Fernhandles- und Kulturbeziehungen nach den Markomannenkriegen. *Památky archeologické* 97, 133–170.

Tejral, J. 2011: Die nachträglichen germanischen Siedlungsaktivitäten am Burgstall bei. Mušov. Versuch einer Interpretation. *Přehled výzkumů* 52/2, 39–73.

Tejral, J. 2017: Mähren zur Zeit der Markomannenkriege. *Študijné zvesti Archeologického ústavu SAV* 61, 149–188.

Teodor, S. 1975: Săpăturile de la Cucorăni (jud. Botoşani). *Arheologia Moldovei* 8, 121–201.

Tikhanova, M. A. 1957: O lokal'nykh variantakh chernyakhovskoy kul'tury (On local variants of the Chernyakhov culture). *Sovetskaya arkheologiya* 4, 168–194.

Tikhanova, M. A. 1976–1977: Zhilishche remeslennika-drevodela na poselenii u s. Luka-Vrublevetskaya na Dnestre (The woodworker's house at the settlement near Luka-Vrublevetskaia on the Dniester). *Kratkiye soobshcheniya Instituta arkheologii* 148, 69–76.

Tikhanova, M. – Shcheglova, O. – Shchukin, M. – Sharov, O. 1999: The strukture of the Lepesovka settlement. In: Gomolka-Fuchs, G. (ed.): *Die Sîntana-de-Mureş–Černiachov-Kultur. Akten des Internationalen Kolloquiums in Caputh vom 20. bis 24. Oktober 1995.* Bonn, 91–99.

Tylishchak, V. S. 2014: Mohylnyk cherniakhivskoi kultury Toky: khronolohiia ta osoblyvosti keramichnoho kompleksu (The Toky cemetery of the Chernyakhiv culture: Chronology and characteristics of the ceramic assemblage). In: Petrauskas, O. V. – Horbanenko, S. A. (eds): *Cherniakhivska kultura. Do 120-richchia vid dnia narodzhennia V. P. Petrova.* Kyiv, 197–210.

Tymoshchuk, B. A. – Vinokur, I. S. 1964: Pamyatniki chernyakhovskoy kul'tury na Bukovine (Sites of the Chernyakhov culture in Bukovina). *Materialy i issledovaniya po arkheologii SSSR* 116, 186–195.

Vaday, A. 1989: *Die sarmatischen Denkmäler des Komitats Szolnok. Ein Beitrag zur Archäologie und Geschichte des sarmatischen Barbaricums.* Budapest.

Vakulenko, L. V. 2010: *Ukrainski Karpaty u piznoromskyi chas (etnokulturni ta sotsialno-ekonomichni protsesy)* (Ukrainian Carpatians in the late roman times (ethno-cultural and social-economic processes)). Kyiv.

Varsik, V. 2003: *Veľký Meder und Bratislava-Trnávka: zwei germanische Siedlungen im Vorfeld des pannonischen Limes (Befunde und Chronologie in Übersicht).* Anodos – Supplementum 3. Trnava, 153–196.

Varsík, V. 2011: Die kaiserzeitliche Siedlung von Veľký Meder. In: Kovács, G. – Kulcsár, G. (eds): *Ten thousand years along the Middle Danube: Life and early communities from prehistory to history.* Budapest, 131–140.

Vinokur, I. S. 1979: Ruzhichanskiy mogil'nik (The Ruzhychanka Cemetery). In: Symonovich, E. A. (ed.): *Mogil'niki chernyakhovskoy kul'tury*. Moskva, 112–135.

Vladár, J. 1962: Výskum v Branči pri Nitre v roku 1961. *Archeologické Rozhledy* 14, 308–327.

Voitseshchuk, N. – Osaulchuk, O. – Pavliv, D. – Chopek, S. – Trybala-Zavysliak, K. – Bobak, D. 2015: Poperedni rezultaty arkheolohichnykh doslidzhen (rozkopok) u baseini richky Vyshnia v 2014–2015 rokakh (Preliminary results of archaeological investigations in the Vyshnia River basin in 2014–2015). *Arkheolohichni doslidzhennia Lvivskoho universytetu* 19, 118–141.

Vornic, V. – Matveev, S. 2026: Fibule cu portagrafă înaltă în spaţiul Pruto-Nistrean: descoperirile recente de la Rădoaia şi Gura Bîcului, republica Moldova. *Tyragetia* 20[25].1, 337–350.

Zaitsev, B. P. 1964: Novyye materialy chernyakhovskoy kul'tury basseyna Severskogo Dontsa i Psla (New materials on the Chernyakhov culture in the Seversky Donets and Psel River basins). *Materialy i issledovaniya po arkheologii SSSR* 116, 44–52.

Zeman, T. 2017: *Střední Pomoraví v době římské. Svědectví povrchové prospekce.* Olomouc.

Zharov, H. V. – Terpylovs'kyi, R. V. 2006: Doslidzhennia pamiatok skifskoho ta rymskoho chasu u Verkhnomu Posulli (Investigations of Scythian and Roman-period sites in the Upper Sula River region). *Arkheolohichnyi Litopys Livoberezhnoi Ukrainy* 1, 89–99.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 237–250. 10.17204/dissarch.suppl.5.2026.237

Roman bead workshops at Tibiscum

Twenty years after

Lavinia Grumeza
Institute of Archaeology Iaşi, Romanian Academy, Iaşi, Romania
lavinia_grumeza@yahoo.com

Received 6 October 2025 | Accepted 12 May 2026 | Published 18 November 2026

Abstract: This paper presents a reassessment of the Roman bead workshops at Tibiscum, written two decades after the pioneering study conducted by D. Benea. Tibiscum emerges as the principal bead-production centre on the Dacian western frontier, uniquely oriented towards supplying the extra-provincial world, particularly the Sarmatian cultural area. A comprehensive analysis of over 50,000 beads from both Tibiscum and Sarmatian burial contexts has revealed a striking correspondence in typology and colour. This finding suggests that virtually all bead types produced at Tibiscum circulated within Sarmatian communities. Glass and carnelian beads are found in abundance in this exchange, while other materials—such as amber or chalcedony—are present only sporadically in Sarmatian graves and have not yet been documented in the Tibiscum workshops. The study emphasises the technological sophistication, organisational scale, and strategic significance of bead production in Tibiscum, highlighting its role in trade and cultural interaction along the Pannonian–Dacian *limes*. Whilst it is evident that definitive provenance confirmation demands interdisciplinary analyses, the present typological and chromatic evidence underscores the importance of Tibiscum in the distribution of Roman material culture in the Sarmatian *Barbaricum*.

Keywords: Tibiscum, Roman Dacia, beads, workshops, Sarmatians

Introduction

Two decades ago, D. Benea conducted one of the most detailed studies of Roman provincial bead workshops.[1] The study focused on production centres active in Tibiscum throughout the existence of the Dacian province and possibly beyond. Twenty years later, these workshops remain relevant and warrant renewed attention. On the one hand, recent discoveries, particularly in the *Barbaricum*, have significantly expanded the comparative material available for analysis. On the other hand, new bead types now documented in museum collections call for a revision of the existing typological framework. Finally, the bead corpus of Tibiscum itself requires more adequate illustration, which could not be achieved within the technical and editorial constraints of the initial publication.

Tibiscum and the Pannonian–Dacian *limes*

The ancient town of Tibiscum was located on the western frontier of the Roman province of Dacia. It was established in AD 106 as a military *vicus*, and by the early 3rd century AD it had developed into a *municipium*.[2] Due to its strategic location, Tibiscum played a key role in the defensive system

1 Benea 2004.

2 Only two epigraphic monuments mention the title of *municipium Tibiscensium* (IDR III/1, 132 and IDR III/1, 139). R. Ardevan considers that Tibiscum became *municipium* together with Porolissum and ▸

✉ Corresponding author

of south-western Dacia and, by extension, in the protection of its capital, Ulpia Traiana Sarmizegetusa. The fortifications housed highly specialised auxiliary troops, including cavalry and archery units such as *cohors I Sagittariorum*, *Palmireni sagittarii*, and *Mauri equites*, whose expertise was particularly vital in conflicts with the Sarmatian populations inhabiting the frontier zones.[3]

The ancient ruins are dispersed across the present-day territory of the villages of Jupa and Iaz (Caraş-Severin County, Romania). A large part of the Roman settlement was destroyed by the shifting course of the Timiş River, which eroded substantial portions of its built environment. Archaeological investigations in this area have brought to light an extensive industrial and commercial area of the former city, where numerous workshops operated, specializing in the processing of diverse materials, including bronze, iron, silver, glass, semi-precious stones, bone, and ceramics. While the workshops producing glass vessels in the Roman Empire are relatively well documented, those engaged in bead-making remain far less understood. In this respect, Tibiscum stands out: it emerged as the most important bead-making centre identified in the Roman provincial world up to this day, providing a crucial reference point for understanding craft specialisation, technological traditions, and long-distance exchange along the empire's frontiers.

Other attestations of bead *officinae* are known from Brigetio and Intercisa (Hungary), Colonia Claudia Ara Agrippinensium and Augusta Treverorum (Germany), and probably from Oescus and Novae (Bulgaria), Aquincum and Arrabona (Hungary), Porolissum (Romania), as well as Augusta Raurica and Lausanne-Vidy (Switzerland).[4] Of particular interest is the tendency for these workshops to cluster along the Roman *limes* (Fig. 1), thereby underscoring their strategic importance in terms of frontier economy and exchange networks.



Fig. 1. Bead workshops (● – certain; o – possible; — the line of the *limes*).

As far as current evidence indicates, a wide range of monochrome and polychrome beads was produced only at the workshops of Tibiscum and Brigetio, active during the 2nd–4th centuries AD[5] and the first half of the 3rd century AD, respectively.[6] While the Brigetio workshop appears to have supplied beads and glass vessels primarily for consumption within Roman Pannonia,[7] Tibiscum emerged as the principal production centre serving the extra-provincial sphere, in particular the Sarmatian cultural area. The establishment and operation of these *officinae* may be connected to communities of craftsmen with long-standing traditions in glassworking, who settled in Tibiscum following the stationing of eastern auxiliary units in the region, such as *cohors I Sagittariorum* and *numerus Palmyrenorum Tibiscensium*.[8] A parallel can be drawn with Intercisa,

▸ Dierna during Septimius Severus' reign (Ardevan 1998, 116–117). D. Benea dates these processes to the year AD 197 (Benea 2003, 91–93).

3 Marcu 2009, 171–172.

4 For a list of these glass workshops, see Amrein 2001, 99–125 and Grünewald–Hartmann 2014, 43–57.

5 Benea 2004, 238–243.

6 Dévai 2015, 83.

7 Fórizs *et al.* 2012, 103–114.

8 Benea 2004, 267.

where the glass workshop is associated with the presence of *cohors I Aurelia Antoniniana milliaria Hemesenorum*, a Syrian archery troop. Syrian influences are also discernible in the technological repertoire, exemplified by the appearance of a new type of glass beaker decorated with appliquéd threads, the so-called 'snake-thread glass of Pannonia'.[9]

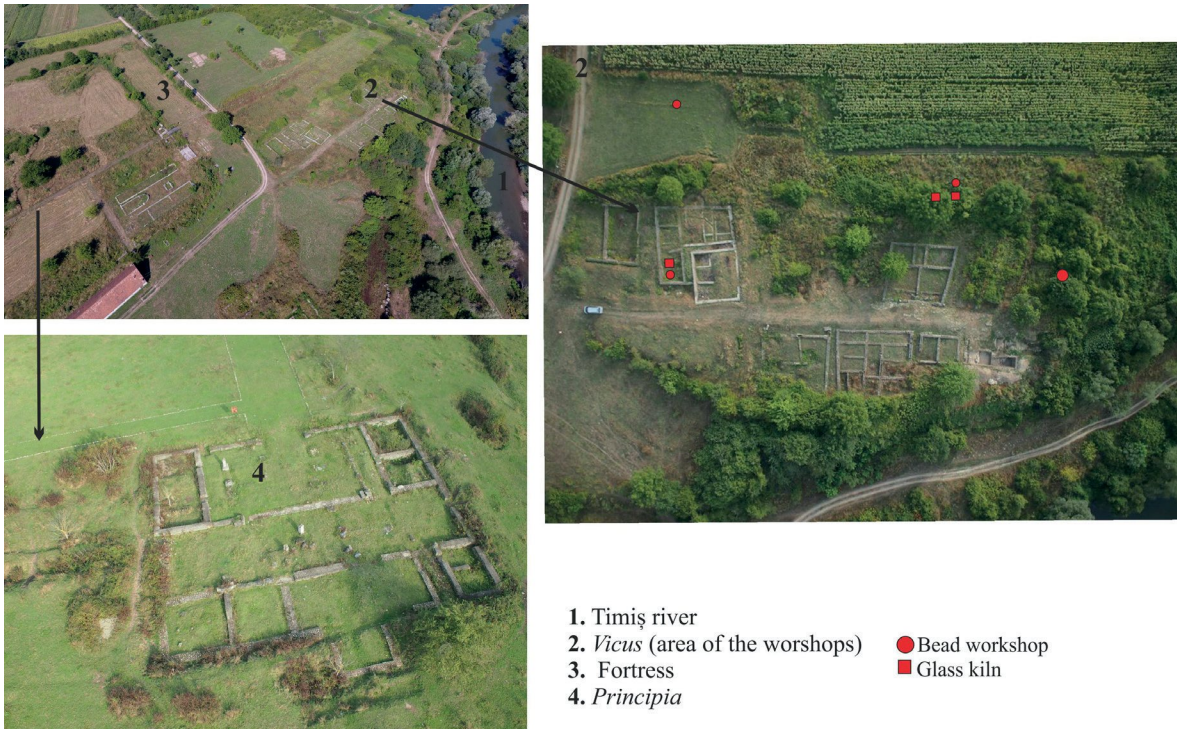


Fig. 2. Tibiscum. The military and industrial area (photos by Michał Pisz).

D. Benea advanced the argument that these workshops, comprising four clusters of installations for glass melting along with annexes (Figs 2–3), represented the largest bead-producing centre in the Roman Empire documented to date. The production of these *officinae* was not only the most extensive of its kind, but also unique in terms of the diversity of its output, which encompassed artefacts made of glass, metal, semi-precious stones, coral, and other materials. The significance of Tibiscum is underscored by two factors. Firstly, the longevity of its operation, and secondly, its continued activity even after the evacuation of Dacia.[10] Evidence of large-scale production is provided not only by the more than 10,158 beads preserved in the National Museum of Banat, Timişoara, but also by several thousand discarded beads, ceramic crucibles, iron rods, scrapped beads, and residual glass, all of which attest to sustained manufacturing activity from the 2nd through the 4th centuries AD.[11]

The workshops

Bead Workshop I (Building I) underwent both timber and stone construction phases. Archaeological investigations have revealed a glass-melting furnace, as well as a variety of specialised tools for glassworking, including knives, iron rods for twisting glass, and other implements.[12] The workshop

9 Dévai 2015, 84. In addition, physico-chemical analyses have shown that it was mainly the Syrio-Palestinian workshops that supplied the Imperial market with raw glass (see Antonaras 2017, 6–8, with bibliography).

10 Benea 2004, 268.

11 Benea 2008, 135.

12 Benea 2004, 161, 186–189.

produced an extensive range of objects, including glass beads, carnelian and coral beads (particularly in the 3rd century AD), glass rings, pendant-beads, *millefiori* glass plates, glass tokens, gold-glass beads, and enamelled objects.[13] The timber phase of the building dates to the first half of the 2nd century AD. Following the Marcomannic Wars, the workshop was reconstructed in stone, creating a more durable facility that remained in operation until the first half of the 4th century AD, as attested by coins of Constans and Constantius II.[14] Bead Workshop I was the principal glass *officina* of Tibiscum, representing the core of its bead-production industry.

Bead Workshop II was identified in Building VII. It was established following the levelling of the room after a fire, when a kiln for glass melting was constructed. Archaeological evidence from the site includes ceramic crucibles, iron bars, discarded beads, and other glassworking tools. A bronze workshop appears to have operated concurrently with the bead workshop, while a glass-melting furnace has also been documented.[15] This workshop functioned for a relatively short period at the beginning of the 3rd century AD.[16] At the time of its discovery, the assemblage from this workshop consisted exclusively of white opaque and translucent blue glass beads.[17]

Bead Workshop III, located to the west of Building VII, is less well documented. It was situated in a wooden structure, and although no glass-melting kiln was identified, traces of glassworking indicate that production activities took place there. To the west of Building II, two additional small kilns (40–60 cm in diameter) for melting and colouring glass were discovered; these were associated with Workshop IV and dated to the Hadrianic period (AD 117–138).[18]

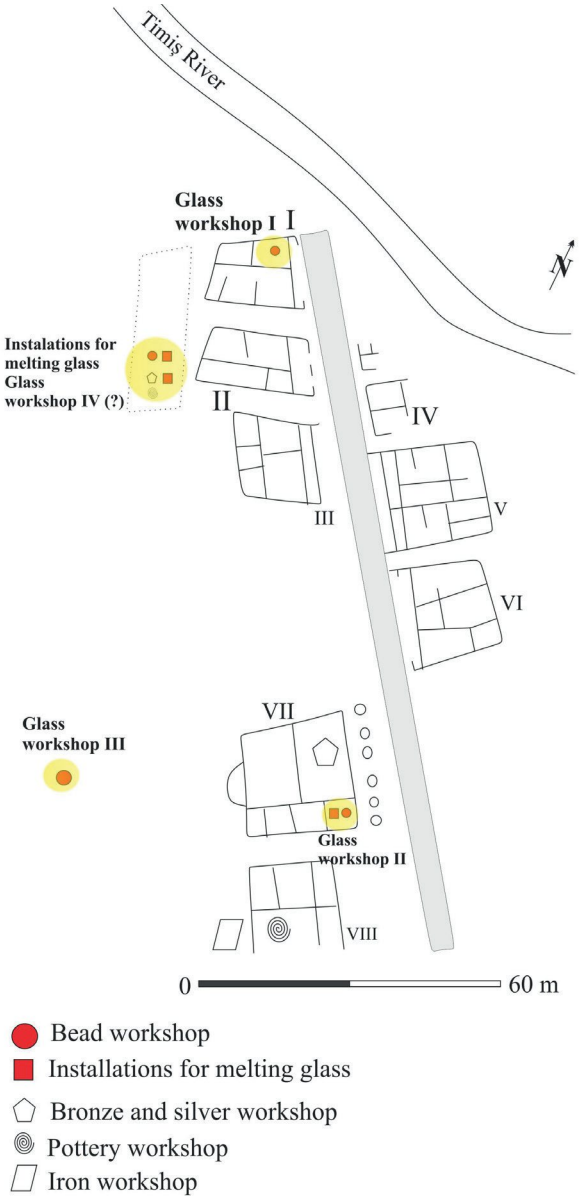


Fig. 3. Tibiscum. The position of glass *officinae* (after Benea 2004).

Typology

With regard to the provenance of raw materials, glass beads originate from two distinct workshops in the Roman Empire: primary workshops, where the raw glass blocks were produced, and secondary workshops, where these blocks were transformed into beads and other

13 Benea 2004, 210.
14 Benea 2004, 263.
15 Benea 2004, 163.
16 Benea 2004, 263.
17 Benea 2008, 141.
18 Benea 2004, 172.



Fig. 4. Comparative typology of monochrome glass beads.



Fig. 5. Comparative typology of polychrome glass beads.

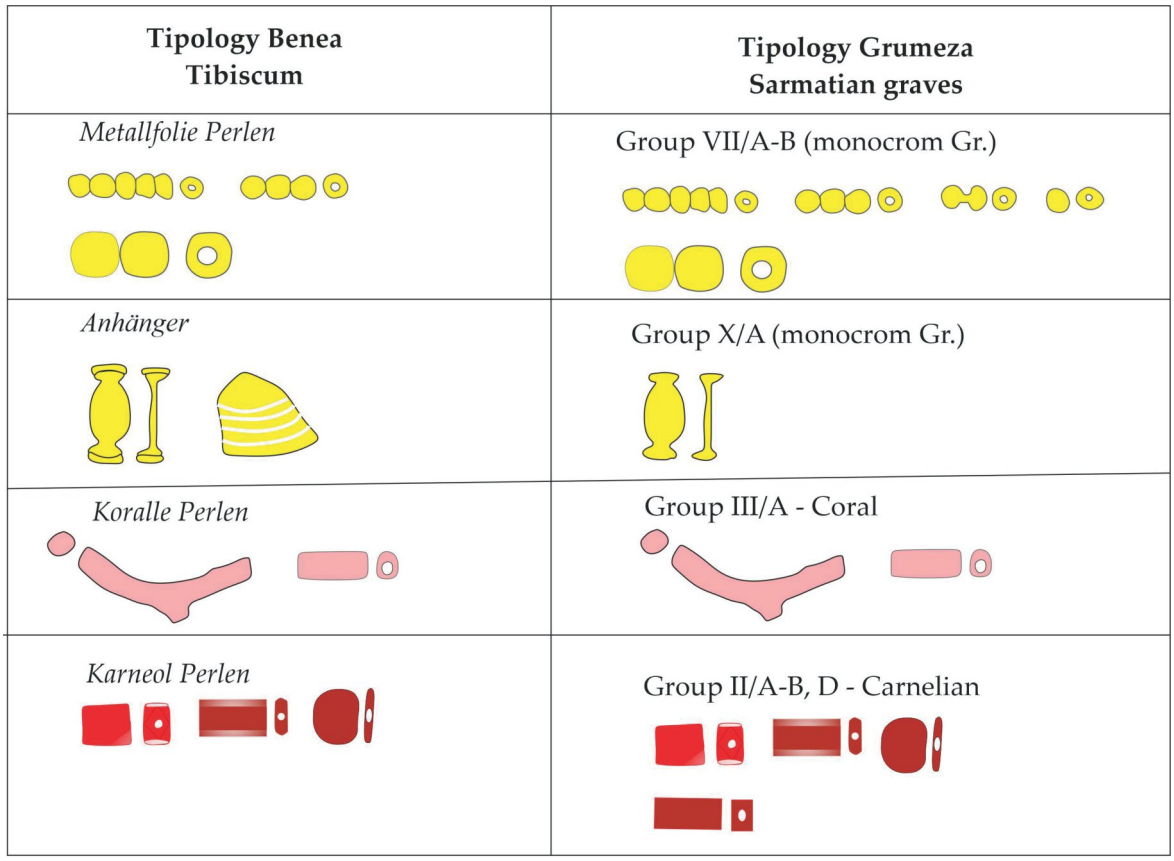


Fig. 6. Comparative typology of other types of beads.

glassware. In the case of marine and coral shell beads, it is imperative to consider both the regions where the raw materials were harvested—the seas and oceans—and the workshops where they were cut, processed, and assembled. At Tibiscum, glass was exclusively processed and not produced; the raw glass blocks were likely imported from the eastern provinces of the Empire. Furthermore, glass vessels were occasionally recycled and repurposed for the production of beads.[19]

In terms of typology, D. Benea classified the recovered glass material into eleven principal categories of monochrome beads, seven categories, with several variants, of polychrome glass beads, and created independent categories for carnelian, coral, and gold-glass beads. The assemblage is dominated by opaque glass, exhibiting a variety of colours (Figs 7–9).[20]

The recent examination of beads originating from various contexts at Tibiscum (currently in the repository of the Caransebeș County Museum),[21] together with those recovered from Workshop 1 (unpublished, in the collection of the Timișoara Museum), has resulted in the identification of previously unrecorded bead types and raw materials. According to D. Benea, Workshop I was engaged in the processing of "coral beads, carnelian, stones, and shells." A re-examination of the material from this *officina* indicates, however, that its assortment was more diverse, comprising beads made of coral, limestone, glass (including monochrome, polychrome, and gold-glass varieties), and carnelian, as well as glass tokens. Subsequent analysis of the museum collections has revealed additional bead types manufactured at Tibiscum, notably new varieties of polychrome

19 Benea 2004, 185.

20 Benea 2004, 194, 264.

21 Grumeza 2013a.

beads (Types XVII–XIX; Fig. 5) and ornaments produced from the canines of *Cervus elaphus*, valves of *Spondylus spinosus*, and fossiliferous limestone (Fig. 7.2).[22]

It is therefore essential to undertake a thorough re-evaluation of the Tibiscum workshops—conceived as a genuine industrial zone in Antiquity—in order to gain a more comprehensive understanding of their organisation, technological processes, and overall production. Such an approach is of particular significance given that the so-called 'Tibiscum types' of beads circulated widely beyond their immediate context of manufacture and occur in considerable numbers within Sarmatian funerary assemblages across the Great Hungarian Plain. Their distribution not only underscores the scale and specialisation of production at Tibiscum but also offers valuable insights into patterns of trade, cultural interaction, and the integration of local workshops into broader regional exchange networks.

'Tibiscum type' beads in Sarmatian environment in the Banat region and beyond

Beads constitute a recurring element of grave inventories of Sarmatian cemeteries west of the Dacian *limes*, often numbering several hundred, and in some cases, even thousands of specimens. An illustrative case study is Grave 24 from Pančevo-Vojlovica (Vojvodina), which yielded 2,215 beads,[23] while the cemetery of Timișoara-Hladik (139 graves) produced an exceptional total of 13,973 beads and thousands of fragments.[24] Comparable patterns can be observed in Sarmatian funerary complexes situated both to the north (Crișana region) and in the Great Hungarian Plain.[25]

Within the corpus of Roman-period discoveries from Arad County, beads represent the most numerous category of artefacts, with sometimes as much as several hundred specimens within a single grave. Across 53 Sarmatian cemeteries in the county, nearly 4,000 beads have been documented to date. The Arad database alone records 3,727 beads, in addition to several hundred fragments. It should be noted, however, that for approximately one-third of the graves the precise quantity of beads was not specified, and in many cases the finds were not counted at all. A particularly illustrative case is noted by E. Dörner in his field diary, where he describes a grave at Zădăreni in which "numerous beads were found around the skeleton […] which could be strung into a row extending to four metres in total."[26]

The quantity of beads, however, varies considerably from one burial ground to another, depending on a combination of factors: the particular character of each site, its proximity to the *limes*, the

22 The use of deer canine elements in personal ornamentation has a long chronological trajectory in Eurasia, being well attested in prehistoric contexts from the Mesolithic onwards, including Neolithic, Bronze Age, and Iron Age assemblages, where both original and imitative forms occur as components of composite necklaces (see, for example, Choyke 2001; Siklósi – Csengeri 2011; Măndescu 2020). Within this broader tradition, the occurrence of canine beads in Sarmatian graves and at Tibiscum may reflect the persistence of long-standing symbolic preferences, as well as the possible reuse or recontextualization of earlier artefacts within Roman-period assemblages.

23 Batistić-Popadić 1985, 62.

24 The data are not yet published but will be released in 2026 by L. Grumeza and V. Bârcă.

25 At the level of 2020 (Istvánovits *et al.* 2020) had 87,171 beads in their database, found in 1192 burials (from 152 sites from Great Hungarian Plain). The overwhelming majority of beads accompanied female burials. There were only 116 (9.73%) burials of children with beads. Beads are also found in male burials, but much less than in female and child burials, and they were used in different ways (Istvánovits *et al.* 2020, 11).

26 "*Um das Skelett herum fanden sich viele Perlen […] die eine Gesamtlänge von 4 Metern bildeten*" (Grumeza 2019, 26, Note 55).



Fig. 7. Beads. 1 – Polychrome beads from Tibiscum, 2 – coral, canine, *Spondylus* shell, and fossiliferous limestone beads from Tibiscum, 3 – fossiliferous limestone beads from a Sarmatian grave, findspot unknown (National Museum of Banat, Timișoara; photos by the author).

proportion of Roman imports within the assemblages, the economic resources of the communities, the chronological position of the cemetery, the proportion of female burials, and, perhaps most decisively, whether or not the grave was looted.

The remarkable quantities of beads are best understood in light of their varied functions. While they also occur in bracelets, necklaces, and earrings, the majority were sewn directly onto garments—along hems, cuffs, and necklines—as well as onto belts, handbags, and footwear. Beaded clothing

and accessories were a distinctive feature of Sarmatian female costume, particularly during the 2nd–4th centuries AD.

This paper focuses primarily on the typology of Sarmatian beads. In the study of *Barbaricum*, the classification proposed by M. Tempelmann-Mączyńska has long been employed, particularly in the various volumes of the *Corpus der römischen Funde im europäischen Barbaricum* and more broadly across Central and Northern Europe.[27] Her system, however, cannot be applied directly to the Sarmatian context, as the beads recovered from the Sarmatian *Barbaricum* differ significantly from those found further north. Moreover, the provenance of these beads is better understood, since the workshops where many of them were produced and distributed have been identified. For these reasons, and building upon the earlier work of D. Benea and A. Vaday, I have developed my own typology, which I have systematically refined over the years.[28] This revised system, presented in detail in Figs 4–6 partly aligns with the framework developed by Benea, while also expanding and clarifying several of its categories.



Fig. 8. Glass beads from Tibiscum (1–2 – National Museum of Banat, Timișoara, 3–5 – Caransebeș County Museum; photos by the author).

On the basis of the material analysed—more than 50,000 beads from Sarmatian contexts in western Romania and the Roman settlement of Tibiscum—it can be stated with a high degree of certainty that all types of beads produced at Tibiscum may appear in Sarmatian burials (Fig. 10). This implies that the beads identified within the Sarmatian *Barbaricum* either originated directly from Tibiscum or from a similar workshop along the Pannonian–Dacian *limes*. Clearly, this conclusion can only be verified through interdisciplinary analyses. However, the typological and chromatic congruence is indisputable.

27 Tempelmann-Mączyńska 1985.

28 Grumeza 2013a; Grumeza 2013b; Grumeza 2014; Grumeza 2019; Grumeza 2020; Grumeza – Bârcă 2020. The typology is intentionally open, allowing for the incorporation of new types, shapes, or colours as they come to light. This flexibility reflects the dynamic nature of the material and ensures that the system remains responsive to ongoing discoveries.



Fig. 9. Glass beads from Tibiscum (1 – National Museum of Banat, Timișoara, 2–6 – Caransebeș County Museum; photos by the author).

Summary

The reassessment of the Tibiscum workshops, twenty years after D. Benea's pioneering study, underscores their exceptional significance within the Roman provincial world. Tibiscum emerges not merely as a local centre of craft production, but as the principal bead-making hub on the Dacian frontier, with a unique orientation toward supplying the extra-provincial sphere, particularly the Sarmatian cultural area. The extensive typological and chromatic correspondence between the Tibiscum assemblage and bead finds from Sarmatian funerary contexts, supported by the analysis of over 50,000 beads, demonstrate that virtually all bead types produced at Tibiscum circulated within Sarmatian communities. This evidence implies that the majority of glass and carnelian beads recovered in the Sarmatian *Barbaricum* were derived either directly from Tibiscum or from a comparable workshop along the Pannonian–Dacian *limes*.



Fig. 10. Beads from Sarmatian graves. 1 – Giarmata Site 10, Grave 22, 2 – Timișoara (National Museum of Banat, Timișoara), 3 – Șofronea (Arad Museum Complex, Arad), 4 – Foeni-Cimitirul Ortodox, Grave 14 (National Museum of Banat, Timișoara), 5 – Timișoara-Hladik 1, Grave 14 (not to scale; photos by the author).

It should be noted, however, that certain types of beads—those made of amber or chalcedony, which appear only in small quantities within Sarmatian graves—have not yet been discovered among the finds from the Tibiscum workshops. Their absence may indicate production elsewhere, but that

cannot be confirmed without further study. Moreover, a large part of the Roman settlement was destroyed by the shifting course of the Timiș River, which eroded precisely the area where the first workshops were located. Today, this sector lies directly on the riverbank and continues to be affected by erosion. Consequently, it cannot be excluded that additional workshops once operated there in Antiquity, possibly specialising in the processing of materials such as amber, chalcedony, or other materials now absent from the surviving archaeological record. By contrast, recent examination of organic bead deposits in the Museum of Banat, Timişoara, has revealed additional bead types that can be securely attributed to Tibiscum, including examples fashioned from residual canines, various corals, shells, limestone, and the valve of *Spondylus spinosus*.

Although the confirmation of provenance requires interdisciplinary analyses, current typological and chromatic evidence firmly establishes Tibiscum as one of the most important bead-production centres identified in the Roman Empire. Its output not only highlights the scale and sophistication of craft specialisation on the frontier, but also provides crucial insights into trade networks, cultural interaction, and the mechanisms by which Roman material culture was disseminated in the broader Sarmatian world.

Sources

IDR: Russu, I. I. – Dušanić, M. – Gudea, N. – Wollmann, V. (eds): *Inscripțiile Daciei romane. Vol. III: Dacia Superior 1.* Bucureşti, 1977.

References

Amrein, H. 2001: *L'atelier de verriers d'Avenches. L'artisanat du verre au milieu du Ier siècle après J.-C.* Lausanne.

Antonaras, A. Ch. 2017: *Glassware and glassworking in Thessaloniki: 1st century BC–1st century AD.* Oxford. https://doi.org/10.2307/j.ctv170x4f0

Ardevan, R. 1998: *Viața municipală în Dacia Romană.* Timişoara.

Batistić-Popadić, D. 1985: Sarmatska nekropola Vojlovica-Pančevo. *Rad Vojvođanskih muzeja* 29, 59–83.

Benea, D. 2003: Septimius Severus şi Tibiscum. *Patrimonium Banaticum* 2, 91–93.

Benea, D. 2004: *Die Römischen Perlenwerkstätten aus Tibiscum – Atelierele romane de mărgele de la Tibiscum.* Timişoara.

Benea, D. 2008: Accesorii vestimentare (I), Mărgelele între import şi producţie locală. *Bibliotheca Historica et Archaeologica Universitatis Timisiensis X: Studii de Istorie economică a Daciei Romane*, 134–166.

Choyke, A. M. 2001: Late Neolithic red deer canine beads and their imitations. In: Choyke, A. M. – Bartosiewicz, L. (eds): *Crafting bone – Skeletal technologies through time and space. Proceedings of the 2nd meeting of the ICAZ worked bone research group.* British Archaeological Reports – International Series 931. Oxford, 251–266. https://doi.org/10.30861/9781841712291

Dévai, K. 2015: The secondary glass workshop in the civil town of Brigetio. *Dissertationes Archaeologicae* 3.3, 83–104. https://doi.org/10.17204/dissarch.2015.83

Fórizs, I. – Dévai, K. – Tóth, M. – Nagy, G. – May, Z. 2012: A Brigetiói üveggyártó műhely néhány jellemző üveglelete műszeres analitikai vizsgálata (Analytical investigations on the glass findings from Brigetio). *Komárom-Esztergom Megyei Múzeumok Közleményei* 18, 103–114.

Grumeza, L. 2013a: Roman beads found in Tibiscum. In: Ferencz, I. – Rişcuţa, N. C. – Bărbat-Tutilă, O. (eds): *Archaeological small finds and their significance. Proceedings of the symposium: The costume as an identity expression.* Proceedings Deva 1. Deva, 157–178.

Grumeza, L. 2013b: Typology and chronology of the beads found within the Foeni Sarmatian necropolis. *Tibiscum* 3, 245–260.

Grumeza, L. 2014: *Sarmatian cemeteries from Banat (late 1st–early 5th centuries AD).* Cluj-Napoca.

Grumeza, L. 2019: *Corpus der römischen Funde im europäischen Barbaricum. Rumänien Band 1. Kreis Arad.* Cluj-Napoca.

Grumeza, L. 2020: The more colourful, the better! Polychrome glass beads of the 2nd–4th century cemeteries in Banat (Romania). In: Mărgărit, M. – Boroneanţ, A. (eds): *Beauty and the eye of the beholder: Personal adornments across the millennia.* Târgovişte, 437–445.

Grumeza, L. – Bârcă, V. 2020: Glass beads discovered in the Sarmatian cemeteries from south-western Romania. *Archaeology and Early History of Europe* 36/3, 402–415. https://doi.org/10.37445/adiu.2020.03.28

Grünewald, M. – Hartmann, S. 2014: Glass workshops in northern Gaul and the Rhineland in the first millennium AD as hints of a changing land use: Including some results of the chemical analyses of glass from Mayen. In: Keller, D. – Price, J. – Jackson, C. (eds): *Neighbours and successors of Rome: Traditions of glass production and use in Europe and the Middle East in the later 1st millennium AD.* Oxford, 43–57. https://doi.org/10.2307/j.ctvh1dq24.10

Istvánovits, E. – Kulcsár, V. – Stoyanova, A. A. 2020: Busy v kostyume neseleniya sarmatskogo vremeni Kryma i Al'fĕl'da. *Krym v sarmatskuyu epokhu (II v. do n. e. – IV v. n. e.)* 6, 10–43.

Măndescu, D. 2020: Animal skeletal parts as personal adornments in the Early Iron Age necropolis at Valea Stânii (Argeş County, Romania). In: Mărgărit, M. – Boroneanţ, A. (eds): *Beauty and the eye of the beholder: Personal adornments across the millennia.* Târgovişte, 431–436.

Marcu, F. 2009: *The internal planning of Roman forts of Dacia.* Cluj-Napoca.

Siklósi, Zs. – Csengeri, P. 2011: Reconsideration of Spondylus usage in the Middle and Late Neolithic of the Carpathian Basin. In: Ifantidis, F. – Nikolaidou, M. (eds): *Spondylus in prehistory: New data & approaches.Contributions to the archaeology of shell technologies.* British Archaeological Reports – International Series 2216. London, 47–62.

Tempelmann-Mączyńska, M. 1985: *Die Perlen der römischen Kaiserzeit und der frühen Phase der Völkerwanderungszeit in mitteleuropäischem Barbaricum.* Römisch-Germanische Forschungen 43. Mainz.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 251–288. 10.17204/dissarch.suppl.5.2026.251

Development and changes in Roman glassmaking during the 1st century AD as reflected in the Roman road station Romula (Ribnica near Brežice, Slovenia)

Irena Lazar ✉
Faculty of Humanities, University of Primorska, Koper, Slovenia
Irena.Lazar@fhs.upr.si

Received 2 March 2025 | Accepted 26 June 2026 | Published 18 November 2026

Abstract: Roman glass production underwent several important changes and developments between the 1st century BC and the 1st century AD. These changes took place in production techniques, vessel forms, and use. These changes are most visible at the end of the 1st century BC and in the early decades of the 1st century AD. At the newly investigated site of the Roman road station of Romula in Slovenia, the glass assemblage, in terms of quantity, diversity, quality, and chronological range, reflects this period as well as the period of the settlement's establishment and life. Settlement and grave finds show that Romula experienced its greatest prosperity from the mid-1st to the 2nd century AD. Life at the settlement declined quite rapidly during the 3rd century AD. Compared with other early Roman sites with autonomous status in the region *(Colonia Iulia Emona, Municipium Claudium Celeia)*, the number of glass finds, strongly coloured mould-made and blown vessels, and decolourised glass (mould-made and blown), is surprisingly high. Taken together, this assemblage represents fine, high-quality glass produced at the peak of Roman glass production in terms of technological sophistication and variety, and demonstrates the wide range of glass artefacts available to consumers.

Keywords: Roman glass, mould-made glass, mould-blown glass, Romula, Pannonia, settlement, necropolis

Roman glass industry in the 1st century BC and 1st century AD

Incorporation of the Hellenistic states into the Roman world brought cultural and social influences and changes to Roman life and culture. Arts and crafts underwent substantial development and innovation. This was also true of glassmaking, which developed rapidly in the Roman world and soon reached a scale beyond that of ordinary crafts. Hellenistic influences provided the impetus for the creation and development of an independent Roman glass industry, which flourished from the Augustan period onwards and spread throughout the provinces. It became a strong and independent branch of the economy. This was made possible by the expansion of trade in the early Imperial period, the growth of glass workshops, knowledge of the preparation and production of raw glass and glassware, and a new way of organisation of glass production.

Over roughly a century of development and growth, Roman glass production underwent several important changes between the 1st century BC and the 1st century AD. These changes affected production techniques, vessel forms, and use, and became most conspicuous at the end of the 1st century BC and in the first half of the 1st century AD. No period in Roman history better illustrates

✉ Corresponding author

the remarkable diversity of technological practices. Glass finds from this period show a wide range of forms, colours, decorations, and production techniques. Strabo, writing in the age of Augustus, noted that glassmakers in Rome had discovered new colours and simplified the production of glass vessels to such an extent that a glass cup or a *balsamarium* could be bought for a single copper coin.

Romula in the context of Roman history

The Roman road and customs station of Romula was located on the *via publica* Aquileia–Emona–Siscia. The road, which in Roman times ran through present-day Dolenjska, was originally a *via militaris*, meaning that during the conquest of the southeastern Alpine region and the western Balkans, it was founded, laid out, and, to a large extent, probably also built by the Roman army for military campaigns and other needs.[1] Owing to the lack of epigraphic evidence, it is not known exactly when the road was built. During the reign of Emperor Augustus, this part of present-day Dolenjska was included in Illyricum, a region established before the creation of the independent provinces of Pannonia and Dalmatia. In view of political events in the Empire and its strategic needs, that the road was likely built in the Augustan period. At that time, there is no doubt that sufficient military units or legions were present in the area, which was a prerequisite for the execution of such a demanding construction project. Initially, these units were involved in Octavian's war in Illyricum (35–33 BC), then in Tiberius' operations in Illyricum between 15 and 9 BC, and finally in the Pannonian-Dalmatian rebellion between AD 6 and 9.[2]

The site and its role

Roman Romula is located in the village of Ribnica near Brežice in Dolenjska (Lower Carniola).[3] The station is mentioned twice in ancient sources, namely in two Roman itineraries, the *Tabula Peutingeriana* and the *Itinerarium Antonini*, both from the end of the 3rd century AD.[4] The settlement was built on the fringes of the Pannonian Plain, at an exceptionally favourable strategic point at the passage from the valleys of the Krka and Sava rivers to the Pannonian Plain at the foot of the Gorjanci Hills, where they slope into the plain of the Sava River (Savus). The *via publica Emona–Siscia* ran along the narrowest part of the terrace between the Sava River and the slopes of the Gorjanci Hills; from the peaks on the fringes of the Gorjanci Hills, the view extends to the west, east, and north, while the slopes of Gorjanci protect the southern side (Fig. 1). The settlement was erected at the narrowest section between Gorjanci and the Sava River, allowing its inhabitants to supervise traffic along the Sava River. In this way, the road station of Romula linked the entrance to Italy with the Balkan Peninsula. Because of natural constraints to the north and south, the settlement could expand only to the east and west, along the Roman road, reaching a length (measured during research between 2001 and 2004) of approximately 600 m, while its width remained between 60 and 130 m.

It is important to single out the find of a votive inscription to *Silvanus Augustus*, dedicated by a slave of the customs officers' society, and an inscription reading *ROMVLA* on a lead tablet.[5] These finds are essential for defining the administrative status of the settlement as a road and customs(?) station and for confirming its location.

1 Šašel 1977, 459, 466.
2 Lovenjak 1997, 90.
3 Petru 1975, 259.
4 Šašel 1975, 76–77.
5 Lazar 2020a; Tomaž *et al.* 2025b.



Fig. 1. Researched area of the Roman settlement of Romula (after Tomaž *et al.* 2024).

Settlement finds and, to a large extent, finds from the burial grounds show that Romula experienced its greatest prosperity in the second half of the 1st and the 2nd centuries AD, while life in this area declined quite rapidly during the 3rd century AD.[6] In this respect, the results of the analysis of material from Petričev grič are particularly noteworthy, as the finds include an exceptional selection of high-quality imported ceramic and glass products.

Some of the finds from Petričev grič are certainly older than those from the settlement; one may conclude that they are the remains of a building or complex (a Roman villa) that was inhabited from the end of the Augustan or the beginning of the Tiberian period onwards, that is, already before the foundation of the settlement of Romula. Most of the small finds from Petričev grič can be dated to the 1st and the first half of the 2nd century AD, while finds of the 3rd century AD are rare. Among the coin finds, the number of coins from the Julio-Claudian dynasty stands out, confirming the dating established from the analysis of other small finds.

The graves of the western and eastern necropolises in which glass products appear as grave goods cover the period from the mid-1st to the 2nd century AD. They mainly contain free-blown products, with only a few mould-blown products.

Presented glass finds

Given the selected scope of the discussion and the large quantity of material, the presentation focuses mainly on forms and products dating from the 1st to the first half of the 2nd century AD. The remaining glass material from the site of Romula is presented and published in open-access monographs on the necropolis, the settlement, and Petričev grič Hill.[7]

6 Tomaž *et al.* 2024; Tomaž *et al.* 2025a; Tomaž *et al.* 2025b.

7 Tomaž *et al.* 2024; Tomaž *et al.* 2025a; Tomaž *et al.* 2025b.

Petričev grič (Petrič Hill) – Roman *villa* (?)

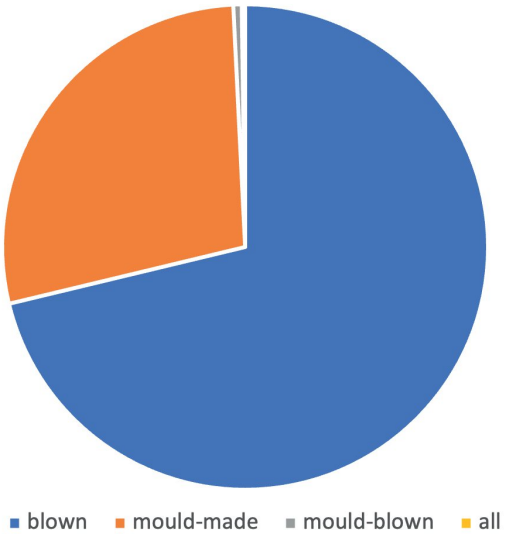
In the area of Petričev grič, or in the sector of the same name within the Roman settlement of Romula (Ribnica pri Brežicah = Ribnica near Brežice),[8] the wide variety of glass finds recovered during the excavations stood out not only for their quantity but also for their quality. Further study of the material has shown that the area yielding this concentration of glass finds, which includes both mould-made and free-blown products of virtually all colours and shapes, stands out clearly within the overall context of the settlement of Romula.

We may assume this was part of a destroyed Roman villa that had been built here, or existed here, before the road station of Romula was established. Although most of the finds from the Petričev grič area originate from disturbed layers, the coin finds show that most activity in this part of the settlement took place in the 1st century and the first half of the 2nd century AD. Two-thirds of the coin finds date from the period between the reigns of Emperor Augustus (27 BC to AD 14) and Emperor Marcus Aurelius (AD 161–180). The associated, and more precisely datable, glass material consists largely of mould-made vessels of intensely coloured glass, dating the assemblage from the second quarter of the 1st century to around AD 60,[9] and a group of vessels of decolourised glass, with or without faceted decoration,[10] which mainly covers the second half of the 1st and the beginning of the 2nd century AD.

From the Petričev grič area, a total of 535 glass vessel fragments (rims, bases, decorated fragments, fragments with inscriptions or imprints, etc.) were selected and separated for analysis, and it was possible to identify them at the level of basic forms. Of these fragments, 382 belong to free-blown glass vessels, while 150 belong to mould-made vessels (Tab. 1). Only three fragments are parts of vessels made by mould-blowing.

Tab. 1. Graph showing the numerical representation of glass vessels according to manufacturing technique.

Blown	382
Mould-Made	150
Mould- Blown	3
All	535



Within the group of mould-made vessels, a good third (50 pieces) belong to products made of decolourised glass, 46 vessels are made of naturally coloured glass (predominantly ribbed bowls), and 54 fragments belong to vessels made of intensely coloured and mosaic glass (Tab. 2). Among the latter, dark green strongly predominates (35 pieces), and is thought to represent a novelty and

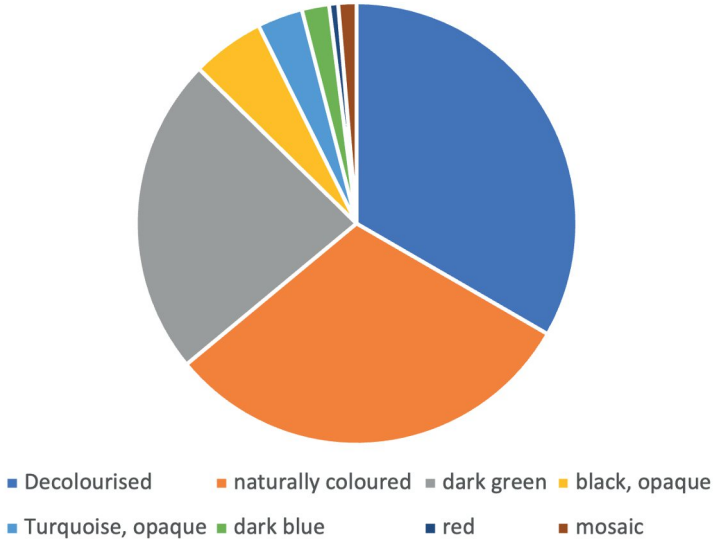
8 Tomaž *et al.* 2025a.

9 Grose 1989; Grose 1991.

10 Lazar 2020b; Lazar 2021.

Tab. 2. Graph showing the numerical representation of naturally coloured, intensely coloured and decolourised mould-made glass.

Mould-made glasses	Število-number
Decolourised	50
Naturally coloured	46
Dark green	35
Black, opaque	8
Turquoise, opaque	5
Dark blue	3
Red	1
Mosaic	2



achievement of the most prosperous period of the Roman glass industry. This is followed by vessels made of black glass (8 pieces), opaque turquoise glass (5 pieces), dark blue glass (3 pieces), red glass (1 piece), and two vessels made of mosaic glass.

The selected glass assemblage is currently unmatched in terms of quality and diversity among Roman sites in Slovenia. Particularly noteworthy are the rich selection of early Imperial imported mould-made vessels of intense colours and the group of decolourised glass, which includes both mould-made vessels with cut decoration and numerous free-blown products. The products of both groups belong to tableware. The majority of the mould-made material was imported from newly established glass workshops in central Italy, while some pieces also came from Mediterranean workshops in the eastern part of the Empire.

As will be shown below, this extensive and diverse assemblage of glass from Romula is important not only for understanding the use of Roman glass products in this area, but also, more broadly, in the context of the Empire as a whole, as it reflects particularly well the period of growth, development, and change in Roman glass production from the end of the 1st century BC to the second half, or end, of the 1st century AD. The assemblage includes vessels made using all glassmaking techniques known at the time, namely mould-made mosaic glass, coloured glass, decolourised glass, mould-blown products, and blown glass. It may be compared with material from the settlement layers and 131 graves, dated from the middle of the 1st to the end of the 2nd century AD.[11]

The numerous new vessel forms also permit a new interpretation of Roman glass material in Slovenia and directly indicate the integration of the road station of Romula into the period of the most intensive development and change in the organisation of the Roman glass industry and the extensive trade network for glass products in the Empire.

The material comes from disturbed layers, so it has been examined in groups and in chronological order according to the manufacturing technique used (mould-made glass, blown glass, mould-blown glass), as well as typologically. The sequence of forms discussed follows the established schemes in publications on Roman glass.

11 See Lazar 2020a; Tomaž *et al.* 2024.

Mould-made glass vessels

Ribbed bowls

In the Petričev grič area, ribbed bowls are quite numerous. Almost all fragments discovered at the site belong to products made of naturally coloured glass, with only two fragments as exceptions. One fragment (G356)[12] belonged to a dark blue or cobalt-blue bowl, while the other (G338) was part of a ribbed bowl made of mosaic glass with a spiral pattern of white and purple glass on a turquoise-blue background. The ribbed bowls from Petričev grič (Form 2.1.4 or Isings 3 or AR 3)[13] are small (G344) to medium-sized (G347). They may be shallow (e.g., G339–G342) or deep (G343, G349, G362), and the shape and placement of the ribs vary considerably, with either a small or a large space between them. Their quality of manufacture also varies, so we can say with some confidence that they were made in several workshops producing items of differing quality, or by glassworkers with different levels of skill and experience. Judging by the shape of the ribs, these items were imported from Roman workshops in Italy.[14]

Several bowls feature bands of shallow grooves (G339, G343–G344, G368–G369) on the inside, characteristic of the early series of these products.[15] Such parallel grooves may appear on the lower part of the rim or on the base, mostly in bands of two to four. Judging from the well-preserved finds, the bowl fragments from the site in question belonged mostly to deep bowls (e.g,. G343–G344, G347, G349–G350, G353, G355), with only a few shallow examples (G339–G342, G351), and can be compared with Form 2.1.4[16] or Isings 3[17] and the AR 2.1 and AR 2.2 types.[18]

The production of ribbed bowls undoubtedly ceased in the 1st century AD, although their use continued into the first half of the 2nd century AD owing to their exceptional popularity in this region as well. At Roman sites in Slovenia, for example, they can still be found as heirlooms in graves from the early 2nd century AD, and they were also used as urns or containers for the cremated bones of the deceased.[19]

Monochrome translucent coloured fine ware

This group of products is typically characterised by angular forms and by dark green glass in various shades, as well as dark blue, cobalt blue, and peacock blue, all of which result from different minerals used to colour the glass. Emerald green and peacock blue are colours developed by the Roman glass industry and were used almost exclusively for this group of vessels. Among the finds from Romula, emerald green is the predominant colour for all forms of this fine tableware. Dark green glass products were specially sampled and analysed, and the results of the archaeometric analysis are presented in the book *Ribnica pri Brežicah – Analize*.[20] The initial findings have already been presented briefly by Caroline M. Jackson.[21]

12 G356 refers to the ID in the catalogue in the Petričev grič monographic volume (Tomaž *et al.* 2025a). These Ids are referred to throughout this study for clarity and to facilitate identification in the primary publication.

13 Type IDs are referring to Isings 1957; Lazar 2003; Fünfschilling 2015.

14 Grose 2017, 55, Pl. 3.4.

15 Fünfschilling 2015, 105, Abb. 137.

16 Lazar 2003, 37.

17 Isings 1957.

18 Fünfschilling 2015, 263.

19 Lazar 2000, 66.

20 Jackson – Lazar 2025.

21 Jackson *et al.* 2015; Cottam – Jackson 2018, 93.

Plates

Twenty fragments of plates (G314–G333) were found, with straight, semicircular, outturned, or carinated walls. The rim is mostly everted, in some cases also profiled, and the base is flat or has a low ring foot. On some base fragments, shallow grooves are visible on the inside or outside and, in some cases, a small circle is preserved at the centre of the exterior of the base, marking the point at which the vessel was attached to a lathe during finishing. Most of the plates are made of translucent dark green glass (against the light, it is clear that they are of different shades of dark green), while two fragments belong to a plate made of dark blue or cobalt-blue glass (G329, G331). Only the plates with a flat base and outturned rim (G314–G315) belong to the already defined Forms 1.1.1[22] or Isings 19, while the others may be defined as new forms in the glass record of the period in Slovenia (Fig. 2):[23]

- Form 1.1.2 – Plate with a straight wall and an outturned rim (G316).
- Form 1.1.3 – Plate with a rounded wall and profiled, outturned rim (G318–G319).
- Form 1.1.4 – Plate with a carinated wall and a ring foot (G321).
- Form 1.1.5 – Plate with an outturned wall, a straight rim, and a flat base (settlement S298, PN 2377).
- Form 1.1.6 – Plate with a vertical wall and an outturned rim; the wall slightly projects at its junction with the base; decorated with grooves.[24]

Bowls

Among the fragments, seventeen were identified as parts of bowls (G382–G398), which are relatively diverse in size and shape. The wall may be hemispherical, convex, or profiled, that is, carinated, with a groove in the middle. The rims are formed according to the shape of the bowl and may be either slightly everted or straight. Only in exceptional cases is the rim slightly profiled (G383, G385). Several fragments show that some bowls had low ring-shaped foot. They were made most often of translucent dark green glass in various shades; only two fragments were parts of bowls made of dark blue glass.

Five fragments of vessels made of dark green glass (G400, G403–G405, G407) were identified as parts of bowls with cylindrical walls and flat bases, very similar to *pyxides*, although these have no lids. Their shape is entirely similar to that of the sigillata form Conspectus 29.[25]

Their sizes vary considerably, with diameters ranging from 5.6 cm to 11 cm and heights from 4 cm to 4.5 cm. Several vessels have a clearly visible circle on the base, indicating that the bowl was attached to a lathe for finishing. The shapes of the bowls presented here are new in the glass record of the period in Slovenia, so we have defined them as new forms within the group of mould-made bowls (Fig. 3):

- Form 2.1.10 – Globular bowl with an outturned rim and a ring foot (G382–G383, G385, G390).
- Form 2.1.11 – Bowl with a carinated wall and a ring foot (G386–G389, G391).
- Form 2.1.12 – Bowl with a vertical (cylindrical) wall and a flat base (G400–G407).
- Form 2.1.13 – Bowl with a slightly conical wall and an outturned rim (G392–G394).
- Form 2.1.14 – Bowl with a slightly conical wall that transitions into the rim (G399).

The described group of vessels has a few individual parallels at Slovenian archaeological sites, such as Emona (Insula 32),[26] Celeia, and Poetovio,[27] but at none of these sites does the material occur in such

22 Lazar 2003, 33, sl. 10.

23 For a complete overview of types, settlement finds are also added to the figure.

24 Isings 1957, Form 22.

25 Ettlinger *et al.* 1990, 104, Taf. 27.

26 Plesničar Gec 1983, t. 23.12,16,19,22,25.

27 Lazar 2023; Lazar – Tomaž in print.

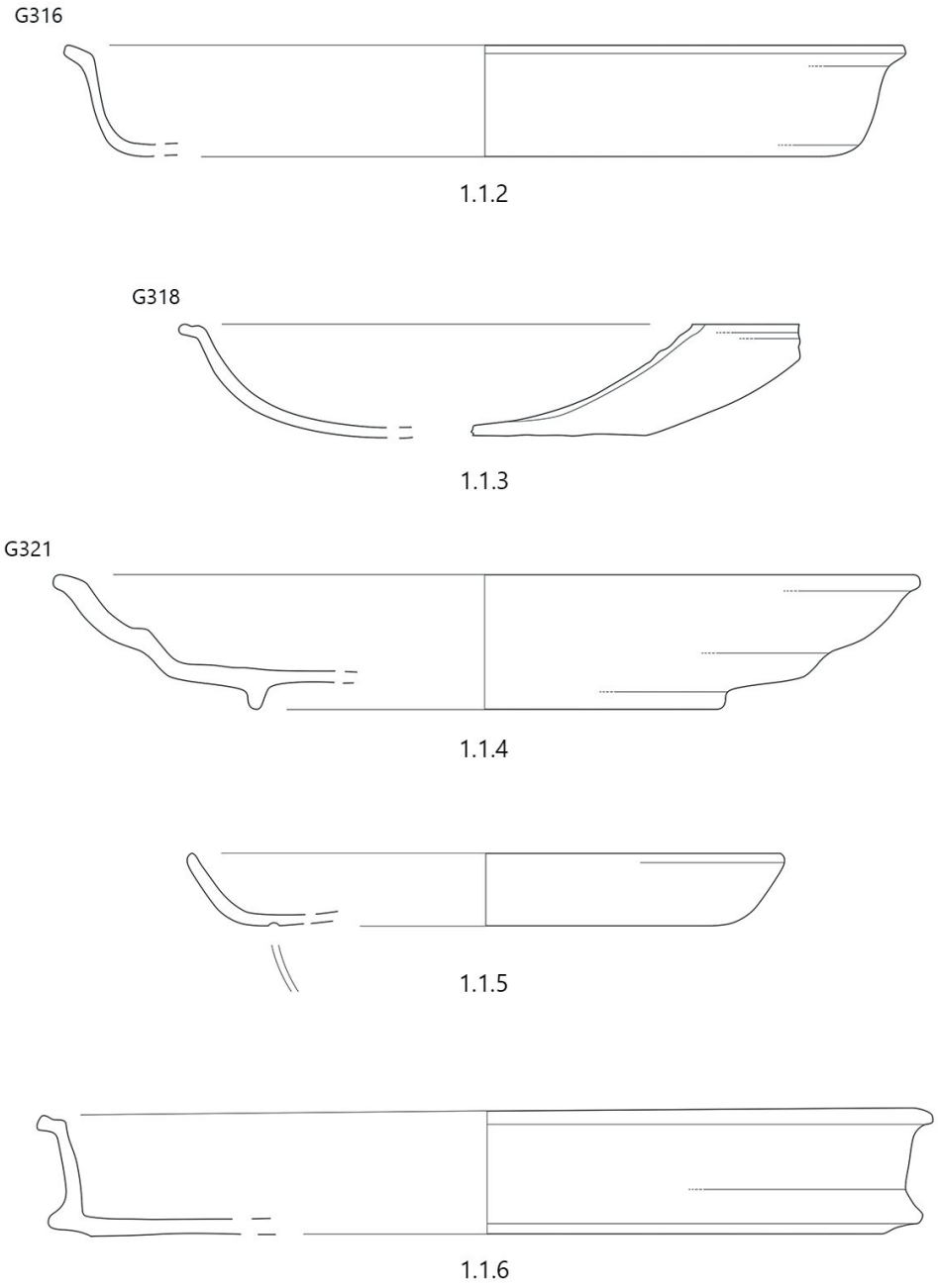


Fig. 2. Romula. Forms of mould-made plates made of intensely coloured glass. M = 1:2.

quantities as at Ribnica near Brežice. It is also important to emphasise that, in this context, we are dealing exclusively with settlement finds. None of the graves at Romula contains such vessels as grave goods, although there are graves dated to the middle of the 1st century AD in the western necropolis, some of which contain valuable imported grave goods, such as amber objects or mould-blown glass.

Other parallels for the described material are known from well-dated contexts at Magdalensberg, where identical fragments are believed to derive mainly from the period before AD 45,[28] when the town was abandoned; some fragments are dated to the Augustan period.[29] At Vindonissa, finds from dated layers are mainly linked to Tiberian and early Claudian contexts, with a few exceptions

28 Czurda-Ruth 1979, 65–91.

29 Czurda-Ruth 1979, 70–71.

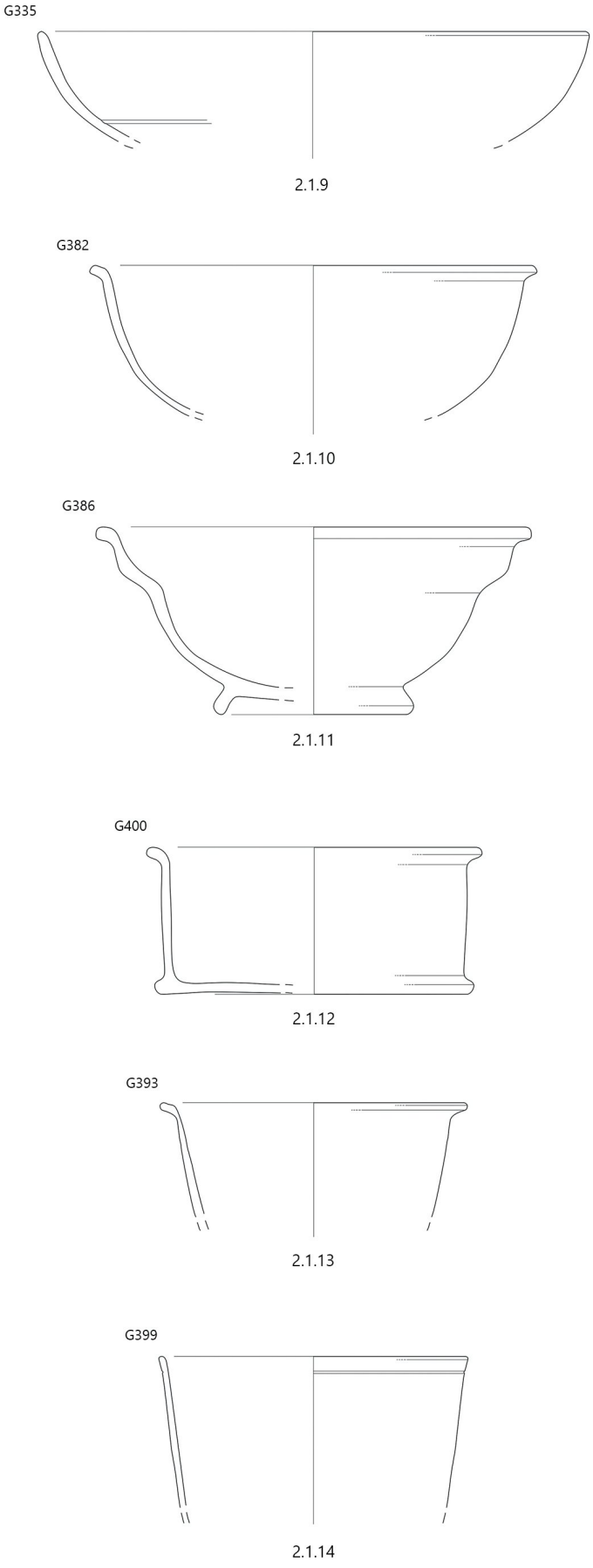


Fig. 3. Romula. Forms of mould-made bowls made of intensely coloured glass. M = 1:2.

dating to the time of Emperor Nero.[30] Similar material is also known from Salona (dark green and dark blue artefacts).[31]

The bowl with carinated walls, representing the Isings 2 or AR 6.2 type,[32] is characteristic of the period between AD 20 and 50. It is present at the sites of Augst (Augusta Raurica) and Avenches throughout the 1st century AD,[33] while at Arles it occurs mainly in the first half of the 1st century.[34]

At Cosa, an Etruscan city and early Roman colony (273 BC), rebuilt after several upheavals during the reign of Emperor Augustus, comparable finds occur in several well-dated contexts.[35] The earliest layers (Phase IV, before 25–15 BC) are linked to the repopulation and reconstruction of the city in the Augustan period, and there products made of opaque turquoise and white glass are found. Grose believes that these are the earliest products of the Roman glass industry or products imported from workshops in the eastern Mediterranean.[36]

In Phases V and VI, dated from 25–15 BC to AD 40–45, bowls with carinated and cylindrical walls and an outturned rim are found; besides, some finds come from a shop storeroom that was destroyed probably between AD 40 and 45.[37]

The products in this group, discovered in Phases VII and VIII (dated to before AD 50–55), show that the production of these vessel types continued until the mid-1st century AD, perhaps even a little longer, but certainly not beyond the last quarter of the 1st century AD.[38]

Monochrome opaque coloured fine ware

This group of vessels includes products made of opaque glass, more precisely light blue or turquoise glass in almost all cases. A base fragment with a ring foot, which could belong to a plate or a larger red glass bowl, was omitted from the analysis for several reasons. In addition, the fragment is too poorly preserved to determine its form.[39]

Within this group of vessels, we identified only one form—bowls—which appears in two main variants: globular bowls (G390) and bowls with carinated walls (G388, G391). They feature either a ring foot or a cast foot (G398). A small fragment of an outturned rim made of turquoise glass (G395) indicates that the range of opaque glass vessels used at the site was broader than can be determined from the preserved finds.

Vessels made of opaque coloured glass are dated predominantly to the first half of the 1st century AD. Judging from the finds from the aforementioned site of Cosa in Italy, where they were found in layers dating from 25–15 BC,[40] it may be concluded that their production began in the last decades of the 1st century BC. It is possible that the prototypes or models for Roman opaque-glass products were Hellenistic products of the 1st century BC, which were also made of light blue and white opaque glass.[41]

30 Berger 1960, 24–30.

31 Buljević 2016, 64.

32 Isings 1957, 17; Fünfschilling 2015, 272.

33 Fünfschilling 2015, 272; Bonnet Borel 1997, 21.

34 Foy 2010, 90.

35 Grose 2017.

36 Grose 2017, 81–82.

37 Grose 2017, 81, Pl. 8.134,136,137,139, Pl. 9.154.

38 Grose 2017, 82.

39 See also Jackson – Lazar 2025; the fragment was included in an archaeometric analysis.

40 Grose 2017, 81.

41 Grose 2017, 82.

Black glass

Glass researchers usually present black glass (a technical term accepted in the field) as a separate group. In our case, there are quite a few finds of opaque black glass made using moulds, so it seems sensible to consider them in the broader context of other mould-made vessels. Research into black glass in the western provinces of the Roman Empire has shown that these products were popular and fashionable in two periods, and were manufactured using various glassmaking techniques. The first peak in popularity occurred in the 1st century AD, during the reign of Emperor Tiberius and the Flavian dynasty (AD 30–80).[42] At that time, these vessels were made both in moulds and by blowing. The distribution of black-glass vessels during this period covers the entire Roman Empire.[43]

The United Kingdom deserves special mention here, where such products are known from numerous sites, such as Colchester, Fishbourne, and Carlisle, and have been found predominantly in civilian contexts; the range of forms is not particularly wide.[44] At other European sites, the contexts containing black-glass products and the range of forms are more varied.[45] Among the material from Roman sites in Slovenia, the earliest forms of black-glass vessels were published from Romula (Ribnica pri Brežicah), specifically from a settlement context. These are mould-made vessels, many of which, with their distinctive profiles, resemble metal or sigillata vessels of the Early Imperial period. The production of black-glass vessels during the 1st century AD fully reflected the popularity and prevalence of monochrome coloured glassware produced during the Julio-Claudian dynasty.[46]

The glass assemblage from Ribnica[47] includes plates of various forms with straight or slightly conical walls (Form 1.1.4, see Fig. 2), slightly profiled rims (G320), and bases decorated on the inside with shallow grooves in the form of concentric circles (Fig. 4.1,3), as well as bowls with a slightly conical body and a slightly profiled or everted rim (G394; Forms 2.1.13 and 2.1.14, see Fig. 3) and vessels with cylindrical or vertical walls (G405, G406; Form 2.1.12). The latter are represented by several products that vary in size, with diameters between 5 and 10 cm (Fig. 4.6). Like the plates, the exteriors of their bases are often decorated with shallow grooves in concentric circles.

Mould-made vessels from the 1st century AD were first classified into several groups and forms by Cosyns and Fontaine.[48] Cosyns then proposed 14 basic forms, with subgroups, for mould-made glass[49] and 19 forms for free-blown vessels from this period.[50] However, this corpus will probably be expanded by new finds.

Mould-made decolourised glass

Demand for, and taste in, fine tableware changed dramatically in the second half of the 1st century AD, with intense colours quickly losing popularity and demand arising for something new and different. A range of elegant tableware made of colourless glass, often decorated with faceted cut decoration that emphasised the quality of the glass and the precision of its manufacture through

42 Cosyns – Fontaine 2009.

43 Cosyns 2015, 191.

44 Cosyns – Fontaine 2009; Cool – Price 1995.

45 Cosyns – Hanut 2005, 117, Pl. 1.

46 Cosyns – Fontaine 2009, 83.

47 The form and typology of black-glass are not treated separately; instead, the forms are considered together with other mould-made vessels of intensely coloured glass. Therefore, only a brief mention and overview of the forms are provided here. See Lazar 2019, 29, for details.

48 Cosyns – Fontaine 2009, 80, Pl. 1.2.

49 Cosyns 2011, 52, Fig. 34.

50 Cosyns 2011, 48, Fig. 33.

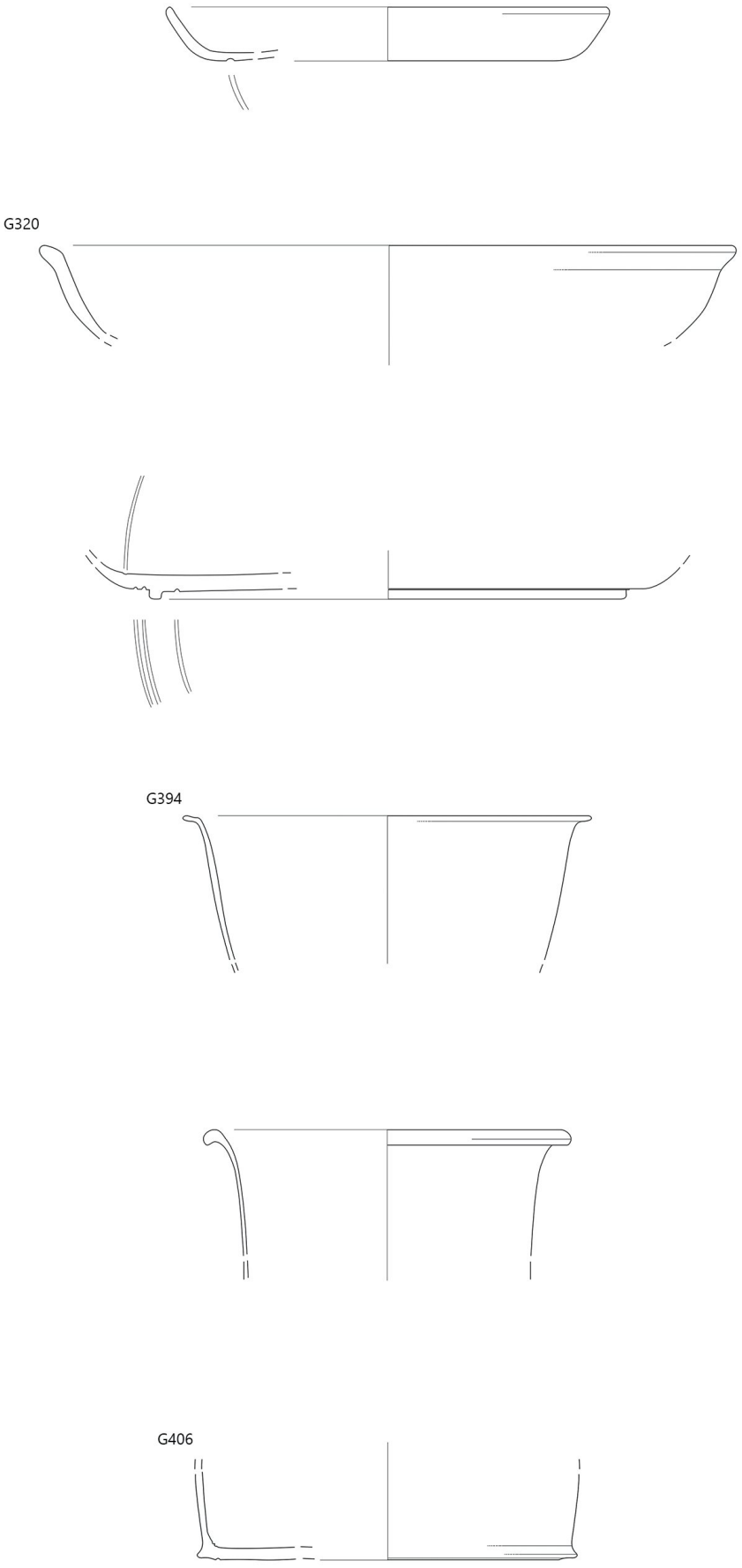


Fig. 4. Romula. Forms of vessels made of black glass. M = 1:2.

the refraction of light, appeared on the market. The material found at Romula likewise shows that the demand for prestigious tableware remained and is reflected in a group of decolourised products. From the second half of the 1st century AD onwards, and throughout the 2nd century AD, the demand for fine colourless tableware dominated the market for high-quality imported products.[51]

This innovation confirms the numerous changes that Roman glassmaking underwent in the course of the 1st century AD, changes that were linked to technology and, consequently, to market supply. They also brought about a new type of glass and a new range of forms and decorations for tableware. Cheaper, widely available blown-glass vessels intended for everyday use hardly competed with this group of fine mould-made tableware.

Mould-made vessels of decolourised glass, decorated with facet-cut patterns, stand in contrast to vessels made of intensely coloured glass, which were widespread at the beginning and during the first half of the 1st century AD.[52] The new group includes beakers, shallow and deep bowls, plates and, more rarely, trays, decorated with facet-cut patterns.

While everyday glass products of this period were all blown and made of naturally coloured or greenish glass, the finest glass objects of the second half of the 1st century AD were generally colourless or decolourised.[53]

Bowls

On the bowls from Romula, faceted decoration appears almost everywhere except on the inside of the vessels. Cut decoration in the form of grains, circles, facets of various shapes, and rosettes appears individually or in combination on the upper and lower sides of the wide rim, on the wall, and on the base; the edge of the downward-curved rim or the edge of the ring-shaped foot is often decorated with serrated incisions. Owing to the above-mentioned characteristics, fragments of these vessels can be identified relatively quickly within the assemblage.

The bowl fragments can be identified as the already mentioned Form 2.1.8.[54] Such vessels are characterised by sharp, carinated edges and high-quality cut decoration. They have wide, highly outturned rims with overhanging edges; they are decorated with facet-cut patterns on both sides and on the edge. The circular or oval facets are sometimes combined with rice grain cuts. The finds from Romula are decorated on the rim and base (G421).

The same bowl form can be found in Slovenia at Ptuj and Logatec,[55] as well as in contexts dated to between AD 80 and 150/160 AD at Augusta Raurica in Switzerland.[56] Comparable finds from Trier (Form Trier 23) and Avenches (Form Aventicum 25/26) have been dated similarly. The main period of their use is believed to span the late 1st century to the mid-2nd century AD.[57] However, some finds from Milan and the area of Rome and Ostia attest to their use even in later contexts, dated to the end of the 2nd century AD.[58]

51 Lazar 2020b.

52 Grose 1991, 1.

53 More about Roman decolourised glass in Jackson 2005 and Lazar 2025, 66, with footnotes.

54 Lazar 2003, 43, Fig. 12.

55 Ptuj, Grave 615: Istenič 2000, Pl. 134.4; Logatec: Lazar 2004b, 59, Fig. 2.1.

56 Type AR 16.2; Fünfschilling 2015, 281.

57 Goethert-Polaschek 1977, 36; Bonnet Borel 1997, 24; Fünfschilling 2015, 282.

58 Uboldi 2017, 185, Fig. 1.1,2; Lepri 2021, 47, Fig. 13.

The body of another bowl fragment (G417) is decorated with elongated facets comparable to Form IN142,[59] or, more precisely, to a find from Spain,[60] since the rim in this case is only partially preserved. It may be assumed to be similar to Form AR 13.2 from Augst.[61]

To this group of bowls, one may add several fragments of similarly shaped but undecorated vessels (G425–G429). These are smaller and larger bowls with a distinctly wide rim and a downward-curved or hanging edge (German *Kragenrand*), usually with a wide, low ring foot. The form is known from material from Augst, where it was defined as Types AR 16.1 and AR 16.2.[62] The rim design is identical to that of 2.1.8 or IN142 forms decorated with facet-cut patterns,[63] but this group of vessels from Romula is entirely undecorated. In Augst, this form was originally dated from the Flavian to the Severan period,[64] but new finds place it between AD 80/90 and 170/180.[65]

The fragment, defined as a new bowl form, 2.1.15 (Fig. 5), has a markedly different rim that widens into a kind of handle. Its dimensions are small, and therefore it cannot be defined as a large plate, such as AR 16.1,[66] or even as an oval plate, such as AR 26 and Aventicum 35.[67] Based on the visible extension at the rim, it may be assumed that this bowl was a smaller vessel or a bowl with a horizontal handle or grip at the rim. Known parallels from Nin (Asseria)[68] and the Zadar area in Croatia[69] are dated to the end of the 1st century AD.

It is also worth mentioning an almost completely preserved miniature hemispherical bowl without decoration (G424). A similar one was also identified in the find material of Augst and defined as Type AR24.2,[70] corresponding to IN137 in France.[71] In Slovenia, we have classified it as a new form, 2.1.16 (Fig. 5). This miniature form does not occur frequently; such vessels are known from French and German sites dated from the first half of the 1st to the 3rd century AD.[72]

Medium and large bowls made of colourless glass without decoration occur in considerable numbers at the site in different variants, differing in the design of the rim or the base. Several comparable finds and close parallels for the variety of these colourless glass products can be found at Augst, as well as in the areas of Rome and Ostia.[73] This group of vessels has a ring foot and, only rarely, a high foot; the wall is plain or features only shallow individual grooves. Rims occur in different forms and are often wide, horizontal, and profiled on the inside, with an overhanging edge. A wide range of rim forms of these products is presented in a monograph on glass from Augst.[74] Owing to their fragmentary state (mostly only the rim or the base of the vesselssurvive), they could not be assigned to new, precise formal categories, but could only be identified at a more general level.

59 Foy *et al.* 2018, 148.
60 Price 1987, Fig. 3.1.
61 Fünfschilling 2015, 279.
62 Fünfschilling 2015, 280.
63 Foy *et al.* 2018, 148.
64 Rütti 1991.
65 Fünfschilling 2015, 280.
66 Fünfschilling 2015, 281.
67 Fünfschilling 2015, 281, 289; Bonnet Borel 1997, 26.
68 Fadić 1997, 174, nos 152–153; Trasparenze 1998, 175.
69 Fadić – Štefanac 2020, 42, Cat. 10; Eterović Borzić – Štefanac 2021, 102, Cat. 288.
70 Fünfschilling 2015, 287.
71 Foy *et al.* 2018, 143.
72 Foy *et al.* 2018, 143.
73 Fünfschilling 2015, 108; Lepri 2021, 52–53, Fig. 16.
74 Fünfschilling 2015, 108, Abb. 141.

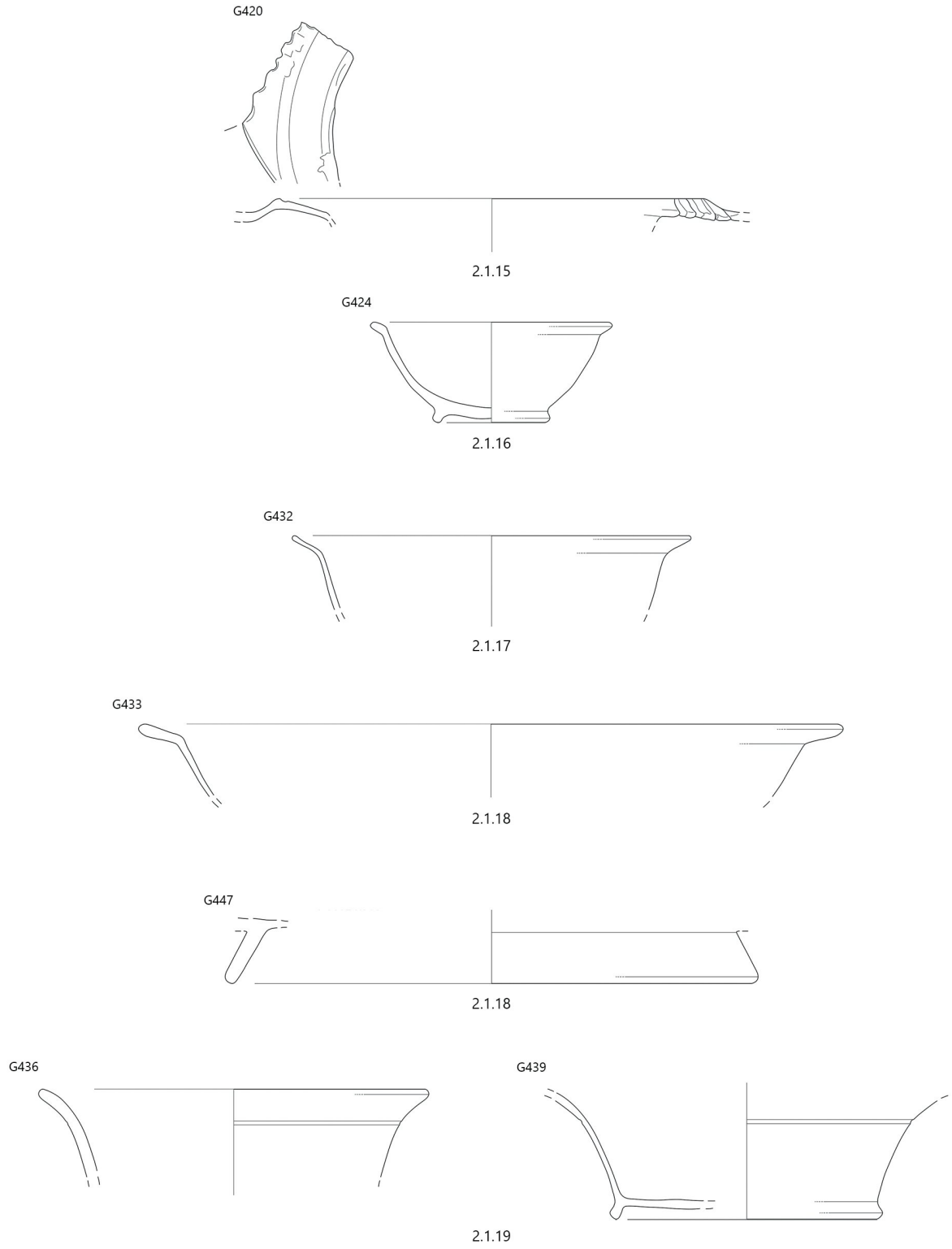


Fig. 5. Romula. New forms of bowls made of decolourised glass. M = 1:2.

Bowls with a funnel-shaped rim and a low ring foot among the finds from Augst have been classified as AR 13.1 and AR 13.2 according to size, and have been dated to the late 1st and 2nd centuries AD.[75] Within the group of decolourised vessels, they are defined as Type IN134, dated to the end of

75 Fünfschilling 2015, 278–79.

the 1st to the 3rd centuries AD; they were most common in the 2nd century AD.[76] We define them as a new form, 2.1.17 (Fig. 5).

Fragments of small and large bowls with relatively wide rims, an occasional slight bulge or grooves on the inside (G433, G466–G467), and a high foot, belong to the AR 14 group,[77] characteristic of the period between AD 70 and 180. In Slovenia, such fragments were defined as a new form, 2.1.18 (Fig. 5).

Several fragments of bowls with an everted rim and a ring foot could be identified as Isings 80 or AR 20.2. Simple horizontal grooves may appear on the outside or just below the rim on the inside of the vessel. The form was widespread throughout the Roman Empire; in Augst, they appear from the Flavian period onwards and can be traced up to the beginning of the 3rd century AD, while at Avenches, they were most common in the 2nd century AD. In Romula, we have defined them as a new form, 2.1.19 (Fig. 5).

Parallels for such bowls at Slovenian sites are known from the settlement of Celje, the Roman Celeia.[78] Three fragments belong to bowls representing types that were classified at Augst as AR 16.1 and 16.2, and in France as IN142 or smaller variants of IN143.[79] Their period of use extends from the Flavian period to the middle of the 3rd century AD, although individual forms disappear as early as the 2nd century AD.[80]

Beakers

Finds of beakers with faceted and other cut decoration from the Petričev grič area are considerably more numerous than bowl finds. They occur in various shapes—low or tall, rounded—and their walls are covered with faceted decoration, sometimes emphasised by a horizontal rib below and/or above the decorated part. The facets of the decoration may be diamond-shaped or more rounded, while on some beakers they are more elongated. Among the finds there are also examples of conical beakers without faceted decoration, with only thin horizontal ribs emphasising the smooth walls.

This type of decolourised product, namely beakers with cut decoration, was first defined by Oliver, who divided them into Groups I and II on the basis of wall shape.[81] Group I includes beakers with cut decoration but without horizontal ribs on the wall, while Group II includes conical beakers in which the decoration is bounded by pronounced horizontal ribs.[82]

We have identified low conical beakers with cut decoration (G452) as Form 3.1.2 or AR 45.1 (Fig. 6).[83] Parallels are known from the Celje-Mariborska cesta site, where various examples of these beakers were found. Two fragments[84] may be compared with finds from Augst (AR 45.1; Isings 21 type) and with known finds from Romula. A single fragment[85] was identified as form AR 45.1B, a variant with a rib at the transition between the decorated wall and the foot, or Group II according to Oliver's

76 Foy *et al.* 2018, 140, Fig. 32.1,2.
77 Fünfschilling 2015, 279.
78 Lazar 2023, 421.
79 Foy *et al.* 2018, 148, 150.
80 Fünfschilling 2015, 108–109; Foy *et al.* 2018, 149–150.
81 Oliver 1984, 39.
82 Oliver 1984, 49.
83 Fünfschilling 2015, 313, variant Isings 21.
84 Lazar 2023, 420.
85 Lazar 2023, 420, Fig. 602.

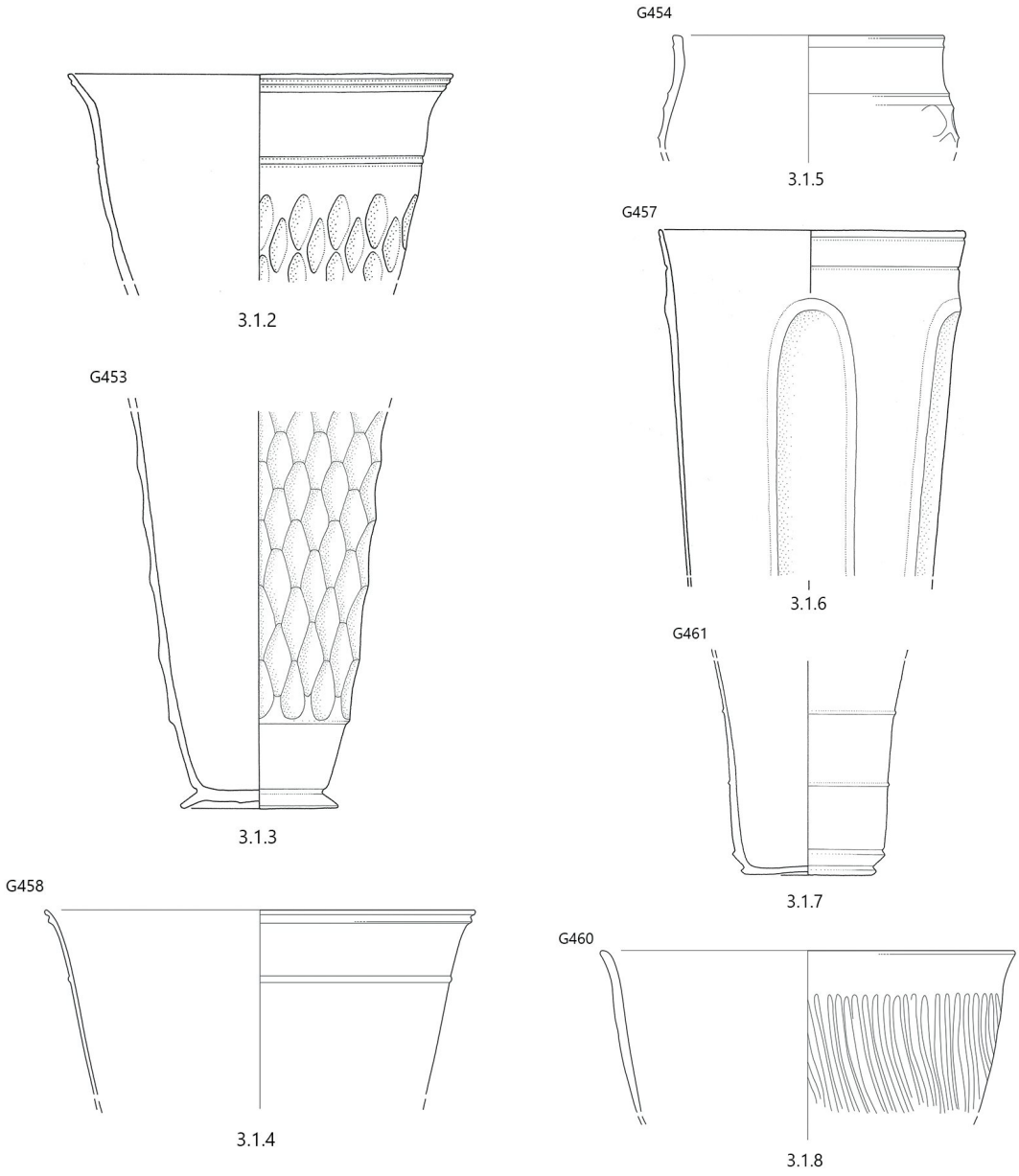


Fig. 6. Romula. New beaker forms made of decolourised glass. M = 1:2.

classification.[86] A beaker of this type is also known from Grave 298 at Poetovio, which dates to the Flavian-Hadrianic period.[87] Numerous smaller fragments of identical beakers were also discovered at the Roman customs station of Atrans (Trojane) and in the Roman *villa rustica* at Mošnje (PN 2959, 5408).[88]

A group of low beakers made of colourless glass was identified in France as type IN10, dated to the last decades of the 1st century, with some finds also originating from the first third of the 2nd century.[89] At Augst, this type of beaker has been dated to between AD 70 and 120, while at Avenches (Aventicum) it has been dated to between AD 100 and 150.[90]

86 Fünfschilling 2015, 313; Oliver 1984, 49.

87 Istenič 2000, 99.

88 The findings were prepared for publication by the author.

89 Foy *et al.* 2018, 18.

90 Fünfschilling 2015, 313; Bonnet Borel 1997, 30.

A possible reconstruction of the beakers described above shows that, based on the inclination of the wall, fragment G453 could also be classified as a conical form. This type of beaker is taller and narrower and may be defined as Type AR 45.2 or Group IN11 according to the typology of decolourised glass.[91] The facets of the decoration are more elongated, and there is no rib beneath the pattern band. It is important to note that both beakers have a visible circle on the outside of the base, resulting from the attachment of the vessel to a lathe. The beaker was defined as a new form, 3.1.3 (Fig. 6).

An identical type of tall beaker with faceted decoration is known from the cemetery at Nova Tabla near Murska Sobota; it was found in Grave 166, dated by grave goods to the beginning of the 2nd century AD.[92]

The find material includes not only decorated beakers of this form but also low conical beakers made of decolourised glass with smooth walls and two thin horizontal ribs below the rim (G458). In terms of form and manufacture, these undecorated beakers are entirely similar to the forms with faceted decoration described above, except that their walls are plain and divided only by horizontal ribs. Parallels are known from Oliver's publication, but further examples may be found among decolourised glass from France, where the form is defined as IN14 and dated to the end of the 1st or the beginning of the 2nd century AD.[93] Other sites with similar finds are in Great Britain, the Netherlands, Egypt, and Algeria. We have defined it as a new form, 3.1.4 (Fig. 6).

Two beaker fragments from Romula (G454 and G456) differ from others and indicate that their walls were more spherical or barrel-shaped. Fragment G456 also has a pronounced rib below the rim or neck. The spherical beaker with faceted decoration may be compared with a find from Nijmegen in the Netherlands[94] and, according to the typology of decolourised products from France, belongs to Type IN18 and dates to the end of the 1st or the beginning of the 2nd century AD.[95] At Augst (Augusta Raurica), this type of beaker is defined as type AR 45.4 and dated to between AD 30 and 130.[96] The same form of beaker can also be found in the Begram treasure.[97] In our material, it is defined as a new form, 3.1.5 (Fig. 6).

Examples of the beakers described above in a blown variant, made of naturally coloured glass and decorated with simple oval engraved facets, are known from the settlement area of our site,[98] as well as from Ticino in Italy.[99]

It should also be noted that the archaeological material includes examples of these types of beakers in metal and ceramic variants. Among the metal finds, two treasure finds should be mentioned, namely Berthouville and Chaourse, which date to the end of the 2nd and early 3rd centuries AD.[100] Ceramic copies of beakers with faceted decoration are known among the settlement finds from Romula and Celje,[101] among graves at Emona and Verdun,[102] and from Andautonia (Ščitarjevo) in Croatia.[103]

91 Fünfschilling 2015, 314; Foy *et al.* 2018, 19.

92 Guštin 2004, 75, Fig. 10; Lazar 2020b, 343, Fig. 3.a,b.

93 Foy *et al.* 2018, 23.

94 Oliver 1984, 42, Fig. 15.

95 Foy *et al.* 2018, 26.

96 Fünfschilling 2015, 315.

97 Whitehouse 1989, 153; Meininger 1996; http://www.michaelmenninger.de/begram/html/frame4.htm

98 Lazar 2020b, 340.

99 Biaggio Simona 1991, 108, Fig. 49.176.2.

100 Baratte – Painter 1989, Fig. 26 (Berthouvile), Figs 58–61 (Chaourse).

101 Lazar 2023, 421, G6694–SE3184.

102 Ljubljana; Petru 1972, Pl. 44.12; Breščak 2002, 138, Cat. 72.3.

103 Nemeth Ehrlich 1994, 121, Fig. a.

Beakers with faceted decoration are not the only high-quality products of this type found at Petričev grič. At least three other fragments made of decolourised glass deserve mention. One of the beakers (G457; Fig. 6, 3.1.6) is decorated with two horizontal grooves below the rim and relief vertical ovals or arcades along the wall. It resembles arcaded beakers, but the decoration is cut so as to stand out in relief rather than being applied. Among the published material, there are no direct parallels, but as a variant, it could be placed in the group of decorated conical beakers IN7 or perhaps IN8; both groups are believed to have been known before AD 79, as indicated by finds from Pompeii.[104] The form and type of decoration are uncommon and do not occur after the beginning of the 2nd century AD. Based on the finds and their distribution, workshops in Campania or Rome are assumed. A similar form is defined at Augst as AR 48 and dated to between AD 70 and 120.[105] We have defined it as a new form, 3.1.6.

The second beaker stands on a ring foot, has thin horizontal ribs on the lower part of the wall (G461; Fig. 6, 3.1.7), and widens slightly towards the rim. In terms of form and decoration, it is most similar to a find from the La Bourse site in Marseille, which belongs to Type IN13 and dates to the first half of the 2nd century.[106] Similar finds are known from sites of Augst, Settefinestre, and Nijmegen, where they occur in the period from AD 80 to the first half of the 2nd century AD.[107] This beaker is defined as a new form, 3.1.7.

In connection with the finds described above, the glass from Celeia–Mariborska cesta III should also be mentioned. The broader group of mould-made decolourised glass from the second half of the 1st century AD also includes two fragments of biconical beakers with a flat base, decorated only with thin horizontal ribs along the walls (G1129: SE 2741, G1130: SE 271).[108] The thin body and simple decoration emphasise the elegant form and high quality of the product, which we have defined as a variant of the IN13[109] form or as Group AR 39/40, namely tall conical beakers with a curved transition to the lower part or flat base. In grave complexes in France, these beakers date to between AD 80 and 100,[110] while at other sites they occur in the second half of the 1st century and at the beginning of the 2nd century AD.[111]

Fragment G460 (Fig. 6, 3.1.8) belonged to an oval beaker decorated with dense, slightly oblique or twisted flutes on the wall. Parallels can be found at French sites in Lyon, Marseille, and Fréjus, where the form is defined as IN12.[112] Whitehouse dates beakers with similar decoration, based on finds from Begram in Afghanistan, to the end of the 1st and the beginning of the 2nd century AD.[113] Comparable finds also appear in the material from Cologne, where an identical beaker was found in the rich Grave 48 on Luxemburger Strasse, which, based on the grave goods, was dated to the end of the 2nd or the beginning of the 3rd century AD.[114]

104 Foy *et al.* 2018, 15–16.
105 Fünfschilling 2015, 316.
106 Foy 1998, 66, no. 99; Foy *et al.* 2018, 22.
107 Foy *et al.* 2018, 22.
108 Lazar 2023, 423.
109 Foy *et al.* 2018, 22.
110 Foy *et al.* 2018, 111, Ass. 54.
111 Fünfschilling 2015, 120, Abb. 157.
112 Foy *et al.* 2018, 21.
113 Whitehouse 1997, no. 396.
114 Boeselager 2012, 102–105, Form 12d.

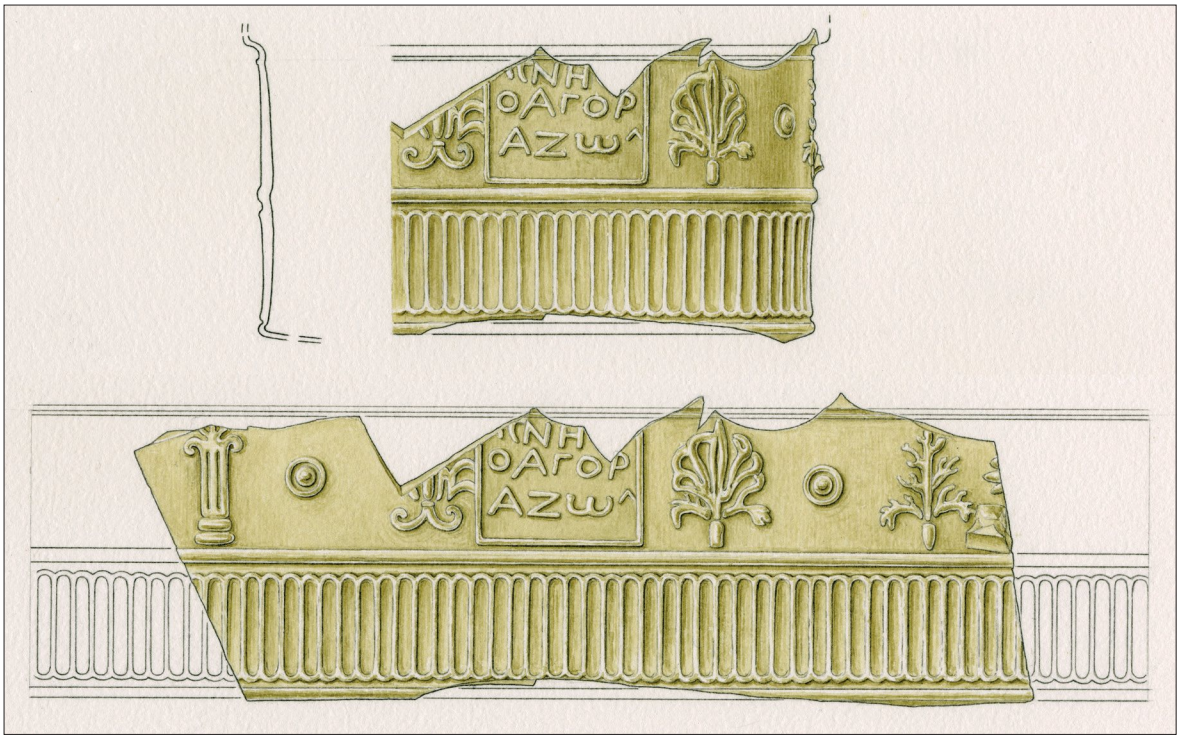


Fig. 7. Romula. 'Ennion beaker', a coloured reconstruction of the find (by Anđelka Fortuna Saje).

Mould-blown glass

During excavations of the Roman settlement of Romula, a mould-blown beaker was found among a group of high-quality imported glass. The partially preserved vessel with vegetal decoration (Fig. 7) bears an inscription in Greek on the wall, on the basis of which it could be identified as a product of the Roman glassmaker Ennion.[115] This is the first find of this group of products in Slovenia and in the wider area of the south-eastern Alps (defined as Form 3.1.9; Fig. 8), which is also important in the broader context of the distribution of these products throughout the Roman Empire and therefore undoubtedly deserves some attention.

Among the known names preserved on products of this type, his name stands out because he inscribed in Greek on his products who had made them. Within the group of mould-blown products, his work is distinguished by its precision, clear design, and high-quality decoration, which drew inspiration from contemporary Roman toreutics. His work was innovative and technically accomplished.[116]

The fragment from Ribnica[117] belonged to a one-handled beaker and was made of transparent, pale yellow-coloured glass.[118] The remains of the handle attachment are preserved on the wall. The vegetal decoration on the vessel consists of columns, palmettes, concentric circles, and part of a star. Based on analogies, it may be defined as a Near Eastern style of decoration, as identified by Lehrer and Lightfoot.[119] In the central part, an inscription in Greek, ΜΝΗΘΗ ΟΑΓ ΟΡ ΑΖΩΝ (*mnethe ho agorazon* – May the name of the buyer be remembered), is preserved in a square frame.

115 See Lazar 2005b; Lazar 2021, 150; Lazar 2022b.

116 Stern 1995, 69; Lehrer 1979; Israeli 2011; Lightfoot 2015.

117 Diameter: 125 mm, PN 4596, S 889.

118 Lazar 2004a, 53, Abb. 17; Lazar 2005b, 40.

119 Lightfoot 2015, 36, Fig. 26; Lehrer 1979, Pl. 6.2.

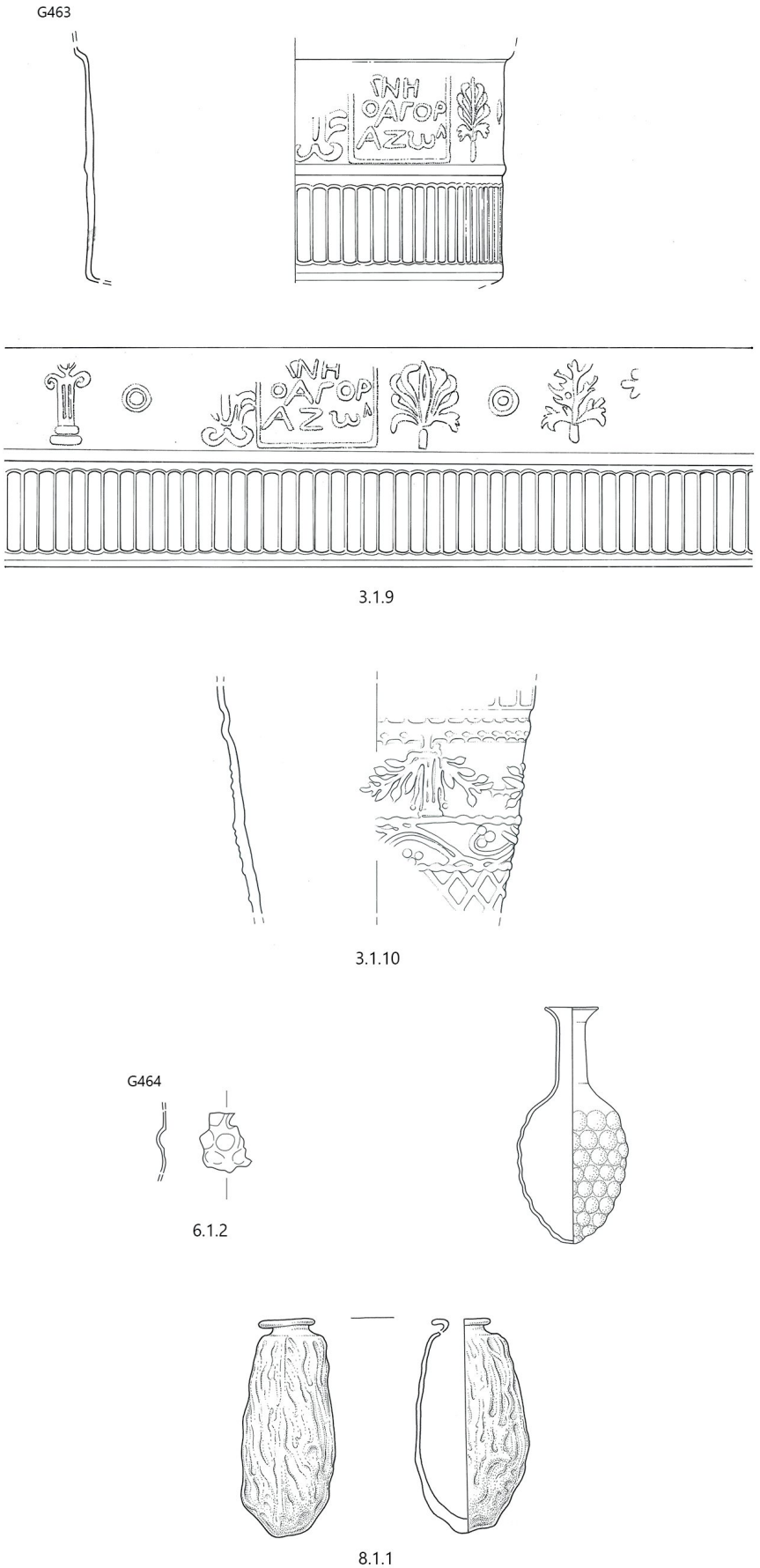


Fig. 8. Romula. Table of forms of mould-blown glassware from the settlement and necropolis. M = 1:2.

Another inscription, placed on the other side of these cups, ENNI / ΩNEΠ / OIHCE N *(Ennion made me)*, may be assumed based on comparisons, but unfortunately, it has not been preserved.

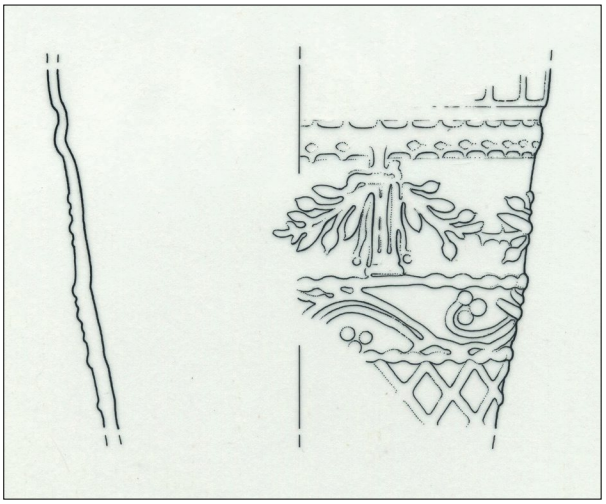


Fig. 9. Romula. Fragment of a mould-blown conical beaker with vegetal decoration.

The inscription preserved on the beaker from Romula, together with its decoration, may be classified as type J according to the typology of known inscriptions.[120] Parallels with the find from Ribnica, in terms of inscription and decoration, can be found on a fragment of a greenish glass bowl discovered at Soluntum (Solanto) in Italy (kept in the A. Salinas Regional Archaeological Museum in Palermo, Sicily),[121] and in a two-handled beaker from the Shlomo Moussaieff Collection.[122] Both beakers were blown in a mould with the same pattern or decoration as the find from Romula; the decoration, the framed inscription, and other details are entirely identical.

This may be confirmed by comparing the position of the letters and the inscription in the frame MNH… / OAΓOP / AZΩN; it can be seen that the letter 'N' is placed above the letter 'Ω' (ω) in the third line and not in the fourth, as is the case on other beakers of this group, for example the one from Narona in Croatia.[123] From this, it may be concluded that there were differences between the moulds used for the same type of beaker and that, of course, several moulds existed. These small differences may have arisen during the repair or manufacture of new moulds.

Ennion's one-handled beakers date to the second quarter of the 1st century AD. Rare finds from dated contexts occur in late Tiberian and Claudian layers.[124] The find from Romula belongs to a rich collection of glass finds dating from the second quarter to the end of the 1st century AD. More recent finds show that Ennion's products were widely represented throughout the western part of the Empire; apart from Italy, they are also found in Spain, Greece, and France.[125] The broad distribution of his products throughout the European provinces of the Empire is now complemented by the aforementioned finds from Croatia[126] and Slovenia.

It is also worth mentioning a wall fragment from a mould-blown beaker from the settlement, which features vegetal decoration similar to that on Ennion's products.[127] The conical beaker was made of slightly bluish, naturally coloured high-quality glass (Fig. 8, 3.1.10, Fig. 9). It bears no traces of an inscription, but its decoration shows numerous similarities to products signed by *Ennion* and other Roman masters known by name. The four visible decorative bands are separated by horizontal lines of pearls or small dots. Two bands with vegetal patterns show elements of Dionysian-style decoration in the lower part, akin to those seen on Ennion's two-handled beakers.[128] The upper band

120 Lightfoot 2015, 28.

121 De Bellis 2004, 129–133, Figs 6, 8; De Bellis 2010, 39.

122 Lightfoot 2015, 92.

123 Buljević 2015, 61, Fig. 50.1.

124 Lightfoot 2015, 26; Price 1991, 65.

125 McClellan 1983, 76; Lightfoot 2015, 12–13.

126 Buljević 2004, 188; Buljević 2012; Buljević 2015, 61, Figs 50–51.

127 Lazar 2022b, sl. 3.

128 Lightfoot 2015, 36, Fig. 27.

consists of columns with garlands. The decoration on the fragment ends with vertical flutes at the top and a net pattern at the bottom of the cup, an arrangement recognised on products that could have been signed by both Ennion and Aristeas. We have classified the vessel as a conical cup in Form 3.1.10.

Free-blown glass

Even within the group of free-blown vessels from the Petričev grič area, both the quality range and the colour palette are surprisingly diverse. Of the 383 blown-glass fragments selected for analysis, 278 are made of naturally coloured blue-green or greenish-blue glass, 59 fragments belong to vessels made of decolourised glass, and 51 fragments belong to vessels made of coloured glass (Fig. 10). The latter are particularly important in our context, as they indicate 1st-century AD production, when blown vessels, especially tableware such as plates, bowls, and beakers, were often still made of coloured glass.

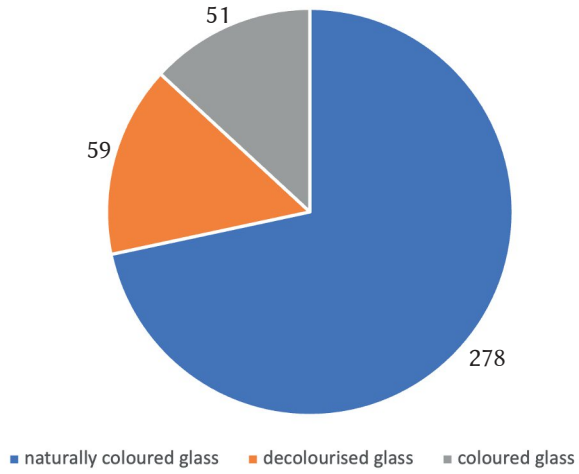


Fig. 10. Free-blown glass. A graph showing the ratio of products made of naturally coloured, decolourised, and coloured glass.

Dark blue and dark green are equally represented among the colours (18 each), followed by purple (6), honey-brown (5), light blue (2), and yellow (2) (Fig. 11). Four vessels decorated with splashed decoration or applied threads were classified according to their basic colour (two purple and two blue).

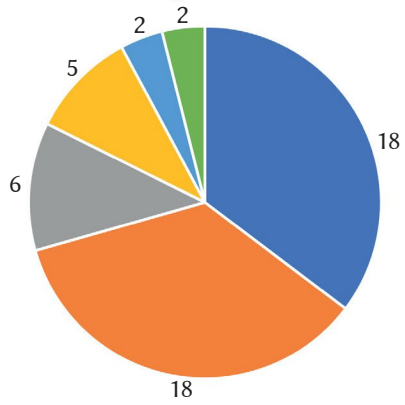


Fig. 11. Free-blown vessels made of coloured glass. The graph shows the percentage of individual colours.

Based on the use of glass in everyday Roman life, a predominance of tableware, such as plates, bowls, and cups, may be observed among the blown-glass assemblage from this area. Transport containers (bottles, jars) are only modestly represented, as are *balsamaria*. The range of tableware extends from forms derived from mould-made vessels to those made by free blowing. The abundance of tableware has also led us to consider the significance of this area within the wider context of the settlement of Romula.

Represented vessel forms[129]

Plates made of coloured or naturally coloured glass are surprisingly numerous, and several forms could be identified, such as Form 1.2.1 and 1.2.2 or Isings 47,[130] Form 1.2.4 or Isings 46a, Forms 1.2.5 and 1.2.6 or AR 86 and AR 108,[131] and Form 1.3.1 or a variant of Isings 45.[132]

129 We present only forms represented by more than one specimen, even if fragmentary.

130 Isings 1957, 62; Lazar 2003, 64.

131 Fünfschilling 2015, 366, 385; Lazar 2025, 81, Fig. 54a.

132 Isings 1957, 60; Lazar 2003, 66.

Bowls are represented by *zarte Rippenschalen* (Form 2.3.1 or Isings 17),[133] Forms 2.3.2 and 2.4.1 or Isings 44 and 41b,[134] shallow bowls with appliqué decoration on the rim (Form 2.4.3 or Isings 43),[135] and a variety of bowls with a tubular rim and a ring foot (Form 2.4.4 and 2.5.1 corresponding to Isings 44a and AR 109).[136]

Beaker variants include Hofheim cups (Form 3.2.1 or Isings 12), form Isings 29, arkaded beakers (Form 3.3.3 or Isings 33),[137] indented beakers (Form 3.5.1 or Isings 32) and cylindrical beakers with an applied ring foot (Forms 3.6.1 and 3.6.2 or Isings 85a, b).[138]

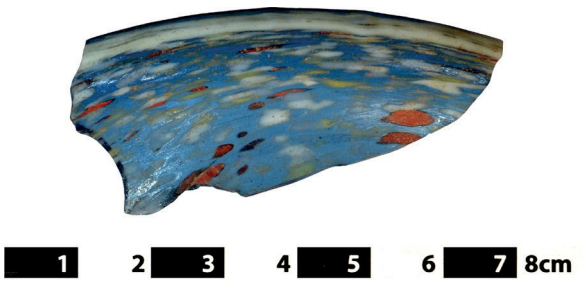


Fig. 12. Romula. Rim fragment of a footed beaker made of deep blue glass with splashed decoration in yellow, red, light blue and white opaque glass (G563; photo by Aleš Ogorelec).

Among the more notable finds is a fragment of a footed beaker with a stepped rim (G563), or chalice, which is also known from grave and settlement contexts at Emona (from excavations at Dunajska cesta in 2021, Grave 38, unpublished)[139] and Celeia and may be defined as Form 3.8.1 or Isings 36a.[140] The vessel usually stands on a tall, separately blown foot, which may also be separated from the bowl by a disc. This form appears, for example, at Augst between the mid-1st and mid-2nd centuries AD, while in Cologne and Trier it can also be found in 3rd-century AD contexts.[141] In Slovenia, products made of naturally coloured glass are known from the cemetery at Celeia, which dates to the Flavian period,[142] and one fragment was also discovered in a Phase 3c context in the settlement of Romula.

The fragment from Romula (Fig. 12) belongs to a beaker made of dark blue glass; the edge of the stepped rim is finished with a thread of white opaque glass, and the body features splashed decoration in white, yellow, light blue, and red opaque glass, applied to the wall as blobs and stretched into a multicoloured splashed pattern by blowing. The applied glass pieces could form a decoration of grains protruding from the wall, or they could be rolled into the wall and blown to stretch the pattern.[143] Splashed decoration, reminiscent of colourful mosaic glass, appeared in blown glass around the AD 20s–30s and remained widespread until the Flavian period.[144]

Parallels for our fragment can be found in Grave 58, or the tomb, at Celeia. The completely preserved beaker is made of dark blue glass and decorated with splashed decoration in different coloured glass (white, yellow, red, light blue); the stepped rim is likewise emphasised by a thread of white opaque glass.[145] Taken as a whole, the glass objects found in the tomb date to the second quarter of the 1st century AD.[146]

133 Lazar 2003, 68; Isings 1957, 35.

134 Isings 1957, 59, 57; Lazar 2003, 71–72.

135 Lazar 2003, 75; Isings 1957, 59.

136 Isings 1957, 59; Fünfschilling 2015; Lazar 2003, 75, 80.

137 Isings 1957, 27, 44, 47.

138 Isings 1957, 46, 102; Lazar 2003, 102.

139 I would like to thank Bernarda Županek (Mestni Muzej Ljubljana, MGML) and Marko Sraka for this information.

140 Isings 1957, 50; Lazar 2003, 110.

141 Fünfschilling 2015, 372; Goethert-Polaschek 1977, 349.

142 Lazar 2003, 111.

143 Fünfschilling 2015, 80, Abb. 80–81.

144 Lazar 2003, 58, Fig. 19.

145 Lazar 2023, 425, Fig. 604.

146 Plestenjak *et al.* 2023; Lazar 2023, 426, Figs 605–607.

Further parallels are known from graves at Emona.[147] The latest excavations of the northern necropolis of Emona on Dunajska cesta (Vienna Road) yielded, to our surprise, a new find of the same form and decoration in Grave 1038.[148] Based on details of the rim, the small handles at the bottom of the wall, the coloured spots, and the profile of the wall, the vessels show minor differences that can undoubtedly be linked to different workshops. The new grave assemblage from Emona still awaits full publication, but the associated ceramic material is similar to that found in the Celje tomb.

Within the group of bottles, cylindrical and square examples are only modestly represented by typically highly fragmentary specimens. There is a small dark blue flask with splashed opaque-white decoration[149] and some fragments of decolourised bottles with simple horizontal engraved decoration. One of these finds deserves special mention.



Fig. 13. Romula. Base fragment of a rectangular bottle with '*Sentia Secunda*' inscription from Aquileia (G705), photo and drawing (photo by Tomaž Lauko).

Fragment of a rectangular bottle with the inscription of *Sentia Secunda*

Among the transport and storage vessels, a fragment of the base of a large rectangular bottle (G705) made of naturally coloured glass stands out (Fig. 13). Although only partially preserved, the remains of an impressed inscription can be recognised on the base. Part of the inscription can be read in two rows: in one, *CIT A Q A*, and in the other, *CVND*, while the third row of the stamp is completely missing. Given the very good preservation, size, and legibility of the letters, the inscription may be reconstructed as part of the stamp on the base of the vessel, reading in full *SENTIA SECVNDA FACIT AQ(vileia) VITR(earia)* – made by the glassmaker *Sentia Secunda* from Aquileia. Reconstruction of the stamp was possible on the basis of comparison of the fragment with two completely preserved bottles discovered in a Roman tomb at Linz.[150] One of them bears a stamp in three lines, which helped us reconstruct the fragment from Romula as part of a larger rectangular two-handled bottle, which we have defined in Slovenia as a new form, 6.3.8, comprising rectangular two-handled bottles.[151]

The fragment is also important and special because it is only the third known find of a bottle bearing an inscription of this glassmaker from Aquileia. Previously, only two bottles from a grave at Linz were known, both larger rectangular two-handled bottles of the Isings 90 type, discovered in 1927 in Grave 99a at Linz (Roman Lentia).[152] The bottles are all the more interesting because both

147 Grave 141: Lazar 2004a, 57, Kat. 28; Grave 798: Plesničar Gec 1972, Pl. 211.6, Pl. 216.

148 The goblet has applied blobs of yellow, white, and light blue glass, further inflated into splashed decoration, and two miniature handles on the lower part of its wall. I thank my colleague Bernarda Županek, who enabled me to examine both the old and newly discovered finds at the Mestni Muzej in Ljubljana, as well as the material from Grave 1038 in the museum's collection.

149 Lazar 2025, 90.

150 Schwanzar 2003, 333, Abb. 2; Glöckner 2006, 199, Pl. 6.AUS 68,69.

151 Lazar 2025, 92, sl. 54b; Lazar 2005a, 41.

152 Glöckner 2006, dimensions: a, height 27.4 cm, base 23.6 × 11.9 cm; b, height 30 cm, base 23 × 11.7 cm; Nenna – Foy 2006.

bear the stamp of the same woman glassmaker, but in two different versions. On the first bottle, the inscription is arranged in three lines and reads *SENTIASE/CVNDA FA/CITAQVITR* – Made by the glassmaker *Sentia Secunda* from Aquileia. On this basis, the inscription on the fragment from Romula could be reconstructed, as it was clearly the same type of stamp.

Judging by the design of the bottle, *Sentia Secunda* was active in Aquileia in the second half of the 1st century. The name was originally interpreted as that of the workshop owner, since glassblowing was considered too demanding a craft for a woman.[153] However, Marianne E. Stern later demonstrated that the abbreviation *VITR* (Latin *vitrearius*) refers to a glassmaker, that is, a manufacturer of glass, and therefore to the glassblower, whether male or female. The word *FACIT* (made) also refers directly to the practitioner of this craft, who made the vessel, rather than to the owner of the workshop.[154] In her opinion, and based on her own experience with glassblowing, we must accept that there were Roman women glassmakers who were masters of their craft.

The settlement

Based on stratigraphy and the material discovered there, we have divided the Roman settlement remains of Romula (Phase 2 of the settlement) into three basic subphases.[155] Phase 2a comprises remains that date from before the construction of masonry architecture in the settlement and that occur concentrated in individual parts of the settlement, dating from the middle to the end of the 1st century AD.

Phase 2b includes remains related to the construction and use of most of the stone buildings in Ribnica, including the remains of a blacksmith's workshop, the remains of fourteen masonry buildings with associated traces of past use, two masonry and three wooden structures, and an exceptionally large number of pits and postholes, as well as remains of hearths and fireplaces and numerous other features. The Roman settlement seems to have had its greatest extent in Phase 2b, as remains were found in all investigated sectors. Phase 2b can be assigned to the 2nd century AD, after which there was a significant decline in settlement activity.

Phase 2c of the settlement includes the remains of structures that were still in use during this phase; however, most of the associated archaeological contexts—mainly rubble layers—were created when the settlement was abandoned. The layer sequence does not allow one to date the end of this phase precisely, but it may be assumed with a high degree of probability that the decline of the settlement began at the turn of the 2nd and 3rd centuries AD and accelerated in the 3rd century AD.

Glass finds

Quantitatively, the glass material from Phase 2a is not very abundant. However, in terms of the manufacturing techniques represented (mould-made glass, blown glass, and the absence of mould-blown products) and the documented forms, the finds are sufficiently informative to confirm the chronological definition of the phase. As at many other sites, a large number of ribbed-bowl fragments have been found at Romula. Compared with the Petričev grič area, mainly products made of naturally coloured glass were identified in the settlement; there are no products made of monochrome coloured glass, and only one piece of decolourised glass.

The group of blown glass includes tableware (plates, bowls, beakers, jugs), storage containers (square and cylindrical bottles, spherical jars), and *balsamaria*. Noteworthy among the plates are

153 Calvi 1968, 12–13.

154 Stern 1997, 130; Stern 2005, 15.

155 Tomaž *et al.* 2025b.

forms Isings 46a; among the bowls, Isings 42a and Isings 41b; among the beakers, Isings 29 and Isings 33 with arcade decoration; and among the jugs, Isings 52.[156]

Bottles are represented in small numbers and occur in cylindrical and square forms, some of them with a collar rim;[157] globular jars are represented by the form Isings 67.

In the second Roman phase of the settlement at Romula, the number of glass finds increased, as did the variety of blown-glass forms. Ribbed bowls (shallow and deep) are still represented, all made of blue-green glass, while other mould-made vessels are rare. There are a few individual fragments of black-glass vessels; decolourised products, with and without faceted decoration, appear for the first time, but in very limited quantities (Form 2.1.17; beakers with faceted decoration: Forms 3.1.2 and 3.1.3), not to the extent known from the Petričev grič area.

Free-blown plates are represented by Forms 1.2.4 (Isings 46a) and 1.2.5.[158] Bowls with a tubular rim and ring foot (Forms 2.4.4 and 2.5.1 or Isings 44a) are well represented. Among the beakers, we may mention form Isings 29, indented beakers (Forms 3.5.3, 3.5.6, and 3.5.8 or Isings 32 and Isings 35), and cylindrical beakers with a ring foot (Forms 3.6.1 and 3.6.2 or Isings 85a and b).

Bottles are more numerous in this phase, represented by cylindrical, square, and rectangular forms, and a few decolourised products. Base marks are not very diverse; the most common are concentric circles, combined with dots and letters. Within the group of jars, the globular form 7.2.4 and the square form 7.1.2 were documented.[159] *Balsamaria* are still modestly represented; new forms include small bath flasks (Forms 8.3.2, 8.3.3) with handles.[160]

The final phase, 2c, is represented by forms similar to those of Phase 2b, with a few exceptions. Mould-made glass is represented only by fragments of ribbed bowls; there is no mould-blown glass, and 1st-century AD free-blown forms are not numerous.

Glass finds from the western necropolis

The eastern necropolis (investigated in 1958–1960) lay east of the settlement and was partially excavated in a narrow strip south of the Emona–Siscia road.[161] The uncovered 41 cremation and inhumation graves date from the early 1st century to the beginning of the 3rd century AD. The western necropolis was excavated in 2002 and 2004 and measured 95 m in length and up to 16 m in width. Stretching along the north side of the Roman road, it was separated from the road by a 1.5 m-wide gravel-paved walkway; the orientation of all the graves respected the course of the road. A total of 131 cremation and inhumation graves were identified at the burial ground, with cremation graves accounting for 80% of all graves and inhumation graves for 20%. Four graves contained no human remains and were interpreted either as cenotaphs or as pre-prepared graves. More than twelve graves contained several burials.[162] Apart from individual graves, four larger grave plots (A, B, C, D) with several individual graves and two built tombs were explored. Based on the dating of the graves and the scattered distribution of the inhumation graves within the necropolis, we

156 Isings 46a: Isings 1957, 61; bowls Isings 42a and Isings 41b: Isings 1957, 58; beakers Isings 29 and Isings 33: Isings 1957, 44, 47; and jug Isings 52: Isings 1957, 69.

157 Stern 2001, 48.

158 Isings 1957, 61; Lazar 2003, 65.

159 Lazar 2003, 165, 159.

160 Lazar 2003, 171.

161 Petru 1969, 21.

162 Data from a partially completed anthropological analysis; therefore, the interpretation is only preliminary.

conclude that there is no clear temporal distinction between the use of cremation and inhumation burial, and that both burial rites were practised simultaneously, that is, a bi-ritual practice was followed.

The forms of cremation and inhumation graves in the Ribnica pri Brežicah necropolises are diverse. Including the forms in the eastern necropolis, we identified three basic forms of grave pit with several variations among the cremation graves, and three among the inhumation graves. Particularly noteworthy are Tomb 1 (Grave 7) and Tomb 2 (Graves 101 and 135), as well as two *bustum* graves, which also preserved traces of postholes indicating the placement of a wooden pyre construction above the grave.

Based on tomb architecture and the grave goods discovered in the western necropolis, it may be concluded that the tombs reflect the distinct social status of the deceased. Among the grave goods, amber objects deserve special mention, including several spindles, rings, and medallions with relief depictions, as well as high-quality imported glassware and bone objects.[163] An alabaster vase and a bronze mirror depicting the Three Graces on the reverse also stand out. Unlike the imported items mentioned above, the ceramic grave goods are distinctly local or regional in character, linked to the provincial workshops of Noricum and Pannonia. There are virtually no imported *sigillata* vessels among the grave goods.

With rare exceptions, the glass grave goods found in the western cemetery of Romula consist mainly of objects widely used in everyday life, with tableware and cosmetic vessels predominating. Unlike the settlement, where early Imperial mould-made glass is very well represented,[164] the grave goods consist predominantly of free-blown vessels.

High-quality imported products made of decolourised glass, typical of the 1st and 2nd centuries AD, are very well represented. Of the 131 graves in the western necropolis, glass is present in 40, that is, in about one-third. In 18 graves, a single glass vessel was deposited, while the remaining graves contained several, mostly imported products, including new forms previously unknown in Slovenia.[165]

Only glass beads or jewellery were preserved in five graves, while ten graves contained glass beads or necklaces together with glass vessels. A glass mirror was included once. The graves containing glass products date from the mid-1st to the 2nd centuries AD.



Fig. 14. Romula. Mould-blown *balsamarium* of amber coloured glass from Grave 1 (photo by Aleš Ogorelec).

Mould-blown date-shaped *balsamarium*

Among the grave goods, the date-shaped *balsamarium* is the only object made by mould-blowing. It was made of amber-brown glass and placed in Grave 1 (Fig. 14).[166]

Mould-blown bottles imitating the wrinkled surface of dates or the outer shell of almonds are among the most common forms of mould-

163 Lazar – Tomaž 2024; Lazar – Tomaž in print.

164 See previous paragraphs and Lazar 2021; Lazar 2022a; Tomaž *et al.* 2024; Tomaž *et al.* 2025a.

165 Lazar 2025, 93, Fig. 54.a–c.

166 Tomaž *et al.* 2024, 198–209.

blown vessels from the 1st century (Isings form 78d).[167] Small date-shaped bottles belong to a very popular group of products from the second half of the 1st century AD.[168] Their surface is wavy and wrinkled, just like that of a date. The colour likewise usually imitates dates, as the bottles are most often made of amber-coloured glass, followed by purple glass, while examples made of naturally coloured glass are very rare. Parallels for coloured vessels can also be found in the Hermitage collection in St Petersburg.[169]

Flasks of this shape were blown in two-part moulds, which is why they have a seam running along their entire length. Their production began shortly before the middle of the 1st century and continued until the beginning of the 2nd century AD.[170] The earliest examples from closed contexts are known from Trier, where they were found in a tomb dated to the Claudian period.[171] Finds from Pompeii and Herculaneum bear witness to the same. Finds from the second half of the 1st century are known from Israel, Crete, and nearby Croatia.[172] Two-thirds of the known finds originate from the Middle East, with the remaining sites scattered across the western and eastern Mediterranean. The exact locations of the workshops cannot be pinpointed, but their distribution suggests production on the Palestinian coast or in the well-known glassmaking centres of Phoenicia. In the 1st century, this region was known not only for its mould-blown glass products, but also for its date palms. In Greek, the terms for Phoenicia (Phoenike) and dates or date palms *(phoinix)* are homonyms.

The *balsamarium* from Grave 1 was blown in a two-part mould, with a visible seam on the side where the two parts of the mould met. For comparison, the Hellenistic and Roman necropolis of Budva may be mentioned, with its large number of imported mould-blown products, among which similar forms of *balsamaria* also occur.[173] In the grave contexts of Budva, they usually appear in pairs, and a free-blown balsamarium is often added to the group.[174] Graves with date-shaped *balsamaria* at Budva are dated to the 1st and 2nd centuries AD.[175]

Grave 1 from Romula contains, in addition to the *balsamarium*, the upper part of a Mercury flask made of decolourised glass (G51), the lower part of the balsamarium (G52; Form 8.6.5), a square bottle (G53; Form 3.6.4) and a spherical one-handled bottle (G54; Form 6.3.8), an amber medallion (G46), three house-urns (G55–G57), oil lamps with stamps (G62–G63), and ceramic vessels (G58–G61). It dates to the second half of the 1st and the first half of the 2nd century AD.[176]

Balsamaria with stamps

Balsamaria are quite numerous in grave assemblages, but unfortunately, some were damaged beyond recognition by fire. Early forms include *balsamaria* with a triangular body, often with a constriction at the transition from the neck to the body (Form 8.6.5), which, on the basis of known grave assemblages, date to the second half of the 1st and the 2nd centuries AD (Graves 1, 54, and 130).[177]

167 Isings 1957.
168 Price 1991, 69.
169 Kunina 1997, 280, Cat. 146, Fig. 91, left.
170 Stern 1995, 93.
171 Goethert-Polaschek 1977, 96, no. 453.
172 Fadić – Štefanac 2010, 279; Buljević 2002, 393, Cat. 1, Pl. 1.
173 Marković 2012; Lazar 2016, 21.
174 Marković 2012, Grave 39: 27/2, A–I/11, Grave 174: A–I/8.
175 Lazar 2016, 25.
176 Tomaž *et al.* 2024, 166, Fig. 141.
177 Lazar 2003, 181.

Particularly noteworthy are *balsamaria* bearing a stamp or inscription on the base. In Grave 9 (G201),[178] a *balsamarium* with a wide neck and a flattened body with a wide horizontal rim (Fig. 15) was found. It is made of decolourised glass and belongs to Form 8.6.12 or the IN 192 type.[179] Its special feature is a stamp on the flat base, which is difficult to read but may be identified as belonging to the *PATRIMONI* group.



Fig. 15. Romula. *Balsamarium* with a flattened body and a '*PATRIMONI*' stamp on the base (photo by Aleš Ogorelec).

Balsamaria with stamps *PATRIMONI/PATRIMONIUM/VECTIGAL PATRIMONIN or VEC(tigal) MONOP(oliu)M P(atrimoni) IMP(eratoris) CAE(saris) M(arci) A(ureli) (ANT)ONINI/PATEVAN* have been found at many European sites in the area of the former Roman provinces. They occur from Great Britain through the Netherlands, Germany, Switzerland, Portugal, and Spain to Italy.[180] Numerous parallels can be found in our vicinity, on the coast of neighbouring Croatia, where nine *balsamaria* with variants of the *PATRIMONI* stamp were found at *Asseria*, *Aenona*, Bakar, and Zadar.[181]

The stamps clearly indicate the involvement of the state administration of the Roman Empire in the production, distribution, and trade of aromatic substances, which were transported and sold in these vessels in the second half of the 2nd century and at the beginning of the 3rd century AD. That this concerned a monopoly on products or contents under the control of the imperial treasury is demonstrated by stamps from neighbouring Italy bearing the inscription *VEC(tigal) MONOP(oliu) M P(atrimoni) IMP(eratoris) CAE(saris) M(arci) A(ureli) (ANT)ONINI.*[182] Unfortunately, the precise type of tax involved is unclear, but the content of the stamp undoubtedly confirms the principle of taxation arising from the imperial monopoly. In addition to the financial aspect, the inscription *PATRIMONI* alludes to the emperor himself and thus indirectly attests to the guarantee and quality of the contents stored or offered in these *balsamaria*.

The partially preserved lower part of the *balsamarium* from Grave 59 (G863), also made of decolourised glass, can be assigned to the same form as the previous example.[183] The hardly legible stamp on the base can be reconstructed as *IANUARI* or, in full, as *VOLUMNI IANUARI*, and is interpreted as the name *ANTONIUS VOLUMNIUS IANUARIUS.*[184] *Balsamaria* with this stamp are found mainly in the western provinces of the Empire; they are known from Great Britain, France, and Italy.[185] The inscription may be interpreted as the name of the manufacturer, but unfortunately, it is unclear whether it refers to the maker of the glass vessel, that is, the glassmaker, the producer of the contents, or a trader or distributor. It may also refer to a person who combined all three functions.

178 Tomaž *et al.* 2024, 244–245.
179 Lazar 2003, 178; Foy *et al.* 2018, 193.
180 Foy 2011; Amrein 2006; Frova 1971.
181 Fadić – Štefanac 2012, 37, 137–140; Fig. 18.
182 Frova 1971, 38–40.
183 Tomaž *et al.* 2024, 446–451.
184 Sternini 1994.
185 Foy – Nenna 2006, 136.

European sites have yielded *balsamaria* of various forms bearing this stamp, as shown by a series of publications on glassware stamps.[186] From this, it may be concluded that the workshop produced flasks or *balsamaria* for storing various substances or products. On the basis of parallels, it is possible that production was located somewhere in northern or central Italy. The southernmost find of a balsamarium with this stamp is known from Starigrad in Croatia.[187] Based on other parallels, *balsamaria* with the *VOLUMNI IANUARI* stamp were mainly in use in the second half of the 2nd and early 3rd centuries AD.

Another type of stamp should also be mentioned, found on *balsamaria* from Graves 25 (G361), 32 (G507), 44 (G651; Fig. 16), and 54 (G755).[188] The balsamaria, with a wide and slightly flattened body and a wide neck ending in a tubular rim, belong to Form 8.6.7.[189] On the concave base they have a stamp that may be read as *AT.F* on the bottom line and *OE*, or simply *O*, above it. An identical stamp is known from Grave 1/1977 at Stari Trg near Slovenj Gradec.[190] The letters *AT* may be interpreted as an abbreviation of a name, e.g., *AT(imetus) f(ecit)*. The letters *OE* in the upper line may refer to the contents that were transported or sold in the *balsamaria*. The grave at Slovenj Gradec dates to the beginning of the 2nd century AD, while at other European sites, these types of balsamaria with similar inscriptions date to the 2nd and 3rd centuries AD.[191]

A group of four *balsamaria* with the same stamp is rare, or rather an exceptional find at our sites. Without doubt, they were used to transport contents that were also employed in funerary ceremonies, most probably fragrant oils. Their number probably indicates a regular supplier who supplied the settlement of Romula with his products. It is interesting to note that all the graves in question are *bustum* burials with a rich assemblage of grave goods, including coins. In Grave 25, a coin of Domitian (AD 81–96) was deposited, while the others date from the second quarter (Hadrian, Graves 32 and 54) and the middle of the 2nd century AD (Antoninus Pius, Grave 44).

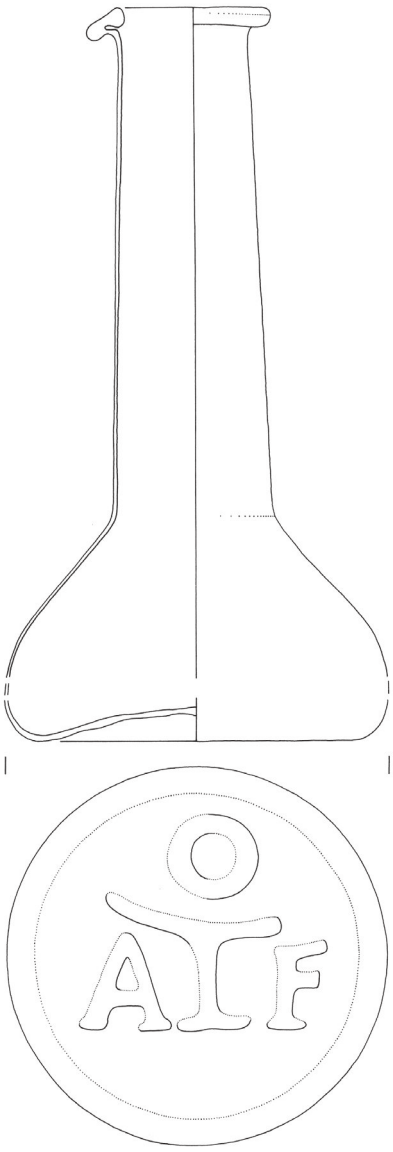


Fig. 16. Romula. Drawing of a *balsamarium* with a stamp from Grave 44 (G651).

Stamps with this abbreviation may be compared with a similar group of stamps found in Dalmatia, at sites such as Starigrad, Zadar, and Senj. The *balsamaria* of this type found there bear the abbreviations *QOP/AL.F* or *QDE/LPF*; they were probably made by workshops in northern Italy at the end of the 1st or in the first decades of the 2nd century AD.[192] Parallels for these stamps come from

186 Foy – Nenna 2006, Pl. 136, nos 072–076.

187 Fadić – Štefanac 2012, 41, cat. 30.

188 Tomaž *et al.* 2024, 100–101.

189 Lazar 2003, 186.

190 Lazar 2006, 245; Strmčnik Gulič 1981, 365.

191 Strmčnik Gulič 1981, 368; Taborelli 1999, 267–77.

192 Mandruzzato – Marcante 2007, 51.

Aquileia, where the first line is interpreted as an abbreviation for the *tria nomina* of the workshop owner. Based on the composition or abbreviations of the stamp and the form of the *balsamaria* from the graves at Romula, it may be assumed that they originated in workshops in northern Italy, which is also confirmed by the chronological position of the associated features, as suggested by grave goods, especially coins.[193]

Miniature glass mirror

Grave 70 (G710) contained an eight-sided concave glass element belonging to a miniature mirror. The mirror was set in a lead frame, which, unfortunately, has not been preserved in this case.[194] Similar mirrors have been found throughout the Roman Empire, most notably at sites such as Milan, Trier, Cologne, Nijmegen, Augst, the Black Sea region, and Olbia.[195] Several similar finds are known in Slovenia from grave contexts, especially at Ptuj, Križišče near Spodnje Škofije (Grave 29), and Grave 246 at *Emona*.[196] It is also worth mentioning the recently published finds from the western necropolis at Salona.[197]

Women's graves often contain various accessories and items for personal and cosmetic care, so the first assumption might be that the miniature mirror was likewise for personal care. In this case, however, that would be misleading, since the surface of the mirror is only 2 to 3 cm across, making such use unlikely. In addition, the lead from which the frames of these mirrors were made is extremely soft and unsuitable for everyday use.

Known finds of these mirrors come mainly from temples, for example, as votive offerings in female cults, and from graves. In the latter context, they may be defined as grave goods rather than as objects of personal use. The mirror frames, whether square, round, with handles, etc., were made of lead, not only because it was cheap and easy to shape, but also because the colour of lead was traditionally associated with the underworld and with magic. From the Black Sea region, frames depicting Bacchus, Silenus, Pan, and satyrs are known; the same depictions have also been identified on a mirror frame from Križišče.[198]

From Aquincum, finds of mirrors are known with inscriptions such as "gift for a beautiful woman", "for a beautiful soul", "*utere felix*", etc. Such gifts and inscriptions are often associated with cults of female deities such as Venus, Selene, Isis, Juno, etc.[199] Parallels may be drawn with concepts such as beauty, youth, health, and premature death. It may therefore be concluded that these miniature mirrors belong to the grey area between religion and magic, especially if the inscriptions and dedications preserved on the frames of these mirrors are taken into account.

Mirrors with square frames are more common at sites in the western part of the Empire, and their use spans a wide time period between the 1st and the 4th century AD, perhaps even into the early Middle Ages. Researchers believe that there was a workshop producing these items in Avenches, active in the 2nd and 3rd centuries AD.[200]

193 Tomaž *et al.* 2024, 101, 165–167, Fig. 41.

194 Tomaž *et al.* 2024, 104–105; 400–405.

195 Uboldi 2016, 98.

196 Ptuj: Lazar 2004a, 78, Abb. 92; Križišče: Lazar 2004a, 78, sl. 93; Novšak *et al.* 2019, 106–107; Emona: Petru 1972, Pl. 25.1.

197 Buljević 2023, 45.

198 Novšak *et al.* 2019, 108.

199 Baratta 2014, 712.

200 Amrein 2001.

This time frame is also the most common for dated contexts currently known at French sites, while at sites in northern Europe, e.g., Cologne, these finds are common in the second half of the 3rd and the first half of the 4th century AD.[201] Comparable finds from Slovenia date from the 1st (Emona) to the 3rd century AD (Školarice, Grave 29; Poetovio), and those from Salona from the 2nd to the 4th century AD.[202]

Archaeometric analysis of glass finds[203]

For the archaeometric study prepared by Caroline Jackson, only early Roman fragments from the settlement were sampled, since glass items from the graves were undergoing restoration and were therefore unavailable. The fragments were chosen to represent the range of forms (bowls, jars, bottles, beakers, plates, *pyxis*) typical of the 1st century AD and to encompass a representative range of colours.[204]

The glasses are all soda-lime-silica glasses and are typical of compositions comparable to those seen in Roman glasses from this period.[205] Every colourless glass sample contained sufficient antimony, and there are no examples of manganese-decolourised glass. All further details and the results of the study are available in the aforementioned publication by Caroline Jackson and Irena Lazar.

Concluding remarks

In terms of quantity, diversity, quality, and chronological range, the glass and other materials discovered and analysed at the site of Romula reflect the period of the settlement's establishment and development and speaks of its inhabitants: the Roman settlers and the indigenous Celtic population. After the Roman state completed its military operations in the region of Illyricum and suppressed the Dalmatian-Pannonian uprising between AD 6 and 9, it was time to establish governance, trade, and normal life along the *via publica* that ran from Aquileia through Emona to Siscia and onwards to the Balkans and the eastern provinces. On the basis of the material, and of its quantity and quality in the Petričev grič area, it may be concluded that a Roman villa was first established here, owned by a representative of the upper class of Roman society. This is indicated by the high-quality imported glass finds from the Tiberian period onwards, the quantity of which exceeds that expected for a modest *villa rustica*. Given its location on the main Roman road, the villa may briefly have served as a road station, after which the road and customs station of Romula was established in the immediate vicinity at a strategic location, probably in the middle of the first half of the 1st century AD.

Owing to its location (on a road and possibly at a port), the settlement flourished throughout the 1st and 2nd centuries AD. The earliest graves in the western necropolis date to the mid-1st century AD, while the youngest date to the end of the 2nd or the beginning of the 3rd century AD. Unfortunately, because of the geographical conditions that had previously been advantageous, Romula was unable to expand and develop. Consequently, during the Flavian dynasty, the *Municipium Flavium Latobicorum Neviodunum* was founded just a few miles west of Romula. This autonomous city became the centre of the region, and *Romula* began to lose its role and importance. Perhaps its fate was also influenced by the Sava River, with its size and tendency to flood. By the end of the 2nd century AD, Romula's importance had begun to wane, and by the 3rd century AD, it was no more than an insignificant, albeit useful, roadside stop.

201 Foy *et al.* 2018, 330, Form IN325.

202 Novšak *et al.* 2019, 109; Buljević 2023, 45–49.

203 For a comprehensive publication, see Jackson – Lazar 2025.

204 Sixty-nine vessels were sampled and eighty-two analyses were performed (some glasses were multi-coloured).

205 Jackson *et al.* 2009; Freestone – Stapleton 2015; Gallo *et al.* 2013; Jackson 2005.

Compared with other early Roman sites with autonomous status in the region *(Colonia Iulia Emona, Municipium Claudium Celeia)*, the number of strongly coloured mould-made and blown glasses, and of decolourised glass (mould-made and blown), is surprisingly high, predominantly in the Petričev grič area. The vessel forms range from open forms produced using sophisticated cane techniques, slumped over formers in mixtures of opaque and translucent glass, to large quantities of monochrome vessels. The quantity of these high-quality vessels suggests consumption by an affluent section of society. Glass was still an expensive and high-status commodity. Some products were still regarded as unique and were therefore available only to a limited part of society.

Taken together, this assemblage represents fine, high-quality glass produced at the peak of Roman glass production in terms of technological sophistication and variety; it demonstrates the wide range of technologies, forms, colours, and supplies of glass available to both glassworkers and consumers. The period reflected in the range of vessels and colours stands at a transitional point in the production and consumption of Roman glass; blown vessels were becoming more common and easier to produce, and new forms were becoming more widely available because they could be formed easily at the end of a blowpipe.

Funding

The author acknowledges the financial support from the Slovenian Research and Innovation Agency as part of the P6-0460 Long-Term grant.

References

Amrein, H. 2001: *L'atelier de verriers d'Avenches. L'artisanat du verre au milieu du 1er siècle après J.-C. Aventicum.* Cahiers d'archéologie romande 87 – Aventicum XI. Lausanne.

Amrein, H. 2006: Marques sur verre attestées en Suisse. In: Foy, D. – Nenna, M.-D. (eds): *Corpus des signatures et marques sur verres antiques, Vol. 2.* Aix-en-Provence–Lyon, 209–244.

Baratta, G. 2014: Gli specchietti votivi in piombo dedicati alla *KURIA AGORAC*. In: Martínez Fernández, A., Ortega Villaro, B., Velazco López, H. (eds): *Àgalma. Ofrenda desde la Filología Clásica a Manuel García Teijeiro.* Valladolid, 709–713.

Baratte, F. – Painter, K. S. (eds). 1989: *Trésors d'orfèvrerie gallo-romains. Exhibition Catalogue.* Paris.

Berger, L. 1960: *Römische Gläser aus Vindonissa.* Basel.

Biaggio Simona, S. 1991: *I vetri romani I–II.* Locarno.

Boeselager, D. von 2012: Römische Gläser aus Gräbern an der Luxemburger Strasse in Köln. Typologie, Chronologie, Grabkontexte. *Kölner Jahrbuch* 45, 7–526.

Bonnet Borel, F. 1997: *Le verre d'*époque *romaine à Avenches-Aventicum. Typologie générale.* Doc. Musée Romain Avenches 3. Avenches.

Breščak, D. 2002: Antika. In: *Oživljene kulture. Exhibition catalogue.* Ljubljana, 47–100.

Buljević, Z. 2002: Stakleni balzamariji. In: Marin, E. – Vickers, M. (eds): *Longae Salonae.* Split, 383–454.

Buljević, Z. 2004: The Glass. In: Marin, E. – Vickers, M. (eds): *The rise and fall of an imperial shrine. Roman sculpture from the Augusteum at Narona.* Narona VII. Split, 186–209.

Buljević, Z. 2012: *Traces of Ennion and Aristeas in the Roman province of Dalmatia. Exhibition catalogue.* Split.

Buljević, Z. 2015: Ennion and Aristeas glasware found in the Roman province of Dalmatia. In: Lightfoot, C. (ed.): *Ennion: Master of Roman glass. Exhibition catalogue.* New York, 61–67.

Buljević, Z. 2016: *Ranorimsko salonitansko i tilurijsko stakleno posuđe u kontekstu nalaza staklenog posuđa s područja provincije Dalmacije.* PhD Dissertation, University of Zagreb, Zagreb.

Buljević, Z. 2023: Staklena zrcala u grobovima Zapadne salonitanske nekropole (Glass mirrors in the graves of the Western Salonitan necropolis). *Nova antička Duklja* 14, 45–80.

Calvi, C. 1968: *I vetri romani del Museo di Aquileia.* Aquileia.

Cool, H. E. M. – Price, J. 1995: *Roman vessel glass from excavations in Colchester, 1971–1985.* Colchester Archaeological Report 8. Colchester.

Cosyns, P. 2011: *The Production, Distribution and consumption of black glass in the Roman Empire during 1st to 5th century AD. An Archaeological, archaeometric and historical approach.* PhD Dissertation, Free University Brussels, Brussels.

Cosyns, P. 2015: Beyond the channel! That's quite a different matter. A comparison of Roman black glass from Britannia, Gallia Belgica and Germania Inferior. In: Bayley, J. – Freestone, I. – Jackson, C. (eds): *Glass of the Roman World.* Oxford–Philadelphia, 190–204.

Cosyns, P. – Fontaine, S. 2009: La vaisselle en verre d'apparence noire dans les provinces occidentales au 1er siècle ap. J. C. In: Jansens, K. H. A. – Degryse, P. – Cosyns, P. – Caen J. – Van't dack, L. (eds): *Annales du 17e Congrès de l'AIHV.* Antwerp, 80–87.

Cosyns, P. – Hanut, F. 2005: Black glass of second to third-century date in northern Gaul: A preliminary survey. In: Nenna, M.-D. (ed.): *Annales du 16e Congrès de l'AIHV.* London, 113–118.

Cottam, S. – Jackson, C. 2018: Things that travelled: Precious things for special people? In: Rosenow, D. – Phelps, M. – Meek, A. – Freestone, I. (eds): *Mediterranean glass in the first millennium AD.* London, 92–106. https://doi.org/10.2307/j.ctt21c4tb3.11

Czurda-Ruth, B. 1979: *Die römischen Gläser vom Magdalensberg.* Kärntner Museumsschriften 65. Klagenfurt.

De Bellis, M. 2004: Le coppe da bere di Ennione: Un aggiornamento. *Aquileia nostra* 75, 121–190.

De Bellis, M. 2010: Ennion: Maître verrier du Ier siècle apr. J.-C. Ses Coupes, sa vie. In: Fontaine-Hodiamont, C. (ed.): *D'Ennion au Val Saint-Lambert. Le verre soufflé-moulé. Actes des 23e Rencontres de l'AFAV.* Bruxelles, 39–44.

Eterović Borzić, A. – Štefanac, B. 2021: *Ancient glass. Catalogue of the permanent exhibition of the Museum of Ancient Glass in Zadar.* Zadar.

Ettlinger, E. – Hedinger, B. – Hoffmann, B. 1990: *Conspectus formarum terrae sigillatae Italico modo confectae.* Materialien zur römisch-germanischen Keramik Materialien 10. Bonn.

Fadić, I. 1997: Il vetro. In: Fadić, I.: *Trasparenze imperiali – vetri romani dalla Croazia.* Milano, 73–246.

Fadić, I. – Štefanac, B. 2010: Reljefno ornamentirani vrčići sirijske staklarske produkcije s područja južne Liburnije. *Asseria* 8, 275–350.

Fadić, I. – Štefanac, B. 2012: *Rimsko staklo Hrvatske: Radionički reljefni žigovi – Roman glass in Croatia: Workshop relief stamps.* Zadar.

Fadić, I. – Štefanac, B. 2020: *Muzej antičkog stakla: raritetni i luksuzni primjerci – Museum of ancient glass: Rare and luxurious items.* Zadar.

Foy, D. 1998: Le verre. In: Bonifay, M. – Carre, M.-B. – Rigoir, Y. (eds): *Fouilles à Marseille: les mobiliers (Ier–VIIIe siècles).* Études Massaliètes 5. Aix-en-Provence, 127–132.

Foy, D. 2010: *Les verres antiques d'Arles. La collection du Musée départemental d'Arles antique.* Paris.

Foy, D. 2011: Signatures et marques sur verres antiques trouvés en France: second addenda. In: Foy, D. – Nenna, M.-D. (eds): *Corpus des signatures et marques sur verres antiques, Vol. 3.* Aix-en-Provence–Lyon, 83–138.

Foy, D. – Nenna, M.-D. 2006: Les unguentaria. In: Foy, D. – Nenna M.-D. (eds): *Corpus des signatures et marques sur verres antiques, Vol. 1.* Lyon, 133–148.

Foy, D. – Labaune-Jean, F. – Leblond, C. – Pruvot, Ch. M. – Marty, M.-T. 2018: *Verres incolores de l'Antiquité romaine en Gaule et aux marges de la Gaule.* Archaeopress Roman Archaeology 42:1/2. Oxford. https://doi.org/10.2307/j.ctv19vbgmw

Freestone, I. – Stapleton, C. 2015: Composition, technology and production of coloured glasses from Roman mosaic vessels. In: Bayley, J. – Freestone, I. – Jackson, C. M. (eds): *Glass of the Roman world.* Oxford, 61–76.

Frova, A. 1971: Vetri romani con marchi. *Journal of Glass Studies* 13, 38–44.

Fünfschilling, S. 2015: *Die römischen Gläser aus Augst und Kaiseraugst.* Forschungen in Augst 51. Augst.

Gallo, F. – Silvestri, A. – Molin, G. 2013: Glass from the archaeological museum of Adria (North-East Italy): New insights into early Roman production technologies. *Journal of Archaeological Science* 40, 2589–2605. https://doi.org/10.1016/j.jas.2013.01.017

Glöckner, G. 2006: Signs, inscriptions and other designs on Roman glass vessels in Austria. In: Foy, D. – Nenna M.-D. (eds): *Corpus des signatures et marques sur verres antiques, Vol. 2*, Lyon, 187–208.

Goethert-Polaschek, K. 1977: *Katalog der römischen Gläser des Rheinischen Landesmuseums Trier.* Trierer Grabungen und Forschungen 9. Mayence.

Grose, D. F. 1989: *Early ancient glass. Core-formed, rod-formed, and cast vessels and objects from the Late Bronze Age to the Early Roman Empire, 1600 B.C. to A.D. 50.* New York–Toledo.

Grose, D. F. 1991: Early imperial Roman cast glass: The translucent coloured and colourless fine wares. In: Painter, K. – Newby, M. (eds): *Roman glass. Two centuries of art and invention.* London, 1–18.

Grose, D. F. 2017: *The Hellenistic, Roman and Medieval glass from Cosa.* Rome. https://doi.org/10.3998/mpub.8228892

Guštin, M. 2004: Steklene posode z Nove Table pri Murski Soboti – Glass Vessels from Nova Tabla near Murska Sobota. In: Lazar, I. (ed.): *Drobci antičnega stekla – Fragments of Ancient Glass.* Koper, 71–80.

Isings, C. 1957: *Roman glass from dated finds.* Archaeologica Traiectina 2. Groningen.

Israeli, Y. 2011: *Made by Ennion: Ancient glass treasures from the Shlomo Moussaieff Collection. Exhibition catalogue.* Jerusalem.

Istenič, J. 2000: *Poetovio, zahodna grobišča II – Poetovio, the western cemeteies II.* Catalogi et monographiae 33. Ljubljana.

Jackson, C. M. 2005: Making colourless glass in the Roman period. *Archaeometry* 47:4, 763–780. https://doi.org/10.1111/j.1475-4754.2005.00231.x

Jackson, C. M. – Lazar, I. 2025: Typology, composition and technology of early Roman coloured glasses from Ribnica near Brežice (Romula). In: Tomaž, A. (ed.): *Ribnica pri Brežicah VI: Analize.* Arheologija na avtocestah Slovenije 118/6. Ljubljana.

Jackson, C. M. – Price, J. – Lemke, C. 2009: Glass production in the 1st century A.D. Insights into glass technology. In: Degryse, P. – Cosyns, P. – Caen, J. M. A. – Van't dak, L. (eds): *Annales du 17e Congrès de l'Association Internationale pour l'Histoire du Verre.* Antwerp, 150–156.

Jackson, C. M. – Lazar, I. – Cottam, S. 2015: The green, green glass of Rome. In: Lazar, I. (ed.): *Annales du 19e Congrès de l'AIHV.* Koper, 109–117.

Kunina, N. 1997: *Ancient glass in the Hermitage Collection.* St Petersburg.

Lazar, I. 2000: Ribbed glass bowls from the territory of modern Slovenia. In: Whitehouse, D. (ed.): *Annales du 14e Congrès de l'AIHV.* Lochem, 63–68.

Lazar, I. 2003: *Rimsko steklo Slovenije – The Roman Glass of Slovenia.* Opera Instituti Archaeologici Sloveniae 7. Ljubljana. https://doi.org/10.3986/9789610503156

Lazar, I. 2004a: *Odsevi davnine – Antično steklo v Sloveniji – Spiegelungen der Vorzeit – Antikes Glas in Slowenien.* In: Lazar, I. (ed.): *Rimljani–steklo, glina, kamen – Die Römer–Glas, Ton, Stein*, Celje–Ptuj–Maribor, 11–81.

Lazar, I. 2004b: Najdbe rimskega stekla iz Logatca (Longaticum) – Finds of Roman glass from Logatec (Longaticum). In: Lazar, I. (ed.): *Drobci antičnega stekla – Fragments of Ancient Glass*, Koper, 57–65.

Lazar, I. 2005a: Fragment of the base of the bottle with the inscription *SENTIA SECUNDA*. *Bulletin Instrumentum* 21, 41–42.

Lazar, I. 2005b: Ennion beaker. *Bulletin Instrumentum* 21, 40–41.

Lazar, I. 2006: Vessels with base marks from Slovenia. In: Nenna, M.-D. – Foy, D. (eds): *Corpus des signatures et marques sur verres antiques, Vol. 2.* Lyon, 245–272.

Lazar, I. 2016: The mould-blown glass assemblage of the Roman necropolis in Budva – Skupina stakla duvanog u kalup sa rimske nekropole u Budvi. *Nova antička Duklja* 7, 21–37.

Lazar, I. 2019: Črno steklo, da ali ne? Rimski vrč iz groba 4/1988 na ptujski obvoznici in nove najdbe posod iz na pogled črnega stekla. *Zbornik Pokrajinskega muzeja Ptuj* 6, 29–43.

Lazar, I. 2020a: *Romula* – Ribnica. In: Horvat, J. – Lazar, I. – Gaspari, A. (eds): *Mala naselja rimske dobe v Sloveniji.* Opera Instituti archaeologici Sloveniae 40. Ljubljana, 387–402. https://doi.org/10.3986/9789610502586

Lazar, I. 2020b: Transparence luxury – a new group of Roman glass with facet-cut decoration. In: Radman Livaja, I. – Bilić, T. (eds): *Monumenta marmore aereque pereniora.* Collectanea archaeologica Musei archaeologici Zagrabiensis 3. Zagreb, 338–345.

Lazar, I. 2021: New finds of Roman high-quality glass from Romula (Pannonia). In: Sevindik, O. (ed.): *Annales du 21e Congrès de l'AIHV.* Istanbul, 149–160.

Lazar, I. 2022a: *Pogled skozi steklo – A look through the glass.* Libri Universitatis Hereditati 1. Koper. https://doi.org/10.26493/978-961-293-203-9

Lazar, I. 2022b: Rimska čaša s podpisom mojstra Enniona – prva najdba, odkrita v Sloveniji / Roman beaker signed by Ennion – the first find discovered in Slovenia. *Studia universitatis hereditati* 10/2, 31–38. https://doi.org/10.26493/2350-5443.10(1)31-38

Lazar, I. 2023: Opredelitev steklenega gradiva. In: Plestenjak, A. – Gaspari, A. – Žerjal, T.: *Celje, Mariborska cesta III.* Arheologija na avtocestah Slovenije 111. Ljubljana, 417–431.

Lazar, I. 2025: Opredelitev steklenega gradiva. In: Tomaž, A. – Lazar, I. – Schindler Kaudelka, E. 2025a: *Ribnica pri Brežicah III: Romula, območje Petričev grič.* Arheologija na avtocestah Slovenije 118/3. Ljubljana, 51–97.

Lazar, I. – Tomaž, A. 2024: House urns in the burial practices of the western necropolis of Romula (NW Pannonia) (Hišaste žare v pogrebnih praksah zahodnega grobišča Romule (SZ Panonija)). *Studia universitatis hereditati* 12:1, 35–57. https://doi.org/10.26493/2350-5443.12(1)35-57

Lazar, I. – Tomaž, A. in print: Graves with amber from the western necropolis of Romula (Pannonia, Slovenia). In: *Lux Nova. Acta in Honorem M. Korać.* Belgrade.

Lehrer, G. 1979: *Ennion. A first century glassmaker. Exhibition catalogue.* Tel Aviv.

Lepri, B. 2021: *Il vetro tra il II e il III secolo D.C. Produzione e distribuzione in area romano-ostiense.* Roma.

Lightfoot, C. 2015: *Ennion: Master of Roman Glass. Exhibition catalogue.* New York.

Lovenjak, M. 1997: Štirje novi miljniki s ceste Emona-Neviodunum. *Arheološki vestnik* 48, 89–96.

Mandruzzato, L. – Marcante, A. 2007: *Vetri antichi del Museo Archeologico Nazionale di Aquileia.* CCV Friuli Venezia Giulia 3. Trieste.

Marković, Č. 2012: *Antička Budva – Nekropole. Istraživanja 1980–1981.* Podgorica.

McClellan, M. C. 1983: Recent finds from greece of first-century A.D. mold-blown glass. *Journal of Glass Studies* 25, 71–78.

Meininger, M. 1996: *Untersuchungen zu den Gläsern und Gipsabgüssen aus dem Fund von Begram (Afghanistan).* Würzburger Forschungen zur Altertumskunde 1. Würzburg.

Nemeth Ehrlich, D. 1994: Andautonija, rimsko urbano središte – Andautonia, a Roman urban centre. In: Rendić-Miočević, A. – Škoberne, Ž. – Radovčić, J. – Cvitković, I. – Balen-Letunić, D. – Gregl, Z. – Dukat, Z. – Nemeth-Ehrlich, D. – Vojvoda, P. – Sokol, V. (eds): *Zagreb prije Zagreba – Zagreb before Zagreb. Exhibition catalogue.* Zagreb.

Nenna, M.-D. – Foy, D. (eds) 2006: *Corpus des signatures et marques sur verres antiques, Vol. 2.* Aix-en-Provence–Lyon.

Novšak, M. – Bekljanov Zidanšek, I. – Žerjal, T. 2019: *Križišče pri Spodnjih Škofijah.* Arheologija na avtocestah Slovenije 81. Ljubljana.

Oliver, A. 1984: Early Roman facetted glass. *Journal of Glass Studies* 26, 35–58.

Petru, P. 1969: Rimski grobovi iz Dobove, Ribnice in Petrušnje vasi. *Razprave I. razreda SAZU* 6, Ljubljana, 5–82.

Petru, S. 1972: *Emonske nekropole.* Catalogi et monographiae 7. Ljubljana.

Petru, P. 1975: XII, Krško, Ribnica, Podgračeno. In: Bolta, L. – Gabrovec, S. (eds): *Arheološka najdišča Slovenije.* Ljubljana, 259.

Plesničar Gec, L. 1972: *Severno emonsko grobišče.* Catalogi et monographiae 8. Ljubljana.

Plesničar Gec, L. 1983: *Starokrščanski center v Emoni.* Catalogi et monographiae 21. Ljubljana.

Plestenjak, A. – Gaspari, A. – Žerjal, T. 2023: *Celje, Mariborska cesta, III.* Arheologija na avtocestah Slovenije 111. Ljubljana.

Price, J. 1987: Glass vessel production in Southern Iberia in the first and second centuries A.D.: A Survey of the archaeological evidence. *Journal of Glass Studies* 29, 30–39.

Price, J. 1991: Decorated mould-blown tablewares in the first century AD. In: Newby, M. – Painter, K. (eds): *Roman Glass: Two Centuries of Art and Invention.* London, 56–75.

Rütti, B. 1991: *Die römischen Gläser aus Augst und Kaiseraugst.* Forschungen in Augst 13/1–2. Augst.

Schwanzar, C. 2003: Römischer Fernhandel. In: Leskovar, J. – Schwanzar, C. – Winkler, G. (eds): *Worauf wir stehen. Ausstellungskatalog.* Wien, 329–334.

Stern, E. M. 1995: *Roman mold-blown glass: The first through sixth centuries.* Toledo.

Stern, E. M. 1997: Neikais – A woman glass blower of the first century AD. In: Erath, G. – Lehner, M. – Schwarz, G. (eds): *Komos. Festschrift für Thuri Lorenz zum 65. Geburtstag.* Wien, 129–132.

Stern, E. M. 2001: *Roman, Byzantine, and early medieval glass, 10 BCE–700 CE. Ernesto Wolf Collection.* Ostfildern-Ruit.

Stern, E. M. 2005: À la recherche de la première canne à souffler. *Bulletin Instrumentum* 21, 15–18.

Sternini, M. 1994: Bottiglie in vetro con bolli greci. In: *Epigrafia della produzione e della distribuzione. Actes de la VIIe Rencontre franco-italienne sur l'épigraphie du monde romain (Rome, 5-6 juin 1992).* Collection de l'École française de Rome 193. Rome, 567–574.

Strmčnik Gulič, M. 1981: Antično grobišče v Starem trgu pri Slovenj Gradcu. *Arheološki vestnik* 32, 348–389.

Šašel, J. 1975: Rimske ceste v Sloveniji. In: Bolta, L. – Gabrovec, S. (eds): *Arheološka najdišča Slovenije.* Ljubljana, 74–81.

Šašel, J. 1977: Viae militares. In: *Studien zu den Militärgrenzen Roms II.* Beihefte der Bonner Jahrbücher 38. Köln–Bonn, 244–334.

Taborelli, L. 1999: Unguentari di vetro della necropoli marchigiana: tipi di medie e grandi dimensioni, tra II e III secolo D. C. *Picus* 19, 267–298.

Tomaž, A. – Lazar, I. – Breščak, D. 2024: *Ribnica pri Brežicah II: Romula, cesta in grobišče.* Arheologija na avtocestah Slovenije 118/2. Ljubljana.

Tomaž, A. – Lazar, I. – Schindler Kaudelka, E. 2025a: *Ribnica pri Brežicah III: Romula, območje Petričev grič.* Arheologija na avtocestah Slovenije 118/3. Ljubljana.

Tomaž, A. – Lazar, I. – Breščak, D. 2025b: *Ribnica pri Brežicah II: naselbina.* Arheologija na avtocestah Slovenije 118/4. Ljubljana.

Trasparenze 1998: *Trasparenze Imperiali – Vetri romani dalla Croazia. Exhibition catalogue.* Milano.

Uboldi, M. 2016: Specchietti simbolici in vetro e piombo dalle necropoli milanesi dell'Università Cattolica e di via Madre Cabrini. In: Lusuardi Siena, S. – Perassi, C. – Sacchi, F. – Sannazaro, M. (eds): *Archeologia classica e post-classica tra Italia e Mediterraneo. Scritti in ricordo di Maria Pia Rossignani.* Contributi di archeologia 8. Milano, 97–106.

Uboldi, M. 2017: New evidence about engraved glass from Milan (Italy) (3rd–4th century AD). In: Wolf, S. – De Pury-Gysel, A. (eds): *Annales du 20e Congrès de l'AIHV.* Romont, 184–189.

Whitehouse, D. 1989: Begram reconsidered. *Kölner Jahrbuch für Vor- und Frühgeschichte* 22, 151–157.

Whitehouse, D. 1997: *Roman glass from the Corning Museum of Glass, vol. 1.* Corning–New York.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 289–304. 10.17204/dissarch.suppl.5.2026.289

Roman glass from Ban Josip Jelačić Square in Osijek

Mia Leljak ✉
Independent researcher, Đurmanec, Croatia
mialeljak@gmail.com

Tino Leleković
Croatian Academy of Sciences and Arts, Zagreb, Croatia
tilelek@hazu.hr

Received 20 October 2025 | Accepted 26 March 2026 | Published 18 November 2026

Abstract: In 2008, the Department of Archaeology of the Croatian Academy of Sciences and Arts conducted a rescue excavation at Ban Josip Jelačić Square in Osijek, on the very edge of the Roman city of Mursa. Investigation of a rich cultural layer dating from the 1st to the 4th centuries AD revealed Roman graves and remains of residential architecture. Various Roman-period finds, including glass vessels, were recovered at the site. Although many of these vessels were fragmentary, they can still be identified typologically; in addition, a few more or less complete specimens were found in graves. This paper presents the glass finds from the site, including those from the graves and the surrounding area. These artefacts have not been published before and provide valuable insight into the material culture of Roman Mursa.

Keywords: Mursa, Osijek, Roman glass, glass vessels, *balsamaria*

In 2008, the Department of Archaeology of the Croatian Academy of Sciences and Arts conducted a rescue excavation at Ban Josip Jelačić Square in Osijek, in the Roman city of Mursa. Previous excavations took place in 1970, 1987, and 2007; moreover, numerous finds were uncovered during various municipal works over the years.[1] The square covers more than 15,000 m², and the 2008 excavation focused on a 3,112 m² section in its eastern part, at the local market. This area lies on the edge of the ancient Roman settlement, outside its city walls (Fig. 1).

Mursa was granted the status of a colony (Colonia Aelia Mursa) during the reign of Emperor Hadrian, around AD 133.[2] The city was probably established as a military settlement or as a reward for veterans, a common practice in the Roman Empire. Its strategic position upstream on the Drava River, above its confluence with the Danube, made it an ideal site for settlement, trade, and transport. The surrounding marshlands created natural barriers that made crossing the river extremely difficult, strengthening the city's defences. This position made Mursa a key hub along the Roman limes.[3]

The research conducted at Ban Josip Jelačić Square revealed a complex stratigraphic sequence comprising five distinct phases dating from the 1st to the 4th century AD. The strata reflect a dynamic sequence of occupation and transformation and comprise three settlement layers and two grave horizons. The earliest layer represents a cemetery that predated the establishment of the Roman colony. It was followed by two settlement horizons containing the remains of buildings and infra-

1 Leleković 2008, 45.
2 Leleković 2024, 475.
3 Leleković 2024, 472.

✉ Corresponding author

structure belonging to the eastern suburb of the colony. Above these was another cemetery, dated to the 3rd and 4th centuries AD, which developed after the destruction and abandonment of the suburban zone. The uppermost layer corresponds to the Late Antique phase and is characterised by refuse pits and architectural debris that partly disturbed earlier features, especially graves from the 3rd and 4th centuries AD (Fig. 2).

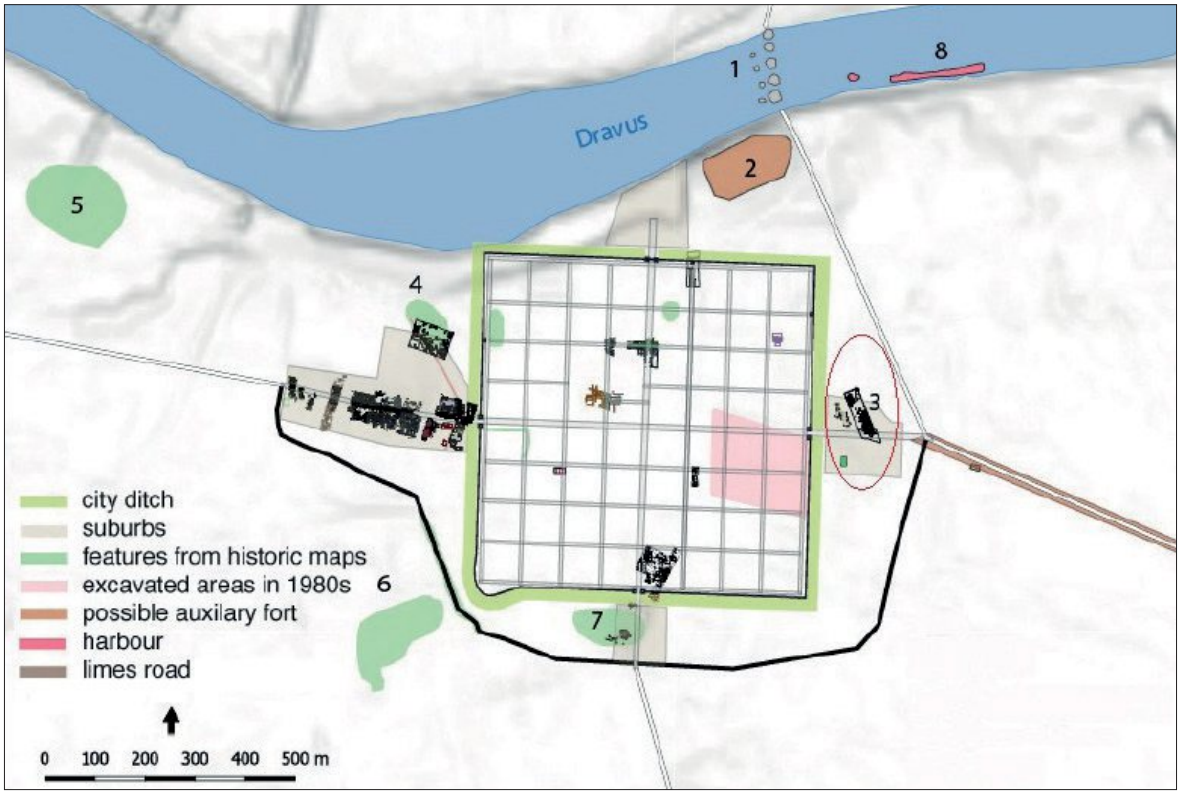


Fig. 1. Map of the colony of Aelia Mursa with the location of present-day Ban J. Jelačić Square (made by the author).

Excavations uncovered numerous Roman graves and remains of residential structures, as well as a rich assemblage of artefacts from various phases of occupation. Among these finds, glass vessels and their fragments stand out because of their typological diversity and chronological significance. The glass finds have been classified into two main categories: grave finds and settlement finds, the latter including pieces recovered from secondary contexts.

Glass from the graves

A total of 408 burials were discovered at Ban Josip Jelačić Square, forming two distinct cemetery phases. The first phase consists exclusively of cremation burials, while the second contains mainly inhumations and only a few cremation graves. All graves belong to the eastern necropolis of the ancient city of Mursa.

First cemetery phase (Trajanic–early Hadrianic period)

Glass vessels were found in only eighteen graves, some of which contained more than one vessel. Most of these are *balsamaria*; the group of grave finds also includes a cosmetic jar and a few pieces of tableware. A significant number of *balsamaria* were found melted in the graves, indicating that they had been burned on the pyre with the deceased and were placed in the grave in this state. As a result, their original shape could not be determined.



Fig. 2. Five periods of the site (graphics by the author).

Balsamaria

The *balsamaria* include tubular, triangular, conical, and biconical forms. Grave 3 contained a tubular *balsamarium* (Cat. 1.1.1) with a very short body, a rounded bottom, a long, narrow neck, and an inward-folded rim. Tubular *balsamaria* were also found in Graves 270 (Cat. 1.1.4) and 402 (Cat. 1.1.5); the necks of these pieces are slightly waisted, and they differ in shape and size. The *balsamarium* from Grave 270 has a funnel lip, a straight rim, and a flat bottom, while the one from Grave 402 has a short body, a straight rim, and a rounded bottom with a small base. Grave 286 contained two tubular *balsamaria*, one (Cat. 1.1.6) with a constricted neck, a tubular, widened body with a flat base, and an everted rim. The other (Cat. 1.1.3) has a tubular, broad body that passes directly into a small neck with an everted rim. Tubular *balsamaria* are the most widespread type and are broadly dated to the 1st–2nd centuries AD. Examples with smooth bodies occur as early as the Flavian period, and their production continued into the 2nd century AD.[4] *Balsamaria* with a constricted body remained in use for a longer period and appear in archaeological contexts from the 2nd through the 3rd centuries AD.[5]

4 Lazar 2003, 196.

5 Lazar 2003, 196.



Fig. 3. a – base fragments with concentric circles, b – base fragments with diamond pattern, c – base fragments with rosette motifs, d – base fragments with beads and knobs, e – base fragment with wheel or rosette motifs within a circle, f – base fragment with inscription (photos by M. Leljak).

The *balsamarium* found in Grave 172 (Cat. 1.2.1) has a wide triangular body with a flat bottom and a flared, inward-folded rim. Grave 197 contained two closely similar *balsamaria* (Cat. 1.2.2 and 1.2.3), and Grave 297 contained two identical examples (Cat. 1.2.4 and 1.2.5). Each vessel has a short triangular body, a concave bottom, a slightly waisted neck, a funnel lip, and a flat rim. They can be dated to the second half of the 1st to the 3rd centuries AD.[6]

The *balsamarium* in Grave 283 (Cat. 1.3.1) has a wide conical body, a slightly concave bottom, and a very lightly waisted neck. Its rim is horizontal and flattened. This type is characteristic of the 1st–2nd centuries AD.[7]

Grave 392 yielded two *balsamaria* with conical bodies but markedly different shapes. One (Cat. 1.3.2) has a short body, a long neck, a funnel lip, and a flat rim. The other (Cat. 1.3.3) has an elongated body, a tubular rim, and a concave base. Grave 395 contained a *balsamarium* (Cat. 1.4.1) with a biconical body, a wide funnel lip, an inward-folded rim, and a slightly concave bottom, representing a type dated to the 2nd to the first half of the 3rd century AD.[8]

Cosmetic jar

Grave 172 contained, alongside the triangular *balsamarium*, a complete cosmetic jar (Cat. 2.1) with a globular body, an outward-rolled, flared rim, and a flat bottom. These cosmetic vessels are less common than *balsamaria* in the assemblage, but they served the same purpose, namely the storage of various ointments. They were most common in the second half of the 1st to the 2nd centuries AD, but also occur in graves of the 3rd century AD.[9]

Tableware

Grave 392 contained an incomplete jug (Cat. 3.1.1) with an oval body, a ring base, an inward-folded rim, and a ribbed handle with a thumb rest on its upper part; analogies date it to the 2nd century AD.[10] Grave 189 yielded a fragmentary beaker (Cat. 3.2.1) with a biconical body, a wide conical mouth, and a bulging rim. This type is characteristic of the 1st to 2nd centuries AD.[11] Another beaker was found in Grave 286 (Cat. 3.2.3). It has a barrel-shaped body decorated with shallow engraved lines, an everted rim, and a foot disc wider than the bottom. This type is characteristic of the second half of the 1st to the first half of the 2nd century AD.[12]

The dating of this cemetery phase is based on several lines of evidence. The first is the grave goods, the production dates of which indicate a period spanning the second half of the 1st and the 2nd century AD. Stamped pottery oil lamps of the Loeschcke X type, which were not produced before the early 2nd century AD, are particularly important for dating this phase. Some graves also contained volute lamps and stamped pottery oil lamps of the Loeschcke IX type, suggesting that, although some graves were probably established at the end of the 1st century AD, most date from after the beginning of the 2nd century AD. The discovery of a road section in the southern part of the present-day square is key to dating the abandonment of this part of the cemetery. With its typical east–west orientation, this road closely resembles Roman roads in the region. Its construction destroyed several cremation graves, indicating that it was built after the first cemetery phase. On the basis of its position within the urban grid, it may be a *decumanus* that connected the cemetery

6 Lazar 2003, 196.

7 Isings 1957, 34, 35, Form 16; Ružić 1994, 22, no. 150, T. 14.6.

8 Gregl – Lazar 2008, 85.

9 Cool – Price 1995, 116.

10 Lazar 2003, 130, Form 5.1.6.

11 Leljak 2015, 85.

12 Isings 1957, Form 34.

with the settlement of Mursa during the first cemetery phase, before the AD 130s.[13] This implies that the necropolis was abandoned no later than AD 133 and provides a clear upper limit for the use of this part of the eastern necropolis during the first cemetery phase.

All glass vessels found in the graves are characteristic of the 1st and 2nd centuries AD. In light of the dating of the first cemetery phase, the time of their production and use can be narrowed to the second half of the 1st and the early 2nd century AD.

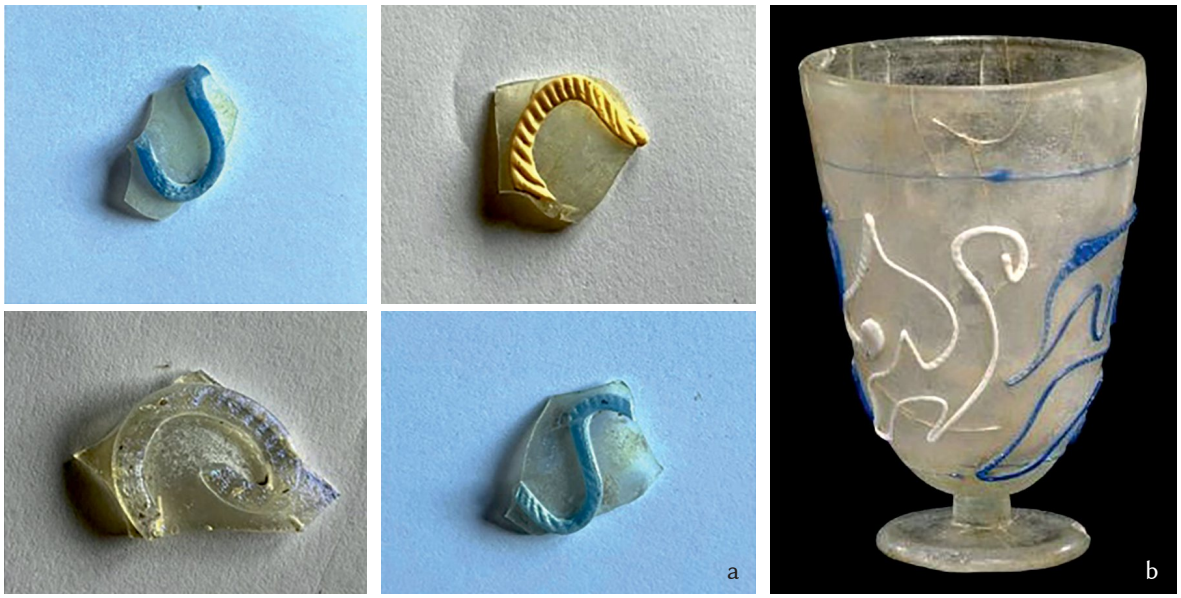


Fig. 4. a– snake-thread decorated fragments (photo by M. Leljak), b – snake-thread decorated goblet (after Corning Museum of Glass web site).

Second cemetery phase (second half of the 3rd–early 4th century AD)

Glass vessels were found in only nine graves. Most are *balsamaria*, together with a beaker, a vessel fragment, and some plain fragments unsuitable for type identification.

Balsamaria

Grave 17 contained a *balsamarium* (Cat. 1.3.4) with a conical body, a concave bottom, and a long neck. This type is characteristic of the 1st–2nd centuries AD.[14] Another *balsamarium* (Cat. 1.4.2) was found in Grave 79. It has a biconical body, a long neck, and a flat bottom. This type is characteristic of the 2nd to the first half of the 3rd century AD; the *balsamarium* recovered from Grave 395 of the first cemetery phase is of the same type. Grave 136 yielded a fragment of a *balsamarium* (Cat. 1.1.2) with a tubular body; the rest of the vessel is missing. Grave 3 of the first cemetery phase contained another specimen of this type.

Tableware

Grave 316 included a beaker (Cat. 3.2.2) with a hemispherical body, a wide funnel mouth, a flat, bulging rim, and a tubular foot, representing a type dated to the 2nd and 3rd centuries AD.[15]

Graves of the second cemetery phase yielded very little glass; such vessels are characteristic of the preceding Roman period, particularly the 1st–2nd centuries AD. However, *balsamaria* occur in graves up to the 3rd century AD.

13 Leleković 2011, 18–19.

14 Leljak 2015, 67.

15 Barkóczi 1988, 91, 92, Taf. 6.59; Roffia 1993, 91, no. 71.

Other grave goods, mainly coins of Emperors Gordian III, Philip II, Valerian, and others,[16] date the second cemetery phase to the second half of the 3rd century AD. These graves were dug into the ruins of a large urban villa built in the late 2nd or early 3rd century AD. This suggests that the production and use of some glass vessel types, including their deposition as grave goods, such as *balsamaria* characteristic of the early Roman period, continued into the 3rd century AD. These vessels were probably produced in local workshops.



Fig. 5. a – fragments with droplet decoration (photo by M. Leljak), b – bottle with droplet decoration from Mursa (after Fadić 1997).

Glass vessels from other contexts

Besides the two cemetery phases (Periods 1 and 4), the stratigraphy of the site includes three settlement phases (Periods 2, 3, and 5). The second period is marked by the remains of timber houses, pits, and canals along the road that cut through the first cemetery; these features were dated to the 2nd century AD. This settlement was destroyed by a fire at the end of that century. Subsequently, a new quarter was built at the end of the 2nd or the beginning of the 3rd century AD. This period, Period 3, is characterised by large brick buildings, some equipped with internal heating and decorated with frescoes, stone slabs, and stuccowork. The complex comprised several representative buildings, courtyards, and gardens. The remains bear no trace of fire or violent destruction, suggesting that the buildings were not abandoned abruptly but were probably vacated because of population decline or the closure of the cities within the city walls. The abandoned *villae* were looted and used as a source of building materials, and around the second half of the 3rd century AD, the area became a burial ground again, marking the beginning of Period 4. By the beginning of the 4th century AD, this part of the cemetery had been abandoned, and the area of the present-day square had lost its function. Period 5, the last phase of the site, is the most poorly preserved; even the foundations of most buildings associated with this period were almost entirely destroyed.[17]

No complete glass vessels were found in contexts other than graves, only fragments. However, some of these are suitable for type identification. Moreover, other decorated fragments allow certain vessels to be reconstructed and their period of use to be estimated. Most sherds are base fragments of square bottles with various stamps, including circles and two or more concentric circles (Fig. 3.a). Diamond motifs are the second most common and appear in several variants (Fig. 3.b).

16 Leleković 2011, 144.

17 Leleković 2008, 46–50.



Fig. 6. a – facet-cut vessel fragments (photo by M. Leljak), b – facet-cut bowl from Mursa (after Fadić 1997).

For example, fragment C2 features a palmette motif within a diamond, surrounded by the inscription 'CCRS'. Most parallels to this stamp are known from Italy;[18] these vessels were probably manufactured in workshops in northern Italy,[19] typically in the mid-1st to 2nd century AD. Three fragments feature incomplete rosette motifs (Fig. 3.c), but the original number of petals cannot be estimated in any case, which makes comparison with similar specimens difficult.

Different kinds of beading appear on two bases (Fig. 3.d). One features large, flat knobs at the centre of the base. It is unclear whether there were more knobs, as the base is incomplete. Interestingly, vessels with such a pattern on their base are known in southern Pannonia exclusively from Mursa, where they occur at several different locations.[20] The other base fragment also features round knobs, but these are smaller and more delicate; a heart-shaped fragment of another motif appears next to them. Another fragment bears a wheel or rosette within a circle (Fig. 3.e), a common motif on the bases of hexagonal bottles.[21] The most interesting example (Fig. 3.f) is undoubtedly the one with the inscription 'FEB (or FEL) …FEB…'. As part of the original inscription is missing, the name cannot be reconstructed; unfortunately, this particular example has no close parallels.

Snake-thread-decorated vessels

Several wall fragments featuring snake-thread decoration in different colours were discovered at the site (Fig. 4.a). This type of vessel decoration first appeared in the 2nd century AD in both the eastern and western parts of the Roman Empire and remained in use until the mid-3rd century AD. At least two centres that produced such glassware have been identified in the western part of the Empire, one in the Rhine region and another in Pannonia.[22] Evidence for production in Pannonia has been found in the western part of the province,[23] but is currently lacking in its southern part. Vessels with this decoration are difficult to reconstruct accurately; parallels from northern Pannonia, including numerous complete vessels and fragments, suggest that the fragments found at Ban Josip Jelačić Square belonged to stemmed goblets similar to the one in Fig. 4.b.

Vessels with droplet decoration

Droplet decoration is characteristic of the late Roman period. Glass droplets were applied to the vessel surface either in a straight horizontal line or in small groups, typically of three. Neither fragment recovered from the site (Fig. 5.a) features more than a single droplet, which suggests that they were probably arranged in a straight line. A complete bottle with droplets arranged in three

18 Casagrande – Ceselin 2003, 65, no. 20; Calvi 1968, 86, no. 216, T. E.4; Facchini 1999, 209, no. 499.

19 Facchini 1999, 65.

20 Leljak 2015, 116.

21 Moirin 2006, Corp. 1, 123, Pl. 58.F-HEX 030.

22 Stern 2001, 138.

23 Dévai 2019, 325.

rows, with a colour matching that of the fragments, was found in a sarcophagus in the eastern necropolis of Mursa[24] (Fig. 5.b); the fragments may have belonged to vessels of the same type.



Fig. 7. Glass rod (photo by M. Leljak).

Facet-cut vessels

Facet-cut vessels appeared as early as the 1st century AD, but reached the height of their popularity only in the late 2nd and early 3rd centuries AD. Key production centres included Pannonia, the Rhine region, Syria, and the Pontic area.[25] A complete facet-cut bowl was found in the same sarcophagus as the bottle with droplet decoration (Fig. 5.b).[26] The body of the bowl is divided into horizontal bands; the main band, covering the central part of the body, is decorated with circles separated by T motifs, while the one below features a hexagonal pattern with a central circle and smaller circles between its arms. The decoration on the two fragments of such vessels (Fig. 6.a.1–2) is different. The fragment in Fig. 6.a.1 is decorated with oval or circular facets in one band and rice-shaped facets in another, while the other (Fig. 6.a.2) bears only small oval facets.

Glass rod

A characteristic small spiral glass rod fragment (Fig. 7) was also discovered at the site. Glass rods have been found throughout the Empire and are thought to have served various functions, although their exact purpose remains unknown.[27] They were popular in the 1st–2nd centuries AD.

Mosaic (millefiori) glass vessels

Two fragments of mosaic glass artefacts were found at the site (Fig. 8.a–b). One is probably a base fragment that was perhaps prepared for secondary use, while the other may be part of a bowl. Both fragments feature similar millefiori decoration, a pattern of yellow circles and oval 'eye' motifs against a green background. Although it was long believed that the use of mosaic glass ceased during the AD 70s,[28] research has shown that mosaic glass vessels, in reduced quantities, remained in use until the 5th century AD.[29]

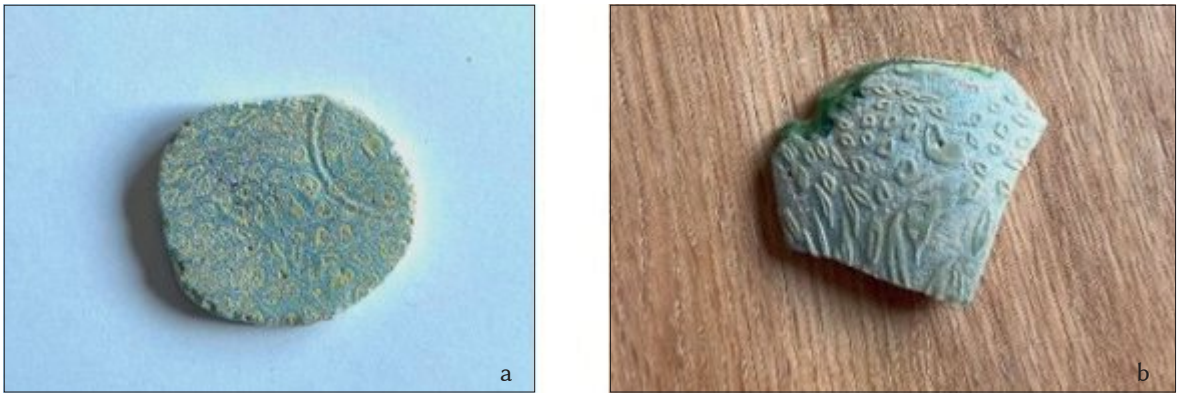


Fig. 8. a–b – mosaic fragments *(millefiori)* (photo by M. Leljak).

24 Göricke-Lukić 2000, 88–89.
25 Dévai 2021, 254.
26 Göricke-Lukić 2000, 87.
27 Biaggio-Simona 1991, 221–223.
28 Grose 1989, 262.
29 Rütti 1991, 126–133; Nenna 2002, 155–157.

Conclusion

Most glass fragments found in contexts other than graves can be attributed to Periods 2 and 3, the first two settlement phases, corresponding to the second half of the 2nd and the first half of the 3rd century AD. Square bottles became highly popular from the second half of the 1st century AD and remained so for a long time; their production continued even into the 4th century AD. They were therefore probably available in both settlement phases (Periods 2 and 3), from the second half of the 2nd century until the mid-3rd century AD. Snake-thread-decorated vessels first appeared in the 2nd century AD and their production continued until the mid-3rd century AD. These vessels were probably more common in Period 3, the phase of the representative buildings. The use of facet-cut vessels also dates to this period. Both types of vessels were certainly produced in northern Pannonia, while evidence for such production in this part of the province has yet to be found. Droplet decoration, also characteristic of the late Roman period, suggests that these fragments, probably from a bottle, can likewise be associated with Period 3. Fragments of a glass rod and a millefiori vessel can also be dated to the two settlement phases, corresponding to the second half of the 2nd and the first half of the 3rd centuries AD. Millefiori patterns became popular from the late 1st century AD onwards and remained so throughout the 2nd and 3rd centuries AD.[30]

Most vessels from the graves are early Roman and were most likely imported into Mursa. The first glass vessels were imported into northern Croatia from Aquileia in Italy in the 1st century, during the Roman conquest of Pannonia. Most of these goods probably arrived overland directly from Aquileia along a route that passed through Emona and included key cities such as Siscia, Mursa, Cibalae, and Sirmium, while a smaller quantity came indirectly via Salona. The provinces of Dalmatia and Pannonia were connected by the road linking Salona and Servitium, which then joined the longitudinal route crossing the Sava Valley.[31] The import of vessels from workshops in the Rhine region into Pannonia via the Danube began as early as the 2nd century AD; this initially small-scale trade increased significantly in the Late Imperial period, especially in the 3rd century AD, before declining again in the 4th century AD.[32] A large number of glass workshops operated in northern, and presumably also in southern Pannonia in the 3rd and especially the 4th century AD. Besides southern Pannonia, evidence points to glass production in Siscia and Cibalae,[33] although the evidence for the latter is inconclusive. To date, there is no evidence of glass production in Mursa.

In conclusion, the presented vessels of the 2nd–3rd centuries AD are probably Pannonian products. On the basis of the current state of research, the quantity of vessels, and the confirmed existence of glass workshops in northern Pannonia, it is highly probable that vessels with snake-thread, facet-cut, and droplet decoration were imported from the northern part of the province, although local production cannot be excluded.

Many uncertainties remain regarding the origin of the glass vessels found at Osijek, as well as the possibility of glass production in the area during the Roman period. These vessels represent only a small part of the glass artefacts discovered in Osijek, many of which have yet to be published. Fortunately, ongoing research in the city will certainly bring new discoveries that will, it is hoped, provide further insights in the future.

30 Fünfschilling 2015, 64–67.

31 Leljak 2015, 48.

32 Leljak 2015, 51.

33 Leljak – Lazar 2014.

Catalogue

1. *Balsamaria*

1.1. Tubular balsamaria

1.1.1. Tubular *balsamaria* (Fig. 9.1). Inv. no. PN 288. Context: Grave 3. Colour: Light green. Dimensions: H: 7.7 cm, diam. (base): 1.5 cm. Technique: Free blowing. Description: Complete. Tubular body, long, narrow, cylindrical neck, slightly everted lip, inward-folded rim, rounded bottom. Dating: 1st–first half of the 2nd century AD. Literature: Leleković 2011, 208. Analogies: Isings 1957, 41, Form 27; Barkóczi 1988, 111, Taf. 17.188.

1.1.2. Tubular *balsamaria* (Fig. 9.2). Inv. no. PN 2779. Context: Grave 136. Colour: Light green. Dimensions: Cannot be measured. Technique: Free blowing. Description: Incomplete. Tubular body, long, narrow, cylindrical neck, rounded bottom. Dating: 1st–first half of the 2nd century AD. Literature: Leleković 2011, 302. Analogies: Isings 1957, 41, Form 27; Barkóczi 1988, 111, Taf. 17.188.

1.1.3. Tubular *balsamaria* (Fig. 9.3). Inv. no. PN 4277. Context: Grave 286. Colour: Blue. Dimensions: H: 5 cm, diam. (base): 1.4 cm. Technique: Free blowing. Description: Incomplete. Tubular body ending in a short neck, everted rim, rounded bottom. Dating: 1st century AD. Literature: Unpublished. Analogies: Isings 1957, f. 27/28, 41–42; Zampieri 1998, no. 203, 114.

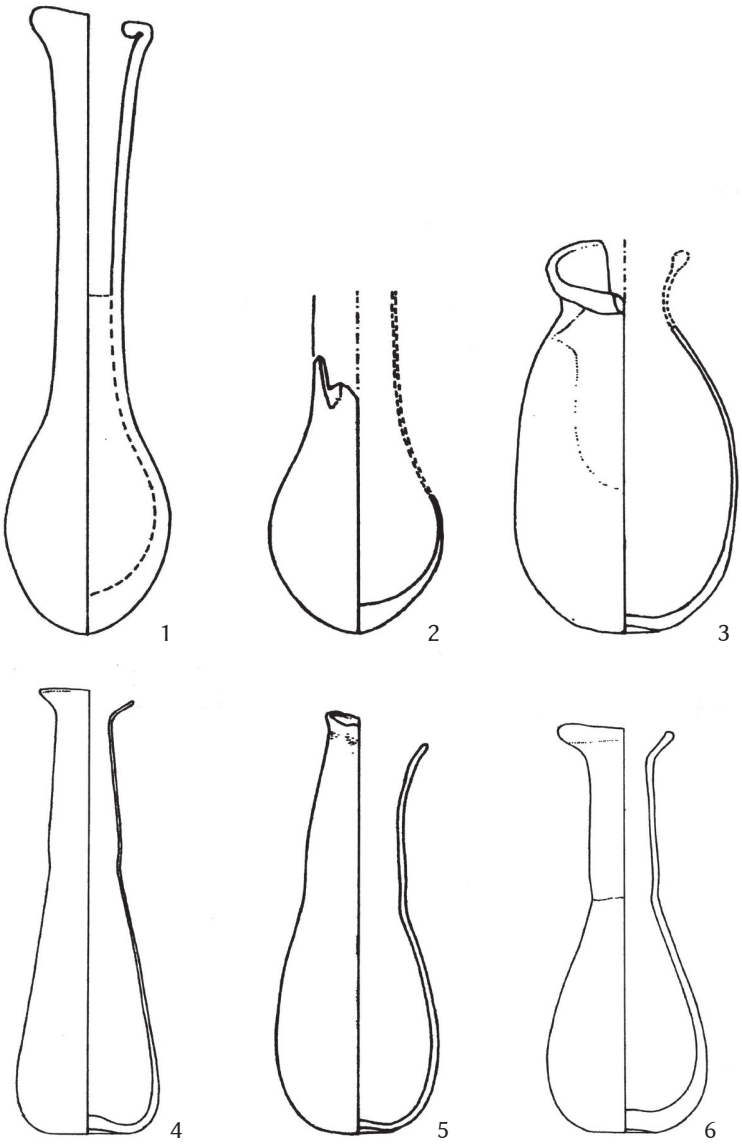


Fig. 9. 1–6 – Tubular *balsamaria.*

1.1.4. Tubular *balsamaria* (Fig. 9.4). Inv. no. PN 4132. Context: Grave 270. Colour: Light blue. Dimensions: H: 8.6 cm, diam. (rim): 1.9 cm, (base): 1.9 cm. Technique: Free blowing. Description: Complete. Tubular body, slightly waisted long, narrow, cylindrical neck, funnel lip, straight rim, flat base. Dating: 1st–2nd centuries AD. Literature: Leleković 2011, 235–236. Analogies: Isings 1957, 24, Form 8; Goethert-Polaschek 1977, Taf. B, Form 66b; Šaranović-Svetek 1986, 26, 27, T. 14.2; Biaggio-Simona 1991, Fig. 63.176.1.149; Gregl – Lazar 2008, 131, no. 18.

1.1.5. Tubular *balsamaria* (Fig. 9.5). Inv. no. PN 5283. Context: Grave 402. Colour: Green. Dimensions: H: 5.2 cm, diam. (rim): 1.2 cm, (base): 1.4 cm. Technique: Free blowing. Description: Complete. Tubular body, slightly waisted long, narrow, cylindrical neck, short funnel lip, straight rim, flat base. Dating: 1st–2nd centuries AD. Literature: Leleković 2011, 260. Analogies: Isings 1957, 24, Form 8; Goethert-Polaschek 1977, Taf. B, Form 66a; Roffia 1993, 130, no. 169; Larese 2004, T. 25.193, 203; Bonomi 1996, 93, no. 193, 97, no. 203.

1.1.6. Tubular *balsamaria* (Fig. 9.6). Inv. no. PN 4276. Context: Grave 286. Colour: Blue-green. Dimensions: H: 9.4 cm, diam. (rim): 2.5 cm, (base): 2.5 cm. Technique: Free blowing. Description: Complete. Tubular body, slightly waisted long, narrow, cylindrical neck, funnel lip, flat base. Dating: 1st–2nd centuries AD. Literature: Unpublished. Analogies: Isings 1957, 24, Form 8; Šaranović-Svetek 1986, 26, 27, T. 14.2; Ružić 1994, 24, T. 16.1; Bonomi 1996, 104, no. 224, 225, 226; Zampieri 1998, 101, no. 162, 163.

1.2. Triangular balsamaria

1.2.1. Triangular *balsamaria* (Fig. 10.1). Inv. no. PN 3065. Context: Grave 172. Colour: Dark green. Dimensions: H: 12 cm, diam. (rim): 2.3 cm, (base): 3.2 cm. Technique: Free blowing. Description: Incomplete, reconstructed. Triangular body, long, narrow, cylindrical neck, flared and inward-folded rim, flat base. Dating: second half of the 1st–2nd century AD. Literature: Leleković 2011, 224. Analogies: Whitehouse 1997, 131, no. 210; Lazar 2003, 183, Fig. 50, 8.6.6.

1.2.2. Triangular *balsamaria* (Fig. 10.2). Inv. no. PN 3326. Context: Grave 197. Colour: Blue-green. Dimensions: H: 9.3 cm, diam. (rim): 2 cm, (base): 2 cm. Technique: Free blowing. Description: Incomplete, reconstructed. Triangular body, slightly waisted, long, cylindrical neck, flared and inward-folded rim, slightly concave base. Dating: Second half of the 1st–3rd century AD. Literature: Leleković 2011, 255–256. Analogies: Šaranović-Svetek 1986, 30, T. 15.6; Zampieri 1998, 83, no. 119; Larese – Zerbinati 1998, 45, no. 84; Whitehouse 1997, 150, 151, no. 253, 255; Buljević 2004, 91, no. 211–232; Arveiller-Dulong – Nenna 2005, 127, no. 308, 128, no. 311, 314, 129, no. 315, 316, 130, no. 319; Mandruzzato – Marcante 2007, 83, no. 167.

1.2.3. Triangular *balsamaria* (Fig. 10.3). Inv. no. PN 3320. Context: Grave 197. Colour: Blue-green. Dimensions: H: 9 cm, diam. (rim): 2.6 cm, (base): 2.7 cm. Technique: Free blowing. Description: Complete. Triangular body, waisted, long, narrow, cylindrical neck, funnel lip, flat rim, concave base. Dating: Second half of the 1st–3rd century AD. Literature: Leleković 2011, 226. Analogies: Šaranović-Svetek 1986, 30, T. 15.6; Zampieri 1998, 83, no. 119; Larese – Zerbinati 1998, 45, no. 84; Whitehouse 1997, 150, 151, no. 253, 255; Buljević 2004, 91, no. 211–232; Arveiller-Dulong – Nenna 2005, 127, no. 308, 128, no. 311, 314, 129, no. 315, 316, 130, no. 319; Mandruzzato – Marcante 2007, 83, no. 167.

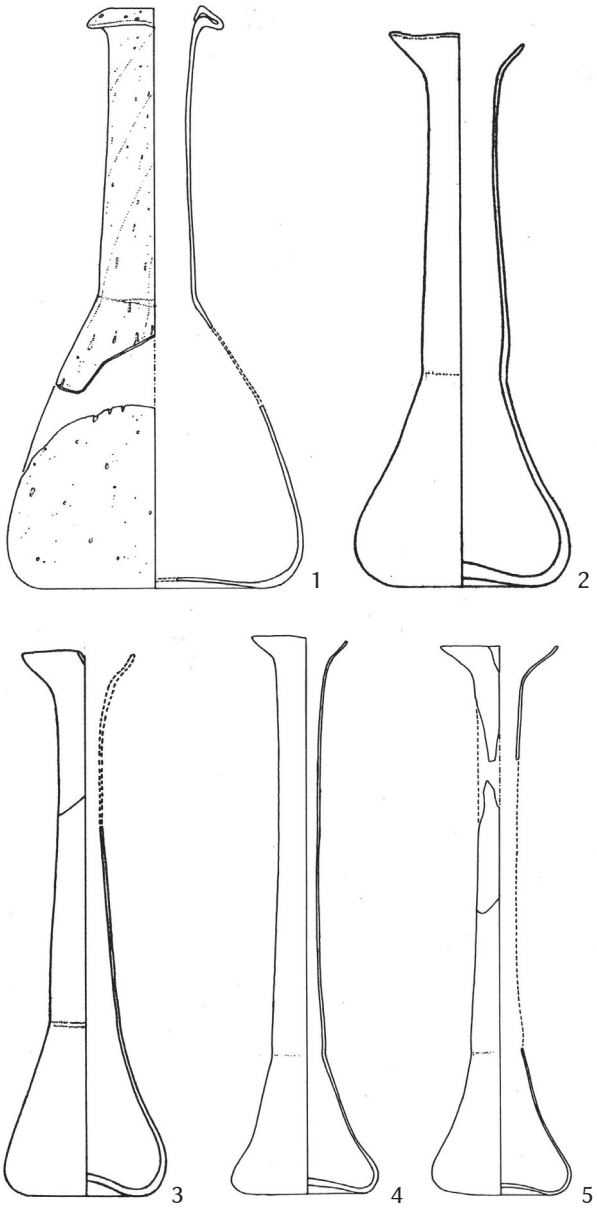


Fig. 10. 1–5 – Triangular *balsamaria.*

1.2.4. Triangular *balsamaria* (Fig. 10.4). Inv. no. PN 4359. Context: Grave 297. Colour: Blue-green. Dimensions: H: 9 cm, diam. (rim): 2.6 cm, (base): 2.7 cm. Technique: Free blowing. Description: Complete. Triangular body, waisted long, narrow, cylindrical neck, funnel lip, flat rim, concave base. Dating: Second half of the 1st–3rd century AD. Literature: Leleković 2011, 242. Analogies: Šaranović-Svetek 1986, 30, T. 15.6; Zampieri 1998, 83, no. 119; Larese – Zerbinati 1998, 45, no. 84; Whitehouse 1997, 150, 151, no. 253, 255; Buljević 2004, 91, no. 211–232; Arveiller- Dulong – Nenna 2005, 127, no. 308, 128, no. 311, 314, 129, no. 315, 316, 130, no. 319; Mandruzzato – Marcante 2007, 83, no. 167.

1.2.5. Triangular *balsamaria* (Fig. 10.5). Inv. no. PN 4360. Context: Grave 297. Colour: Blue-green. Dimensions: H: 9 cm, diam. (rim): 2.6 cm, (base): 2.7 cm. Technique: Free blowing. Description: Incomplete. Triangular body, waisted long, narrow, cylindrical neck, funnel lip, flat rim, concave base. Dating: Second half of the 1st–3rd century AD. Literature: Leleković 2011, 242. Analogies: Šaranović-Svetek 1986, 30, T. 15.6; Zampieri 1998, 83, no. 119; Larese – Zerbinati 1998, 45, no. 84; Whitehouse 1997, 150, 151, no. 253, 255; Buljević 2004, 91, no. 211–232; Arveiller-Dulong – Nenna 2005, 127, no. 308, 128, no. 311, 314, 129, no. 315, 316, 130, no. 319; Mandruzzato – Marcante 2007, 83, no. 167.

1.3. Conical balsamaria

1.3.1. Conical *balsamaria* (Fig. 11.1). Inv. no. PN 4220. Context: Grave 283. Colour: Light blue. Dimensions: H: 13.5 cm, diam. (rim): 3.3 cm, (base): 5.7 cm. Technique: Free blowing. Description: Incomplete, reconstructed. Conical body, slightly waisted long, narrow, cylindrical neck, flared and flattened rim, slightly concave base. Dating: 1st–2nd centuries AD. Literature: Leleković 2011, 239–240. Analogies: Isings 1957, 34, 35, Form 16; Goethert-Polaschek 1997, T. B, no. 70b; Ružić 1994, 22, no. 150, T. 14.6.

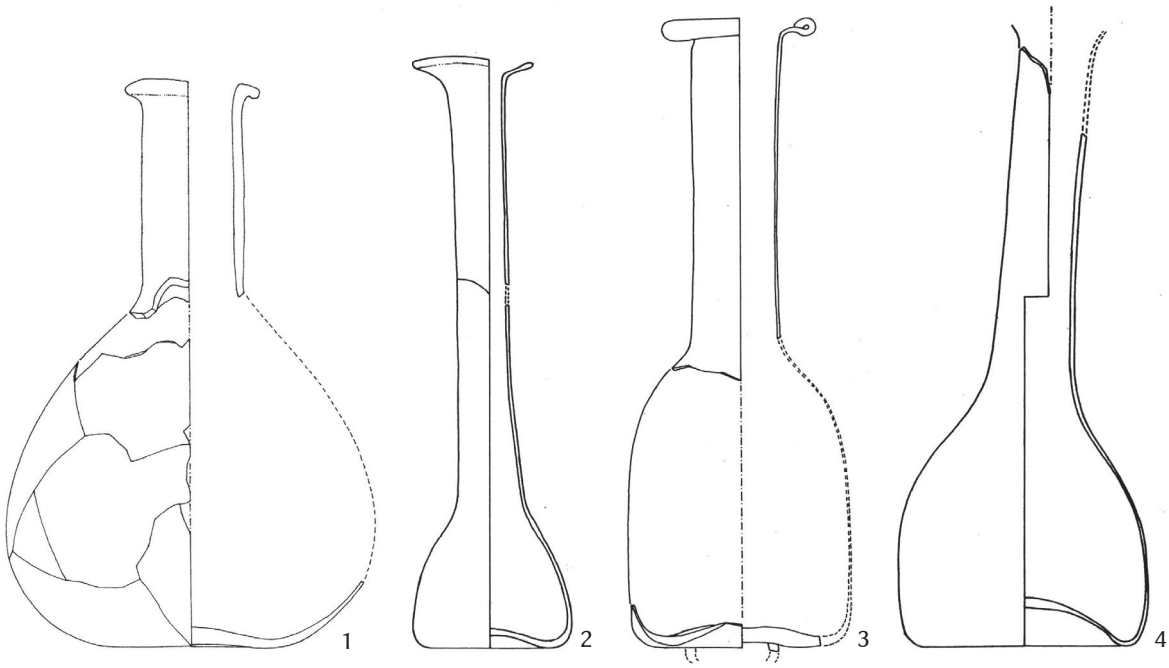


Fig. 11. 1–4 – Conical *balsamaria.*

1.3.2. Conical *balsamaria* (Fig. 11.2). Inv. no. PN 5252. Context: Grave 392. Colour: Light green. Dimensions: H: 11.9 cm, diam. (rim): 2 cm, (base): 2.7 cm. Technique: Free blowing. Description: Complete. Conical body, long, narrow, cylindrical neck, flared lip, flat rim, concave base. Dating: First half of the 2nd century AD. Literature: Leleković 2011, 254–255. Analogies: Barkóczi 1988, 115, T. 17.202; Facchini 1999, 78, no. 117.

1.3.3. Conical *balsamaria* (Fig. 11.3). Inv. no. PN 5253. Context: Grave 392. Colour: Light green. Dimensions: H: 16 cm, diam. (rim): 3.8 cm, (base): 4.8 cm. Technique: Free blowing. Description: Incomplete, reconstructed. Conical body, long, narrow, cylindrical neck, flared and inward-folded rim, concave base. Dating: 1st–2nd centuries AD. Literature: Leleković 2011, 254–255. Analogies: Sternini 1990, 43, P. 22, no. 115; Zampieri 1998, 38, no. 20; Larese 2004, 84, T. 56, no. 20.

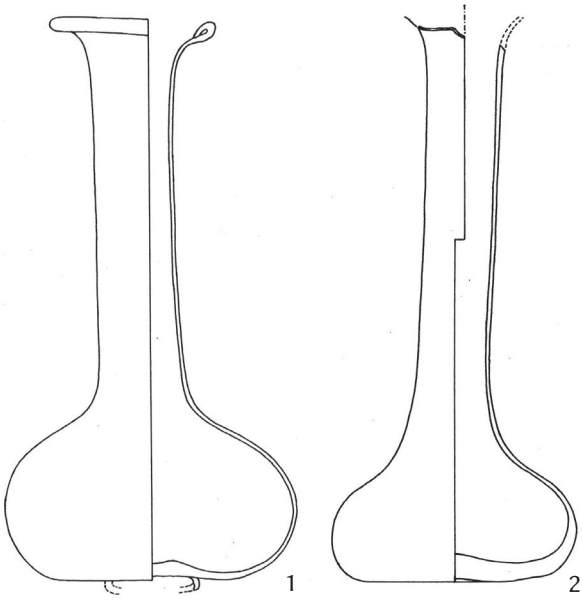


Fig. 12. 1–2 – Biconical *balsamaria.*

1.3.4. Conical *balsamaria* (Fig. 11.4). Inv. no. PN 400. Context: Grave 17. Colour: Light green. Dimensions: H: 11.6 cm, diam. (base): 4 cm. Technique: Free blowing. Description: Incomplete. Conical body, long, narrow, cylindrical neck, concave base. Dating: 1st–2nd centuries AD. Literature: Leleković 2011, 299–300. Analogies: Šaranović-Svetek 1984, 67, no. 174, T. 16.3; Kunina 1997, 325, no. 365; Gregl – Lazar 2008, 136, no. 37.

1.4. Biconical balsamaria

1.4.1. Biconical *balsamaria* (Fig. 12.1). Inv. no. PN 5271. Context: Grave 395. Colour: Light blue. Dimensions: H: 13.7 cm, diam. (rim): 4.1 cm, (base): 4.7 cm. Technique: Free blowing. Description: Complete. Oblate spherical body, long, narrow, cylindrical neck, funnel lip, inward-folded rim, slightly concave base. Dating: 2nd–first half of the 3rd century AD. Literature: Leleković 2011, 256–257. Analogies: Cermanović-Kuzmanović 1976, 188, T. 3.6; Ravagnan 1994, 102, no. 193; Ružić 1994, 29, T. 18.4; Lazar 2003, 185, Fig. 50, 8.6.7; Arveiller-Dulong – Nenna 2005, 143, no. 370; Mandruzzato – Marcante 2007, 126, no. 150.

1.4.2. Biconical *balsamaria* (Fig. 12.2). Inv. no. PN 2409. Context: Grave 79. Colour: Light green. Dimensions: H: 12.2 cm, diam. (base): 4.6 cm. Technique: Free blowing. Description: Incomplete. Oblate spherical body, long, narrow, cylindrical neck, flat bottom. Dating: 2nd–first half of the 3rd century AD. Literature: Leleković 2011, 286. Analogies: Cermanović-Kuzmanović 1976, 188, T. 3.6; Ravagnan 1994, 102, no. 193; Ružić 1994, 29, T. 18.4; Lazar 2003, 185, Fig. 50, 8.6.7; Arveiller-Dulong – Nenna 2005, 143, no. 370; Mandruzzato – Marcante 2008, 126, no. 150.

2. Cosmetic jar

2.1. Cosmetic jar (Fig. 13). Inv. no. PN 3064. Context: Grave 172. Colour: Green. Dimensions: H: 3.6 cm, diam. (rim): 4.4 cm, (base): 2.8 cm. Technique: Free blowing. Description: Complete. Oblate spherical body, short neck, outward-rolled rim, flat base. Dating: Second half of the 1st–2nd century AD. Literature: Leleković 2011, 224. Analogies: Isings 1957, 88, 89, Form 68; Mandruzzato – Marcante 2007, 88, no. 198.

3. Tableware

3.1. Jugs

3.1.1. Jug (Fig. 14). Inv. no. PN 5254. Context: Grave 392. Colour: Green. Dimensions: H: 17.4 cm, diam. (rim): 5.2 cm, (base): 6 cm. Technique: Free blowing. Description: Incomplete, partially reconstructed. Oval body, inward-folded rim, ring base, ribbed handle with a thumb rest. Dating: Second half of the 1st–2nd century AD. Literature: Leleković 2011, 254–255. Analogies: Barkóczi 1988, 170, Taf. 36, no. 399; Lazar 2003, 130, Sl. 38, no. 5.1.6.

3.2. Beakers

3.2.1. Beaker (Fig. 15.1). Inv. no. PN 3228. Context: Grave 189. Colour: Light green. Dimensions: H: 8.2 cm, diam. (rim): 8.5 cm, (base): 4 cm. Technique:

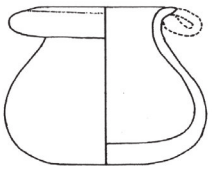


Fig. 13. Cosmetic jar.

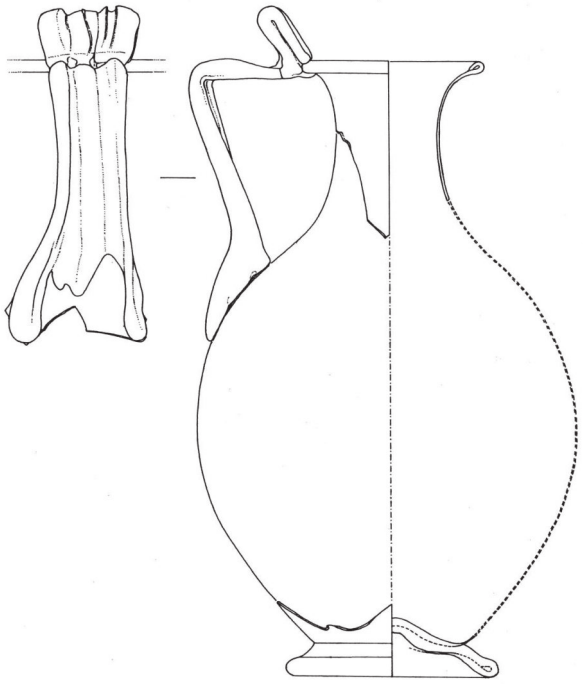


Fig. 14. Jug.

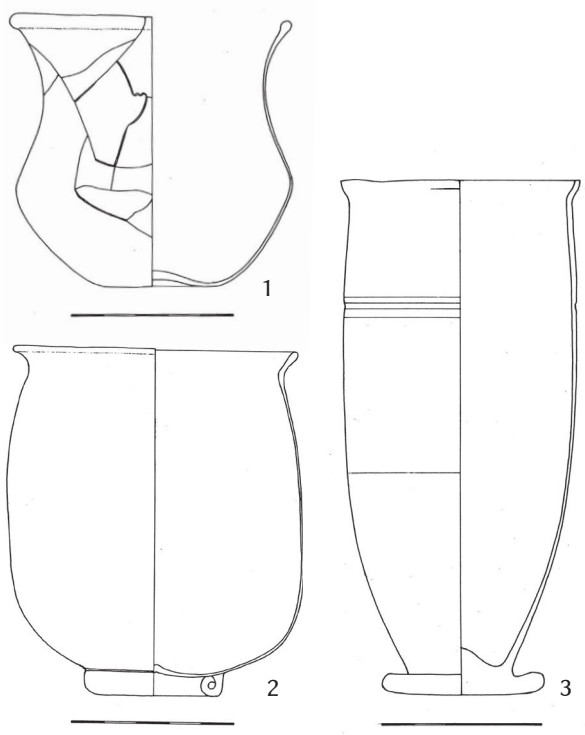


Fig. 15. 1–3 – Beakers.

Free blowing. Description: Incomplete, reconstructed. Biconical body, wide mouth, everted, bulging rim; concave base. Dating: 1st–2nd centuries AD. Literature: Leleković 2011, 224–225. Analogies: Klemenc 1938, 49; Gregl 1989, 30, G. 114.1, T. 31.2; Whitehouse 1997, 226, no. 383; Nin 2003, 426, 427, Fig. 12.88.

3.2.2. Beaker (Fig. 15.2). Inv. no. PN 4584. Context: Grave 392. Colour: Light green. Dimensions: H: 10.2 cm, diam. (rim): 8.9 cm, (base): 4 cm. Technique: Free blowing. Description: Complete. Cylindrical body, funnel lip, flat, bulging rim, inward-rolled ring foot. Dating: 2nd–3rd centuries AD. Literature: Leleković 2011, 254–255. Analogies: Barkóczi 1988, 91, 92, Taf. 6.59; Fadić 1997, 196, no. 195; Lazar 2003, 105, Sl. 33.3.6.3; Roffia 1993, 91, no. 71.

3.2.3. Beaker (Fig. 15.3). Inv. no. PN 4314. Context: Grave 286. Colour: Blue. Dimensions: Diam. (rim): 7.5 cm, (base): 5 cm. Technique: Free blowing. Description: Complete. Barrel-shaped body with shallow horizontal lines, wide mouth, short everted rim, foot disc wider than the bottom. Dating: Second half of the 1st–first half of the 2nd centuries AD. Literature: Unpublished. Analogies: Isings 1957, 48, 49, Form 34; Foy – Nenna 2003, 183, 184, no. 311, 312.

References

Arveiller-Dulong, V. – Nenna, M. D. 2005: *Les verres antiques du Musée du Louvre, vol. II, Vaisselle et contenants du I^er^ siècle au début du VII^e^ siècle apr. J.-C.* Musée du Louvre. Paris.

Barkóczi, L. 1988: *Pannonische Glasfunde in Ungarn.* Budapest.

Biaggio-Simona, S. 1991: *I Vetri Romani provenienti dalle terre dell'attuale cantone Ticino.* Locarno.

Bonomi, S. 1996: *Vetri antichi del Museo Archeologico Nazionale di Adria.* Corpus delle Collezioni Archeologiche del Vetro nel Veneto 2. Adria.

Buljević, Z. 2004: Stakleni balzamariji iz Salone. In: Lazar, I. (ed.): *Dropci antičnega stekla – Fragments of ancient glass.* Annales Mediteranea. Koper, 81–94.

Calvi, M. C. 1968: *I vetri romani del Museo di Aquileia.* Aquileia.

Casagrande, C. – Ceselin, F. 2003: *Vetri antichi delle Province di Belluno, Treviso e Vicenza.* Corpus delle collezioni archeologiche del vetro nel Veneto 7. Murano.

Cermanović-Kuzmanović, A. 1976: Pregled i razvitak stakla u Crnoj Gori. *Arheološki vestnik* 25, 175–190.

Cool, H. E. M. – Price, J. 1995: *Roman vessel glass from excavations in Colchester 1971–85.* Colchester Archaeological Report 8. Colchester.

Dévai, K. 2019: The tradition of snake-thread glass in Pannonia. *Acta Archaeologica Academiae Scientiarum Hungaricae* 70, 325–342. https://doi.org/10.1556/072.2019.70.2.5

Dévai, K. 2021: The tradition of facet-cut bowls from Pannonia – New fragments from Brigetio. *Acta Archaeologica Academiae Scientiarum Hungaricae* 72, 253–265. https://doi.org/10.1556/072.2021.00015

Facchini, G. M. 1999: *Vetri antichi del Museo archeologico al Teatro Romano di Verona e di altre collezioni veronesi.* Corpus delle collezioni archeologiche del vetro nel Veneto 5. Verona.

Fadić, I. 1997: *Invenzione, produzione e tecniche antiche di lavorazione del vetro. Trasparenze imperiali, Vetri romani dalla Croazia. Exhibition catalogue.* Milano–Roma, 75–228.

Foy, D. – Nenna, M. D. 2003: Productions et importations de verre antique dans la vallée du Rhône et le Midi méditerranéen de la France (Ier–IIIe siècles). In: Foy, D. – Nenna, M. D. (eds): *Échanges et commerce du verre dans le monde antique, Actes du colloque de l'Association Française pour l'Archéologie du Verre.* Montagnac, 227–296.

Fünfschilling, S. 2015: *Die römischen Gläser aus Augst und Kaiseraugst. Kommentierter Formenkatalog und ausgewählte Neufunde 1981–2010 aus Augusta Raurica.* Forschungen in Augst 51. Augst.

Goethert-Polaschek, K. 1977: *Katalog der römischen Gläser des Rheinischen Landesmuseums Trier.* Trierer Grabungen und Forschungen 9. Mainz.

Göricke-Lukić, H. 2000: *Sjeveroistočna nekropola rimske Murse.* Zagreb–Osijek.

Gregl, Z. 1989: *Rimskodobna nekropola Zagreb-Stenjevec.* Katalozi Arheološkog muzeja u Zagrebu 3. Zagreb.

Gregl, Z. – Lazar, I. 2008: *Bakar, Staklo iz rimske nekropole.* Katalozi i monografije Arheološkog muzeja u Zagrebu 5. Zagreb.

Grose, D. F. 1989: *Early ancient glass. The Toledo Museum of Art.* New York.

Isings, C. 1957: *Roman glass from dated finds.* Groningen–Jakarta.

Klemenc, J. 1938: *Archaeologische Karte von Jugoslavien.* Beograd.

Kunina, N. 1997: *Ancient glass in the Hermitage collection.* St. Petersburg.

Larese, A. 2004: *Vetri antichi del Veneto.* Corpus delle Collezioni Archeologiche del Vetro nel Veneto 8. Venice.

Larese, A. – Zerbinati, E. 1998: *Vetri antichi di raccolte concordiesi e polesane.* Corpus delle Collezioni Archeologiche del Vetro nel Veneto 4, Fiesso d'Artico.

Lazar, I. 2003: *Rimsko steklo Slovenije.* Ljubljana.

Leleković, T. 2008: Osijek – Trg bana J. Jelačića. In: Mesić, J. (ed.): *Hrvatski arheološki godišnjak* 5. Ministarstvo kulture, Uprava za arhivsku djelatnost i arheološku baštinu, 45–50.

Leleković, T. 2011: *Roman cemeteries of Siscia and Mursa.* PhD dissertation, University of Zagreb, Zagreb.

Leleković, T. 2024: Aelia Mursa reimagined: A comprehensive study of urban evolution through archaeological insights. In: Horvat, J. – Štular, B. – Velušček, A. (eds): *Roman urban landscape. Towns and minor settlements from Aquileia to the Danube.* Opera Instituti Archaeologici Sloveniae 47. Ljubljana, 471–502. https://doi.org/10.3986/9789610508281_24

Leljak, M. 2015: *Roman glass from the Croatian part of the province of Pannonia.* PhD dissertation (manuscript), University of Zagreb. Zagreb.

Leljak, M. – Lazar, I. 2014: Rimske staklarske radionice na području hrvatskog dijela provincije Panonije. *Vjesnik Arheološkog muzeja u Zagrebu* 46, 115–133.

Mandruzzatto, L. – Marcante, A. 2007: *Vetri antichi del Museo archeologico nazionale di Aquileia. Balsamari, olle e pissidi.* Corpus delle collezioni del vetro nel Friuli Venezia Giulia 3. Venice.

Moirin, A. 2006: Les bouteilles hexagonales et dodecagonales. In: Nenna, M. D. – Foy, D. (eds): *Corpus des signatures et marques sur verres antiques 1.* Aix-en-Provence-Lyon, 119–124.

Nenna, M.-D. 2002: New research on mosaic glass: Preliminary results. In: Kordas, G. (ed.): *Hyalos. History, technology and conservation of glass and vitreous materials in the Hellenic world.* Athens, 153–158.

Nin, N. 2003: Aspects de la verrerie antique d'Aix-en-Provence à travers quelques contextes funéraires et d'habitat. In: Foy, D. – Nenna, M. D. (eds): *Échanges et commerce du verre dans le monde antique, Actes du colloque de l'Association Française pour l'Archéologie du Verre Aix-en-Provence et Marseille 2001.* Montagnac, 413–432.

Ravagnan, G. 1994: *Vetri antichi del Museo vetrario di Murano.* Corpus delle Collezioni Archeologiche del Vetro nel Veneto 1. Venezia.

Roffia, E. 1993: *I Vetri Antichi delle Civiche Raccolte Archeologiche di Milano.* Milano.

Rütti, B. 1991: *Die römischen Gläser aus Augst und Kaiseraugst.* Forschungen in Augst 13. Augst.

Ružić, M. 1994: *Rimsko staklo u Srbiji.* Centar za arheološka istraživanja, Knjiga 13. Beograd.

Stern, E. M. 2001: *Roman, Byzantine, and Early Medieval Glass, Ernesto Wolf Collection.* New York.

Sternini, M. 1990: *La verrerie Romaine du Musée archéologique de Nîmes I–II.* Nimes.

Šaranović-Svetek, V. 1986: *Antičko staklo u jugoslovenskom delu provincije Panonije.* Novi Sad.

Zampieri, G. 1998: *Vetri antichi del Museo Civico Archeologico di Padova.* Corpus delle Collezioni Archeologiche del Vetro nel Veneto 3. Padova.

Whitehouse, D. 1997: *Roman glass in the Corning Museum of Glass, vol. 1.* Corning–New York.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 305–315. 10.17204/dissarch.suppl.5.2026.305

Archaeology and the *interpretatio* of an ancient Iberian sanctuary

From El Cerro de los Santos to Ad Palem

Francisco Marco Simón
University of Zaragoza, Zaragoza, Aragón, Spain
marco@unizar.es

Received 15 December 2025 | Accepted 19 May 2026 | Published 18 November 2026

Abstract: El Cerro de los Santos is one of the most important Iberian cult-places, with pilgrims attested at least as early as the 5th century BCE. The *statio* Ad Palem mentioned by the Vicarello vases in the 4th century CE on the Via Augusta from Gades to Rome was convincingly identified by P. Sillières with this sanctuary. The Hispano-Roman temple excavated at the site has a *pronaos* and a *cella*, and towers 25 m above the Roman road, while the great number of *ex votos* left by pilgrims attest to the considerable appeal of the sanctuary in Roman times. It also offers an interesting case of *interpretatio* of an ancestral fertility goddess as the Roman Pales. This assimilation makes even greater sense when we consider the importance of the Parilia, celebrated on 21 April to commemorate the anniversary of the foundation of Rome (Natalis Vrbis), a ritual with epigraphic testimonies in Hispania, for example in the rock sanctuary of Cales Coves (Minorca), datable to the second century CE.

Keywords: Iberian cult-place, Romanisation, *interpretatio*

The processes of cultural contact traditionally referred to as 'Romanisation' began much earlier in the Iberian Peninsula (particularly in the east and south) than in other parts of the western Mediterranean. This was an area inhabited by Iberian peoples, who had previously established close contacts with both Semitic (Phoenician and Carthaginian) and Greek colonial elements, to the extent that they were integrated into a cultural *koiné* of the central-western Mediterranean. In that Iberian region, from the end of the 3rd century BCE, the Romano-Italic presence following the victory over Carthage in the Second Punic War (218–201 BCE) gave rise to interesting processes of acculturation.[1]

The so-called 'Cerro de los Santos' is one of the most important cult places among the Iberian peoples, with pilgrims attested as early as the 5th century BCE. Its name, meaning the 'Hill of the Saints', is due to the great number of statues found there, not to mention the large quantity of bronze and stone *ex votos* (more than five hundred pieces).[2] The early excavation of the temple was followed by such systematic spoliation that, in 1898, the French archaeologist Pierre Paris, from

1 See Tortosa – Ramallo Asencio 2017. For the Iberian Peninsula as a 'micro-continent' placed between the Mediterranean and the Atlantic world, where a wide range of strategies, initiatives, and means were used in the religious sphere by both individuals and communities, and for the limitation of concepts such as 'Romanisation' and globalisation when studying cultural processes in the ancient Mediterranean, see Sinner – Revilla Calvo 2022, 13–24; Grau Mira 2022.

2 See Rada y Delgado 1875; Fernández de Avilés 1966; Chapa Brunet 1984; Ruano 1988; Sánchez Gómez 2002; García-Cardiel 2015; Brotóns Yagüe – Ramallo Asensio 2017; Grau Mira 2022, 32–34.

✉ Corresponding author

Bordeaux, wrote that "*les chercheurs de statues et trésors n'ont presque pas laissé pierre sur pierre des murs déblayés…*".[3]

The 'Cerro de los Santos' Iberian sanctuary is located at an important crossroads of some of the main routes in eastern Iberia, in the south-eastern part of Hispania Tarraconensis (Fig. 1). The sanctuary has extraordinary sculptures from the 4th century BCE (such as the so-called Offering Ladies, now in the National Archaeological Museum in Madrid (Fig. 2), as well as the enthroned ladies and the male and female heads in the Louvre and the Museo de Albacete, respectively).[4] It is one of the best examples of an ancestral sanctuary that took on some urban roles in addition to its ritual and symbolic functions, owing to its geographical position and the exchange activities that took place there.

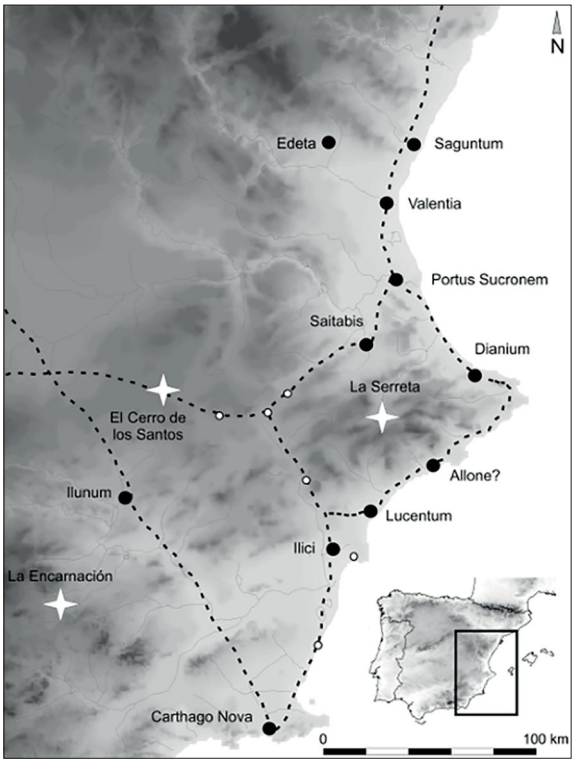


Fig. 1. Map of Eastern Iberia with the main sanctuaries and cities (after Grau Mira 2022).

We do not know to which deities the old Iberian sanctuary was dedicated. A pottery fragment uncovered in the recent excavations depicts a crowned goddess (a Dea Stepanophoros) associated with a star, a bird, and a predator (with features of a wolf or lion), all typical of Iberian iconography.[5] She may be an indigenous ancestral fertility goddess, possibly related to horses, since a good number of equine ex-votos have been found at the sanctuary.[6] The deity is similar to the winged *potnia hippon* depicted on a vase from the nearby Ilici/La Alcudia de Elche[7] and to the fragment found at Las Puertas de San José (Cartagena, Spain), with a depiction of the divine epiphany of a goddess emerging from a plant element, facing forward, with her arms raised and associated rosettes.[8] It is a divine figure interpreted in other parts of the Iberian world as a local counterpart of the Greek Artemis, the Punic Tanit, and the Dea Caelestis.

The new Romano-Italic models were introduced into Iberia over a relatively short period, during the 2nd and 1st centuries BCE,[9] when religious and political identities were recreated in the new world controlled by Rome[10] after its victory over the Carthaginians, who had previously occu-

3 Paris 1903, 46–47.

4 Rouillard 1997, 307–310.

5 Brotons Yagüe – Ramallo Asensio 2014.

6 The concentration of equine *ex votos* is especially significant in the sanctuary of El Cigarralejo (Mula, Murcia): Lillo Carpio *et al.* 2005.

7 Tortosa Rocamora 1996, 152, Fig. 78.

8 Tortosa Rocamora 1996, 151, Fig. 72.

9 Tortosa – Ramallo Asensio 2017.

10 The traditional concept of 'Romanisation', understood as a dichotomous model between the centre (Rome) and the periphery of the conquered territories, elaborated from colonialist positions of power, emphasises the cultural hegemony of Rome in the face of active or passive resistance on the part of the local populations and has been subject to criticism, especially in Anglo-Saxon historiography. Today, some historiographers continue defending its usefulness once stripped of its imperialist and Romanocentric connotations, pointing out its early character in the Iberian Peninsula and its effects on ▸



Fig. 2. Statue of the Offering Lady from El Cerro de los Santos (photo by Museo Arqueológico Nacional, Madrid).

pied this part of the Iberian Peninsula. One example is the statue of a male *palliatus* with the inscription *L(ucii) Lic(i) ni(i)* on his breast. He was probably a Romanised native, since three other inscriptions in the sanctuary are in Iberian.[11] Another *togatus* bears the epigraph *Bastulaitin* (in De Hoz's reading);[12] the name points to the city of Bastulo (Baza, Granada, where the famous Seated Lady comes from) and the tribe of the Bastetani. It seems reasonable to think that this figure represented a collective of the Bastuli or Bastetani. These are good examples of integration into the Mediterranean Hellenistic-Roman *koiné*, as well as excellent examples of the adoption of Italic dress (and names) by the Iberian ruling class.

A particularly significant find is the rim of a painted votive vessel depicting a column crowned by an Ionic capital (like the one found in the sanctuary, which has since disappeared) and, behind it, a triangular pediment with *acroteria* that crowned the façade of the temple.[13] Traditional interpretations of the sanctuary ranged from a therapeutic enclave[14] to a geopolitical centre for various Iberian communities.[15] Various sculptures and ceramic elements, *pondera*, *fusayolas*, bowls for dyes or cosmetics, weapons, and copper or bronze objects (rings, bracelets, bangles, and fibulae), similar to others found in sanctuaries from the 4th to 3rd centuries BCE, such as La Encarnación or El Pinar de la Algaida, belong to the late Roman period and reflect the adoption of elements from the Italic and Hellenistic tradition, such as the late Republican *toga*, the veil, or the very concept of 'portrait'.[16]

Recently, a team from the University of Murcia, led by Brotón Yagüe and Ramallo Asensio, conducted research campaigns at the site and proposed that, during the monumentalisation of the cult place and the building of the new temple as part of that process, the hundreds of earlier sculptures and *ex votos* were used to fill the foundation pit of the new building,

▸ monumentalisation and the emergence of epigraphic habitus (Beltrán Lloris 2017), while others propose the use of alternative readings such as 'hybridism', 'creolisation', 'discrepant identities' or 'creolage'. Certainly, these processes of cultural contact are characterised by diversity, with tensions, adaptations, reinterpretations, or transformations that develop uniquely in local contexts, far from a uniform pattern. In this sense, the concept of 'glocalisation', underlining an interaction between global and local, can be useful for understanding how this multiple and changing construction of the 'Roman' took place in time and space (Gasparini 2026).

11 Ruiz Bremón 1986.

12 Or *bas]stulai/aen* (TM 30187; www.trismegistos.org/text/30187).

13 Noguera 1997, 151, Figs 1–2.

14 Ruiz 1988.

15 Ruano 1988.

16 Noguera 1997, 150–151.

thereby hiding and, at the same time, preserving them and associating them with the new temple[17] (Figs 3–4, with a modification and theoretical reconstruction of the ground plan). The Hispano-Roman temple (measuring 15.6 × 6.9 m) built in that phase has a *pronaos* and a *cella* (of 12 × 6 m); it towers 25 m above the Roman road. The *cella* could be accessed through a 2.6 m-wide door preceded by a façade. As regards the paving of the building, fragments of *opus signinum* and black and white tesserae have been recorded, together with two columns resting on Attic bases without a plinth between the Ionic-style *antae*. The capitals and mosaics suggest that a reconstruction took place during the Augustan period.[18] The cult site was probably abandoned in the early Imperial period, possibly towards the mid-1st century CE.[19] At the Cerro de los Santos, therefore, a deliberate destruction of the old structures was followed by a refoundation that attempted to respond to the new ideology of the Iberian elites who held power with the consent and support of the Roman authorities.



Fig. 3. Location and theoretical ground plan of the El Cerro de los Santos temple based on foundation pits found in recent excavations (after Brotóns Yagüe – Ramallo Asencio 2017, Fig. 1).

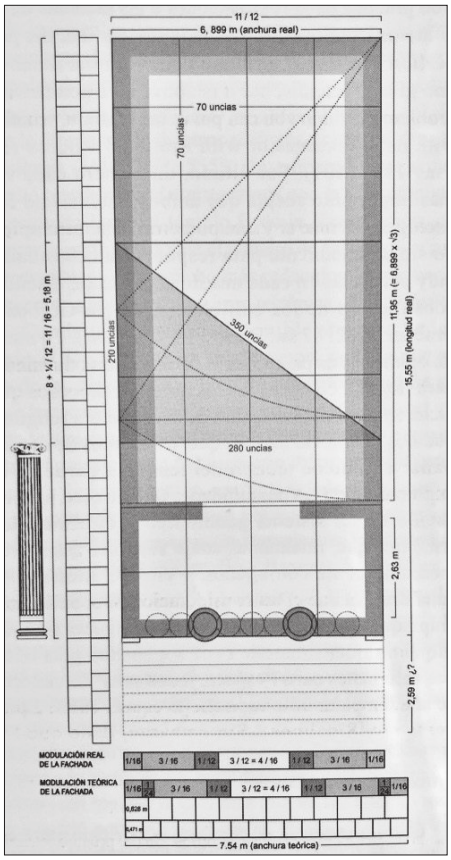


Fig. 4. Modification and theoretical restitution of the ground plan of the temple (after Brotóns Yagüe – Ramallo Asencio 2017, Fig. 3).

A look at the urban landscape during the Roman Imperial period reveals that traditional Iberian sanctuaries were located in areas without cities, such as Cerro de los Santos, La Encarnación or La Serreta de Alcoi. These were monumentalised around the mid-2nd century BCE, using construction models and decorative elements with clear central-southern Italian influence.[20] In this sense, the panorama would be similar to that of the sanctuaries of central and southern Italy, interpreted by

17 Brotons Yagüe – Ramallo Asencio 2017.

18 Brotons Yagüe – Ramallo Asencio 2014, 40; Grau Mira 2022, 33.

19 García Cardiel 2015, 88–89.

20 Grau Mira 2022, 165–166.

Mario Torelli[21] as focal points of territorial integration in areas with little urbanisation.



Fig. 5. *Vascula Apollinaria* (Beakers of Vicarello), 4th century CE (Wikimedia Commons).

The Vicarello vases (4th century CE: Fig. 5) include a *statio* Ad Palem between Saltigis (Jumilla, Murcia) and Saetabis (Játiva),[22] and Pierre Sillières has convincingly proposed identifying this *statio* with the Iberian sanctuary of Cerro de los Santos.[23] These four silver vases, now in the Palazzo Massimo alle Terme (Rome), were found in the *thermae* of Vicarello (Aquae Apollinares), in Sutri/Sutrium, close to Lake Bracciano, near Rome, in 1852.[24] They are shaped like milestones and are presumably *ex votos* that a pilgrim from Gades deposited in the lake's waters, since the names and distances between the various stations on the road that led from Gades to Rome, with a length of some 1,841 Roman miles, are engraved on their walls. This is the itinerary of the ancient Via Heraclea followed by the Greek hero on his return driving the bulls of Gerion, later known as the Via Augusta, which connected with the Via Domitia on the other side of the Pyrenees.

The features of the Iberian deity to whom the sanctuary had traditionally been dedicated could have facilitated her assimilation to the Roman Pales.[25] Pales is an archaic divinity who gave her name to the Palatine Hill and was related to fertility and the protection of sheep, cattle, and horses[26] (Pastorum domina,[27] Dea pastoralis,[28] Dea pabuli[29]). This assimilation was made by the Italian soldiers of the Roman army at the end of the 3rd or in the 2nd century BCE, who would have been the first visitors to the sanctuary of El Cerro de los Santos.[30] This assimilation makes even greater sense if we think of the Palilia or Parilia, that is, the festival in honour of Pales, which was celebrated on 21 April (*ante diem XI kalendas Maias*), coinciding with the opening of the agricultural and livestock cycle, when the flocks leave their sheepfolds for the spring pastures. What had long

21 Torelli 1983.

22 Aur. Vict., I, II, III and IV: Ad Palem. The distance between the place name Ad Aras, which refers to altars, and *Saetabis*, 28 miles, has led to think that it was located at the site of Casa del Ángel, on the road between Font de la Figuera and Caudete, and the place name could indicate a fork in the Via Augusta and the so-called 'Hannibal road', between Saltigi and Castul (Lloréns Forcada 2002, 66–67, with references). See also Álvarez Martínez *et al.* 2002.

23 Sillières 1990, 267, 272 and 806–810.

24 CIL XI, 3281 and 3283: *Itinerarium a Gades Romam … Saltigim XVI / Ad Palem XXXII / Ad Aras XXII / Saetabim… Romam XX / sum(ma) m(ilia) p(assus) MDCCCXXXX(milia).* See Gasperini 2008; Schmidt 2011.

25 On the processes of interpretation (indigenous and 'Roman'), see Marco Simón 2012; Bettini 2015.

26 Marcos Celestino 2002.

27 Ov. *Fast.*, 4.776.

28 Solin., 1.15.

29 Serv. *Ecl.*, 5.35; Serv. *Georg.*, 3.1.294.

30 Silliéres 1990; Stylow 1995, 25–29.

been a festival celebrating the fertility of the herds, favoured by the goddess Pales, after whom the Roman Palatine Hill is named,[31] became, in the late Republican period, a festival with strong political and identity-related overtones, celebrating the founding of Rome and also the Caesarian victory of Munda.[32]

From the literary sources we can deduce, especially from Ovid,[33] that shepherds made offerings to Pales of millet cakes, milk (which is logical for a deity protecting the herds), and *sapa* (boiled grape wine). It seems that the ceremony, which also involved the lighting of hay fires, was a purification ritual that later culminated in the mutilation of a horse, the blood of which was mixed with ashes.

At this point, it is worth recalling a feature that characterises El Cigarralejo (Mula, Murcia), and also other Iberian sanctuaries such as El Cerro de los Santos: equine votive offerings.[34] Horses, therefore, would constitute another common element that would facilitate the identification of the deity at the ancient sanctuary with the goddess Pales, since her rituals in Rome[35] culminated in the mutilation—and not the sacrifice—of a horse to obtain blood as the basic element of the *suffimen* (mixed with the ashes of sacrificed cow foetuses and empty bean stalks) distributed among the people by the Vestal virgins.[36]

31 Varro, *Ling.*, 6,15: "*Palilia dicta a Pale, quod ei feriae*"; Vell. Pat., 1.8.4: "*Romam urbem Parilibus in Palatio condidis*".

32 Beard 1987.

33 Ov. *Fast.*, 4.721–805, with a detailed description of the ritual of the Parilia.

34 Fernández de Avilés 1966, 28. Particularly notable are the sandstone horse and the bas-relief with a donkey and a colt from El Cigarralejo (Cuadrado 1950, 185–186 and 226, respectively; Rouillard 1997, 311, nos 2230–2231). On the other hand, the essential role of the horse in the self-representation of knights and aristocrats is well known, as shown, for example, by splendid funerary sculptures such as that of the horseman from Los Villares de Hoya Gonzalo (Albacete), dated around 490 CE (Blánquez Pérez 1997, 218–221), which, within the workshop of Cerro de los Santos and Llano de la Consolación, shows an archaising ideal that follows the outlines of Greek archaism, stylised and transformed to Iberian taste. Particularly interesting is the horse sculpture from Casas de Juan Núñez, an exceptional work that follows the style of the Cerro de los Santos workshop but in plasticity and refinement reflects the influence of the Elche Style (León 1997, 162, 63). On the representations of the so-called 'horse tamer' *(pótnios hippôn)*, see Santos Velasco 2014.

35 Ov. *Fast.*, 4.747–777, transmitted the prayer addressed to the goddess after offering her millet cakes and a jug of warm milk: "Protect the cattle and masters alike, and drive everything harmful from my stalls. If I've fed sheep on sacred ground, sat under a sacred tree, while they've unwittingly browsed the grass on graves. If I've entered a forbidden grove, or the nymphs and the god, half-goat, have fled at sight of me. If my knife has pruned the copse of a shady bough, to fill a basket of leaves for a sick ewe, forgive me. Don't count it against me, if I've sheltered my flock, while it hailed, in some rustic shrine. Don't harm me for troubling the pools. Nymphs, forgive, if trampling hooves have muddied your waters. Goddess, placate the springs, and placate their divinities on our behalf, and the gods too, scattered in every grove (…) Drive off disease: let men and beasts be healthy, and healthy the vigilant pack of wakeful dogs. May I drive back as many sheep as dawn revealed, nor sigh returning with fleeces snatched from the wolves. Avert dire famine: let leaves and grass be abundant, and water to wash the body, water to drink. May I press full udders, may my cheeses bring me money, may the wicker sieve strain my liquid whey. And let the ram be lusty, his mate conceive and bear, and may there be many a lamb in my fold (…). Let my prayer be granted, and every year we'll make huge cakes for Pales, Mistress of the shepherds." (translated by A. S. Kline). The prayer had to be repeated four times at sunrise, and after drinking the purple milk and wine, the burning piles of crackling firewood had to be walked lightly across.

36 The sacrifice did not involve any shedding of blood in the original ritual. It is Prop., 4.1.17–20, who refers to the mutilation of a horse: *"Nulli cura fuit externos quaerere divos, / cum tremeret patrio pendula turba sacro, / annuaque accenso celebrare Parilia faeno, / qualia nunc curto lustra novantur equo"*. "No one bothered to look for foreign gods, as the crowd was fearful, awaiting the traditional sacrifice and celebrating the annual *Parilia* by lighting hay bonfires, a ritual that has been revived today with the mutilation of a horse." (translated by V. Katz).

The ancient goddess Pales is very scarcely recorded in epigraphy. The *Fasti Veteres* of Antium, a late Republican calendar, dedicates the feast on 7 July to Palibus II,[37] and in Varro the mention Palibus also appears.[38] The gender of the deity sometimes appears without agreement among the sources,[39] so it has been thought that the deity was not so much a good example of the Roman principle *sive mas sive femina* as of *mas et femina*.[40] Dumézil proposed a distinction between a male god Pales, a Roman *interpretatio* of an Etruscan god of cattle, and two female Pales,[41] with two different festivals celebrated: one in April dedicated to small cattle and the other on 7 July dedicated to the two Pales.[42]

In any case, only three epigraphs dedicated to this deity have survived. The Hispanic one comes from Mirobriga of the Turduli (Cabezo del Cerro, in Capilla, Spain), and can be dated to the 1st century AD.[43] The others have been attested at Ispra, in the vicinity of Milan (Italy), qualifying the deity as *conservator animalium*, and at Archar/Ratiaria, where it appears as *pastoralis*.[44] The Capilla inscription clearly describes Pales as *domina* (exactly the same term as in Ovid's fundamental text in the *Fasti*), and one might wonder whether the assimilation of the old Iberian divinity related to horses *(potnia hippôn)* with the Roman Pales would have been facilitated through this route.[45]

There are epigraphic testimonies of the Palilia in Hispania. In the rock sanctuary of Peñalba de Villastar (Teruel, Spain), on the border between the Indo-European world of the interior and the Iberian world of the Levant, our Hiberus research group of the University of Zaragoza discovered a new panel written in Latin (in addition to the inscriptions in the Celtic language that have been widely studied), which mentions a new divinity, Cornutus Cordonus, and the date on which the pilgrim author of the inscription, C. Attilius, made the ascent to the sanctuary; it is some day before the *kalendas* of May, likely the eleventh, i.e. 21 April, the date of the Palilia.[46] This display of Roman identity is not surprising, since verses from Virgil's Aeneid were inscribed in the same sanctuary.[47]

This possibility can be confirmed by the inscriptions in another rock sanctuary, Cales Coves, on the island of Menorca.[48] There, a necropolis with more than a hundred caves dated between 1600 and the 1st century BCE has been excavated. Inside the so-called Cova dels Jurats there is a *nymphaeum*, and at the entrance some rock inscriptions from between 125 and 230 CE, documenting a series of annual visits by magistrates. The inscriptions (Fig. 6) first mention the consular date, followed by the date of the eleventh day before the *kalendas* of May (21 April), and then the phrase *hoc venimus aedi* (mentioned by *aeditui* or *aediles*).[49] It is therefore the celebration of the Parilia to commemorate the Natalis Vrbis, re-established during the reign of Hadrian. It should be remem-

37 ILLRP, 9.

38 Varro *Rust.*, 2.5.1.

39 Serv. *Georg.*, 3.1: "*hanc Vergilius fenere feminino appellat, alli, inter quos Varro, masculino, ut 'hic Pales'*"; see also Mart. Cap., 1.50.

40 Stylow 1995, 27, with references.

41 Dumézil 1970, 380–385.

42 Varro *Rust.*, 6.2; 7.3.

43 CIL II, 851 = EDCS-09000901: *Palei / domi/n(a)e ex v(oto) / G() C() S() Q() p(osuerunt?)*

44 AE 1913, 186 = EDCS-16300160 (first half of the 2nd century): *Pali Sanc(to) / Pastorali / C(aius) Iul(ius) Valen[s] / dec(urio) col(oniae) [Rat(iariae).*

45 Stylow 1995, 29.

46 Beltrán Lloris *et al.* 2005, 941; Marco Simón – Alfayé Villa 2008.

47 Verg. *A.*, 2. 268–269: "*tempus erat quo prima quies mortalibus aegris inc[ipit].*" "That hour it was when heaven's first gift of sleep on weary hearts of men most sweetly steals." (translated by T. C. Williams).

48 Orfila *et al.* 2015; Mayer Olivé 2022.

49 Zucca 1998, 201–202, 216 and notes 46–50.

bered that the emperor Pertinax tried to fix (or restore), in 193 CE, the beginning of the year on this date.[50]



Fig. 6. Some rock inscriptions in Cales Coves mentioning the Parilia (photos by G. Baratta; after Mayer Olivé 2022, Fig. 4.4).

Conclusion

The Roman conquest of the Iberian Peninsula at the end of the 3rd century BCE led to major changes in territorial organisation. The Romans dismantled part of the existing networks of Iberian centres, but used others, and native traditions were reinvented in the new social context through the use of collective memory at significant places in the symbolic landscape and through the establishment of shared practices anchored in the traditions of the past. Traditional sanctuaries were redefined with the adoption of new constructions and votive practices,[51] and during the first phase of Roman expansion in eastern Iberia, the collective identity and power of local groups were expressed through the development of some sanctuaries, rather than through public buildings in towns, as in other parts of Roman dominions.[52] The Cerro de los Santos is a paramount example of this redefinition, overcoming a dualist view that contrasts the terms native and Roman as opposing situations, and it is a very good example of the establishment of a 'common ground'[53] between natives and colonisers. Iberian patterns were intermixed with Romano-Italic ones, and the ancient cult place became a *statio* on the Via Augusta dedicated to the goddess Pales, to whom the ancient Iberian deity was assimilated, and whose feast to celebrate the Natalis Vrbis is documented in other cult places in Roman times, such as the aforementioned Peñalba de Villastar in Celtiberia and, especially, Cales Coves on the island of Minorca, both in the same province of Hispania Tarraconensis in which the ancient Iberian sanctuary was also located.

Sources

AE: *L'Année Épigraphique: Revue des publications épigraphiques relatives à l'antiquité romaine.* Paris.

Ath. *Deipn.*: Athenaeus, *Deipnosophists.*

Aur. Vict.: Aurelius Victor, *De Caesaribus.*

CIL II: Hübner, E. (ed.): *Corpus Inscriptionum Latinarum. Voluminis Secundi: Inscriptiones Hispaniae Latinae.* Berlin, 1869.

50 See Juan Castelló 2005, 751; Mayer Olivé 2022, 59. Athenaeus of Naucratis (Ath. *Deipn.*, 8. 63) has left an account of the celebration of this feast day in Rome: "Now after this long conversation, all of a sudden there was heard all over the city the music of flutes and the noise of cymbals, and also a great crash of drums, with singing at the same time. And it happened to be the time of a festival which used formerly to be called the Parilia, but which is now called the Romana, in honour of the temple built to the Fortune of the City, by that most excellent and accomplished sovereign Hadrian. And all the in habitants of Rome (and all the foreigners sojourning in the city) every year keep that day as a remarkable one." (translated by C. C. Yonge).

51 On the transformations of traditional religious systems with the integration of Hispanic provinces in the Roman Empire, see Marco Simón 2021; Marco Simón in press.

52 Grau Mira 2022, 28.

53 On the concept of 'Common Grounds', see finally Woolf 2023.

CIL XI: Bormann, E. (ed.): *Corpus Inscriptionum Latinarum. Volumen Undecimum: Inscriptiones Aemiliae, Etruriae, Umbriae Latinae*. Berlin, 1888, 1901, 1926.

Col. *De Rust.*: Columella, *De re rustica.*

ILLRP: Degrassi, A. (ed.): *Inscriptiones Latinae Liberae Rei Publicae I–II*. Firenze, 1957, 1963.

Mart. Cap.: Martianus Capella, *De nuptiis Philologiae et Mercurii.*

Ov. *Fast.*: Ovidius, *Fasti.*

Prop.: Propertius, Sextus. *Elegiae.*

Serv. *Ecl.*: Servius, *Commentary on the Eclogues of Vergil.*

Serv. *Georg.*: Servius, *Commentary on the Georgics of Vergil.*

Solin.: Solinus, *De mirabilibus mundi.*

Varro *Ling.*: Varro, *De lingua latina.*

Varro *Rust.*: Varro, *De rustica.*

Vell. Pat.: Velleius Paterculus, *Historia romana.*

Verg. *A.*: Vergilius, *Aeneis.*

References

Álvarez Martínez, J. M. – Aranegui, C. – Cepas Palanca, A. – Corzo Sánchez, R. *et al.* 2002: *Unión Académica Internacional. Tabula Imperii Romani. Hoja J-30: Valencia. Corduba, Hispalis, Carthago Nova, Astigi.* Madrid.

Beard, M. 1987: A complex of times. No more sheep on Romulus' birthday. *Proceedings of the Cambridge Philological Society* 33, 1–15. https://doi.org/10.1017/S0068673500004892

Beltrán Lloris, F. 2017: Acerca del concepto de romanización. In: Tortosa, T. – Ramallo Asencio, S. (eds): *El tiempo final de los santuarios ibéricos en los procesos de impacto y consolidación del mundo romano.* Anejos de Archivo Español de Arqueología 79. Madrid, 17–26.

Beltrán Lloris, F. – Jordán Cólera, C. B. – Marco Simón, F. 2005: Novedades epigráficas en Peñalba de Villastar (Teruel). In: Beltrán Lloris, F. – Jordán Cólera, C. B. – Velaza Frías, J. (eds): *Actas del IX Coloquio sobre lenguas y culturas paleohispánicas, Barcelona, 20-24 de octubre de 2004. Acta Palaehispanica IX.* Paleohispanica 5. Zaragoza, 911–956.

Bettini, M. 2015: *Dèi e uomini nella città. Antropologia, cultura e religione romana.* Roma.

Blánquez Pérez, J. 1997. Caballos y aristócratas del s. V a.C. en el mundo ibéricos. In: Olmos Romera, R. – Santos Velasco, J. A. (eds): *Iconografía ibérica – Iconografía Itálica: Propuestas de interpretación y lectura (Roma 11–13 Nov. 1993).* Madrid, 211–234.

Brotóns Yagüe, F. – Ramallo Asensio, S. 2014: Una *Dea Setepanophoros* en el Cerro de los Santos (Montealegre de Castillo, Albacete). In: Bádenas de la Peña, P. – Cabrera Bonet, P. – Moreno Conde, M. – Ruíz Rodríguez, A. – Sánchez Fernández, C. – Tortosa Rocamora, T. (eds): *Homenaje a Ricardo Olmos. Per speculum in aenigmate. Miradas sobre la Antigüedad.* Estudios y Textos de Erytheia 7. Madrid, 343–349.

Brotóns Yagüe, F. – Ramallo Asensio, S. 2017: Continuidades y cambios en los santuarios ibéricos del sureste de Iberia: Los templos *in antis* del Cerro de los Santos y del Cerro de la Ermita de la Encarnación. In: Tortosa, T. – Ramallo Asencio, S. (eds): *El tiempo final de los santuarios ibéricos en los procesos de impacto y consolidación del mundo romano.* Anejos de Archivo Español de Arqueología 79. Madrid, 93–116.

Chapa Brunet, T. 1984: Primeros resultados de las excavaciones en el Cerro de los Santos (Montealegre del Castillo, Albacete). Campañas de 1977 a 1981. *Al-Basit: Revista de estudios albacetenses* 15, 109–126.

Cuadrado, E. 1950: *Excavaciones en el santuario ibérico del Cigarralejo (Mula, Murcia).* Informes y Memorias 21. Madrid.

Dumézil, G. 1970: *La religion romaine archaique avec un appendice sur la religion des* Étrusques. Paris.

Fernández de Avilés, A. 1966: *Cerro de los Santos, Montealegre del Castillo (Albacete). Primera campaña: 1962.* Excavaciones Arqueológicas en España 55. Madrid.

García-Cardiel, J. 2015: El Cerro de los Santos: paisaje. Negociación social y ritualidad entre el mundo ibérico y el hispano. *Archivo Español de Arqueología* 88, 85–104. https://doi.org/10.3989/aespa.088.015.005

Gasparini, V. 2026: Concluding remarks. In: Mazzili, F. Montoya González, R. – Sokołowski, Ł. (eds): *The global, the local and the glocal. Recent approaches in Roman archaeology*. London, 197–206. https://doi.org/10.5040/9781350398467.ch-009

Gasperini, L. 2008: El Tesoro de Vicarello. Un gran descuibrimiento arqueológico del siglo XIX. *Gerión* 26:2, 91–102.

Grau Mira, I. 2022: Ritual practices and sacred landscapes: Identity and territorial organization in Late Iron Age and Early Roman Eastern Iberia. In: Sinner, A. G. – Revilla Calvo, V. (eds): *Religious dynamics in a microcontinent. Cult places, identities, and cultural change in Hispania.* Archaeology of the Mediterranean World 1. Turnhout, 27–36. https://doi.org/10.1484/M.AMW-EB.5.130621

Juan Castelló, J. 2005: La celebración del Natalis Vrbis en Cales Coves (Menorca): ritual y oficiantes. Paper presented at: C*ongrés Internacional d'Història de les Religions Homo Religiosus. Mediadores de lo divino en el mundo mediterráneo antiguo. Palma de Mallorca*, 747–770. http://diposit.ub.edu/dspace/handle/2445/112045 (last access: 1 May 2026).

León, P. 1997: La imagen en la cultura ibérica. La escultura. In: Aranegui, C. (ed.): *Los Iberos. Príncipes de Occidente.* Barcelona, 153–169.

Lillo Carpio, P. A. – Page del Pozo, V. – García Cano, J. M. (eds) 2005: *El caballo en la sociedad ibérica. Una aproximación al santuario de El Cigarralejo.* Museo Universidad de Murcia 14 de diciembre de 2004 – 4 de febrero de 2005. Murcia.

Lloréns Forcada, M. L. 2002: Carthago Noua: una ceca provincial romana con vocación comercial. *Mastia: Revista del Museo Arqueológico Municipal de Cartagena* 1, 45–76.

Marco Simón, F. 2012: Patterns of Interpretatio in the Hispanic Provinces. In: Chiai, G. F. – Häussler, R. – Kunst, C. (eds): *Interpretatio Romana / Graeca / Indigena Religiöse Kommunikation zwischen Globalisierung und Partikularisierung.* Mediterraneo Antico. Economia, Società, Culture 15.1–2. Pisa–Roma, 217–232. https://doi.org/10.1400/18929

Marco Simón, F. 2021: From the Botorrita Bronce to Peñalba de Villastar: Celtiberian religious epigraphy in a landscape of cultural change. In: Estarán Tolosa, M. J. – Dupraz, E. – Aberson, M. (eds): *Des mots pour les dieux. Dedicaces cultuelles dans les langes indigènes de la Méditerranée occidentale.* Berne, 221–240.

Marco Simón, F. in press: Local cults, sacred landscapes, and cultural change. In: Pina Polo, F. (eds): *Cambridge history of ancient Iberia.* Cambridge, in press.

Marco Simón, F. – Alfayé Villa, S. 2008: El santuario de Peñalba de Villastar (Teruel) y la romanización religiosa en la Hispania indoeuropea. In: Dupré Raventós, X. – Ribichini, S. – Verger, S. (eds): *"Saturnia tellus". Definizioni dello spazio consacrato in ambiente etrusco, itálico, fenicio-punico, iberico e celtico". Atti del convegno internazionale svoltosi a Roma dal 10 al 12 novembre 2004.* Roma, 507–525.

Marcos Celestino, M. 2002: *El aniversario de la fundación de Roma y la fiesta de Pales.* Madrid.

Mayer Olivé, M. 2022: Rock sanctuaries and Roman epigraphy. In: Sinner, A. G. – Revilla Calco, V. (eds): *Religious dynamics in a microcontinent. Cult places, identities, and cultural change in Hispania.* Archaeology of the Mediterranean World 1. Turnhout, 53–64. https://doi.org/10.1484/M.AMW-EB.5.130623

Noguera, J. M. 1997: El Cerro de los Santos. In: Aranegui, C. (eds): *Los Iberos. Príncipes de Occidente.* Barcelona, 150–152.

Orfila, M. – Baratta, G. – Mayer, M. – Sánchez, E. – Gutiérrez, M. – Marín, P. 2015: *Los santuarios de Cales Coves (Alaior, Menorca).* Llibres d'Alaior 20. Alaior.

Paris, P. 1903: *Essai sur l'art et l'industrie de l'Espagne Primitive, I–II.* Paris.

Rada y Delgado, J. de 1875: *Antigüedades del Cerro de los Santos, en término de Montealegre, conocidas vulgarmente bajo la denominación de antigüedades de Yecla.* Museo de Antigüedades 6. Madrid, 249–290.

Rouillard, P. 1997: Una dama en París. In: Olmos, R. – Tortosa, T. (eds): *La Dama de Elche. Lecturas desde la diversidad. Colección Lynx 2.* Madrid, 93–99.

Ruano, E. 1988: El Cerro de los Santos (Montealegre del Castillo, Albacete): una nueva interpretación del santuario. *Cuadernos de Prehistoria y Arqueología de la Universidad Autónoma de Madrid* 15, 253–273. https://doi.org/10.15366/cupauam1988.15.008

Ruiz, A. 1988: Reflexiones sobre algunos conceptos de la arqueología espacial a partir de la experiencia: Iberos en el Alto Guadalquivir. *Arqueología Espacial* 12, 157–182.

Ruiz Bremón, M. 1986: Esculturas romanas del Cerro de los Santos. *Archivo Español de Arqueología* 59, 67–88.

Sánchez Gómez, M. L. 2002: *El santuario del Cerro de los Santos (Montealegre del Castillo, Albacete). Nuevas aportaciones arqueológicas.* Albacete.

Santos Velasco, J. 2014: Algunas cuestiones sobre la identidad subyacente en las imágenes ibéricas del llamado "Domador de caballos". In: Tortosa Rocamora, T. (ed.): *Diálogo de identidades. Bajo el prisma de las manifestaciones religiosas en el* ámbito *mediterráneo (s. III a.C. – s. I d.C.): reunión científica, Mérida (Badajoz, España), 12–14 de noviembre, 2012.* Mérida, 147–158.

Schmidt, M. G. 2011: *A Gadibus Romam.* Myth and reality of an Ancient route. *Bulletin of the Institute of Classical Studies* 54:2, 71–86. https://doi.org/10.1111/J.2041-5370.2011.00025.X

Sillières, P. 1990: *Les voies de communication de l'Hispanie meridionale.* Paris.

Sinner, A. G. – Revilla Calvo, V. 2022: Introduction. In: Sinner, A. G. – Revilla Calvo, V. (eds): *Religious Dynamics in a Microcontinent. Cult Places, identities, and Cultural Change in Hispania.* Archaeology of the Mediterranean World 1. Turnhout, 13–24. https://doi.org/10.1484/M.AMW-EB.5.130620

Stylow, A. 1995: Von Emil Hubner zu Neuauflage von CIL II. Anhang: zu einer neuen Pales-Inschrift aus Mirobriga. *Madrider Mitteilungen* 36, 17–29. https://doi.org/10.34780/zf83-c6c7

Torelli, M. 1983: Edilizia pubblica in Italia centrale tra la guerra sociale ed età augustea. Ideologia e classi sociali. In: Nicolet, C. – Coarelli, F. – Torelli, M. (eds): *Les bourgeoises municipales italiennes aux 2e et 1er siècles av. J.-C.* Paris, 241–250.

Tortosa, T. – Ramallo Asencio, S. F. (eds) 2017: *El tiempo final de los santuarios ibéricos en los procesos de impacto y consolidación del mundo romano.* Anejos de Archivo Español de Arqueología 79. Madrid.

Tortosa Rocamora, T. 1996: *Imagen y símbolo en la cerámica ibérica del Sureste. Colección Lynx 1.* La Arqueología de la Mirada 1. Madrid, 145–162.

Woolf, G. 2023: Ritual mediation on the middle ground: Rome and new Spain compared. In: Wright-Carr, D. C. – Marco Simón, F. (eds): *From ancient Rome to colonial Mexico. Religious globalization in the context of empire.* Denver, 27–44. https://doi.org/10.5876/9781646423163.c001

Zucca, R. 1998: Insulae Baliares. *Le isole Baleari sotto il dominio romano.* Rome.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 317–325. 10.17204/dissarch.suppl.5.2026.317

Copper alloys in Gaul under the Roman conquest

The *Celtic Brass Coins* project

Pierre Mazille
Bibracte EPCC, Glux-en-Glenne, France
Laboratoire UMR 6298 ArTeHiS, Université de Bourgogne Europe, Dijon, France
pierre.remi.mazille@gmail.com

Camille Bossavit
Bibliothèque nationale de France, Paris, France
Camille.Bossavit09@gmail.com

Received 31 October 2025 | Accepted 13 March 2026 | Published 18 November 2026

Abstract: The introduction of brass in Europe has long been considered as a marker of Roman influence. In Gaul the use of zinc as an alloy component, attested since the 1st century BCE, becomes frequent during the latter half of the same century. The *Celtic Brass Coins* project funded by the French National Research Agency intends to understand better the dynamics under which brass spread in Gaul through the lens of numismatics, using historical, archaeological, and elemental analytical approaches. In order to achieve this goal, portable X-Ray Fluorescence (pXRF) has been used extensively on coins from various museum coin collections in France, with additional pXRF analysis conducted on more than 1,400 copper-alloy samples from Bibracte (Mont Beuvray, Burgundy, eastern France), an *oppidum* which was the main urban centre of the Aedui people, a major political and economic partner of the Romans. When available, both typological and stratigraphic information are used, in addition to the compositional data, to date the appearance of brass more precisely in this context. The first results show that around a quarter of the copper-based samples from Bibracte (excluding the coins) were indeed made of brass, especially among the objects for personal adornment (with an almost exact correlation between the brooch types and the alloys used). More unexpected is the near total absence of obvious brass Mediterranean imports.

Keywords: Bibracte, brass, elemental analysis, Gaul, Romanisation

Brass and zinc in Gaul

Brass, the alloy of copper and zinc, requires specific metallurgic techniques during the production process: smelting covers only part of it. While bronze could be made by mixing its two base metals (copper and tin) together in liquid form, the use of zinc makes this operation more complicated because its melting and vaporisation temperatures are quite close to one another (420°C and 907°C): zinc vapour would begin escaping the crucible in large quantities even before all the solid zinc has melted down. Furthermore, copper would still be solid at this point (melting at 1085°C). Several methods have already been suggested for the copper-zinc alloying process, including the prior production of zinc oxides (ZnO).[1] These technical specificities explain the later development of brass metallurgy.

Known in ancient sources as *orichalcum*, brass became ubiquitous in the archaeological record of Temperate Europe in the Roman period. Two millennia after the appearance of bronze in this

1 Bourgarit – Thomas 2015.

✉ Corresponding author

region, this sudden shift raises a question: what dynamics were in action to enable the production and use of brass? Extensive archaeometric studies developed in the regions East of the Alps[2] have clarified the steps of its introduction starting as early as the middle of the 1st century BCE, but such systematic surveys are still missing for the territory of ancient Gaul. In this area, one of the open questions is the possible impact of Caesar's Gallic Wars on the introduction of the new alloy.

A few brass and zinc objects, undeniably of La Tène culture but from chronologically ambiguous contexts, bring forward this question. These include the boar standard from Soulac-sur-Mer (Charente-Maritime, western France),[3] the statue of the so-called 'God of Bouray' (Essonne, Parisian region)[4] or the zinc tablet dedicated to the metalsmith god, Gobanos found in Bern (western Switzerland).[5] In this context, a few coins bearing the name of Vercingetorix minted before or during the siege of Alesia in 52 BCE (Fig. 1), show that its use had undoubtedly begun by the end of the Gallic Wars.[6]



Fig. 1. Vercingetorix brass coin imitating gold types, found in Grésigny-Sainte-Reine, next to Alesia (Côte-d'Or), MAN 285, diameter: 19 mm (Musée d'Archéologie nationale).

The *Celtic Brass Coins* project in Bibracte

This paper is part of the five-year *Celtic Brass Coins* project which brings together six complementary French partners[7] and aims to better understand the introduction of brass in late Iron Age coinage in ancient Gaul in a multidisciplinary study with the aid of material studies, archaeometry, archaeology and digital humanities. The project revolves around the development of a large-scale pXRF (portable X-ray Fluorescence) analysis campaign on almost 4,000 coins from French national museum collections (Bibliothèque nationale de France, Musée d'Archéologie nationale and several museums in Normandy and Northern France), as well as on a collection of non-monetary objects from Bibracte representative of the material culture of the 1st century BCE.[8]

Oxidized or corroded brass is indistinguishable from other copper alloys to the naked eye. Only by using elemental analyses can the alloy be identified. In this paper, we present the first results of pXRF analysis conducted on monetary and non-monetary objects of Bibracte, and discuss the introduction of brass as an alloy for the production of objects in Gaul. Bibracte is an *oppidum* located on Mount Beuvray (Burgundy, eastern France) that was mainly active from the end of the 2nd and throughout the 1st centuries BCE. Capital city of the Aedui people and a major political and economic partner of the Romans in Gaul for the whole period, Bibracte was the site of several episodes of the Gallic Wars before being abandoned around the turn of the common era in favour of the newly created city of Augustodunum (Autun). The choice of Bibracte as a main case study in

2 Istenič – Šmit 2007; Bursák *et al.* 2022.

3 Dubos *et al.* 2017.

4 Pernot – Hurtel 1987.

5 Fellmann *et al.* 1999.

6 Nieto-Pelletier *et al.* 2024; Nieto-Pelletier *et al.* forthcoming.

7 The partners include the IRAMAT laboratory which coordinates the consortium, the CRAHAM laboratory, the Bibliothèque nationale de France, the Musée d'Archéologie nationale, the Maison des Sciences de l'Homme du Val de Loire and BIBRACTE EPCC. More information on the project can be found at its dedicated website: https://brasscoins.hypotheses.org (last access: 26 February 2026).

8 2449 coins analysed at the time of the presentation preceding this paper in May 2025.

this project stems from the fact that this *oppidum* is an archaeological reference site for the material culture from the 1st century BCE, nearly undisturbed by any posterior human activity. Its numerous metal crafts workshops and its overall material culture bear witness to the material culture of Central Gaul in the 1st century BCE and its evolutions shift all along this period. Thus, the analysis of objects found in known archaeological contexts at Bibracte should help identify the beginnings of the use of brass and its purposes.

Sample selection

The series of samples chosen for analysis were selected from the Bibracte storage rooms, where all the finds from excavations since 1984 are kept, and from display cases of the Bibracte Museum, which presents artefacts from 19th-century excavations on Mount Beuvray as well as from other sites.

This selection includes typologically identifiable copper-based artefacts, with a special attention to brooches and to objects of Roman typology. Pieces of metalworking waste material were also picked for analysis in order to observe how much brass was being used compared to other copper alloys. A few 'white metal' objects (i.e. with whitish altered surface) were selected as well, in case some were found to be made out of metallic zinc instead of the more common lead, tin or silver.

Artefacts measuring less than 3 mm were avoided (to match the chosen analytic window size of the pXRF), as were those that were extremely corroded. Conversely, artefacts presenting non-corroded, non-oxidized surfaces (found in anoxic contexts from the basins at Fontaine Saint-Pierre and the well at Theurot de la Roche) have been systematically included in the analysis.

The material in districts with strong evidence of metal-working (Porte du Rebout, Champlain, Côme Chaudron, Parc aux Chevaux 14/15, Domus PC2) was thoroughly studied, as well as the material from Domus PC1 and the Croix du Rebout cemetery due to the diversity of objects found there. The material from the Franciscan convent at Pâture du Couvent was excluded from the research in order to avoid accidentally analysing medieval and modern residue. Nearly every copper-base object displayed at the Bibracte Museum, 318 objects, were included in the study, thus encompassing artefacts found on Mount Beuvray during the 19th century (from Musée Rolin, Autun, 24 objects), others found in the larger territory of the Aedui (from Musée Denon, Chalon-sur-Saône, 3 objects; example of analysis on one of these objects illustrated in Fig. 2), and finally grave goods from the territory of the Ambiani (Somme, Northern France, from Musée Boucher-de-Perthes, Abbeville, 11 objects).[9]



Fig. 2. Analysis on one of the Celtic cauldrons from Lux (Saône-et-Loire), on loan from the Denon Museum to the Bibracte Museum (photo: P. Mazille).

Protocols

Portable XRF (pXRF) is a fast, non-destructive surface method analysis. The results obtained are thus highly impacted by corrosion. The portable device used was a Niton XL5+ from Fondis Elec-

9 The authors wish to renew their thanks to L. Ayache for enabling the study of the objects from the different museums cited here.

tronics, placed on a portable test bench with a cover or on a tripod for some museum objects (Fig. 3). Each analysis session started with the measuring of 5 certified materials, 3 from the CHARM set of reference materials[10] and two from the CTIF.[11] Each object was analysed at least twice or more depending on its nature (objects made up of different parts were analysed once on each part), using the main and low filters of the electronic metals mode (10 seconds main and 30 seconds low for a 40 seconds analysis)[12] and at a 3 mm window.[13] Analyses took place in October and November 2024.[14]

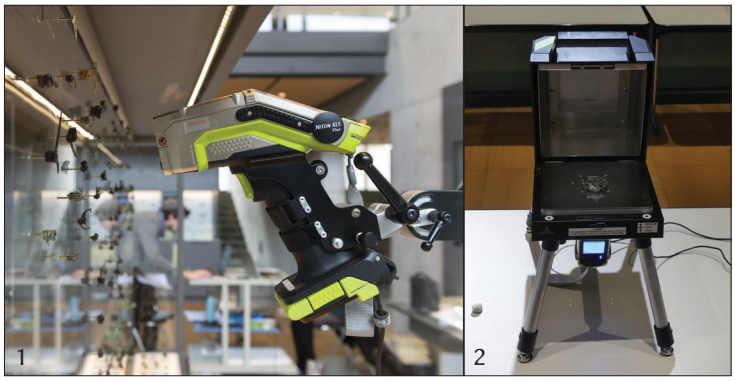


Fig. 3. 1 – freestanding analysis (Bibracte, A. Mailler), 2 – using a portable test bench (photos: P. Mazille).

The main limitation of this method is the influence of corrosion on the measured results. This problem proved to be significant when working with the objects found at Bibracte because most of them were deeply corroded. It has long been demonstrated that pXRF analyses led on corroded surfaces and uncorroded surfaces can yield vastly different results concerning zinc, tin, lead and iron contents (Fig. 4).[15] We were fortunate to be able to scrape the surface of 35 objects (mechanical cleaning made by P. Mazille) in order to perform tests on both the corroded surface and the scraped metal to assess the difference in chemical composition measured by surface analysis. This helped determine in the case of some objects if they were in the brass category or not. For example, the drip (Inv. no. B2021.41.827.1) (Fig. 5) has a heavily oxidised greenish porous surface and measurements made by pXRF on this surface yielded only 2% zinc, along with 2–3% of tin and lead. The artefact had previously been drilled to observe the core metal layer, and surface measurements on the drilled part yielded 17% zinc and less than 0,5% tin and lead, confirming the overestimation of lead, tin and iron by surface analysis and the underestimation of zinc content (due to the dezincification process which entails the preferential disappearance of zinc in the outer layers).

Based on the results obtained from the analysis of the scraped objects, on the previous research on the subject, and taking into account the important corrosion of most of the objects, it was established for this study that an object would be identified as brass if the surface measurements showed more than 1% zinc and less than 10% tin and 10% lead.

It might be argued that some materials are 'quaternary alloys' rather than binary brasses, which we are unable to confirm with a surface analysis (further study by a more in-depth analysis, LA-ICP-MS,

10 32XSN6A, 32XLB17A, 33XGM4AC; Hegingbotham *et al.* 2015.

11 Centre Technique des Industries et de la Fonderie, UZ50 and UZHR5.

12 Bliujienė *et al.* showed that with a Niton Xl3t the analysis results did not change after 35 s so it was deemed sufficient as a time of analysis, our reasoning is the same: Bliujienė *et al.* 2021, 41.

13 Studies have demonstrated that this protocol is sufficient to identify a brass alloy, see Nieto-Pelletier *et al.* forthcoming.

14 Short presentations of these sessions are available at https://brasscoins.hypotheses.org/1810 (last access: 26 February 2026), and at https://www.bibracte.fr/actualite/le-projet-celtic-brass-coins-passe-par-bibracte (last access: 26 February 2026).

15 The difference in tin and lead contents detected by pXRF between the corroded surface and etched sample has for example been demonstrated in Castelle *et al.* 2020. The works of Di Fazio are also important on the matter of surface corrosion of brass, see Di Fazio *et al.* 2019.

is needed to give more details on the alloys' nature).[16] Other copper alloys measured (such as leaded bronze for example) were also identified according to data from literature and taking the corrosion of the objects into consideration.

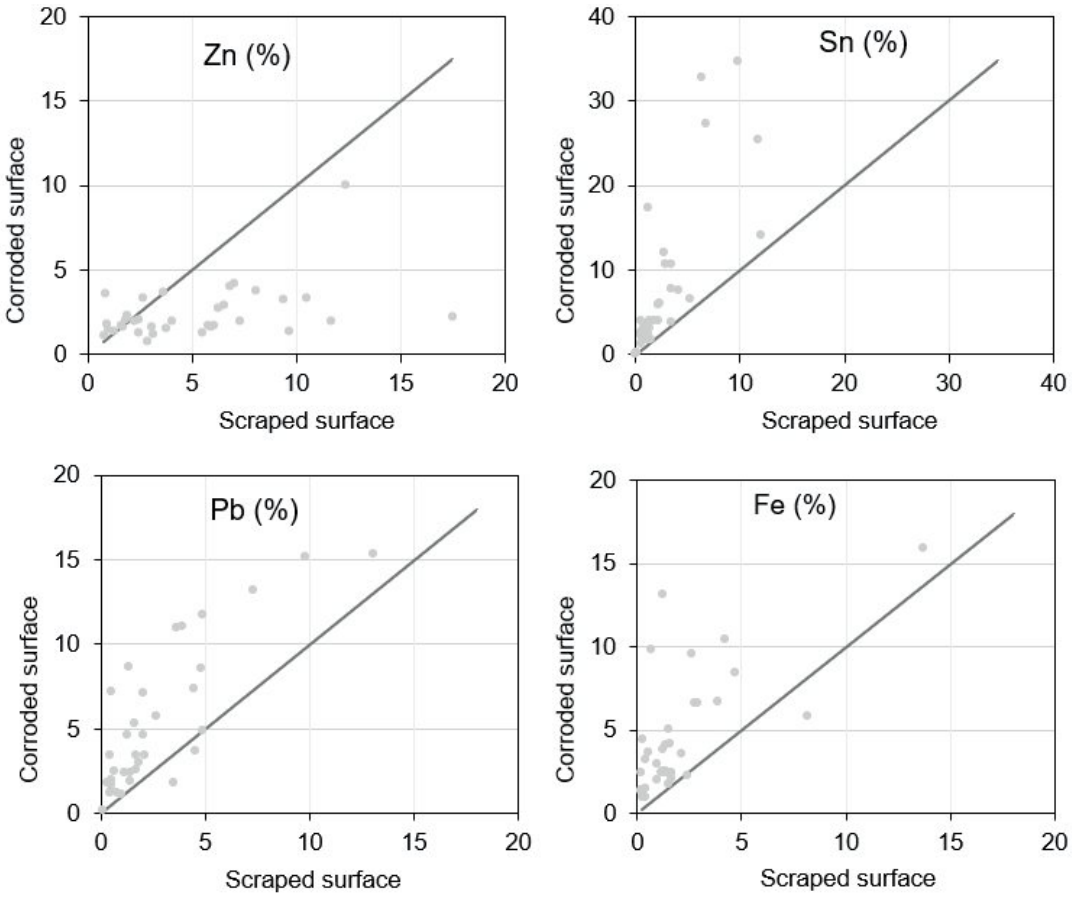


Fig. 4. Binary graphs showing the discrepancy of chemical contents between corroded surfaces and scraped surfaces (C. Bossavit).

Preliminary results and first observations

The analysis campaign indicated brass as the material for 334 objects out of 1,451 (23% of the selection) and 32 brass coins out of 57 coins. For the remaining 1117 objects, 1,069 proved to be copper-dominated alloys,[17] 933 of those are bronzes: 609 binary copper/tin alloys and 324 leaded bronze objects (bronzes with a composition of more than 15% detected lead on the surface). Sixty-four objects do not fall into the binary bronze category because of the high levels of antimony and arsenic they present (which were not detected in all other copper-alloy analysed objects), making these 'quaternary alloys'. The last categories of copper-based metals observed in Bibracte were copper with no tin (1% or less) but traces of arsenic, and lead-rich alloys (the latter sometimes up to 70%).

16 To find out more about the LA-ICP-MS technique and its uses to copper-alloys, see https://brasscoins.hypotheses.org/la-icp-ms (last access: 26 February 2026), and the presentation given at the GMPCA conference (in French): https://webtv.univ-rouen.fr/videos/communication-2-2-4 (last access: 26 February 2026).

17 We chose to exclude the silver-based objects from this paper, since the project deals with copper-alloys, but 15 such objects were analysed (two were previously identified as lead). Likewise, some elements were lead or tin residues, and are not considered in this paper.

While it appeared that brass was used in a limited range of object types, bronze and other copper-alloys tended to characterise many object categories (as well as production leftovers). One exception may be 'quaternary alloys', mostly used for the production of rings. Rings could also be made of leaded bronze, but the use of a mixed copper-alloy with very variable lead and antimony contents, is mainly seen in rings. This probably shows how those highly versatile objects produced in large numbers and with low aesthetical pursuit were last-stage productions of recasting processes, recycling various metallic residues whose content was unknown to the artisan.



Fig. 5. A large drip, showing both an extremely oxidized outer layer and the inner gold colour of the original brass, Inv. no. B2021.41.827.1 (photo: P. Mazille).

Brass remained in the minority whatever the artefact category (metalworking residue, sheet and rod fragments, decorative objects, grooming objects, *militaria*, etc.), except for objects for personal adornment, brooches in particular. Some of those were evidently made locally in large quantities, being found in various stages of the production process. In our case, about 60% of the analysed pieces for personal adornment was brass. It is noteworthy that each basic brooch type measured in this study, considering either its general shape or spring technology, is almost always made of a single copper alloy. For example, brooches that have an external spring cord with fixing claw (e.g., *Kragenfibeln*, *Flügenfibeln*) are always made of brass and never of bronze. Thus, earlier brooch types appear not to have survived this metallic transition and are replaced by newer forms (Fig. 6). Among the selection of 137 properly dated brooches, only one measurement seemed to contradict this model for Bibracte at first sight: while 22 Nauheim specimens were found to be made of bronze (unsurprisingly for such a common type of early La Tène D adornment), the fragmentary brooch (Inv. no. B2005.39.31.1) proved to have been made out of brass. This brooch had been previously identified as a Nauheim type brooch, but it now seems more likely that it belonged to the later Jezerine type.

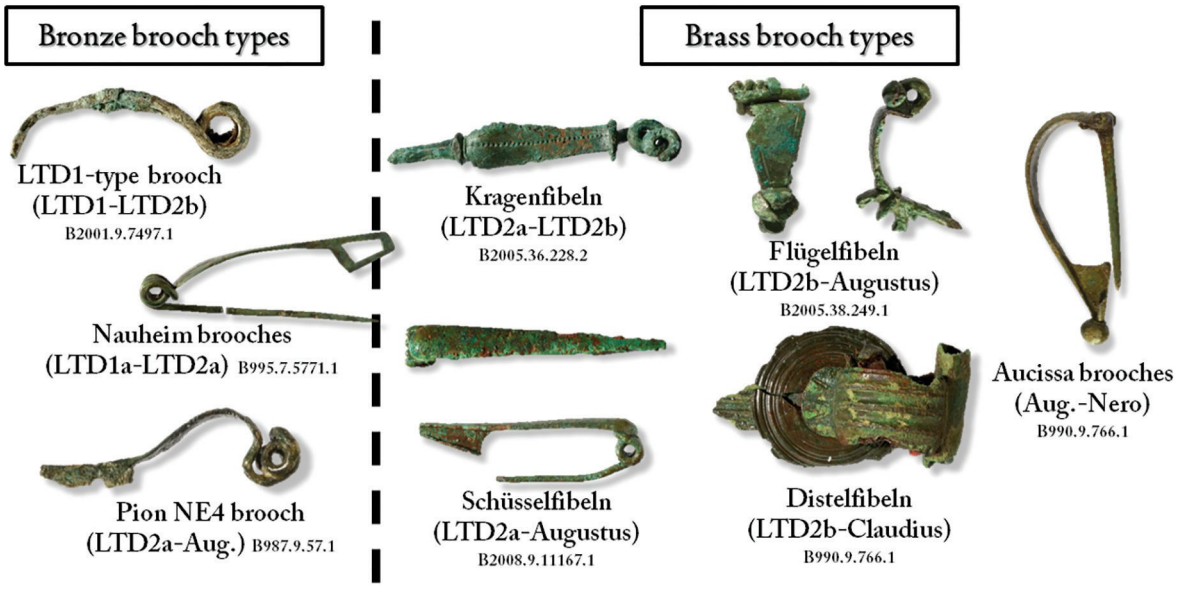


Fig. 6. A selection of basic brooch types spread between bronze and brass alloys (photos: Bibracte, Antoine Maillier).

It is interesting to compare this observation with a similar study undertaken by J. Istenič and Ž. Šmit on 77 brooches from the 1st century BCE from Slovenia.[18] These were analysed with both XRF and PIXE (Particle-Induced X-ray Emission) methods: J. Istenič and Ž. Šmit also found one main alloy pertaining to each brooch type, but with more instances of counterexamples (such as 4 non-brass out of 18 selected Alesia brooches, for example).

Although it has been suggested that early brass used in Temperate Europe was re-melted from Roman imports,[19] no domestic object originating from the Mediterranean and excavated in Bibracte has been evidenced to be cast out of brass. Among the numerous handles belonging to strainers, pans, *simpula* and Campanian metallic ware, spatulas and seal boxes, none show even the slightest traces of zinc. Almost all Roman military objects follow this trend, with two exceptions. The first one is a D-sectioned prism with two fixation bars adorned with a silver sheet (Inv. no. B2018.41.192.4), interpreted as decoration for a Roman soldier's *cingulum* (belt with straps). While made out of brass, its discovery in Domus PC2, a building still occupied in the later years of Bibracte, tends to make it evidence of the late 1st century BCE occupation of the site. The second one is a mesh mount from the top of a Roman scabbard found at Côme Chaudron (Inv. no. B2005.32.1985.4), which may date back to the Gallic Wars.[20]

Beside these observations 57 coins of different types have been tested as well to complete the existing analytic data. A new brass coinage was identified: the fairly rare SEGISV series (Fig. 7), traditionally attributed to the Segusiavii (Central Gaul) due to the legend probably referring to the tribe name, although its main findspot is actually Bibracte.[21] While not accurately dated, it is thought that this coinage starts in the 40s BCE.[22] It is not unreasonable to suggest that these coins, resembling or inspired by northern coinages of Gaul on the obverse,[23] and representing an eagle on the reverse (thus similar to some brass issues of southeastern Gaul such as the VOLC coinage), were issued in Central Eastern Gaul. Another rare brass coin was analysed during this campaign: a MAGVRIX type coin (Inv. no. B2007.9.10433.2), for which only two other coins have been identified and are kept at the Bibliothèque nationale (with unknown provenance).[24] Its estimated date of production is the same as that of the SEGISV coinage.



Fig. 7. 'SEGISV' type coin found in Bibracte, Inv. no. B991.8.165.2. Diameter: 10 mm (credits: Bibracte, Antoine Maillier).

18 Istenič – Šmit 2007.

19 Caley 1964, 3; Istenič – Šmit 2007, 146; Barbato 2015, 109.

20 Pernet *et al.* 2008, 130.

21 A total of 17 SEGISV coins have been analysed, 11 kept at Bibracte, 2 at the Musée d'Archéologie nationale (both were found at Bibracte) and 4 at the Bibliothèque nationale de France (with no indication of provenance). Other examples have been identified at Vendeuil-Caply, Mâlain, Lux, Lyon, Chassey-le-Camp, Nuits-Saint-Georges, Barry, Chambles and Alise-Sainte-Reine: Colbert de Beaulieu – Fischer 1998, 392–393.

22 Brenot – Scheers 1996, 62.

23 Scheers 1971, 38–75.

24 The similarities in iconography to the Carnutes' TVRONA/DRVCCA bronze coinage (no examples present at Bibracte) may indicate an attribution to the Carnutes tribe for the MAGVRIX: Troubady 2016, 170.

Perspectives

In a nutshell, this paper focused on the work led on monetary and non-monetary objects found in archaeological contexts at Bibracte, as part of the *Celtic Brass Coins* project investigating the introduction of brass in Gaul. We found no evidence of the use of brass objects at Bibracte before the middle of the 1st century BCE, and demonstrated the systematisation of the use of this alloy for brooches soon after this date. Only scarce evidence is available for brass artefacts imported from the Mediterranean region and, reversely, numerous residues show large-scale local production of brass objects, especially brooches.

It is to be noted that those results, currently still being processed, present two main limitations. The first one is the small size of sampling for some object types, especially some brooch types. Secondly, the fact that Bibracte is a distinct context, linked to Rome by long-standing commercial and political relations, and not necessarily representative of Gaul as a whole. Thus, further examinations will be required to decide this question: more detailed processing of the data acquired at Bibracte, including statistical analyses and chronological cross-referencing; but also, additional investigations on 1st century BCE non-monetary artefacts from all around the Gallic territories.

Funding

The five-year (2023–2028) Celtic Brass Coins – Brass monetary alloys in La Tène Culture: New perspectives on the monetary practices in the Celtic Society project is funded by the French National Research Agency for five years (project contract number: ANR-22-CE27-0013).

Acknowledgements

The authors wish to thank all the participants of the project who made this study possible, Sylvia Nieto-Pelletier, head of the project, and Maryse Blet-Lemarquand (IRAMAT) for their help and guidance, and most notably Laïla Ayache and Vincent Guichard for allowing the analysis of objects from Bibracte, as well as the rest of the research centre and museum staff of BIBRACTE for their warm welcome for the duration of our stay there.

References

Barbato, M. 2015: The coins of Clovius and Oppius (RRC 476/1 and 550/1-3): New evidence from find-spots. *The numismatic chronicle* 175, 105–117.

Bliujienė, A. – Petrauskas, G. – Bagdzevičienė, J. – Babenskas, E. – Rimkus, T. 2021: Essential changes in the composition of copper alloys reveal technological diversities in the transition from the earliest iron age to the early roman period in Lithuania. *Archaeologia Baltica* 28, 39–62. https://doi.org/10.15181/ab.v28i0.2281

Bourgarit, D. – Thomas, N. 2015: Ancient brasses: misconceptions and new insights. In: Hauptmann, A. – Modaressi-Tehrani, D. (eds): *Archaeometallurgy in Europe III: Proceedings of the 3rd International Conference, Deutsches Bergbau-Museum Bochum, June 29 – July 1, 2011.* Bochum, 255–262.

Brenot, C. – Scheers, S. 1996: *Catalogue des monnaies massaliètes et monnaies celtiques du musée des Beaux-Arts de Lyon.* Leuven.

Bursák, D. – Danielisová, A. – Magna, T. – Pajdla, P. – Míková, J. – Rodovská, Z. – Strnad, L. – Trubač, J. 2022: Archaeometric perspective on the emergence of brass north of the Alps around the turn of the Era. *Scientific Reports* 12, 374. https://doi.org/10.1038/s41598-021-04044-7

Caley, E. R. 1964: *Orichalcum and related ancient alloys: origin, composition and manufacture with special reference to the coinage of the Roman Empire.* Numismatic Notes and Monographs 151. New York, 1–115.

Castelle, M. – Dillmann, P. – Vega, E. – Blanc-Rhiel, C. – Vilain, A. – Chastang, P. – Anheim, E. 2020: Seal the deal: An extensive study of European historical copper-based seal matrices using a multimodal protocol. *Journal of Archaeological Science* 113, 105061. https://doi.org/10.1016/j.jas.2019.105061

Colbert de Beaulieu, J.-B. – Fischer, F. 1998: *Recueil des inscriptions gauloises (RIG), IV. Les légendes monétaires*. Supplément à Gallia 45. Paris, 392–393.

Di Fazio, M. – Felici, A. C. – Catalli, F. – De Vito, C. 2019: Microstructure and chemical composition of Roman orichalcum coins emitted after the monetary reform of Augustus (23 B.C.). *Scientific Reports* 9, 12668. https://doi.org/10.1038/s41598-019-48941-4

Dubos, J. – Guillaumet, J.-P. – Dubos, M. – Giudicelli, M. 2017: L'enseigne au sanglier de Soulac-sur-Mer du Ier siècle a.C.: étude et reconstitution technique. In: Marion, S. – Deffressigne, S. – Kaurin, J. – Bataille, G. (eds): *Production et proto-industrialisation aux Âges du Fer, perspectives sociales et environnementales: actes du 39e colloque international de l'Association Française pour l'Étude de l'Âge du Fer, Nancy 14–17 mai 2015*. Collection Mémoires 47. Bordeaux, 475–495. https://shs.hal.science/halshs-03282595/document

Fellmann, R. – Stern, W. B. – Burkhardt, A. – Rehren, Th. 1999: Das Zinktäfelchen von Thormebodewald auf der Engehalbinsel bei Bern und seine keltische Inschrift. *Archéologie dans le canton de Berne: chronique archéologique et textes* 4A/4/B, 133–175. https://www.e-periodica.ch/cntmng?pid=akb-001%3A1999%3A4%3A%3A721

Heginbotham, A. – Bassett, J. – Bourgarit, D. – Eveleigh, C. – Glinsman, L. – Hook, D. – Smith, D. – Speakman, R. J. – Shugar, A. – Van Langh, R. 2015: The copper charm set: A new set of certified reference materials for the standardization of quantitative X-ray fluorescence analysis of heritage copper alloys. *Archaeometry* 57:5, 856–868. https://doi.org/10.1111/arcm.12117

Istenič, J. – Šmit, Ž. 2007: The beginning of the use of brass in Europe with particular reference to the south-eastern Alpine region. In: La Niece, S. – Hook, D. R. – Craddock, P. T. (eds): *Metals and mines: Studies in archaeometallurgy. Selected papers from the conference metallurgy: A touchstone for cross-cultural Interaction, held at the British Museum 28–30 April 2005*. London, 140–147. https://www.nms.si/en/files/default/muzej/zaposleni/Istenic/MetalsMines-2007_140-147.pdf

Nieto-Pelletier, S. – Bossavit, C. – Blet-Lemarquand, M. forthcoming: The *Celtic Brass Coins* project: production and use of coined brass in Gaul at the end of the Late Iron Age. First results. *Acts of the 6th international archaeometallurgy in Europe conference, held in Falun (Sweden), 11–14 june 2024*.

Nieto-Pelletier, S. – Bossavit, C. – Blet-Lemarquand, M. 2024: Sur les traces des premiers monnayages celtiques en laiton. *Microscoop* Hors-série octobre 2024, 12–13. https://hal.science/hal-04820872v1/document

Pernet, L. – Poux, M. – Teegen, W. R. – Flouest, J.-L. – Guillaumet, J.-P. – Meyland, Fr. 2008: Militaria gaulois et romains sur l'oppidum de Bibracte, Mont Beuvray (Nièvre). In: Poux, M. (ed.): *Sur les traces de César, Militaria tardo-républicains en contexte gaulois: Actes de la table ronde de Bibracte, 17 octobre 2002*. Collection Bibracte 14. Glux-en-Glenne, 103–139. https://hal.science/hal-03953060v1/document

Pernot, M. – Hurtel, L. 1987: Caractérisation métallographique de tôles d'alliages base cuivre des époques Celtique et Gallo-Romaine. *Bulletin de la Société Préhistorique Française* 84:8, 238–247. https://doi.org/10.3406/bspf.1987.9835

Scheers, S. 1971: Les monnaies des peuples belges portant une tête humaine de face. *Revue Numismatique* 13, 38–75. https://doi.org/10.3406/numi.1971.1006

Troubady, M. 2016: Les bronzes tardifs de Loire moyenne, des émissions turones? *Bulletin de la société française de numismatique* 71:5, 166–173.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 327–358. 10.17204/dissarch.suppl.5.2026.327

Sacrificial places in funerary contexts of Roman Thrace

Character and meaning of ritual places in grave contexts of Roman Thrace—evidence from the Yambol region

Dorothea Mildová ✉
Institute of Classical Archaeology, Charles University, Prague, Czech Republic
mildovad@hotmail.com

Received 3 November 2025 | Accepted 5 September 2026 | Published 18 November 2026

Abstract: This article explores the phenomenon of offering sites within funerary practices in the Roman province of Thrace, specifically in the Yambol region of southeastern Bulgaria. The ritual practice also known as *trizna*, or sacrificial offering, dates back to Thracian times and continues to the Roman period. It was commonly performed near graves, both within barrow burials and flat necropolises. Offerings typically consisted of specific types of ceramic vessel(s) and sometimes other associated artefacts, such as small metal objects, animal bones, and charcoal, suggesting a connection to ritual offerings, feasting or food preparation. This work offers the first systematic study of sacrificial places in funerary contexts of Roman Thrace based on an analysis of 60 offering places from 21 archaeological sites dated to the 1st–4th centuries AD. The study investigates these patterns by comparing the material from different sites, analysing the traces left on the artefacts, and considering their depositional contexts. On this basis, a typology is proposed distinguishing: 1) deposits of complete ceramic vessels; 2) assemblages of deliberately broken vessels; 3) combined deposits of intact and fragmentary ceramics; and 4) rarer deposits with metal vessels. Associated animal sacrifices (horses, horse-and-cart, dogs) and other ritual structures are also considered. The results indicate a persisting local tradition rooted in Thracian practices yet adapted and further developed during the Roman period.

Keywords: Thrace, burial rituals, pottery deposits, offerings, Roman period

Introduction

Rituals and customs represent a fundamental category of human behaviour that reflects deeply rooted cultural traditions. They may be defined as repetitive actions or ceremonies imbued with symbolic meaning, typically performed during key moments of life—birth, marriage, death, initiation into adulthood—or as part of religious practice. Their manifestation can be individual, yet they are often a collective expression of an entire community. Despite their diversity and social significance, archaeology can only capture a fraction of such practices—those that leave material traces.

Within archaeology, ritual behaviour is most readily observable in the sphere of funerary practices. Funerary customs can be defined as a set of rituals and traditions performed by a community to reinforce the boundary between the living and the dead. These ritual sequences usually follow a stable repertoire of actions that culminate in the creation of a specific burial context. Some of these actions are transformed into material expressions, thus becoming archaeologically visible. The tangible components of funerary practice include, above all, the graves themselves, the accompanying grave goods, and sacrificial or offering places situated in their immediate vicinity. Together, these

✉ Corresponding author

elements formed a complex image of the funerary ceremony, reflecting the ideology, social organization, and religious beliefs of the given community.

Aims of the study

This study focuses on one of the phenomena that constitute part of the funerary ritual—the so-called sacrificial places located near graves. Sacrificial places represent manifestations of ritual activities that took place outside the burial pit and are therefore sometimes overlooked in archaeological interpretations. The aim of the research was to collect and analyse available data on sacrificial places in the funerary contexts of Roman Thrace, with a particular focus on the Yambol region in southeastern Bulgaria.

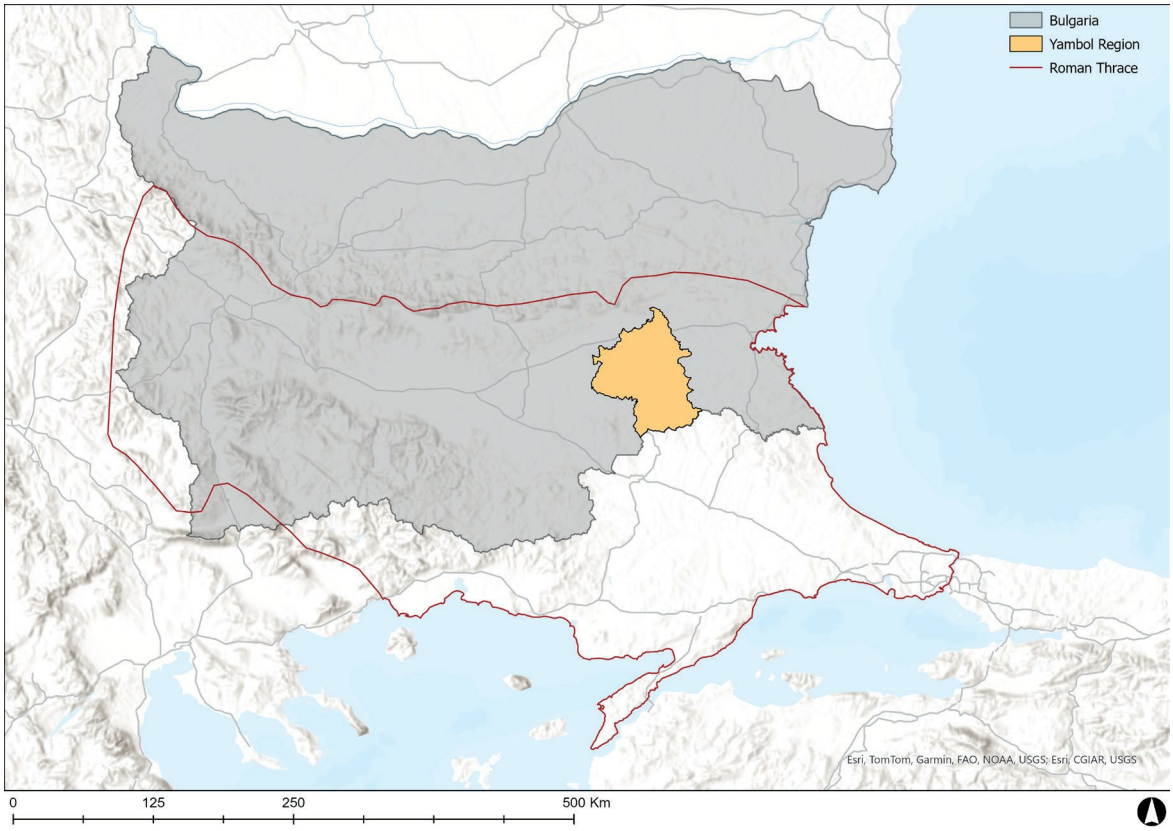


Fig. 1. Map of the southeastern Balkan Peninsula showing the Yambol region and the territorial extent of Ancient Thrace (map by P. Tušlová).

The article concentrates primarily on sacrificial places containing ceramic vessels, which represent the most numerous category within the studied area. All accessible data were gathered and systematically evaluated with respect to these sites. In addition, attention was given to animal sacrifices, carts, and other ritual structures, which in several cases occurred in association with the ceramic assemblages. These associated features, in which ceramic vessels did not constitute the main component, are represented here only by a selected sample; therefore, this study does not present a catalogue of all such contexts.

One of the principal objectives was to establish a typology of sacrificial places with an emphasis on those containing ceramic vessels, and to compile a comprehensive catalogue, the first of its kind for both the studied region and the phenomenon itself. The article thus represents the first systematic analysis of sacrificial places in the context of Roman-period burials in Thrace with specific focus on the Yambol region.

Geographical and historical context

Given the wide geographical distribution and long tradition of the ritual practices under consideration, this study focuses on a specific area—the Yambol region in southeastern Bulgaria—and on burial contexts dated between the 1st and 4th centuries AD.

Ancient Thrace was situated on the northern periphery of the Greek world and occupied the southeastern part of the Balkan Peninsula. Its core territory was bounded by the Aegean and Marmara Seas to the south, the Black Sea to the east, the Danube River and the Stara Planina Mountains to the north, and the Morava and Struma River valleys to the west (Fig. 1).[1] Although the borders of Thrace fluctuated over time, its main territorial nucleus remained within the boundaries of present-day Bulgaria, including the Yambol region under study.[2] The region covers an area of approximately 3,360 km² and comprises five administrative districts: Bolyarovo, Elhovo, Yambol, Straldzha, and Tundzha (Figs 1–2).

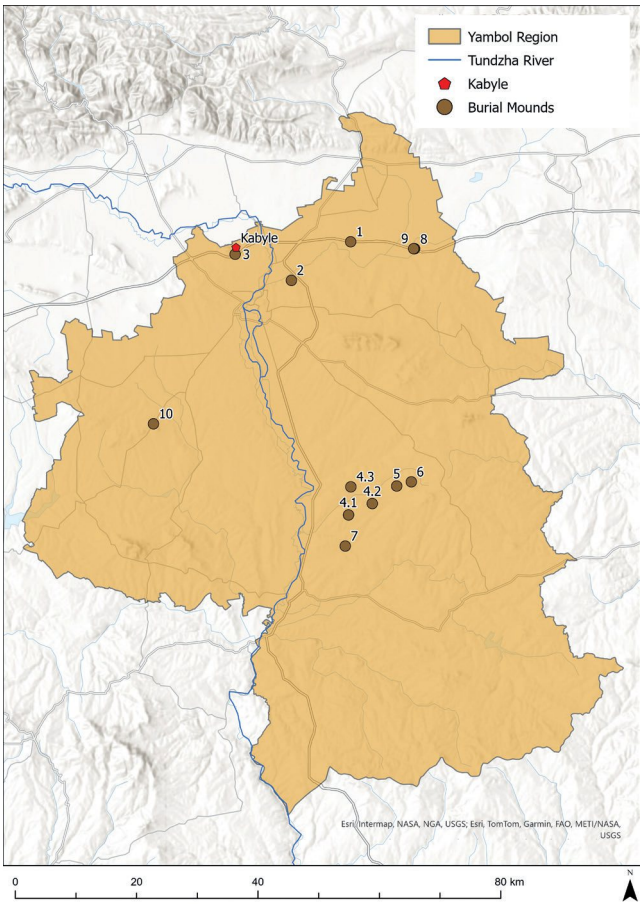


Fig. 2. The Yambol region with archaeological sites included in the study. 1 – Straldzha necropolis, 2 – Golemia Kayryak necropolis, 3 – South necropolis of Kabyle, 4 – Elhovo area: 4.1 – Raykova mogila, 4.2 – Koz Bunar mogila, 4.3 – Kral Mesar mogila, 5 – West necropolis of Borisovo, 6 – East necropolis of Borisovo, 7 – Kirilovo necropolis, 8 – Palauzovo necropolis, 9 – Palauzovo necropolis 2, 10 – Mogila no. 10000907 (after AIS AKB database; map by P. Tušlová).

Chronologically, the study is limited to the period of Roman administration in Thrace, spanning the 1st to 4th centuries AD. This timeframe corresponds to the establishment of the Roman province of Thrace in AD 45/46 and ends with the Battle of Adrianople (modern Edirne) in AD 378, in which the Romans suffered a defeat by the Goths.[3]

Sacrificial Places

The studied features are generally referred to as sacrificial places, further categorized according to the nature of the artifacts recovered. Such a place may contain ceramic or metal vessels, animal sacrifices, carts, altars, fireplaces, or even empty burial mounds. The specific designation of an individual place derives from its content—for instance, a context containing a sacrificed horse is termed a 'sacrificial place with a horse'.

In this study, the term sacrificial place is used as an umbrella term encompassing all contexts associated with ritual activity in connection with graves. The term 'object' refers to a discrete assemblage

1 Bouzek – Graninger 2015, 13.

2 For more historical background: Mazarov 2005; Haynes 2011; Iliev 2015; Theodossiev 2015; Zahrnt 2015.

3 Lozanov 2015, 87–88.

of artifacts—of any character—originating from a sacrificial context. If the assemblage includes ceramic vessels, it is referred to as a 'sacrificial place with ceramics' or 'ceramic assemblage'.

Sacrificial places from ancient Thrace can be divided into three principal types, which may appear in combination within specific depositional contexts:

- sacrificial places with vessels—ceramic or bronze;
- animal sacrifices—horses, horse-and-cart burials, and dogs;
- other ritual structures—such as altars or related building elements.

The first type of sacrificial place—those containing vessels—is the only category that has, to some extent, acquired the unknown designation *trizna* within academic discourse. The term *trizna* originates from the Slavic linguistic tradition and denotes a ritual act associated with a funerary feast. In Bulgarian archaeological literature, the term is frequently used to describe archaeological contexts situated outside graves that contain ceramic assemblages, although its original meaning is chronologically much later and unrelated to the Roman–Thracian cultural environment. In the present study, the term *trizna* is employed solely as a technical designation for sacrificial places with ceramics, corresponding through its characteristics to the most common interpretation—a funerary feast or commemorative meal (see further: 'b) Sets with Numerous Broken Vessels' – *trizna*). However, it must be emphasized that the term is understood here in a purely conventional sense, functioning as an established label for a particular category of ceramic assemblages, rather than as a direct reference to an actual funerary banquet or ritual feast.

Sacrificial places in the context of Thracian graves

The burial practices of the Thracians in the pre-Roman era were characterized by biritualism. From the Late Bronze Age through the Iron Age, both burial rites were practised simultaneously, though with varying intensity. The methods of interring the deceased display a wide range of burial types and forms, which may differ slightly over time.[4]

Sacrificial places in their vicinity first appeared in the Bronze Age,[5] primarily as part of the newly introduced custom of constructing burial mounds,[6] and continued throughout the Iron Age.[7] However, there is currently no detailed study dealing with the development of their forms, the intensity of their creation, regional distinctions, or their spatial distribution. It is therefore not possible to determine whether this tradition was ever interrupted or carried out continuously.

Nevertheless, available data indicate that the phenomenon of sacrificial places appeared in Thrace long before the arrival of the Romans, and that during the period of Roman rule, this tradition remained a distinctly local cultural element.

After Rome established its control over the province of Thrace, the funerary rite underwent certain changes. Compared with the two centuries preceding the establishment of the province, cremation began to prevail over inhumation.[8] The newly arrived Roman population, however, maintained a smooth continuity with Thracian traditions—for instance, by continuing to construct burial mounds

4 Getov 1970, 1; Petropoulou 1988, 31; Leshtakov 2011.

5 Dimitrivova *et al.* 2024, 268, 270, 286, 274, Obr. 10.4; Tušlová *et al.* 2024, 58; Bakardzhiev – Illiev 2006, 77; Borislavov – Ivanova 2016, 185.

6 Alexandrov – Włodarczak 2024, 299.

7 Agre 2004, 130; Nehrizov 2013, 169, Obr. 2.3–4, Obr. 3; Alexandrov *et al.* 2020; Balabanov – Pantov 2020, 562; Dimitrova – Georgieva 2020, 513–515; Valchev 2023, 297.

8 Getov 1970, 1.

and by reusing those from the Late Iron Age (5th–1st centuries BC).[9] This continuity also applies to sacrificial places, which are consistently recorded in all three main forms both before and after the foundation of the province.

Methodology

The methodological approach was based on the analysis of 60 recorded sacrificial places originating from 21 burial complexes dated to the 1st–4th centuries AD. The vast majority of these burial complexes (20 in total) consist of either individual burial mounds or small burial grounds containing up to five mounds. In one case, it remains unclear whether the site represents a flat burial ground or a ploughed mound.

All data were compiled into a catalogue containing detailed descriptions of individual sacrificial places and analyses of the associated material finds. The evaluation focused primarily on the form of deposition of ceramic vessels—whether intact, intentionally damaged, or deliberately destroyed—as well as on their quantity, traces of fire, evidence of purposeful alteration, and other indicators of ritual handling.

Particular attention was devoted to the spatial relationships of the sacrificial places, both in relation to individual graves and to the broader context of the burial mound structures. The dating of the objects was based mainly on the chronology of adjacent graves, and in some cases on numismatic evidence, which, it should be noted, was minimal.

The collected sacrificial places ultimately form a synthetic overview of traditional ritual practices performed within grave contexts in the Yambol region during the 1st–4th centuries AD. This study thus provides a comprehensive typological and contextual framework for understanding sacrificial practices from this period. The topic is particularly suitable for further research, as it has not yet been systematically explored, despite the wealth of available archaeological data.

Sacrificial places with vessels in the Roman Period – Yambol region

Sacrificial places containing ceramic vessels represent the most widespread category of such visible ritual places and can be further divided into several subtypes described below. As discussed in relation to the so-called funerary feasts *(trizna)*, these contexts are often associated with the offering of food and drink or with communal feasting rituals. It should be emphasized, however, that although archaeobotanical data from Thrace confirm the existence of food offerings in graves, comparable evidence for sacrificial places located outside graves is currently lacking.[10]

The Thracian tradition of depositing ceramic vessels outside burials largely retained its visual appearance. With the arrival of the Roman population, the repertoire of grave and ritual artifacts changed, reflecting new vessel forms and stylistic elements characteristic of Roman material culture. In general terms, this funerary practice continued smoothly into the Roman period, although the extent to which its symbolism and function were transformed remains uncertain.

During the Roman period, sacrificial places containing vessels were particularly frequent in the Yambol region. Out of a total of 60 documented sacrificial places, 48 contained ceramic vessels, one contained metal vessels, and one featured a combination of both materials. Altogether, 238 ceramic and 9 metal vessels were recorded. These numbers are likely underestimated, since for 15 places described in the literature as assemblages of fragmentary ceramics of undetermined quantity or form, it was not possible to specify the exact number of vessels.

9 Pramatarov 2018, 5.

10 Hristova 2022, 6.

In most cases, sacrificial places with vessels were found in the vicinity of graves. There are, however, three exceptional cases—two assemblages of broken vessels and one combined assemblage—which were discovered on an empty mound, accompanied by the sacrifices of a horse and a dog, but without a human burial. This phenomenon of empty mounds with animal sacrifices is probably connected with a cult of death and Thracian tradition which started before the 2nd millennium BC.[11]

Typology of sacrificial places with vessels

Sacrificial places containing vessels can be divided into four principal types, each comprising several subtypes:

1) Sacrificial places with complete ceramic vessels
    a) without animal bones, charcoal, or traces of fire
    b) with animal bones or charcoal in the vicinity, but without traces of fire
    c) deposited in an area affected by heat
2) Sacrificial places with deliberately destroyed ceramic vessels
    a) With a low quantity of vessels
    b) With a high quantity of vessels
        I) Assemblages of tableware – '*trizna / triznas*'
        II) Assemblages of cooking vessels
        III) Mixed assemblages
3) Sacrificial places with combined deposits of ceramic vessels
4) Sacrificial places with metal vessels

1) Sacrificial places with complete ceramic vessels

This type of sacrificial place includes horizontally or vertically deposited vessels that were not deliberately destroyed. Most often, these are individually placed vessels showing no traces of fire and no associated artifacts. All ceramic vessels from these places were wheel-made.

In the Yambol region, 16 sacrificial places of this type were recorded, containing a total of 30 vessels. Contexts are characterized by a low number of deposited vessels per assemblage, most commonly a single vessel (10 places). Among the assemblages with multiple vessels, the average number is 1.8 vessels per place, with the highest count being five vessels in one place.

Based on the dating of individual burial mounds, the deposition of complete ceramic vessels occurred continuously from the 1st century AD to the late 3rd or early 4th century AD. Most of the recorded examples date to the 2nd century AD, although this may partly reflect the uneven chronological representation of excavated mounds from different periods.

a) Sacrificial places with a single complete ceramic vessel

A total of ten sacrificial places contained only one complete vessel. The recorded forms include jugs, bowls, mugs, a pot, and a plate (Fig. 3). In most cases, no other artifacts accompanied the vessels; in two instances, one place contained a coin, and another included beads and a fragment of a glass *balsamarium*.

According to the presence of animal bones, charcoal, and traces of exposure to fire, these places can be divided into three subtypes:

11 Cholakov *et al.* 2016, 24; Alexandrova 2013, 30.

a) without animal bones, charcoal, or traces of fire – 7×;
b) with animal bones or charcoal in the vicinity, but without traces of fire – 2×;
c) deposited in an area affected by heat – 1×.

None of the vessels, except for the one deposited directly in a burnt area, show any signs of fire exposure.

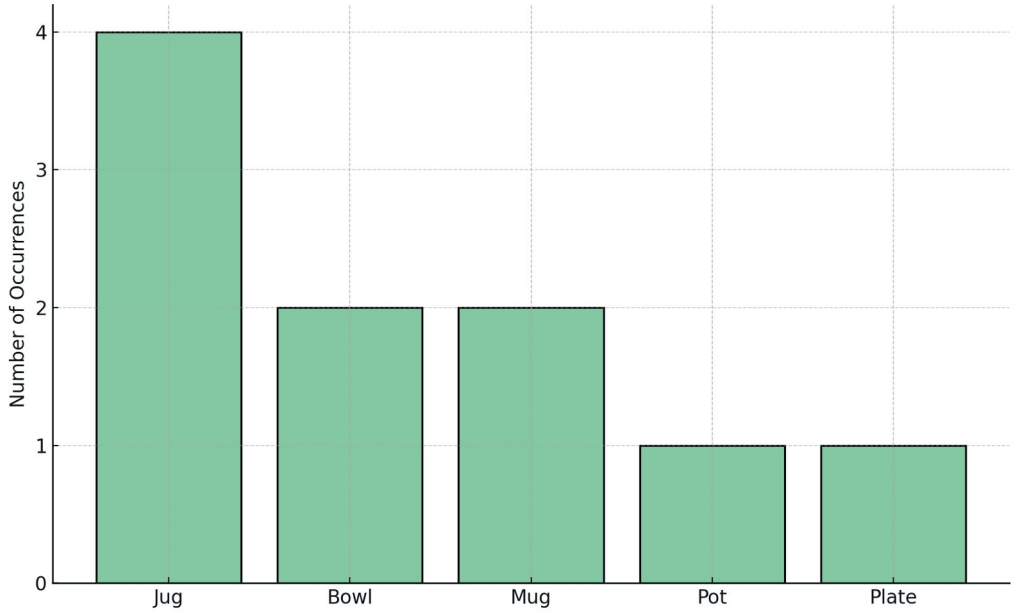


Fig. 3. Number of individual vessel forms in sacrificial places with a single complete ceramic vessel in Yambol region (by D. Mildová).

b) Sacrificial places with multiple complete ceramic vessels

A total of six sacrificial places contained more than one complete vessel. These assemblages consisted of two to five vessels. In one case, it was not possible to determine the exact number or forms.

The following vessel types were recorded: jugs, mugs, baking dishes, bowls, table amphorae, a plate, a krater, and a transport amphora (Fig. 4). In four out of five determinable cases, at least one jug was present, while the remaining one contained a mug.

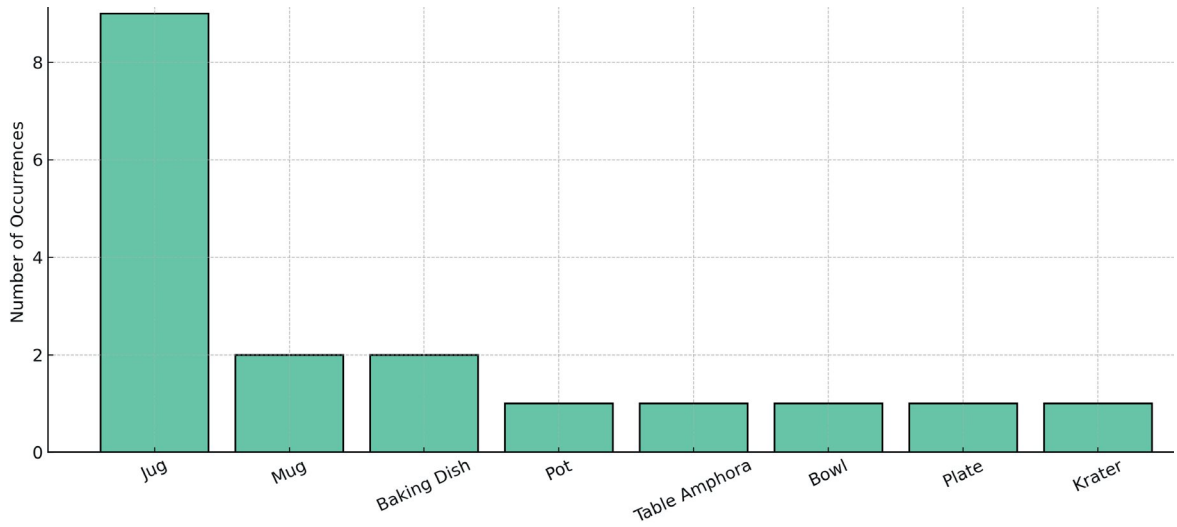


Fig. 4. Number of individual vessel forms in sacrificial places with more than one complete ceramic vessel in Yambol region (by D. Mildová).

In most cases, no additional artifacts were found; only one assemblage contained a coin and a fragment of a glass vessel. The assemblages can be classified in the same way as those with single vessels, except for the last subtype:

a) without animal bones, charcoal, or traces of fire – 4 assemblages;
b) with animal bones or charcoal present, but without traces of fire – 3 assemblages.

Overall, in both types, jugs predominated among the complete-ceramic sacrificial places, occurring in eight out of fifteen assemblages. Jugs were deposited either individually or in pairs (Fig. 5).



Fig. 5. Example of sacrificial place with deposition of whole vessels from southern necropolis of Kabyle (after Mikov *et al.* 2018, 316, Fig. 13).

When found together with other vessel forms, these typically included baking dishes, mugs, pots, or plates. In cases of more vessels but without jugs, the assemblage usually contained a mug or a bowl, perhaps to hold some liquid.

In three assemblages (out of 15), the vessels were deliberately damaged: one contained a jug with a pierced bottom (deposited with another jug and a mug)[12] (Fig. 6), another a mug with a drilled hole (deposited individually),[13] and the third a mug with a drilled hole placed inside a complete krater.



Fig. 6. Deliberately damaged jug by pierced bottom from Golemia Kayryak necropolis (Barrow 5, Feature 6; Włodarczak *et al.* 2024, 15; photo by P. Tušlová).

The vessels were most often deposited at the level of the ancient surface (9×), but were also found within the mound embankment (4×) or in pits dug into the subsoil (3×). In four cases, the context could not be determined.

2) Sacrificial places with deliberately destroyed ceramic vessels

Sacrificial places containing deliberately destroyed ceramic vessels comprise assemblages of fragmentary pottery that exhibit clear traces of intentional breakage. In the Yambol region, twenty-three such sets have been recorded. From this number, only eight places could be examined in this work due to incompletely published information. These assemblages were classified according to their size into:

a) small sets (up to three vessels);
b) large sets (so-called *trizna* / *triznas*).

This group is methodologically challenging. As mentioned, several assemblages are introduced in the literature only briefly, described merely as deposits of intentionally broken vessels without detailed contextual information. In many cases, the number, forms, or traces of manipulation are not specified, which prevented 15 such incomplete sets from being fully included in the evaluation. Based on available data, the dating of these sacrificial places ranges from the second half of the 1st century AD to the late 3rd century AD, with most examples—similarly to the group with complete vessels—belonging to the second half of the 2nd century AD.

a) Sets with a small number of ceramic vessels

This subgroup includes assemblages containing no more than three intentionally broken vessels (Fig. 7). At least five sacrificial places of this type were documented, of which three are examined. Identified vessel forms are three pots and two jugs.



Fig. 7. Example of sacrificial place with low quantity broken vessels from Straldzha necropolis containing two jugs and hand-made pot from Trizna 8, Mogila II (after Cholakov *et al.* 2016, 17, 181, Fig. 98).

12 Włodarczak *et al.* 2024, 15.

13 Iliev – Bakardzhiev 2008, 241; Tušlová 2020.

One site contained two jugs and one pot, while two others included a single pot each. It is noteworthy that all three pots were handmade. At a fourth site—where vessel forms could not be precisely determined—both handmade and wheel-thrown pottery were present. It can therefore be assumed that most of these sacrificial places (at least four out of five) contained at least one handmade vessel. This type thus shows the highest representation of handmade pottery, sharply distinguishing it from the group with complete vessels, where no handmade forms occur.

No associated artifacts were found with the vessels, except for a single flint piece, whose relationship to the pottery remains uncertain. The vessels from the three-vessel set bore traces of contact with fire, and burnt animal bones were found in association with one pot. No such traces were observed in the remaining three assemblages.

The vessels were deposited at the level of the ancient surface or within one of the mound embankment layers (1×), but never in pits or recessed structures.

b) Sets with numerous broken vessels – trizna

This group of sacrificial places comprises assemblages with a large number of ceramic vessels that were deliberately broken into medium to highly fragmented pieces (Fig. 8). At least seventeen such sets have been recorded in the Yambol region, however, only six could be examined in this study. The number of vessels within individual sets ranges from 7 to 32, and the overall number of vessels from the six examined places totals 103. Nevertheless, examples containing more than 50 vessels are known from sites outside the region.[14]

The assemblages are dominated by tableware, especially vessels used for the consumption of food and drink. Bowls (60 pcs) and mugs (15 pcs) are the most frequent, while plates appear less commonly. In addition to tableware, kitchenware is also present—mainly pots (19 pcs), as well as a krater and lids. The pottery is predominantly wheel-thrown, with the exception of three handmade pots documented in only two assemblages. In contrast to other groups, no jugs were recorded in the assemblages.



Fig. 8. Example of sacrificial place with numerous intentionally broken vessels from Straldzha necropolis from Trizna 21, Mogila V (after Cholakov *et al.* 2016, 29–30, 215, Fig. 186).

Based on their composition, three subgroups can be distinguished:

1) 'Banquet' pottery sets—memorial feasts (*trizna / triznas*) – dominated by bowls, mugs, and plates, with only minimal representation of pots (3 sets) (Fig. 9);
2) sets with pottery for food preparation—dominated by pots, or showing a balanced ratio of both functional forms (2 sets) (Fig. 10);
3) combined sets—dominated by banquet pottery but containing a higher number of pots (1 set) (Fig. 11).

In the context of these assemblages, fragments of glass vessels (mainly cups, 3×) (Fig. 12) and metal objects (mostly unidentifiable, occasionally a knife handle) were also recorded. Beads and coins were not found. In most cases (4×), charcoal and burnt animal bones were present, and a considerable portion of the vessels exhibit traces of exposure to fire, usually in the form of localized scorching (Fig. 13).

14 Agre 2008b, 233–235.

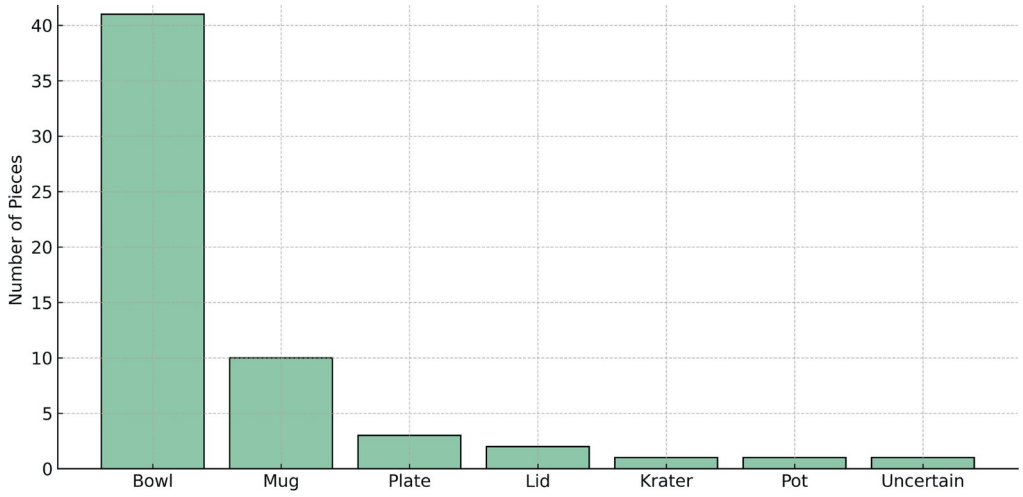


Fig. 9. Graph showing represented ceramic vessel forms in 'Banquet' pottery sets—upper left (by D. Mildová).

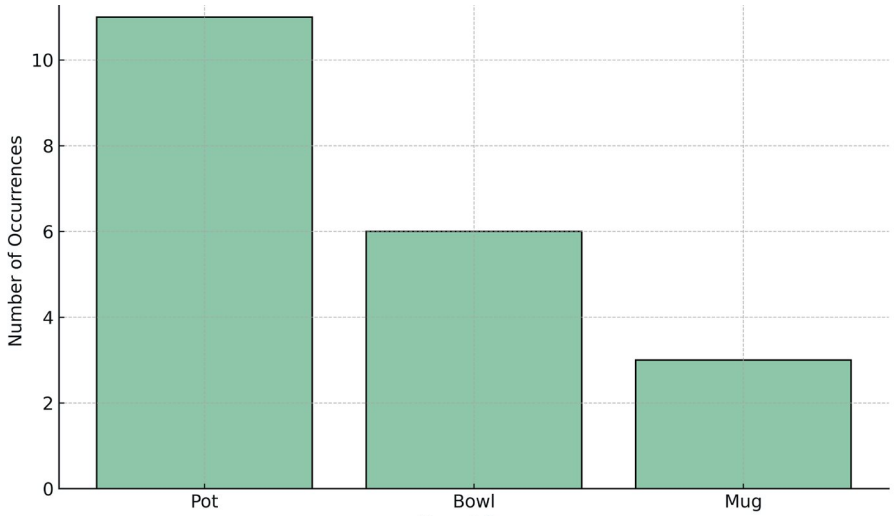


Fig. 10. Graph showing represented ceramic vessel forms in sets with predominate cooking pottery—upper right (by D. Mildová).

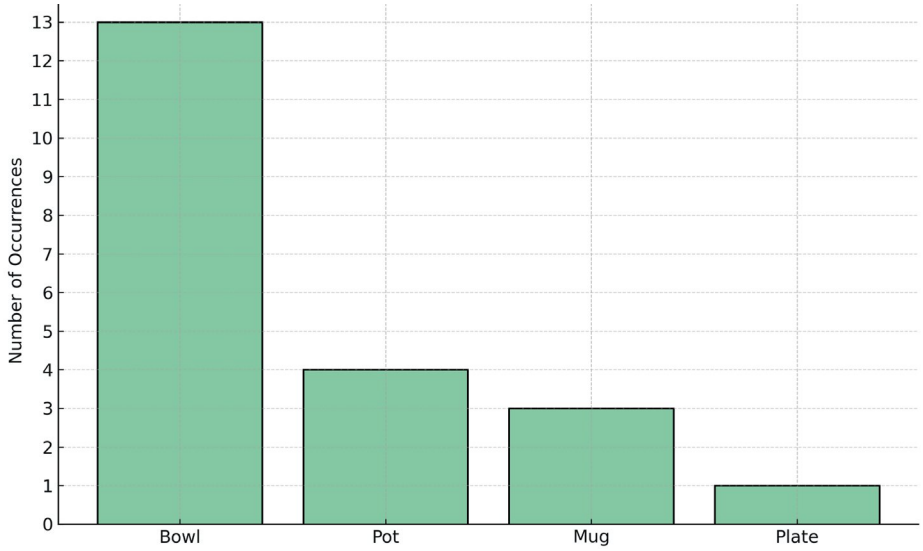


Fig. 11. Graph showing represented ceramic vessel forms in sets with combined forms—serving pottery with cooking pottery (by D. Mildová).

A feature that connects of all assemblages is high fragmentation, which often makes complete reconstruction impossible. Diagnostic sherds only allow for estimates of the original number of vessels. This condition suggests that the pottery was intentionally broken, either outside the sacrificial place and subsequently deposited, or directly on the place, with some fragments removed or redistributed outside the funerary context. The precise reason and location of the breakage, however, remain unclear.

All evaluated sacrificial places were deposited on the contemporary ground surface. In unevaluated cases, deposition within mound embankments has also been documented.



Fig. 12. Fragments of glass vessels from Trizna 21, Mogila V, from Straldzha necropolis (after Cholakov *et al.* 2016, 215, Fig. 187).

3. Sacrificial places with combined deposits of ceramic vessels

This type of sacrificial place contains low to moderately fragmented pottery deposited together with complete vessels within a single structure (Fig. 14). Its overall character is closely related to the previous type associated with 'banquet' pottery, but unlike the 'Sets with numerous vessels containing charcoal and bones' *(trizna)* type, no assemblage of this category contains highly fragmented pottery. A total of three places of this kind were recorded, although in one case the exact number and shape of the vessels could not be determined.

In the Yambol region, the number of deposited vessels ranges from six to thirty-four pieces. The assemblages are dominated by tableware, particularly vessels intended for the consumption of food and beverages. Among them, bowls (3 sets = 33 pieces) and mugs (3 sets = 10 pieces) clearly predominate (Fig. 15).



Fig. 13. Example of localized scorching—traces of ash—on a surface of sherds from a set of numerous broken vessels (Golemia Kayryak necropolis, Barrow 5, Feature 5—the second half of the 2nd century – the first quarter of the 3rd century AD (photo by D. Mildová).

In addition to tableware, kitchen ceramics are also present, including pots, jugs (otherwise absent in the previous category), lids, transport amphorae, and a krater. All vessels are wheel-thrown without exception.

The vessels that were kept complete were bowls, mugs, plates, a jug, and a lekythos. The remaining vessels were deliberately broken.

Additional artifacts were found in all assemblages, including fragments of glass vessels, unidentified bronze objects, a spindle whorl, and a fragmentary iron knife. The knife was recovered from

the largest recorded assemblage, which contained 34 vessels, including seven pots. As in the previous type with deliberately broken pottery, the knife occurred only in a set combining tableware and kitchenware, forming a complete functional unit.

Within the assemblages, animal bones (1×), charcoal (1×), and a combination of both (1×) were identified. In contrast to the previous type, traces of exposure to fire were present in only one assemblage, indicating a different ritual treatment of the deposited artifacts.



Fig. 14. Example of sacrificial place with combined deposits of ceramic vessels (Straldzha necropolis, Mogila IV, Trizna 1; after Cholakov *et al.* 2016, 199, Fig. 142).

A distinctive feature of this type is the combination of deliberately destroyed and fragmented vessels—often impossible to reconstruct—with intact vessels deposited in the same structure. The complete vessels were either placed separately (3×) or nested inside one another (1×) (Fig. 14). The nesting of vessels may suggest that they were empty at the time of deposition, thus symbolically representing offerings rather than containing sacrificial material themselves.

The deposits were placed on the contemporary surface, within mound fills, or in shallow pits cut into the subsoil. Most assemblages were found in the vicinity of graves, but the largest one, comprising 34 vessels, was discovered in an empty mound, together with two additional sets of broken pottery and the sacrifices of a horse and a dog.[15]

Due to the small sample size, the chronological determination of this type remains uncertain, although the documented finds date broadly from the early 2nd to early 3rd century AD.

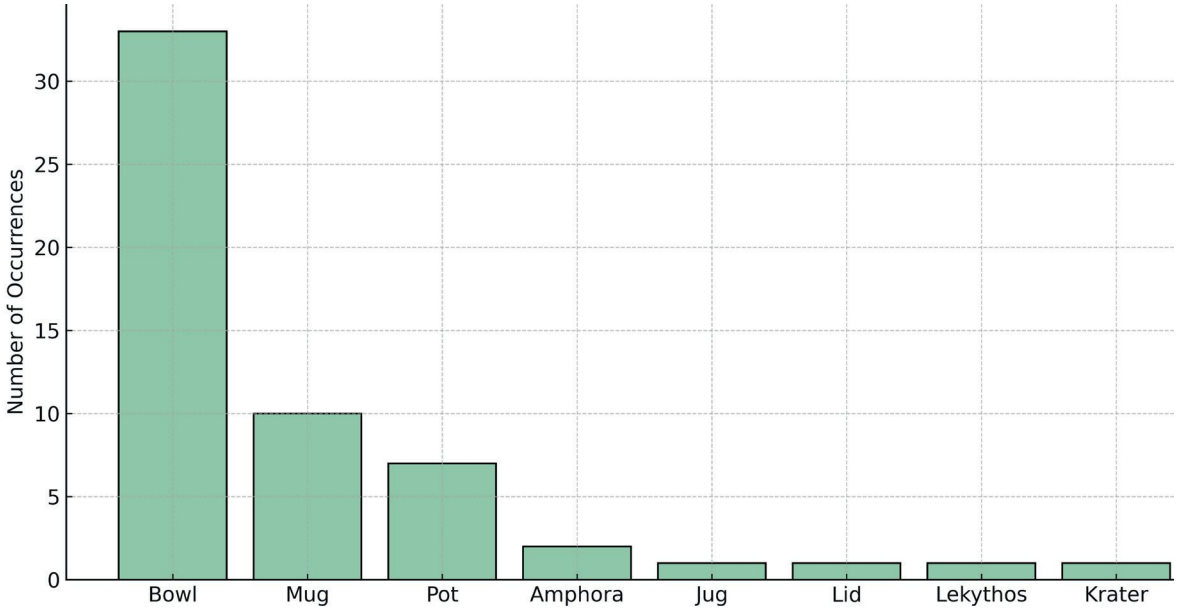


Fig. 15. Graph showing ceramic vessel forms occurring in offering places with combined deposits of ceramic vessels (by D. Mildová).

15 Cholakov *et al.* 2016, 23–24; Alexandrova 2013, 30.

4. Sacrificial Places with Metal Vessels

Sacrificial places containing metal vessels cannot be analysed in detail due to their limited number—only two cases have been recorded in the Yambol region. In general, metal vessels appear to have been deposited either individually or as part of larger assemblages containing additional artifacts. Both examples date from the late 1st to early 2nd century AD.

The first case represents an independent assemblage of six metal vessels deposited without accompanying artifacts. The collection included two jugs, two table amphorae, one bowl, and one patera. All the vessels were intentionally deformed and pierced, indicating ritual destruction and their removal from functional circulation rather than use in libation. The assemblage was deposited within the mound fill and is associated with a female burial.[16]

The second case constitutes a complex assemblage that included a two-horse chariot filled with complete ceramic, bronze, and glass vessels (see Fig. 16 in 'Sacrificial places with horses and carts'). The bronze vessels consisted of a pan (1 pc.) and a ladle and strainer set (1 + 1 pcs), accompanied by an iron grate. The vessels were undamaged and, together with the ceramic forms (jug, bowl, pot, and mortar), formed a set of kitchen and table equipment. This complex is associated with a male burial.[17]

In neither case were traces of exposure to fire observed; charcoal was identified only in the second assemblage.

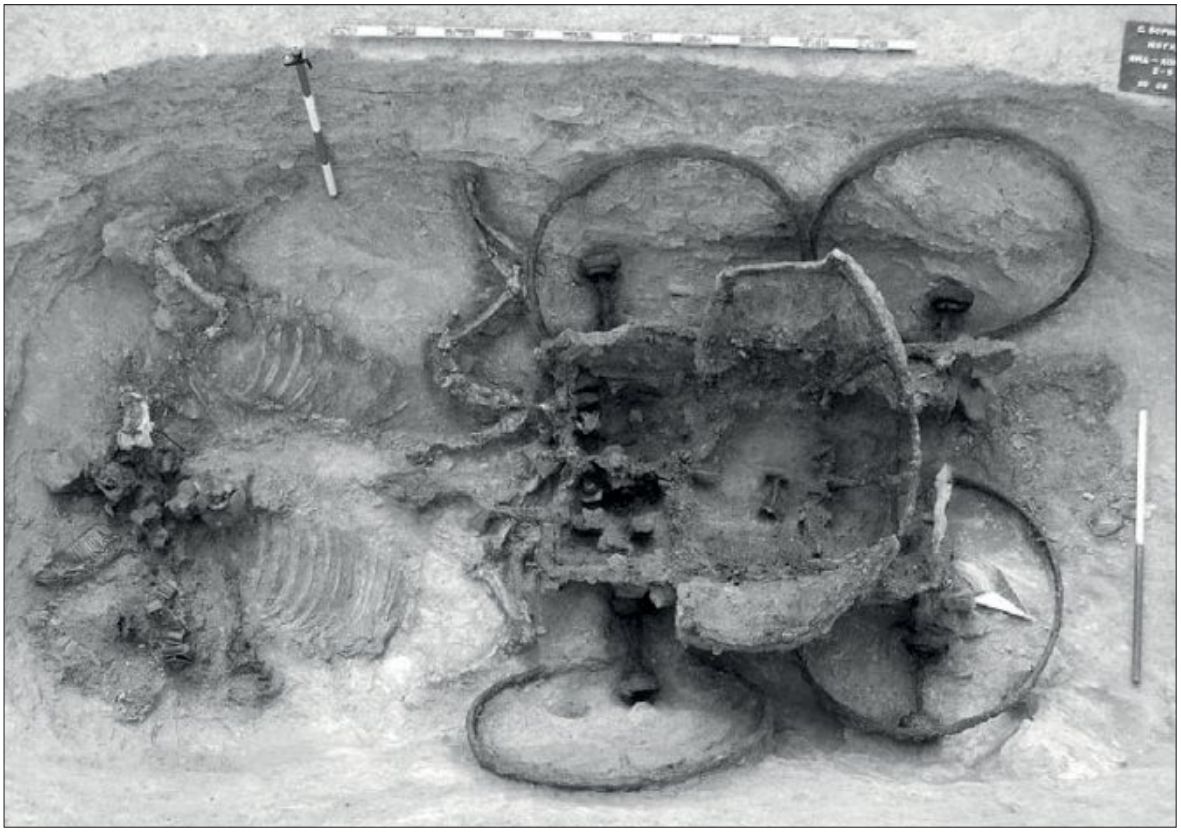


Fig. 16. Example of a sacrificial place with horses and two-wheeled cart, which was filled with ceramic, metal and glass vessels; dated to end of the 1st – beginning of the 2nd century AD (western necropolis of Borisovo, Mogila I) (after Agre 2009, 279–280, Fig. 1).

16 Agre 2008a, 237–239.

17 Agre 2009, 280.

Animal Sacrifices—Horses and Dogs

Animal sacrifices in funerary contexts appear across Europe from prehistory to historical periods and are usually associated with religious or cult practices.[18] Among the culturally specific features of the Thracian environment, horse and dog sacrifices occupy a particularly significant place.[19]

Archaeological evidence of horse sacrifices in the territory of present-day Bulgaria dates back to approximately the 7th century BC.[20] In the pre-Roman period, these sacrifices reached their highest intensity during the 4th–3rd centuries BC, especially in monumental tombs, indicating their connection with the elite strata of society.[21] At the same time, they also appear in the context of simpler pit graves.[22] Thus, horse burials did not only represent expressions of social prestige but may have reflected broader ritual practices. Both riding and draught horses were sacrificed, which may have been related to different ritual functions and symbolism.

Horse sacrifices can be divided into two main categories—sacrifices associated with a deceased person and sacrifices without connection to a grave. In the first case, horses were placed beside the deceased or cremated together with them on the funeral pyre.[23] A common type is also the deposition of a horse or an entire team with a cart or its symbolic parts, which may have represented the journey to the afterlife.[24] The burial of horses together with humans is often associated with Thracian Orphism, where the animal sacrifice was meant to replace a human one.[25]

Dog burials are also not an exclusively Thracian phenomenon—they appear throughout ancient Europe and Asia. The symbolism of the dog was extremely strong: it served as a companion in hunting, a guide during transitional rituals, a guardian of graves, or a psychopomp leading souls to the underworld. The significance of this animal thus transcended the practical level and had a strong ritual and mythological dimension.[26]

As with horses, dog burials can also be divided into two categories—independent sacrifices, representing a collective or communal aspect, and sacrifices, where the dog is found in direct association with a human. In Thrace, dog sacrifices appear from the 10th century BC, although the earliest documented examples in a funerary context date only to the 6th century BC.[27] They occur most frequently near graves from the turn of the 4th and 3rd centuries BC, similarly to horse sacrifices. Dogs were buried independently, together with humans, or in association with horses and carts.

Under Roman influence the sacrifice of horses and dogs continued, though with a slight decline, during the last two centuries before the arrival of the Romans.[28] After the establishment of Roman rule and the achievement of economic stability, the situation changed noticeably, showing a remarkable revival in the popularity of such sacrifices—particularly those involving horses with chariots.[29] The majority of recorded cases feature four-wheeled chariots, concentrated mainly in the Stara Planina region near relatively rich graves in eastern Bulgaria.[30]

18 Pluskowski 2012, 12.
19 Ștefan 2022, 54, Fig. 14.
20 E.g., Sofronievu tumulus, Vratsa district (Ștefan 2022, 50).
21 E.g., the Sveshtari burial complex (Nikolova 2020, 164).
22 E.g., a tumulus from the mid-4th century BC near the village of Elhovo (Georgieva 2016, 272).
23 Georgieva 2016, 272.
24 Agre 2000, 239.
25 Kouzmanov 2005, 145.
26 Ștefan 2022.
27 E.g., Toros tumulus, Lovech region (Ștefan 2022, 50).
28 Nikolova 2020; Ștefan 2022.
29 Nikolova 2020, 168, Fig. 3.
30 Nikolova 2020, 167–168.

A similar resurgence occurred in the practice of dog sacrifices. From the 3rd century BC onwards, dog offerings gradually shifted from northern to southern Thrace, where, by the 2nd century AD, they had regained almost the same level of popularity as during their peak in the 4th century BC.[31] This decline and subsequent increase in both types of animal sacrifices suggest a renewed necessity to perform such rituals in response to the socio-political and cultural transformations brought about by Roman rule.

The rise in the number of animal sacrifices can thus be linked both to the local elites—who formed small aristocratic communities—and to the expansion of the Roman army, which fostered enrichment and consequently a rise in the opulence of funerary practices.[32] The key question remains to what extent the symbolic meaning of these sacrifices was transformed under Roman influence.

Sacrificial places with horses in Yambol region

Horse sacrifices enjoyed considerable popularity during the Roman period. In the Yambol region, such sacrifices were recorded at seven out of twenty burial mounds and one unidentified burial site. Horse sacrifices can be divided into two main types: sacrifices of horses without carts (4×) and sacrifices of horses with carts (5×)—total of fifteen horses sacrificed. These sites date from the end of the 1st to the third quarter of the 3rd century AD.

a) Sacrificial places with a horse/horses without a cart

Sacrificial places containing one or more horses without carts occur mainly in the context of graves (3×) but also on burial mounds without human burials (1×). In the Yambol region, the most frequent form of sacrifice involved a single horse (3×), and only in one case were two horses sacrificed together. Zooarchaeological data indicate that the horses found without carts—both in grave contexts and in empty mounds—were most likely riding horses. Only one sacrificed individual was a pregnant mare, which nevertheless shows she was at the peak of her physical strength.[33]

Sacrificial places associated with graves contain artifacts related to horse harnesses or military attributes, such as shields.[34] In one case, an unidentified perforated bronze object and a bead were found. In the same feature or in its vicinity, horses were sometimes accompanied by dog sacrifices (2×). No additional artifacts, including ceramic vessels, were found, and in the case of the horse sacrifice in an empty mound, no harness parts were present either.

Skeletal burials predominate (3×), but there is also one case where a horse was cremated directly at the place of sacrifice. All individually sacrificed horses were laid on the ancient surface, and only the pair sacrifice was performed in a sunken pit.

Most of the sacrifices could be linked to a nearby grave. Based on this, it can be concluded that riding horses buried without carts were associated exclusively with male burials in the Yambol region.

b) Sacrificial places with horses and carts

Five sacrificial places containing horses with carts have been recorded, all occurring in direct association with graves (Fig. 16). They are therefore more frequent in grave contexts than horse sacrifices without carts (3×). Each site contained two horses and one cart; in at least two cases, the

31 Ştefan 2022, 52, 55, Fig. 11a, Fig. 15.

32 Nikolova 2020, 168.

33 Cholakov *et al.* 2016, 16.

34 Agre 2009, 280.

carts were four-wheeled, which would correspond to their popularity visible in their supra-regional distribution.[35] The remaining carts could not be identified in detail. Archaeozoological analyses indicate that the sacrificed horses were predominantly draft animals.

The assemblages include decorative harness fittings and possible ornamental elements of the carts. Other artifacts—ceramic, metal, and glass vessels—were also deposited with the carts, and in one case, a dog sacrifice was found in association.

The methods of deposition are similar to the previous type, with skeletal burials predominating (4×) and only one example showing cremation of the entire assemblage. Unlike the previous group, however, these horses and carts were placed exclusively in sunken pits. In most cases, these sacrificial places can be linked to specific graves, and the evidence indicates that such sacrifices were made in honor of both men and women.

Sacrificial places with dogs

Dog sacrifices were recorded at three of the twenty burial mounds and at one unidentified burial site. The animals were sacrificed individually, both in the context of graves (2×) and in an empty burial mound (1×). They appear either as part of horse sacrifices (2×) or independently (1×). However, dog sacrifices in the Yambol region are so specific and few in number that it is not possible to draw firm conclusions about their meaning or function.

In the first case, the dog was sacrificed together with a horse in an empty mound without any accompanying artifacts.

In the second case, the dog was sacrificed together with horses and a cart in a grave context. Here, the deposition represents a simple burial of the animal without any accompanying objects (in contrast to the richly equipped horse harnesses).

The third case concerns a cremated dog associated with a male grave. The dog's burial was furnished with a bead, two complete cups, and a pot, with one of the cups placed inside the pot. In this instance, it remains debatable whether the find represents a sacrificial deposit or a full-fledged animal burial.[36]

Sacrificial places with additional structures

Four recorded objects can be classified as sacrificial places containing additional ritual structures. Three of them represent stone altars, and one is a pit filled with a mixed assemblage of materials.

All three altars originate from the area of Borisovo. Two of them, located together in one mound, were constructed from two parallel rows of stones on which *tegulae* were laid to form a flat surface. On these tiles, ash, charcoal, and burnt animal bones were recorded. The third altar consisted of three lines of unworked stones—two parallel and one perpendicular—forming a rectangular layout. In the centre of the structure were found fragments of ceramic vessels, bones, and iron nails. In the literature, this feature is referred to as a *heroon*; however, due to the presence of ceramics and bones, it is included here among the altar structures. These objects represent a small but distinctly ritualized group, likely connected to a local tradition in the Borisovo area.

The fourth object is a pit located in the geometric centre of a mound, filled with fragments of charred wood, charcoal, ash, animal bones, and metal artifacts. The metal finds include seven bronze circular fittings from horse harnesses and eight fragments of an iron object of unclear type. The nature

35 Nikolova 2020, 167–168, Fig. 3.

36 Agre *et al.* 2014, 199.

of the assemblage resembles a cremation pyre; however, the absence of human remains challenges this interpretation. It is possible that the deposit represents the symbolic burning of grave goods, parts of harness equipment, or another type of offering. Although the examination of these structures was not the primary focus of this study and the examples presented here do not constitute a list of all similar features in the Yambol region, their existence confirms the presence of additional forms of ritualized space.

Sacrificial places containing ceramic vessels: Interpretation

Sacrificial places with ceramic vessels represent the most numerous category of sacrificial places from the Roman period in the Yambol region, highlighting their key role in funerary rituals. The analysis of individual types of sacrificial places in the region shows that ritual handling of ceramic and metal vessels was diverse and bore clear signs of ritual behaviour.

Despite their heterogeneity, several consistent patterns allow for the identification of distinct ritual categories and symbolic behaviours.

Sacrificial places with complete ceramic vessels

Sacrificial places with completely deposited ceramic vessels form one of two most numerous group within the Yambol region. They are characterized primarily by the simple deposition of vessels that were neither intentionally destroyed nor directly exposed to fire and are usually not accompanied by additional artifacts. The fact that all vessels were wheelmade indicates a certain degree of standardization and formality in these ritual acts.

Most finds show no traces of heat, charcoal, or animal bones, which clearly distinguishes this type from sacrificial places associated with funerary feasts or food preparation. Instead, it is likely that these vessels were used exclusively to honor the deceased or a deity, either through liquid offerings or their symbolic representation. This interpretation is supported by their strongly standardized ceramic forms dominated by jugs and mugs.

Deliberate damage to vessels, particularly jugs and mugs, is most common within this type. The drilling of holes through the walls or the piercing of the bottom represents a specific ritual act, probably related to emptying the vessel's contents as part of the libation rite or 'killing' the vessel. Spatial variation in deposition—either on the ancient surface or within pits and mound embankments—may reflect different ritual phases, from acts performed during mound construction to later commemorative ceremonies.

Overall, sacrificial places with completely preserved ceramic vessels provide insight into a ritual tradition centred on the consumption or physical or symbolic offering of liquids and the ceremonial 'deactivation' of objects.

Sacrificial places with small numbers of deliberately destroyed vessels

This group includes assemblages containing no more than three broken vessels. A distinctive element is the presence of hand-made pottery, rather than vessels produced on the potter's wheel. Hand-made pots appear in all recorded places, which sharply contrasts with the type of sacrificial places containing completely preserved vessels where handmade pottery is entirely absent.

Their presence highlights the continued use of traditional Thracian ceramic production during the Roman period and suggests that these objects served as carriers of cultural identity rather than merely utilitarian items. The symbolic destruction of vessels, usually limited to one to three examples, likely represented acts of ritual closure, transformation, or offering.

Although the available data do not allow a more detailed reconstruction of the rituals performed, it is likely that these practices represented an expression connected with a local identity.



Fig. 17. Example of deliberately drilled hole in a sherd from a set with numerous broken ceramic vessels from Golemia Kayryak necropolis, Barrow 5, Feature 5 (the second half of the 2nd century – the first quarter of the 3rd century AD; photo by D. Mildová).

Sacrificial places with numerous deliberately destroyed vessels *(trizna)*

This type is one of the two most frequently documented offering sites. These assemblages consist of large quantities of highly fragmented pottery vessels. The pottery is mostly wheel-thrown, but handmade pots also occur, which may reflect Thracian tradition as previous group. The vessels were deposited in a highly fragmented and frequently unreconstructable state, indicating deliberate destruction before or during deposition. The composition of the assemblages, along with the presence of charcoal, animal bones, and traces of burning, suggests a link with funerary feasts (memorial meals). As already noted, although archaeobotanical data from Roman Thrace confirm food offerings within graves—especially between the 1st and 2nd centuries AD—comparable data for sacrificial places are still lacking. Nevertheless, the combination of tableware and kitchenware implies that these rituals involved both food preparation and consumption. Based on the preserved material, the sets can be divided into 'banquet' pottery, pottery for food preparation, and combined assemblages containing both types.

However, it must be acknowledged that not all sacrificial places with 'banquet' pottery necessarily correspond to feasting rituals. As Veselin Ignatov has pointed out, some assemblages may relate to purification rites, during which "… after purification, the used vessels were crushed and gathered into a heap together with animal bones, similar to a pre-Roman ritual."[37] This description corresponds to assemblages with the highest degree of fragmentation (i.e. fragments 40 × 40 mm and less). It is therefore possible that the meaning and function of these sites varied, and that 'banquet' pottery sets may in some cases represent acts of purification or the symbolic conclusion of a feast, rather than a feast itself.

On the other hand, several highly fragmented assemblages include artifacts that clearly refer to feasting or libation rituals. One example comes from the Golemia Kayryak necropolis (MH07_T02), which contained vessels used for both food consumption and preparation, along with animal bones and a sherd from a mug or bowl with a deliberately drilled hole (Fig. 17). Such modifications are often interpreted as evidence of libation practices, i.e., the ritual pouring of liquids as offerings.

Both hypotheses are thus plausible, and it is likely that both ritual variants coexisted. Their precise differentiation, however, can only be confirmed—or refuted—through detailed archaeometric analyses of samples from the sacrificial places themselves, which could verify the presence of food residues or organic remains.

Similar practices are documented at other Roman-period sites beyond the Yambol region and even beyond Thrace.[38]

37 Ignatov 2018, 57.

38 Oţa 2009, 109–113.

Sacrificial places with combined broken and intact vessels

The combination of deliberately destroyed and intact vessels suggests a complex ritual treatment of objects, in which certain vessels were intentionally rendered non-functional while others were preserved. This duality likely reflects a ritual with multiple symbolic layers, where some vessels were broken as part of the sacrificial act, while others remained intact to continue representing the offering or gift in a lasting form. The coexistence of tableware and kitchenware, accompanied by artifacts such as a knife and glass vessels, further points to feast-related rituals in which the preparation and consumption of food played an important symbolic role.

The forms and quantities of the deposited vessels closely resemble those found in the sets of deliberately broken pottery described above. All four assemblages are preserved in a low to medium state of fragmentation, which distinguishes them from pottery associated with purification rituals.[37]

Overall, these sacrificial places can be understood as an expression of a combined ritual, intertwining elements of feasting and sacrifice. The deposition of the largest assemblage in an empty burial mound is particularly interesting, suggesting that such rituals were not always directly connected to burial activities, but could represent independent acts of commemoration or devotion.

Sacrificial places with metal vessels

The interpretation of these assemblages is complex, as they represent two distinct ritual contexts. In both cases, the predominance of vessels associated with feasting—or more precisely, with the *symposion* tradition—indicates their important symbolic and representational role within the ritual context. The deliberate deformation and piercing of the vessels in one of the cases likely carried symbolic meaning—a ritual 'killing' of the object.

Both cases demonstrate that metal vessels occurred in association with both male and female burials, indicating their general ritual importance rather than gender-specific use.

The function and contents of the vessels

The question of the function and contents of sacrificial vessels concerns all types of assemblages. It is generally assumed that the vessels served for the consumption or containment of food and drink, based on their primary utilitarian purpose. As shown in Fig. 18, the most numerous ceramic forms are everyday food-related vessels. However, it cannot be excluded that in some cases, the vessels fulfilled a purely symbolic role and were deposited empty, or used for a different purpose. Unfortunately, this issue cannot yet be clarified, as relevant archaeometric or residue analyses are lacking.

Similarly uncertain is whether the foods and liquids placed in graves were identical to those associated with sacrificial places. In a few cases of graves where archaeobotanical analyses have been done (for example, at the necropolis of Golemia Kayryak) we have data confirming the presence of chickpeas, grapes, plums, hazelnuts, walnuts, and other remains.[39] A comparison of these results with future analyses of sacrificial contexts would be invaluable, as it could reveal distinctions between ritual and funerary consumption practices.

Deliberately broken ceramic vessels: Where is the rest?

In the case of places with deliberately broken ceramics rises a questions concerning their nature. These assemblages represent one of the main interpretative challenges of this study. They are characterized by a high degree of fragmentation and incompleteness, raising the question of where the vessels were actually broken and where the missing parts might have gone.

39 Włodarczak *et al.* 2024, 12–13.

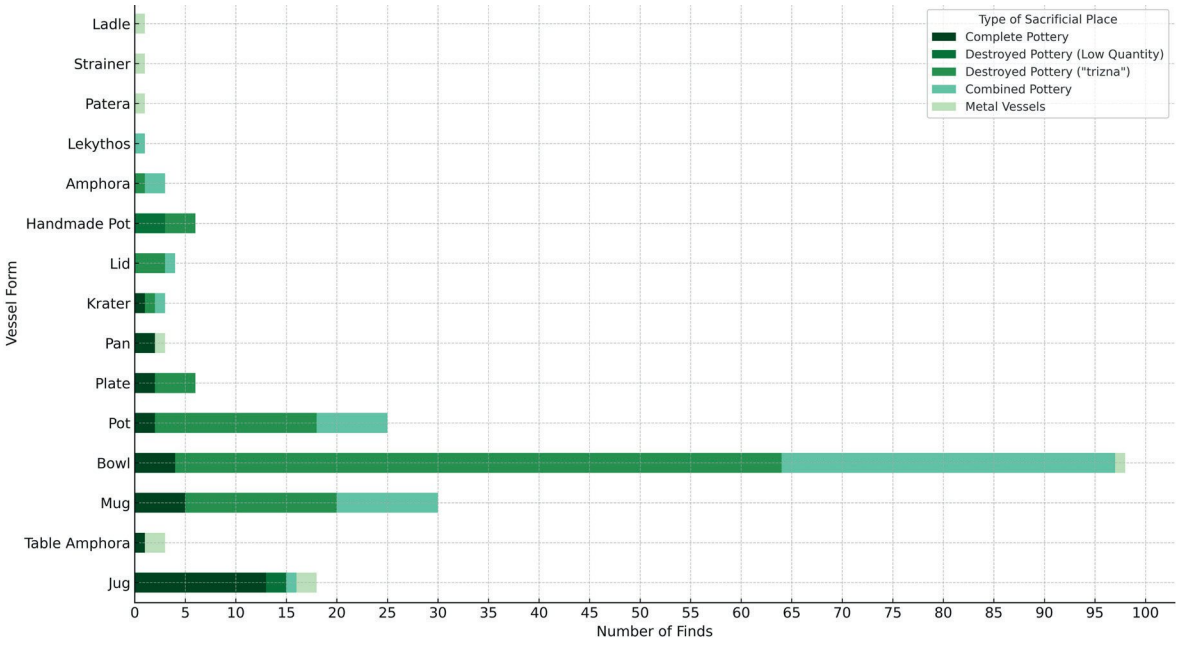


Fig. 18. Graph showing distribution of vessel forms through all types of sacrificial places in the Yambol region (by D. Mildová).

One possible hypothesis suggests that the vessels were broken outside the sacrificial place itself (the location of which cannot yet be determined) and that only selected fragments were brought to the site. An alternative explanation assumes that the destruction took place directly at the site, with part of the sherds later removed or redistributed elsewhere.

The high degree of fragmentation also indicates that the vessels were handled in a particular way. It is conceivable that they were smashed against hard surfaces (e.g., stones) or deliberately trampled. Given the quantity and incompleteness of the fragments, the question of selection arises—whether certain parts of the vessels (e.g., bases, rims) were intentionally chosen or whether the selection was random.

Based on a case study (in preparation), the number of diagnostic and body sherds was found to be approximately balanced. This finding contrasts with the assumption that body fragments should be far more numerous, as they typically represent about 70% of a vessel's mass. Among the diagnostic fragments, rims clearly predominated over bases. The fact that 32 vessels were identified based on rims compared to only 24 distinct bases supports this observation.

It can thus be concluded that, although the counts of diagnostic and non-diagnostic fragments were numerically similar, the generally higher likelihood of non-diagnostic sherds occurring suggests a deliberate preference for depositing diagnostic fragments. This question, however, remains open—yet its resolution could significantly contribute to understanding the symbolic meaning of ceramic destruction in funerary rituals.

Animal sacrifices—horses and dogs: Interpretation

Animal, primary horse, sacrifices enjoyed considerable popularity during the Roman period. In the Yambol region, such practices were recorded at seven of the twenty burial mounds and at one unidentified burial site, with a total of fifteen sacrificed horses. These sacrifices can be divided into two main types: sacrifices involving one or more horses without a cart (4×), and sacrifices involving horses in combination with a cart (5×). The sacrificial places are dated from the end of the 1st century to the third quarter of the 3rd century AD.

Sacrificial places with horse(s) without cart

Sacrificial places with horses without carts represent a distinct ritual element in the Yambol region, closely associated with male graves. The presence of riding horses, often in good physical condition and occasionally of reproductive age, reflects their high value and symbolic role within funerary ceremonies. The occurrence of horse harnesses and military artifacts such as shields indicates a symbolic link between the deceased and military or equestrian status. Differences in the treatment of horse remains—from inhumation to cremation—further demonstrate ritual variability and possible regional or temporal distinctions.

Sacrificial places with horses and cart

This form of ritual practice appears slightly more common in funerary contexts than horse sacrifices without carts. The consistent presence of two draft horses and one cart suggests a deliberately organized ritual act. Unlike the riding horses of the previous type, these animals were not associated with the equestrian elite but with the function of traction and transport. A notable distinction from equestrian horse sacrifices is that these are associated with both male and female burials, indicating that the cart served as a broader social symbol of status and mobility across genders. This type of sacrificial place can thus be interpreted as an expression of prestige and movement without direct reference to military or equestrian identity.

Dog sacrifices

Dog sacrifices in the Yambol region represent a rare and ritually specific phenomenon that appears only sporadically within the broader spectrum of funerary practices. In two cases, dogs were sacrificed in combination with horses—once in an empty mound without additional artifacts and once accompanying a funeral cart and a pair of horses in a grave context. In both instances, the dogs lack individual grave goods or signs of special treatment, suggesting a symbolic rather than a personal role in relation to the deceased. The third case, however, differs significantly. The cremated dog equipped with small grave goods may represent not a sacrificial act but an independent animal burial, perhaps reflecting a personal or emotional bond between the deceased and the animal

Regional tradition of sacrificial places with vessels and animal offerings

Regional differences in sacrificial practices can be traced across the Yambol region (Fig. 19). However, the results must be interpreted with caution, as the degree of systematic archaeological investigation varies considerably between the necropolises. The best-explored sites are Straldzha and Borisovo (5 excavated mounds each), while Palauzovo (3), Boyanovo (2), Golemia Kayryak (2), Kabyle, Stroyno, Kirilovo, and Botevo (one mound each) show a much lower level of investigation. This discrepancy may have influenced the recorded frequency and diversity of sacrificial places across the region. The Straldzha necropolis stands out with the highest concentration and diversity of sacrificial places, including all main types—from single complete vessels to large feasting assemblages and combined deposits. The popularity of sacrificial places with ceramic deposits in Straldzha is further supported by the fact that the triznas yielded the largest quantity of vessels within the necropolis (40.4%).[40] At Palauzovo, deposits of complete ceramic vessels are especially frequent, often containing single piece. The most abundant vessel type within these deposits is the mug.

In Kabyle, only sacrificial places with complete ceramic vessels are documented. In this case, a distinct local tradition can be observed, involving the deposition of jugs exclusively in pairs rather

40 Alexandrova 2013, 30.

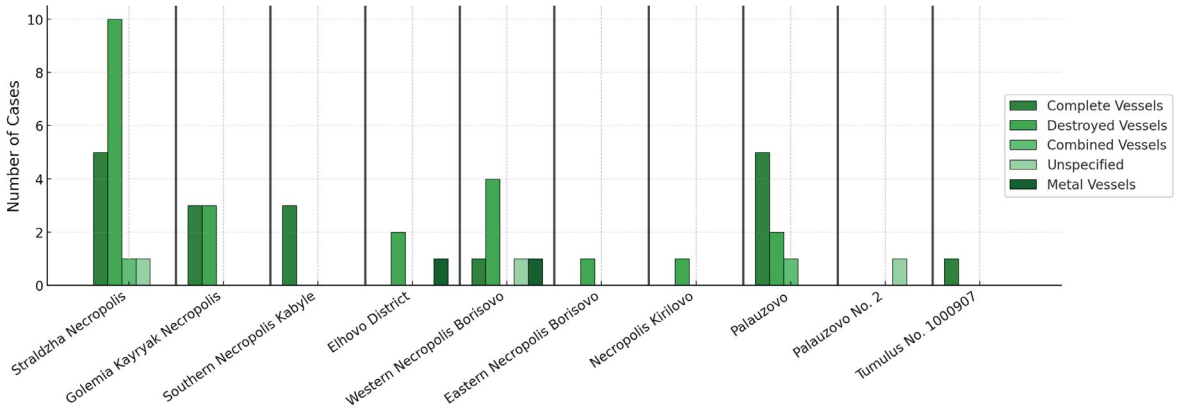


Fig. 19. Graph showing each site included in this work with sacrificial places with vessels found within them (by D. Mildová).

than as single pieces, as seen elsewhere. Additional vessels may occasionally accompany these deposits, but the primary characteristic—strictly paired jugs—is not documented at any other site

Golemia Kayryak necropolis also displays a unique local feature—complete single jugs surrounded by stones (Fig. 20).[41] This stone arrangement may indicate a local or generational peculiarity, as it does not occur elsewhere. It is noteworthy to mention analogous sacrificial places from the Roman period in the territory of Moesia. These places usually contain one or two vessels, most often intended for holding liquids, and are not associated with other finds. Liana Ota further notes that "… most of them were covered by tumuli or small heaps of stones, similar to the graves beside which they were discovered."[42]

In the case of offering places with destroyed pottery, such regional differentiations cannot be determined due to the small number of well-published assemblages. What can be stated, however, is that the highest concentration of these places is again found at the necropolis of Straldzha (8 cases), which may indicate a local predominance of this specific ritual practice. Conversely, compared to complete-vessel deposits, only a relatively small number of such features were documented at Palauzovo (2 cases), suggesting possible regional variation in ritual behaviour. With regard to the deposited vessel forms, no clear local preferences can be distinguished.

A total of four combined offering places were recorded across two necropolises. The tradition of depositing both complete and destroyed ceramic vessels within a single feature is most evident at the Straldzha necropolis, which contains three such assemblages; one of these represents the largest ceramic assemblage documented in this study. The fourth example comes from Palauzovo and is exceptional in its vessel composition when compared to Straldzha. Combined offering places represent a less frequent, yet significant element of ritual practice.

Regional characteristics of individual animal sacrifices are not included in this study; however, it is necessary to highlight the horse sacrifices at the necropolis near the village of Borisovo (Fig. 21). The necropolis yielded a below-average number of ceramic deposits, yet the presence of four horse-and-cart sets and one deposition of two horses indicate a regional dominance of these ritual practices.

Overall, the evidence indicates that although sacrificial practices followed a shared funerary tradition, their form, intensity, and symbolic meaning varied significantly between necropolises.

41 Włodarczak *et al.* 2024, 15.

42 Oţa 2009, 113.

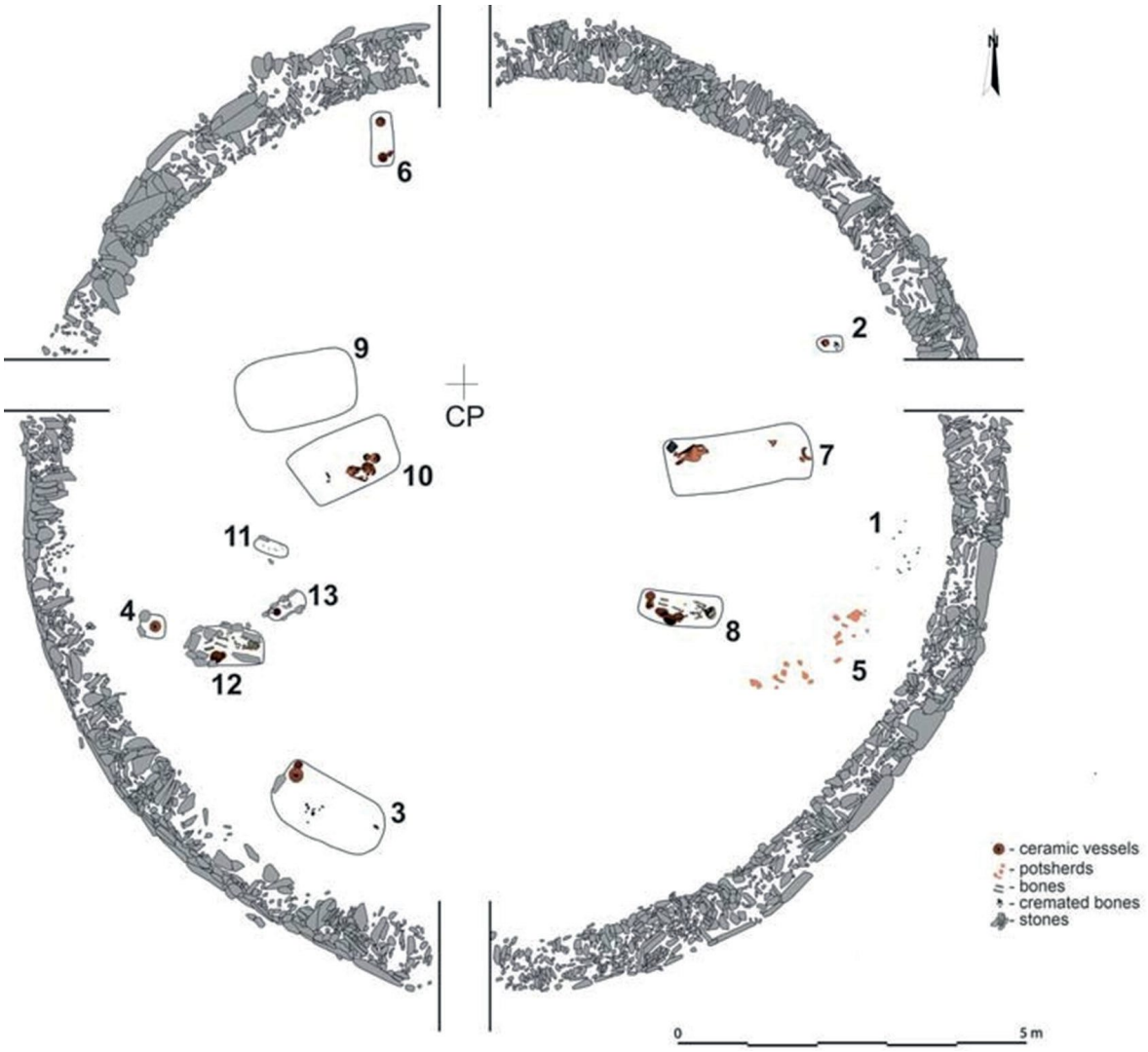


Fig. 20. Plan of Barrow 5 (the second half of the 2nd century – the first quarter of the 3rd century AD) from Golemia Kayryak necropolis with several offering places (nos 4–6). Feature 4 resembles the case of a single jug encircled with stones (after Włodarczak *et al.* 2024, 15, Fig. 7).

Reflections of Thracian traditions and the development of sacrificial places during the Roman Period

The partial continuity of Thracian traditions from the Iron Age into the Roman period has already been indicated in this study. However, the extent to which the character and symbolism of sacrificial places changed after the arrival of the Romans remains uncertain. In general, all recorded types of sacrificial places have their predecessors in the pre-Roman times, and the main question concerns the degree and nature of their transformation following the adoption of Roman administration and culture.

One of the most notable changes lies in the deposited vessel forms, which reflect the influence of new technological and cultural patterns. This transformation is also visible in the selection of vessel types—unlike in the Iron Age, when local production predominated, in the Roman period newly adopted forms became dominant. Whether this change was accompanied by a transformation in the meaning and function of the sacrificial places cannot be determined with certainty based on the available data.

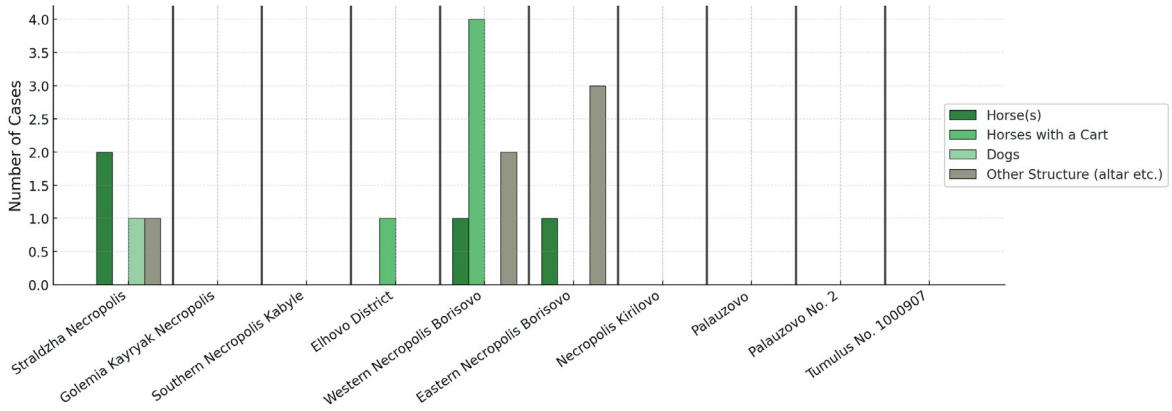


Fig. 21. Graph showing each site included in this work with sacrificial places with animal sacrifice and other ritual structures (by D. Mildová).

Development of sacrificial places during the Roman Period

Tracing the development of sacrificial places during the Roman period is challenging. Their dating is often based on associated artifacts, but in many cases it relies on the chronology of nearby graves. Although many sacrificial places are not stratigraphically connected to specific burials, they generally occur at the same stratigraphic level and can therefore be dated according to adjacent graves. In some instances, however, the graves differ in date by up to a century, making it difficult to determine which of them the sacrificial place was related to. As a result, it is problematic to assess whether certain types of sacrificial places were more popular at specific times or whether preferences shifted over time. The accompanying chart (Fig. 22) illustrates the distribution of sacrificial places during the Roman period based on published datings derived both from artifacts and from surrounding graves.

The chart shows the intensity of occurrence of individual types of sacrificial places with vessels throughout the Roman period. It demonstrates that the highest frequency of all types was reached during the 2nd century AD, particularly in its second half. Complete ceramic vessels were the most

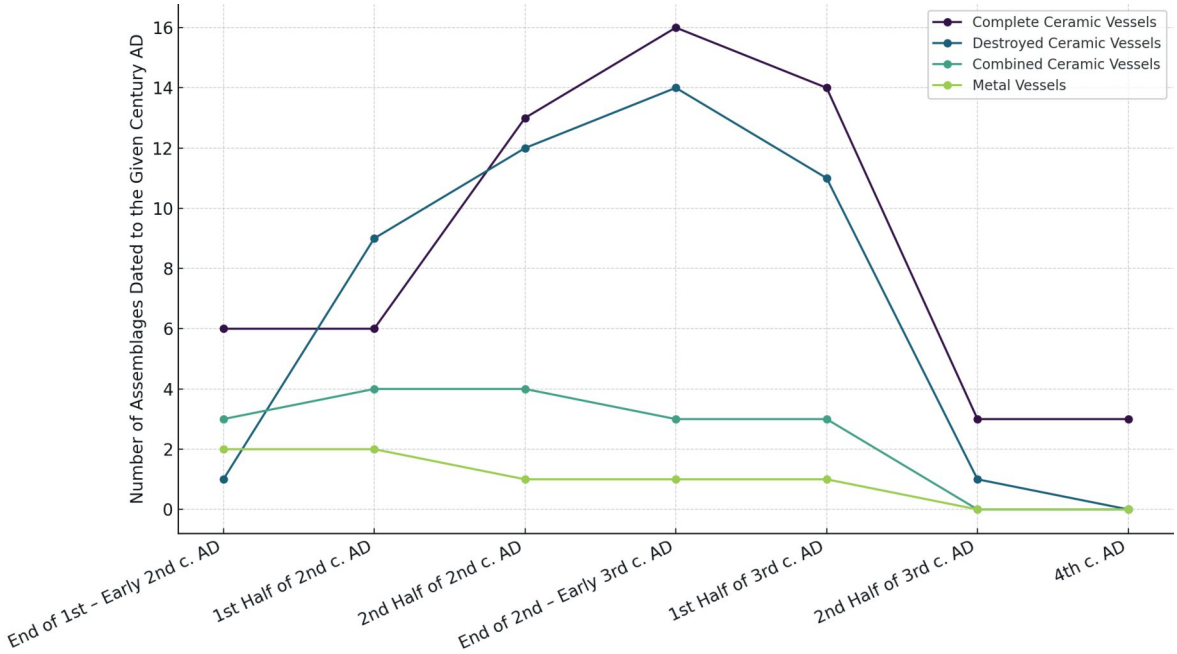


Fig. 22. Chronological table showing number of assemblages of sacrificial places with vessels through 1st–4th century AD (by D. Mildová).

common type across all periods, reaching their peak in the late 2nd and early 3rd centuries AD, while deposits of broken vessels followed a similar trend but in smaller numbers. During the same period, the highest number of horse and dog sacrifices (especially those with carts) also occurred. It should be emphasized that the chart provides only a preliminary approximation of these patterns. Its interpretation is limited by the broad chronological range of many contexts: for example, if a deposit was dated to the end of the 1st – beginning of the 3rd century AD, it was counted within all corresponding time spans. Therefore, the chart should be understood as an initial analytical framework, serving as a basis for further, more detailed chronological analysis.

In addition to sacrificial places, the number of newly constructed burial mounds and the reuse of earlier Iron Age mounds also increased. The second half of the 2nd and the beginning of the 3rd century AD thus represent the most prosperous phase of the Roman period in terms of sacrificial activity, corresponding to a time of economic stability in Thrace.[43]

After the peak at the turn of the 2nd and 3rd centuries AD, the graph shows a marked decline in all forms of sacrificial places, which may reflect the invasion of barbarian people from the north, transformations in religious practices, the spread of Christianity, administrative changes within the Roman Empire, or a general decline in the importance of funerary ritual.[44]

However, these observations must be viewed with caution, as chronological uncertainty and the uneven number of excavated burial mounds.

Conclusion

This study provides the first systematic analysis of sacrificial places in funerary contexts of Roman Thrace, focusing on the Yambol region in southeastern Bulgaria. Despite their frequent occurrence, such contexts have remained largely overlooked in archaeological research.

A catalogue of 60 sacrificial places from 21 burial sites served as the basis for a new typology, distinguishing ceramic, animal, and structural types. The results reveal a persistent local tradition of ritual deposition near graves, rooted in earlier Thracian practices.

The most common forms include deposits of complete ceramic vessels and assemblages of deliberately broken pottery. Whole vessels likely functioned as libations or formal offerings, while fragmented sets—often with fire traces, animal bones, or charcoal—reflect complex rituals linked to feasting or purification. Rare metal-vessel deposits and animal sacrifices (especially of horses and dogs) further emphasize the symbolic diversity of funerary behaviour.

Regional patterns suggest localized traditions: Straldzha and Palauzovo show a prevalence of complete vessels, whereas Borisovo is dominated by horse sacrifices. Overall, these practices demonstrate both continuity and transformation of Thracian ritual traditions under Roman influence.

The study highlights the structured and symbolic nature of these rituals and provides a comparative framework for future research on funerary and religious practices in Roman provincial contexts.

Future research should expand this approach by integrating natural-science analyses, such as archaeobotanical, zooarchaeological, and ceramic studies and by exploring less visible or symbolic ritual behaviour, including those without direct material expression. Such methods would allow a deeper understanding of the social and ideological significance of sacrificial practices in Roman Thrace.

43 Lozanov 2015, 84–85.

44 Lozanov 2015, 87–88.

References

Agre, D. 2000: Spasitelni arheologicheski prouchvaniya na dolmen i mogila ot rannata zhelyazna epoha v zemlishteto na s. Belashtitsa, obshtina Rodopi, oblast Plovdiv. In: Aladzhova, D. (ed.): *Arheologicheski otkritiya i razkopki prez 1999 g*. Sofia, 239–241.

Agre, D. 2004: Arheologicheski razkopki na dolmen i mogila ot rannata zhelyazna epoha v zemlishteto na s. Belevren, obshtina Sredets, prez 2004 g. In: Torbatov, S. (ed.): *Arheologicheski otkritiya i razkopki prez 2004 g*. Sofia, 129–132.

Agre, D. 2007: Arheologicheski prouchvaniya na mogila v zemlishteto na s. Stroyno, obshtina Elhovo, Yambolska oblast. In: Gergova, D. (ed.): *Arheologicheski otkritiya i razkopki prez 2006 g*. Sofia, 76–77.

Agre, D. 2008a: Arheologicheski razkopki na mogila v zemlishteto na s. Stroyno, obshtina Elhovo. In: Gergova, D. (ed.): *Arheologicheski otkritiya i razkopki prez 2007 g*. Sofia, 237–239.

Agre, D. 2008b: №50. Arheologicheski razkopki na mogila v zemlishteto na s. Sinemorets, obshtina Tsarevo. In: Gergova, D. (ed.): *Arheologicheski otkritiya i razkopki prez 2007 g*. Sofia, 233–235.

Agre, D. 2009: Arheologicheski razkopki na mogila v zemlishteto na s. Borisovo, Elhovska obshtina. In: Gergova, D. (ed.): *Arheologicheski otkritiya i razkopki prez 2008 g*. Sofia, 279–282.

Agre, D. 2010: Arheologichesko prouchvane na dve mogili v zemlishteto na s. Boyanovo, Elhovsko. In: Gurova, M. (ed.): *Arheologicheski otkritiya i razkopki prez 2009 g*. Sofia, 251–253.

Agre, D. 2012: № 57. Arheologicheski razkopki na mogila № 2 v zemlishteto na s. Borisovo, Elhovska obshtina. In: Gurova, M. (ed.): *Arheologicheski otkritiya i razkopki prez 2011 g*. Sofia, 217–219.

Agre, D. 2013: №37. Arheologicheski razkopki na mogili № 3 i № 4 v zemlishteto na s. Borisovo, obshtina Elhovo. In: Gurova, M. (ed.): *Arheologicheski otkritiya i razkopki prez 2012 g*. Sofia,164–166.

Agre, D. 2016: Spasitelni arheologicheski prouchvaniya na mogila Kral Mezar v zemlishteto na s. Boyanovo, obsht. Elhovo. In: Vagalinski, L. (ed.): *Arheologicheski otkritiya i razkopki prez 2015 g*. Sofia, 300–303.

Agre, D. – Hristo, H. – Nikolova, E. 2014: № 35 Arheologicheski razkopki na mogili № 1 i № 2, razpolozheni v zemlishteto na s. Kirilovo, obshtina Elhovo. In: Gurova, M. (ed.): *Arheologicheski otkritiya i razkopki prez 2013 g*. Sofia, 197–200.

Alexandrov, S. – Włodarczak, P. 2024: Early Bronze Age barrows in Upper Thrace. In: Alexandrov, S. – Włodarczak, P. (eds): *From the Steppes to the Balkans Yamna Culture in Upper Thrace.* The Yamnaya Impact on Prehistoric Europe 5. Budapest, 299–328.

Alexandrov, S. – Włodarczak, P. – Bakardzhiev, S. – Valchev, T. 2020: Archaeological excavation of a burial mound (third quarter of the 3rd C. BC) near Drazhevo village, Yambol District. In: Popov, H. (ed.): *Arheologicheski otkritiya i razkopki prez 2019 g*. Sofia, 572–574.

Alexandrova, S. 2013: Ceramic vessels from the Roman tumulus necropolis near the village of Charda, Yambol Municipality, SE Bulgaria. *Archaeologia Bulgarica* 17:33, 17–108.

Bakardzhiev, S. – Illiev, I. 2006: Spasitelni arheologicheski prouchvaniya na nadgrobna mogila v zemlishteto na s. Irechekovo, obshtina Straldzha, oblast Yambol. In: Nikolov, V. (ed.): *Arheologicheski otkritiya i razkopki prez 2005 g*. Sofia, 76–78.

Bakardzhiev, S. – Valchev, T. 2014: № 117. Spasitelni arheologicheski prouchvaniya na nadgrobna mogila № 10000907 po AIS AKB, s. Botevo, obshtina Tundzha, oblast Yambol. In: Gurova, M. (ed.): *Arheologicheski otkritiya i razkopki prez 2013 g*. Sofia, 568–570.

Bakardzhiev, S. – Valchev, T. – Iliev, I. 2018: № 26. Spasitelni arheologicheski prouchvaniya na selishte ot bronzovata i nekropol ot rimskata epoha (obekt № 10 po traseto na tranziten gazoprovod № 2 za Republika Turtsiya) pri s. Palauzovo, obshtina Straldzha. In: Vagalinski, L. (ed.): *Arheologicheski otkritiya i razkopki prez 2017 g*. Sofia, 146–148.

Balabanov, P. – Pantov, D. 2020: Archaeological excavation of Tumulus 1 (4th–3rd c. BC) in Staro Selo locality near Novo Panicharevo village. *Arheologicheski otkritiya i razkopki prez 2019 g*. Sofia, 559–562.

Borislavov, B. – Ivanova, S. 2016: Rescue archaeological excavations of Site 11B on the route of Bulgaria-Serbia gas interconnector (km 48+270 – km 48+370), Chukovezer village, Dragoman municipality. In: Vagalinski, L. (ed.): *Arheologicheski otkritiya i razkopki prez 2016 g*. 184–187.

Bouzek, J. – Graninger, D. 2015: *Geography*. In: Valeva, J. – Nankov, E. – Graninger, D. (eds): *A companion to ancient Thrace*. Oxford, 12–21. https://doi.org/10.1002/9781118878248.ch2

Cholakov, I. D. – Alexandrova, S. – Russeva, V. – Peeva, N. 2016: *Tumular necropolis of the Roman period near Straldzha, Yambol region*. Bulgarian e-Journal of Archaeology – Supplementum 5. Sofia.

Dimitrova, D. – Georgieva, L. 2020: Rescue archaeological investigation of a tumulus (2nd–4th c.) near Sokolyane village, Kardzhali municipality. In: Popov, H. (ed.): *Arheologicheski otkritiya i razkopki prez 2019 g*. Sofia, 578–581.

Dimitrova, D. – Alexandrov, S. – Włodarczak, P. 2024: Chronology of Gabrova Mogila and Shekerdzha Mogila near Kamen, Sliven Province. In: Alexandrov, S. – Włodarczak, P. (eds): *From the Steppes to the Balkans Yamna Culture in Upper Thrace*. The Yamnaya Impact on Prehistoric Europe 5. Budapest, 265–297.

Georgieva, R. 2016: Riders' burials in Thrace. In: Henry, O. – Kelp, U. (eds): *Tumulus as sema: Space, politics, culture and religion in the first millennium BC*. Berlin–Boston, 269–280. https://doi.org/10.1515/9783110267501-019

Getov, L. 1970: Pogrebalni obichai i grobni saorazheniya u trakite prez rimskata epoha (I–IV v.). *Arheologiya* 1, 1–11.

Haynes, I. P. 2011: Early Roman Thrace. In: Haynes, I. P. (ed.): *Early Roman Thrace: New evidence from Bulgaria*. Journal of Roman Archaeology – Supplementary 82. Portsmouth, RI, 6–14.

Hristova, H. 2022: Food for the soul, wood for the body: Archaeobotanical studies on charred plant remains from tumuli No. 4 and No. 5 at Golemiya kairyak locality near the village of Mogila, Yambol region, Southeastern Bulgaria. *Interdisciplinary studies* 27, 5–20.

Ignatov, V. 2018: *Pogrebalni Kompleksi s Koli v Rimskata Provintsiya Trakia (sr. na I–III v.)*. Disertatsii 11. Sofia.

Iliev, I. 2015: The Roman conquest of Thrace. *Aristonothos. Rivista Di Studi Sul Mediterraneo Antico* 9, 129–142.

Iliev, I. – Bakardzhiev, S. 2008: №53. Spasitelni arheologicheski prouchvaniya na dve nadgrobni mogili v m. Koyadzhika 1, s. Palauzovo, obshtina Straldzha, oblast Yambol. In: Gergova, D. (ed.): *Arheologicheski otkritiya i razkopki prez 2007 g*. Sofia, 239–242.

Kouzmanov, M. 2005: The horse in Thracian burial rite. In: Domaradski, M. – Bouzek, J. – Domaradska, L. (eds): *The culture of Thracians and their neighbours: Proceedings of the international symposium in memory of Prof. Mieczyslaw Domaradzki, with a round table "Archaeological Map of Bulgaria"*. Oxford, 143–146.

Leshtakov, K. 2011: Bronze Age mortuary practices in Thrace: A prelude to studying the long-term tradition. In: Borgna, E. – Müller-Celka, S. (eds): *Ancestral landscape. Burial mounds in the Copper and Bronze Ages (Central and Eastern Europe – Balkans – Adriatic – Aegean, 4th-2nd millennium B.C.) Proceedings of the international conference held in Udine, May 15th–18th 2008*. Lyon, 567–577.

Lozanov, I. 2015: Roman Thrace. In: Valeva, J. – Nankov, E. – Graninger, D. (eds): *A companion to Ancient Thrace*. Oxford, 75–91. https://doi.org/10.1002/9781118878248.ch7

Mazarov, I. 2005: *Ancient Thrace: The Thracians, art, the king and culture, gods and heroes, faith in immortality, conclusion*. Sofia.

Mikov, R. – Dzhangezova, T. – Bakardzhiev, S. 2018: Novi arheologicheski razkopki na yuzhniya nekropol na Kabile. In: Valchev, I. (ed.): *Studia Archaeologica Universitatis Serdicensis VI Stephanos archaeologicos ad 80 annum professoris Ludmili Getov*. Sofia, 295–331.

Nehrizov, G. 2013: №39. Nadgrobna mogila sas zidana grobnitsa pri s. Buzovgrad. In: Gurova, M. (ed.): *Arheologicheski otkritiya i razkopki prez 2012 g*. Sofia, 167–170.

Nikolova, S. 2020: *Hold your horses – Animals in ancient Thrace*. In: Kaercher, K. – Arntz, M. – Bomentre, N. – Hermoso-Buxán, X. L. – Kay, K. – Ki, S. – Macleod, R. – Muñoz-Mojado, H. – Timbrell, L. – Wisher, I. (eds): *New frontiers in archaeology: Proceedings of the Cambridge annual student archaeology conference 2019*. Oxford, 163–178. https://doi.org/10.2307/j.ctv1dp0v4j.16

Oţa, L. 2009: Post-funeral practices in Moesia Inferior. *Dacia* 53, 107–137.

Petropoulou, A. 1988: The Thracian funerary rites (Her. 5.8) and similar Greek practices. *Talanta* 18–19, 29–47.

Pluskowski, A. 2012: Introduction: The ritual killing and burial of animals in the past. In: Pluskowski, A. (ed.): *The ritual killing and burial of animals: European perspective.* Oxford, 12–22. https://doi.org/10.2307/j.ctv1dp0v4j.16

Pramatarov, K. 2018: *Izvangradski nekropoli v provintsiya Trakiya (I – III v.).* PhD Dissertation, Sofiyski universitet "Sv. Kliment Ohridski", Sofia.

Ştefan, M. M. 2022: Dogs in Late Iron Age Thrace. Symbolic image and ritualized materiality. *Dacia* 66, 29–86.

Theodossiev, N. 2015: An introduction to studying ancient Thrace. In: Valeva, J. – Nankov, E. – Graninger, D. (eds): *A companion to ancient Thrace.* Oxford, 3–11. https://doi.org/10.1002/9781118878248.ch1

Tušlová, P. 2020: *Roman and Late Antique pottery from ancient Thrace, selected assemblages from the Yambol district.* PhD Dissertation, Charles University, Prague.

Tušlová, P. – Valchev, T. – Kubálek, P. – Čisťakova, V. – Bakardzhiev, S. – Atanasoska Vrhel, N. – Mildová, D. – Světlík, I. 2024: Barrow No. 3 in Mogila. In: Alexandrov, S. – Włodarczak, P. (eds): *From the Steppes to the Balkans Yamna Culture in Upper Thrace.* The Yamnaya Impact on Prehistoric Europe 5. Budapest, 41–64.

Valchev, T. 2023: *Izdirvane na arheologicheski obekti v oblast Yambol.* Bulletin of Regional Historical Museum in Yambol 10. Jambol.

Włodarczak, P. – Alexandrov, S. – Bakardzhiev, A. – Valchev, T. 2024: Bulgarian–Polish project of research on barrows in the Middle Tundzha region. In: Alexandrov, S. – Włodarczak, P. (eds): *From the Steppes to the Balkans Yamna Culture in Upper Thrace.* The Yamnaya Impact on Prehistoric Europe 5. Budapest, 9–34.

Zahrnt, M. 2015: Early history of Thrace to the murder of Kotys I. (360 BCE). In: Valeva, J. – Nankov, E. – Graninger, D. (eds): *A companion to ancient Thrace.* Oxford, 33–47. https://doi.org/10.1002/9781118878248.ch4

Catalogue

Mound ID	Feature ID	Cross ref. no.	Feature	Specification	Deposition	Amount	Notes to feature	Literature
MH01	T01	*Trizna* № 8	ceramic vessels	wheel-made	complete	1	—	Cholakov *et al.* 2016, 5–14
MH01	T02	*Trizna* № 10	ceramic vessels	wheel-made	complete	1	beads and pieces of balsamarium	Cholakov *et al.* 2016, 5–14
MH01	T03	*Trizna* № 11	ceramic vessels	wheel-made	complete	1	—	Cholakov *et al.* 2016, 5–14
MH01	T04	*Trizna* № 14	ceramic vessels	wheel-made	destroyed	15	broken glass vessel and iron item	Cholakov *et al.* 2016, 5–14
MH01	T05	*Trizna* № 16	ceramic vessels	wheel-made	destroyed	3+	pieces of glass vessel	Cholakov *et al.* 2016, 5–14
MH02	T01	*Trizna* № 17	ceramic vessels	wheel-made	complete	1	—	Cholakov *et al.* 2016, 14–18
MH02	T02	*Trizna* № 18	ceramic vessels	wheel-made (2) / hand-made (1)	destroyed	3	—	Cholakov *et al.* 2016, 14–18
MH02	T03	*Trupopolagane na kon*	horse	—	inhumation	1	pregnant female horse	Cholakov *et al.* 2016, 14–18
MH03	T01	*Trizna* № 4	ritual structure	—	destroyed	—	pit with charcoal, burned wood, animal bonec, 7 bronze aplique (horse harness)	Cholakov *et al.* 2016, 18–22

Mound ID	Feature ID	Cross ref. no.	Feature	Specification	Deposition	Amount	Notes to feature	Literature
MH03	T02	*Trizna* № 5	ceramic vessels	wheel-made	destroyed	11	—	Cholakov *et al.* 2016, 18–22
MH04	T01	*Trizna* № 1	ceramic vessels	wheel-made	combined	34	iron nails, pieces of an iron knife, bronze plaque	Cholakov *et al.* 2016, 22–25
MH04	T02	*Trizna* № 2	ceramic vessels	wheel-made	destroyed	9	—	Cholakov *et al.* 2016, 22–25
MH04	T03	*Trizna* № 6	ceramic vessels	unidentified	destroyed	unidentified	—	Cholakov *et al.* 2016, 22–25
MH04	T04	*Trupopolagane na kon i kuche*	horse and dog	—	inhumation	1 + 1	—	Cholakov *et al.* 2016, 22–25
MH05	T01	*Trizna* № 19	ceramic vessels	wheel-made	destroyed	8	—	Cholakov *et al.* 2016, 25–32
MH05	T02	*Trizna* № 20	ceramic vessels	hand-made	?	1	—	Cholakov *et al.* 2016, 25–32
MH05	T03	*Trizna* № 21	ceramic vessels	wheel-made	destroyed	7	fragments of a glass vessel	Cholakov *et al.* 2016, 25–32
MH05	T04	*Trizna* № 22	ceramic vessels	wheel-made	destroyed	14+	fragments of a glass vessel	Cholakov *et al.* 2016, 25–32
MH05	T05	*Trizna* № 23	ceramic vessels	wheel-made	complete	1	—	Cholakov *et al.* 2016, 25–32
MH05	T06	*Trizna* № 24	ceramic vessels	wheel-made	destroyed	21	fragments of a glass vessel and iron object (prob. knife)	Cholakov *et al.* 2016, 25–32
MH06	T01	Feature 1	ceramic vessels	wheel-made	complete	1	a coin	Włodarczak *et al.* 2024, 11–19
MH06	T02	Feature 2	ceramic vessels	hand-made	destroyed	1	—	Włodarczak *et al.* 2024, 11–19
MH06	T03	—	ceramic vessels	unidentified	unidentified	unidentified	—	Włodarczak *et al.* 2024, 11–19
MH07	T01	Feature 4	ceramic vessels	wheel-made	complete	1	—	Włodarczak *et al.* 2024, 11–19
MH07	T02	Feature 5	ceramic vessels	wheel-made / hand-made (1)	destroyed	32	—	Włodarczak *et al.* 2024, 11–19
MH07	T03	Feature 6	ceramic vessels	wheel-made	complete	3	deliberately broken jug	Włodarczak *et al.* 2024, 11–19
MH08	T01	Kontext 4	ceramic vessels	wheel-made	complete	3	—	Mikov *et al.* 2018, 295–331
MH08	T02	Kontext 7	ceramic vessels	wheel-made	complete	2	—	Mikov *et al.* 2018, 295–331
MH08	T03	Kontext 9	ceramic vessels	wheel-made	complete	4	—	Mikov *et al.* 2018, 295–331
MH09	T01	—	metal vessels	bronze	comp.– del. damaged	6	deliberately pierced and deformed	Agre 2007, 76–77; Agre 2008a, 237–239
MH09	T02	—	1 cart + 2 horses	—	cremation	1 cart + 2 horses	four-wheeled cart	Agre 2007, 76–77; Agre 2008a, 237–239
MH10	T01	—	ceramic vessels	wheel-made	destroyed	unidentified	fragments of yellow glass vessel	Agre 2010, 251–253
MH11	T01	—	ceramic vessels	wheel-made / unidentified	destroyed	—	—	Agre 2016, 300–303

Mound ID	Feature ID	Cross ref. no.	Feature	Specification	Deposition	Amount	Notes to feature	Literature
MH12	T01a	Pit 1	cart + 2 horses	—	inhumation	1 cart + 2 horses	four-wheeled cart + richly decorated harness	Agre 2009, 279–282
MH12	T01b	Pit 1	met., cer. and glass vessels	bronze / wheel-made	complete	3 metal / 4 ceramic / 5 glass vessels	one iron grate	Agre 2009, 279–282
MH12	T02	Pit 2	two horses	—	inhumation	2	harnessesc + 2 shields with massive umbos	Agre 2009, 279–282
MH12	T03	—	ceramic vessels	unidentified	destroyed	unidentified	—	Agre 2009, 279–282
MH12	T04	—	ceramic vessels	unidentified	destroyed	unidentified	—	Agre 2009, 279–282
MH12	T05	—	ceramic vessels	unidentified	destroyed	unidentified	—	Agre 2009, 279–282
MH13	T01	—	1 cart + 2 horses	—	inhumation	1 cart + 2 horses	bronze aplique from a harness	Agre 2012, 217–219
MH13	T02	Altar No. 1	Altar	From row of stones - on top of them were	—	1	on the tegulae - ash, charcoal and animal bones	Agre 2012, 217–219
MH13	T03	Altar No. 2	Altar	Rows of stones	—	1	—	Agre 2012, 217–219
MH13	T04	—	ceramic vessels	wheel-made	destroyed	unidentified	—	Agre 2012, 217–219
MH13	T05	—	ceramic vessels	wheel-made	destroyed	unidentified	—	Agre 2012, 217–219
MH14	T01	—	1 cart + 2 horses	—	inhumation	1 cart + 2 horses	iron fragments from the cart + bronze appliqué from the harness	Agre 2012, 217–219
MH14	T02	—	1 cart + 2 horses	—	inhumation	1 cart + 2 horses	iron fragments from the cart	Agre 2012, 217–219
MH15	T01	Pit No. 1	ceramic vessel, shells of	wheel-made	destroyed	unidentified	considered as ritual pit	Agre 2013, 164–166
MH16	T01	—	horse	—	cremation	1	not crem. harness + bead	Agre 2013, 164–166
MH16	T02a	Structure No. 1	altar	rows of stones	—	1	—	Agre 2013, 164–166
MH16	T02b	—	ceramic vessels	unidentified	destroyed	unidentified	iron nails, within MH16_T02b struc.	Agre 2013, 164–166
MH17	T01	Grave No. 3	dog	—	cremation	1	3 whole vessels and one glass bead.	Agre *et al.* 2014, 197–200
MH17	T02	*Trizna*	ceramic vessels	wheel-made / hand-made	destroyed	unidentified	—	Agre *et al.* 2014, 197–200
MH18	T01	—	ceramic vessels	wheel-made	combined	3 whole vessels + unidentified	bronze object and spindle whorl	Iliev – Bakardzhiev 2008, 239–242
MH18	T02	—	ceramic vessels	wheel-made	complete – deliberately damaged	1	deliberately drilled hole	Iliev – Bakardzhiev 2008, 239–242
MH18	T03	—	ceramic vessels	wheel-made	complete	1	located near the cremation boundary	Iliev – Bakardzhiev 2008, 239–242
MH19	T01	—	ceramic vessels	wheel-made	complete	1	—	Iliev – Bakardzhiev 2008, 239–242

Mound ID	Feature ID	Cross ref. no.	Feature	Specification	Deposition	Amount	Notes to feature	Literature
MH19	T02	—	ceramic vessels	wheel-made	complete	5	—	Iliev – Bakardzhiev 2008, 239–242
MH19	T03	—	ceramic vessels	wheel-made	complete – deliberately damaged	2	mug - deliberately damaged by drilled hole and placed inside the krater	Iliev – Bakardzhiev 2008, 239–242
MH19	T04	—	ceramic vessels	unidentified	destroyed	unidentified	area exposed to fire	Iliev – Bakardzhiev 2008, 239–242
MH19	T05	—	ceramic vessels	unidentified	destroyed	unidentified	area exposed to fire	Iliev – Bakardzhiev 2008, 239–242
MH20	T01	Structure no. 5–6	ceramic vessels	wheel-made	unidentified	unidentified	—	Bakardzhiev *et al.* 2018, 146–148
MH21	T01	—	ceramic + glass vessel	wheel-made	complete	2 ceramic vessels, 1 glass vessel	bronze coin of Caracalla	Bakardzhiev – Valchev 2014, 568–569

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 359–383. 10.17204/dissarch.suppl.5.2026.359

Archaeological excavation of a new Roman-period wagon grave and its adjacent horse burial at Belvárdgyula (Baranya County, Hungary) in 2021

Interim research report

Zsolt Mráv ✉
National Archaeological Institute, Hungarian National Museum, Budapest
mrav.zsolt@hnm.hu

Réka Neményi
Department of Archaeology, Janus Pannonius Museum, Pécs
nemenyi.reka@jpm.hu

Received 30 November 2025 | Accepted 28 May 2026 | Published 18 November 2026

Abstract: Discussed in this study is the discovery and excavation of a particularly fascinating Roman period burial representing a rare mortuary rite alongside its preliminary assessment. The burial was discovered by a local archaeology enthusiast on the outskirts of Belvárdgyula: the excavation undertaken in autumn 2021 brought to light a grave pit containing a carriage with a horse team and the separate burial of a harnessed saddle horse. The carriage is noteworthy not only for its Bacchic bronze sculptural ornamentation and its structural elements, but also because of the burial rite involving the partial deposition of carriage components and the yoke enabling the reconstruction of the horse team. The horse burial provided yet another example of a Pannonian saddle horse interred with an openwork bronze harness set. Both graves yielded a surprisingly high amount of organic remains (wood, leather and textile) that have enriched our knowledge of the period's horse gear and team-drawn carriages. The burials uncovered at Belvárdgyula have added new details to our overall picture of the local native population of eastern Transdanubia, particularly regarding wagon graves, a distinctive burial type that differs markedly from the funerary rites of Roman-type interments.

Keywords: Baranya County, Belvárdgyula, Roman period, saddle horse, horse burial, wagon grave, otherworld, local elite, Bacchus

One spectacular type of Roman-period funerary rite in Pannonia is represented by burials containing the carriages of the local elite of indigenous background. This burial rite differs markedly from the funerary customs of Roman-type burials.[1] The carriage and the draught horses were deposited in the grave pit as part of the mortuary paraphernalia considered indispensable for the journey to the otherworld. The local Celtic population believed that the deceased or their soul had to undertake a long journey to reach the otherworld, which they conceived of as lying in a remote region of the world, where the deceased would enjoy eternal happiness, and an idyllic golden age provided by Bacchus for his followers. The truly wealthy strove to undertake this long and arduous journey as comfortably as possible. This background accounts for the deposition of their ornate carriages in graves, which were

1 Mráv 2009; Mráv 2016.

✉ Corresponding author

both vehicles used for travel in daily life and symbols of prominent social status. Wagon graves are rare finds in eastern Pannonia: some forty graves of this type have been found since the nineteenth century, although only some of them were professionally excavated and documented with attention to the details of the burial rite. The two most recent wagon graves were discovered in two successive years at Ellend in 2020 and on the outskirts of Belvárdgyula in 2021, both in Baranya County in southern Transdanubia, a region from which only a single wagon grave had previously been known: the one found at Kozármisleny.[2] The goal of this study is to report on the discovery and archaeological in-



Fig. 1. 1 – Belvárdgyula. Soil stain of the wagon grave and the horse burial after the removal of the humous topsoil (photo by Zs. Győrffy-Villám), 2 – Belvárdgyula. The metal-framed tent erected at the start of excavation to protect the then-assumed wagon grave, 3 – Belvárdgyula. Orthophoto of the excavated horse grave (photo by Zs. Győrffy-Villám).

2 Kiss 1989.

vestigation of the Belvárdgyula grave, which has added a wealth of exciting and colourful new details to our continuously expanding knowledge of Pannonian wagon graves.[3]

The discovery of the wagon grave and its archaeological excavation

In 2020, Viktor Réger, a volunteer metal detectorist of the Janus Pannonius Museum of Pécs (henceforth abbreviated as JPM) discovered remarkable Roman-period metal finds on the outskirts of Belvárdgyula, some 1 km south of the settlement's centre. The horse teeth, the fragment of the horse bit with a rein ring, an openwork bridle mount, and a mask-ornamented decorative nail suggested that the area concealed a carriage and horse burial from the Roman period.[4] Before the excavation began, a metal-detector survey was conducted over the area, during which a few iron carriage elements, another mask-ornamented decorative nail, many tegula fragments, and several Roman coins were found. An additional result of the field survey was six so-called Budakeszi/Ellend-type bronze terret rings. These terret rings, uniform in size and shape, certainly did not derive from the wagon grave excavated in 2021. As yet, we cannot explain either their occurrence at the site or their number, which is two more than the complete set of terrets of a Roman-period yoke. Some Roman iron wagon parts found during the metal-detector survey, which have no connection with the excavated wagon grave, also require explanation. Based on the scatter of the finds, we conducted an intensive metal-detector survey over an area of 20 × 40 m; the anomalies were concentrated in a 5 × 4 m area, where the deep-search metal detector indicated the presence of large metal artefacts. We stripped away the ploughed topsoil layer by layer with a backhoe loader until a scatter of horse teeth was encountered at a depth of 20 cm, after which we proceeded to excavate the area manually until reaching the yellow, loessy subsoil, in which a clear, large, light brown soil stain could be discerned. The soil stain of the pit extended beyond the excavation area; therefore, it was expanded by removing the topsoil layer by layer using heavy machinery until the entire soil stain of the roughly rectangular feature became visible (Feature 1, wagon grave). Simultaneously, we also removed the upper humus layer mechanically in an area south of Feature 1, where the metal detector likewise indicated intense anomalies, and uncovered the soil stain of a smaller rectangular pit (Feature 2, horse burial) (Fig. 1.1). Next, a protective roof, a tent with a metal frame, was erected over the assumed wagon grave, and its excavation started (Fig. 1.2).[5] The fill of the pit was removed in 5–10 cm thick layers, all of which were meticulously documented.

The two grave pits were dug into the upper, more gently sloping southern side of the hill. As in the case of the wagon graves at Budaörs and Budakeszi, no trace could be identified of a grave mound that may have been erected over the Belvárdgyula wagon grave and horse burial.[6]

The horse burial

In addition to draught horses, wagon graves of the local native elite often contain saddle horses interred either in the grave pit of the carriage or in a separate pit close to it. The Belvárdgyula horse

3 This study is a more detailed and more richly illustrated version of a previous paper by the authors, Mráv – Neményi 2023.

4 The volunteer metal detectorist surveyed the location where the finds had been discovered and the adjacent areas under the direction of Gergely Kovaliczky, archaeologist of the JPM. As part of this survey, we georeferenced the findspot of the snaffle bit, the horse teeth, and some previously found iron carriage parts.

5 The salvage excavation was generously funded by the Prime Minister's Office. The excavation was conducted by the Department of Archaeology of the Janus Pannonius Museum in collaboration with the Hungarian National Museum. The excavation was directed by Réka Neményi (JPM).

6 On the relationship between mound graves and wagon graves, see Palágyi 1981, 10–14; Palágyi – Nagy 2002, 70, 135–137.



Fig. 2. 1 – Belvárdgyula, horse grave. S-shaped, tin bronze openwork mount attached to a cheek strap of the bridle (Janus Pannonius Museum, Pécs; photo by M. Helesfai), 2 – Belvárdgyula, horse grave. Main mount types on the bridle of the saddle horse (Janus Pannonius Museum, Pécs; photo by M. Helesfai), 3 – Belvárdgyula, horse grave. Openwork strap divider disc from the left side of the saddle horse's chest (photo by Zs. Győrffy-Villám), 4 – Belvárdgyula, horse grave. One of the four openwork strap divider discs *(phalerae)* (Janus Pannonius Museum, Pécs; photo by M. Helesfai).

burial represents the latter type. It must be highlighted that not all horse burials can be assumed to have accompanied wagon graves. The custom of burying deceased or sacrificed saddle horses was much more widespread both geographically and socially than the aristocratic and costly rite of depositing carriages in graves.[7] Horse burials have been found across certain regions in both Pannonian provinces; however, only a portion of these burials can be linked to the local elites. The remainder of these horse burials, particularly the ones containing weapons used in the Roman army and the ones uncovered in the cemetery of a military fort, can be associated with serving or discharged cavalrymen. Obviously, there is some overlap between these two burial types, represented by the weapon burials of the Káloz wagon burial horizon.[8] Another type of burial associated with horses does not include a horse cadaver: these are graves of humans with the addition, following the *pars pro toto* concept, of only certain elements of a horse harness (see the cremation graves at Kleinwarasdorf-Steinäcker, the *ossuarium* at Halbturn-Wittmannshof 'Objekt 252', Gerulata [Bratislava-Rusovce, SK] Cemetery II, Grave 90, and Azaum/Odiavum [Almásfüzitő, H], where a grave comprising metal components of a bridle came to light during the construction of the Alumina Plant in or before 1951).[9]

The grave pit of the Belvárdgyula horse burial was dug some 5 m south of the wagon grave. The relative positions of the two pits can be determined as follows: the eastern longitudinal wall of the

7 For an overview of the Pannonian horse burials, see Palágyi – Nagy 2002, 70; Vörös 2010, 232–233; Márton 2019, 207–208. For more recent, yet unpublished horse burials, see Mráv in preparation.

8 Káloz; Várpalota-Inota, Tumulus 2; Budaörs, Grave 126; see comprehensively Mráv 2006, 53–64; Mráv 2014b, 119–126.

9 Márton 2019, 208; Mráv 2024b.



Fig. 3. Openwork strap divider discs from the Pannonian provinces, representing closest parallels to the pieces found at Belvárdgyula. 1 – Brigetio (Komárom, Szőny), Horse Grave 2, 2 – Sárbogárd-Sárszentmiklós, wagon burial, 3 – Transdanubia, perhaps Intercisa (Dunaújváros), from a destroyed wagon burial, 4 – Szomor-Somodorpuszta, wagon burial, 5 – Brigetio (Komárom, Szőny), Horse Grave 1, 6 – Transdanubia, perhaps Intercisa (Dunaújváros), from a destroyed wagon grave (Hungarian National Museum, Budapest; photo by A. Ferancz).

wagon grave pit, or more precisely its line extended southwards, is approximately aligned with the north-south axis of the horse grave pit. The east–west oriented pit of roughly 193 × 75–100 cm had a rounded trapezoidal shape. After the topsoil had been removed, parallel plough marks running north-west to south-east still scarred both the soil stains and the artificial excavation floor. One of them, disturbing the horse burial, reached as deep as the animal's skull. Ploughing destroyed the nose and mouth of the horse's skull, including its incisors. Only a few molars, stained green by the patina of the bronze rings of the bit, were preserved. They were dislocated from the jaw that had been crushed by the ploughshare. Half a horse bit with rein rings was discovered in this area in 2020.

A saddle horse with lavishly adorned harness was buried in the grave pit (Fig. 1.3). The horse's head lay at the eastern end of the pit, while its hindquarters lay at the western end. The western end of the pit was dug deeper for the horse's hindquarters. The position of the horse skeleton, especially the limbs, suggested that the animal's carcass had somehow been shoved and squeezed into the pit. During the process, one of the straps originally strung through the openwork strap divider disc on the haunch must have become disconnected, as its button was found further away. The bit found in 2020 could be classified as a snaffle bit. It consists of a jointed iron bar with double bronze rings comprising loops of dissimilar size at either end. The cheek straps of the bridle were fitted into the bigger rings, while the reins were fitted into the two smaller rings. The decorative bronze mounts of the left cheekpiece were also heavily disturbed by deep ploughing. This is the reason why one of the two identical S-shaped openwork fittings decorating the cheek straps was found during the metal-detector survey in the uppermost humus layer, while the other was found in the furrow running across the horse's head (Fig. 2.1). It is likely that illegal metal detectorists had found some of the bronze fittings of the bridle straps, dispositioned by ploughing, resulting in their permanent loss.

Nonetheless, most harness ornaments remained in their original positions on the skeleton, although the left cheek and the mounts of the bridle on that side suffered extensive disturbance.

The bridle was adorned with the following tin-bronze mounts: domed, box-shaped strap slides and bridle strap dividers, two looped strap-ends, a bronze shank button with a trilobate head on the top of the horse's head, and a rectangular stud at the last cervical vertebra (Fig. 2.2). The four strap dividers, along with the girth, used to hold the saddle firmly in place. The leather saddle cover and saddle horns made of organic materials were not preserved; iron rods bracing the saddle, such as those observed in the Nagykanizsa horse grave,[10] were not found. The most spectacular harness fittings are undoubtedly the four bronze strap divider discs *(phalerae)*, two of which were found by the haunches and two on either side of the breast (Fig. 2.3). Their openwork decoration is comprised of three S-shaped trumpet motifs *(Trumpetenmuster)* set within a pair of concentric circles (Fig. 2.4). Although the openwork pattern has no exact parallel, several strap divider discs with similar openwork decoration in a 'Celticising' style, composed of three trumpet motifs, have been published from the Pannonian provinces (Fig. 3).[11] Openwork strap divider discs of this type did not have copper-alloy loops attached to their edges; instead, the leather straps were looped directly through them; accordingly, they have no rivets on the back. A pair of bronze shank buttons with trilobate heads lay beside each disc, suggesting that two straps had passed through each disc. (The number and symmetrical position of the openwork strap divider discs in the Belvárdgyula horse burial, together with those of the buttons once fastening the straps to them, are identical to the horse gear found *in situ* in a similar feature at Nagykanizsa (Fig. 4)[12] and in the partly disturbed horse burial at Győr, Újlak Street [STR-100].[13]) A particularly noteworthy observation is that a single yarn or a bundle of yarns was threaded through the shank buttons, thereby enhancing the ornamentation of the harness straps (Fig. 5.1). The straps looped through the outer ring of the openwork strap divider discs have worn the contact surfaces thin to a greater or lesser extent, indicating that the harness was used for a longer period and/or intensively (Fig. 5.2). The haunch straps were also decorated with double S-shaped, openwork bronze mounts with an angular design (Fig. 5.3). A larger buckle of the girth used to fasten the saddle was also found. It had a simple D-shaped bronze buckle frame and an iron pin. The buckle was found at

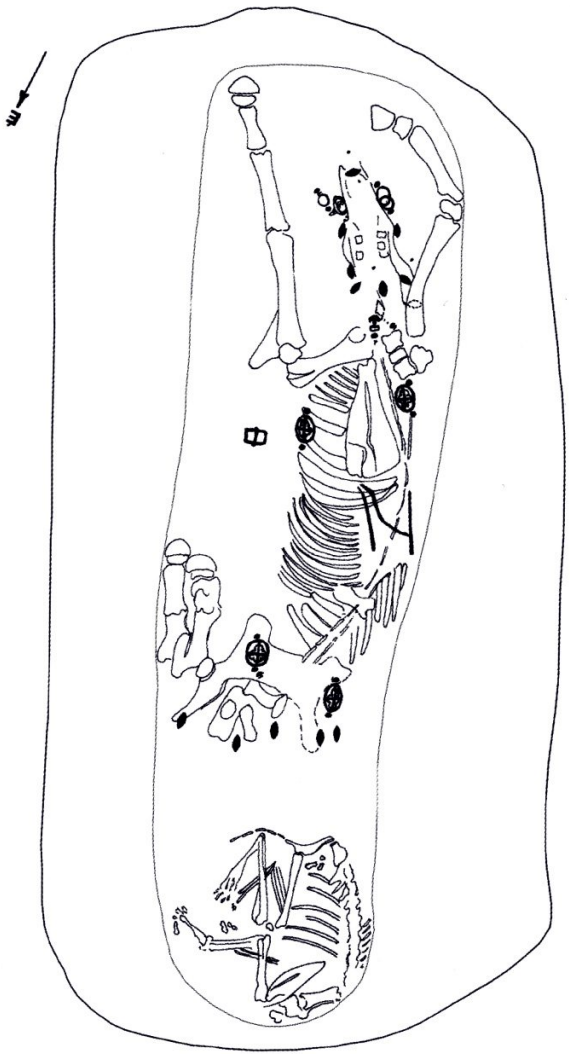


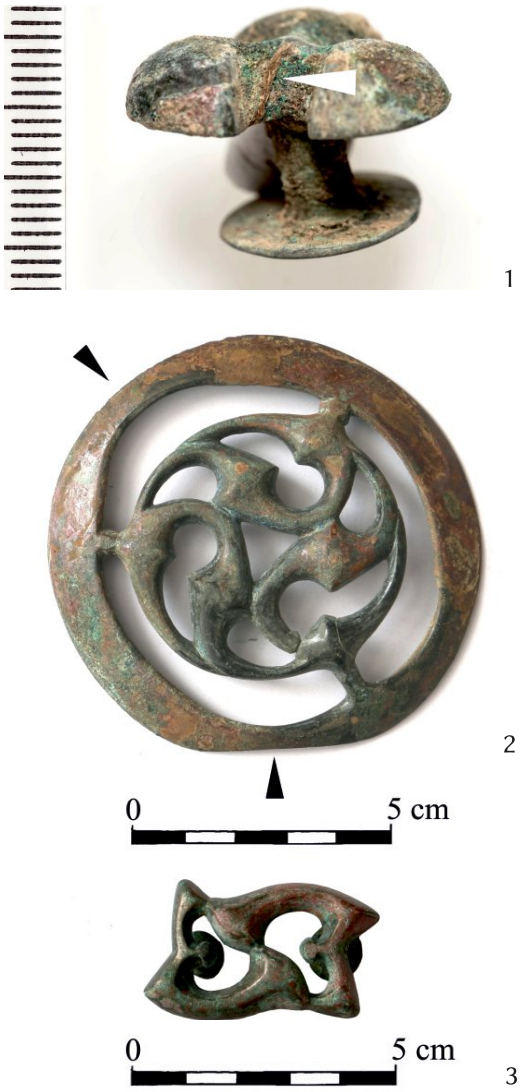
Fig. 4. Nagykanizsa, Inkey funerary chapel, horse grave. The position of the four openwork strap divider discs (after Eke – Horváth 2010).

10 Eke – Horváth 2010, 168, no. 5.1–53, Figs 12, 33–35.

11 E.g., L. Sellye 1940, 237–240, Pls 30–33.

12 Nagykanizsa-Roman cemetery I, Grave 42 (horse burial): Eke – Horváth 2010, 166–168, Figs 11–12.

13 Róbert Herbály's excavation in 2016, unpublished.



the horse's belly; however, it must have been in a secondary position there, shifted and stuck under the strap divider disc on the left side of the chest (Fig. 2.3). The decorative fittings of the horse gear from the Belvárdgyula horse burial enrich the corpus of openwork fittings from horse-harness sets from the Pannonian provinces: comparable sets, both complete and incomplete, have been recovered mostly from horse burials from the Antonine period.[14] Unlike some richly furnished horse burials, the Belvárdgyula grave did not contain any other grave good (such as weapons, bronze vessels used for hand or leg washing, *instrumenta balnei* such as oil flasks, *strigil*s, or foldable iron chairs).[15]

The wagon burial

The carriage and the two draught horses (Horses 1 and 2) were deposited in a large, relatively deep and roughly trapezoidal grave pit (Fig. 6). The south-eastern corner of the pit forms an acute angle, while the other corners are slightly rounded. The straight bottom of the vertical-walled pit dug into the hillside followed the slope of the surface, slightly decreasing southwards; it was oriented north-south with a five-degree deviation. As in the horse burial, the south-western part of its fill was disturbed by deep plough furrows running north-west to south-east, which displaced the teeth and skull fragments of Horse 2.

Fig. 5. Belvárdgyula, horse grave. 1– Remnants of piece or bundle of yarns threaded through a trilobate-headed shank button (Janus Pannonius Museum, Pécs; photo by M. Helesfai), 2 – two worn and thinned parts of the outer ring of one of the openwork strap divider discs where the straps were looped through (Janus Pannonius Museum, Pécs; photo by M. Helesfai), 3 – one of the two openwork mounts of the haunch straps (Janus Pannonius Museum, Pécs; photo by M. Helesfai).

14 Openwork harness sets have been brought to light from the following horse burials: Brigetio-Gerhát cemetery, Horse Burials 1 and 2 (Barkóczi 1948, 169–176, Pls 29–33, cp. also Palágyi 1989, 130–131); Győr-Újlak utca STR-100 (Róbert Herbály's excavation, 2016, unpublished); Mözs-Kakasdomb (Gaál 1979, 34–36, 61–71); Nagykanizsa-Roman cemetery I, Grave 42 (Eke – Horváth 2010, 166–168); Seregélyes-Pálinkaház (Fitz 1959, 205; Fitz 1962, 101; Bánki 1972, 80–81, Cat. no. 60); Tihany (Palágyi 1990); Velence (Marosi 1937, 26; L. Sellye 1940, 237–238, Pl. 30). Aside from these horse burials, harness sets containing openwork strap divider discs were also found in the wagon graves discovered at Szomor-Somodorpuszta (Gaul 1889; Hampel 1892, 55) and Sárbogárd-Sárszentmiklós (Gaul 1890, 115, Pl. 5.6; Hampel 1892, 57; L. Sellye 1940, 238) as well as in an unprovenanced harness set from a wagon grave from Transdanubia, perhaps Dunaújváros, whose find material reached the Hungarian National Museum in a strongly incomplete condition (Hampel 1892, 61; L. Sellye 1940, 239). Horse Burial 2 uncovered at Vajta-Kisvajta-dűlő, possibly also associated with a wagon grave, yielded a harness set containing two openwork, mask-decorated strap divider discs (Fülep 1949, 42, Pl. 28.7; Bánki 1972, 82, Cat. no. 61). For the Környe, Grave 3 (horse burial) and its fragmentary openwork disc, see: Bónis 1982, 148 Cat. no. 10, Fig. 19.2 and 20.2.

15 Mráv 2006; Mráv 2009; Mráv 2013; Mráv 2024a.



Fig. 6. Belvárdgyula. Wagon burial with the horse team and part of a four-wheeled carriage after excavation (orthophoto by Zs. Győrffy-Villám).

During the funeral, the seat was removed from the wagon box and deposited first, after which the bodies of the two horses were dragged into the pit and arranged: Horse 1, yoked, was placed in the centre, while Horse 2, unyoked, was tucked in the south-western quarter. The head of Horse 1 rested partially within the seat, against the inner side of its backrest, indicating that the horse carcass had been placed in the grave after the seat. The front axle was subsequently aligned with the end of the draught pole and deposited upside down at the northern end of the pit, whereas the rear axle and rear bolster—probably together with the floor of the carriage box—were tipped into the southern end of the pit, into the empty space in front of the seat. The construction consisting of the rear axle, the rear bolster, and the carriage box was squeezed into a diagonal position due to the limited available space. As a result, the rear part of the carriage body and the iron components of the rear axle were positioned so high that most of them had already been removed by ploughing, and only some elements survived in situ (see below). Two bronze ornamental nails decorated with satyr masks, recovered during the metal-detector survey preceding the excavation, also originated from the rear part of the carriage body.

The functional structural elements, such as the front and rear axles and the seat, were deposited separately and at some distance from one another. In addition, many components of the carriage were absent from the grave, suggesting that the vehicle had been dismantled into its structural elements before burial and interred with numerous parts missing, without particular attention being paid either to the careful arrangement of the components or to the efficient use of the available space.

The draught horses

The body of Horse 1 was dragged to roughly the centre of the grave pit and laid on its belly, tilted onto its left side (Fig. 7.1). Its spine is slightly curved. Its posture is slumped, with its left hind leg and foreleg pulled beneath it. Its right hind leg was bent beside its body, while its right foreleg was extended forwards. Its cervical spine followed an S-shaped curve. Its head, tipped onto the backrest of the seat, rested on the chin. Horse 1 was deposited together with the yoke attached to the pole. The horse was yoked, as indicated by the U-shaped iron element of the yoke, attached to the wooden pads by iron hooks and found *in situ* under the cervical vertebrae, and by the yoke collar, which had slipped over the top of the head in front of the forehead. Based on the position of the horse, it occupied in the team the left side in the direction of travel. A jointed iron bit with a pair of rein rings lay in its mouth. The cheekpieces and the browband of the bridle had been connected to each other by a simple iron ring on both sides, which had slid in front of the horse's eye sockets.

Horse 2 lay in the south-western quarter of the grave pit, tilted onto its right side, with the withers against the pit's wall (Fig. 7.2). Its front legs were bent, and the left front leg was slightly turned out. Owing to its high-held head and the erosion affecting the hill slope, its skull extended into the upper plough zone and was destroyed. Only a few horse teeth pulled out by the ploughshare were collected from the furrows. The possibility that the half iron bit found near the grave during the metal detector survey was the bit of this horse cannot be completely ruled out. Since it had a ring of larger diameter than the bit of Horse 1, this can hardly be verified with absolute certainty. Its left hind leg extended above the yoke, which shows that Horse 2, of the two draught horses, entered the pit later.

The yoke

One major result of the investigation of the Belvárdgyula wagon burial was the excavation of the double yoke (Fig. 7.3–4), which had quite certainly been attached to the pole when deposited in the grave. Based on the position of the metal parts of the yoke by the skull of Horse 1 (see below) and the presence of U-shaped iron bows of the yoke construction *(Unterhalsbügel)*, the Belvárdgyula



Fig. 7. 1 – Belvárdgyula. Wagon burial in excavation (Janus Pannonius Museum, Pécs; photo by M. Helesfai), 2 – Belvárdgyula, wagon burial. Skeleton of Horse 1 (yoked) at the centre of the grave pit (photo by Zs. Mráv), 3 – Belvárdgyula, wagon burial. Skeleton of Horse 2 (unyoked) in the south-western quarter (photo by Zs. Mráv), 4 – Belvárdgyula, wagon burial. Horse 1 (yoked) and the yoke fittings (photo by R. Neményi), 5 – Belvárdgyula, wagon burial. Metal parts of the yoke at the skull of Horse 1 (photo by Zs. Mráv), 6 – Belvárdgyula, wagon burial. One of the rein terrets of the yoke *in situ* (photo by Zs. Mráv).

piece can be classified as a neck yoke. The iron bows found at Belvárdgyula represent the single bow type, which ended in T-shaped hooks with a downturned end (Sigrid Alföldy-Thomas's Type NG1a, including bows with E-shaped ends [*Unterhalsbügel mit E-förmigen Hakenenden*][16]). They were at-

16 Alföldy-Thomas 2008, 334–335.

tached to a pair of ovoid wooden plaques by two iron hoops that were preserved in their original position inside the hooks of the U-shaped bow under the neck of Horse 1.[17] The underside and both edges of the wooden yoke collars were covered with lead sheets that were secured with bronze rivets. The double pair of rein terrets represents the simplest type: round rings with a downward-widening neck and a semicircular strap loop (Fig. 7.5).[18] The rings of the mounts attached to the yoke tip have an identical shape, the only difference being that their base has a projection. The pin connected the yoke to the draught pole, and the finials attached to the two peaked centres of the double yoke had rings suitable for guiding the reins, making it possible to hitch one leader (unicorn hitch) or even two leaders hitched side by side in front of the wheelers (four-horse hitch). The closely spaced decorative dome-headed bronze nails accurately outlined the middle section and the two terminals of the yoke centres, which, on the evidence of these finds, had a peaked centre, while its lateral arms had upturned ends. Similar types of double yokes are depicted in some stone reliefs belonging to funerary monuments,[19] and their miniature versions can be seen on the double (or single) yoke-shaped fibulae, which are known from the Gallic-Germanic provinces (Fig. 8.1–7).[20]

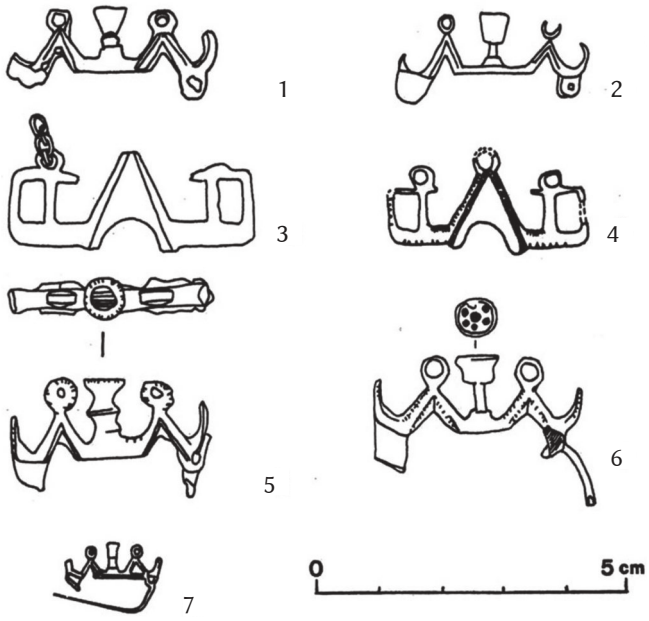


Fig. 8. 1–7 – Brooches in the shape of miniature yokes of western types (after Coulon – Fauduet 1990).



Fig. 9. 1 – Belvárdgyula, wagon burial. Textile remains from under the yoke (photo by K. Pápay and I. Füzi), 2 – Belvárdgyula, wagon burial. Textile remains from under the yoke (photo by K. Pápay and I. Füzi),

17 For the structure of yokes of similar types, see Raepsaet 1995; Raepsaet 2002, 237–247; Alföldy-Thomas 2008, 331–344; Simon 2009, 94–95, 102–103; Raepsaet 2016; Brownrigg – Crouwel 2017, 199–205.

18 For very similar terrets, see for instance Palágyi 2003, 28–29 (from Enying).

19 Raepsaet 1982; Raepsaet 1995; Raepsaet 2002, 237–247; Brownrigg – Crouwel 2017, 199–205.

20 Coulon – Fauduet 1990, Fig. 65. For the yoke finds and reconstructions from the Pannonian provinces, see comprehensively Palágyi 2000.

Textile remains were preserved on the yoke of the draught horses (Fig. 9.1–2). The fabrics most likely belonged to the cushioning placed between the neck of the horses and the lead cover of the yoke.

The carriage

The two axles and the presence of other components of specifically four-wheeled vehicles are a clear indication that a four-wheeled carriage had been deposited in the Belvárdgyula grave. The front axle was laid in the northern end of the grave pit, parallel to its northern wall. This is why the clouts wedged into the bottom of the wooden axle arms were found on top. At the base of the axle arms, on their upper surface, a shorter iron clout was also recessed where the inner nave rings of the wheels rotated. The two ends of the axle were covered with iron axle caps. The distance between the outer ends of the axle caps determined the total length of the axle, which here is 216 cm. Two iron nails with almond-shaped heads found with their heads downward were also part of the traction arm construction. These distinctive nails secured the connecting rod perpendicular to the two traction arms, which ensured the correct distance between the traction arms and kept them parallel.[21]

One remarkable aspect of the Belvárdgyula carriage is that the remains of the decayed pole could be identified as a darker soil stain that preserved its form and revealed that it had a forked end (Fig. 10.1–2).[22] An oval draught pole band *(Deichselmanchette)* lay at the forking of the pole, whose function was to hold together three wooden elements: the pole itself and the separately made two pole-ends.[23] This structure, reconstructed in 2005 by Zsolt Mráv,[24] is also supported by Wagon Burial C, excavated in Mikri Doxipara-Zoni (Evros, GR). In this wagon grave the oval iron band was also found *in situ* on the carriage pole at its bifurcation (Fig. 10.3).[25] The pole had quite certainly been dismantled because the draught bolts that ensured that the traction power of the horses was transferred from the pole to the traction arms[26] were not deposited in the grave. Of the iron fittings of the rear axle, only the left side clout and two iron plates secured with cotters above the axle arm survived in their original position. Due to the erosion of the hillside, the iron parts of the rear axle, which lay high in the grave pit, eventually reached the ploughing level, so they had already been ploughed out by the time of excavation and—except for the right rear bottom clout[27] found during the metal-detector survey—were certainly lost. The plates were protective devices, but they lacked collars that would have prevented mud whipped up by the wheels from lodging between the wheel hubs and the axle. The rear axle and the rear bolster were shoved into the grave pit upside down, as indicated by the fact that the bronze ornamental mount adorning the left arm of the Y-perch lay with its ornamented side facing downwards (Fig. 11.1). The rimmed bronze mount was secured to the rear left end of the Y-perch with three baluster-shaped rivets. Of these two bronze mounts with figural decoration, only the one on the left survived; the one on the right had either fallen off and been lost already in the Roman period or was found and removed from the site after it had been ploughed out. The most profusely ornamented part of Roman four-wheeled vehicles was the rear side of the rear bolster,[28] which also holds true for the Belvárdgyula carriage. A shorter iron strap ending in a horizontal S-shaped loop or hook was nailed to both ends of the upper edges of the

21 Mráv 2005, 40.

22 Mráv 2005, 28–31.

23 Mráv 2005, 21–35.

24 Mráv 2005.

25 Τριαντάφυλλος – Τερζοπούλου 2005, 1–9; Triandaphyllos 2010, 36–37; Trantalidou 2010, 65–66.

26 Mráv 2005, 37–40.

27 Clout is an iron strip deepened into the bottom of the tapered wooden axle arm to reduce its wearing.

28 Mráv 2014b, 134; Mráv 2016, 506, 518.

rear bolster. Iron parts very similar to this, ending in a loop, were used on the rear bolster of the Kozármisleny carriage.[29]

Regarding the carriage box, only this much seems certain: it was not suspended but fixed, since there was nothing to indicate the use of iron stake braces or iron-clad wooden bolster stakes from whose hooked ends the carriage box would have been suspended (strap/cord halters; *Gurthalter auf Kipfen*). The suspension rings of the carriage box were also absent. It also seems likely that the carriage box was thrown upside down into the grave pit together with the rear axle and the bolster, attached to the latter. The box was constructed from a row of wooden planks held together by perpendicular wooden rods. The bronze ornamental nails or appliqués with satyr heads were riveted to the two long sides of the floor plate. The distance between the two opposite decorative nails preserved in their original positions gave the width of the floor plate of the carriage box, which was 75 cm.

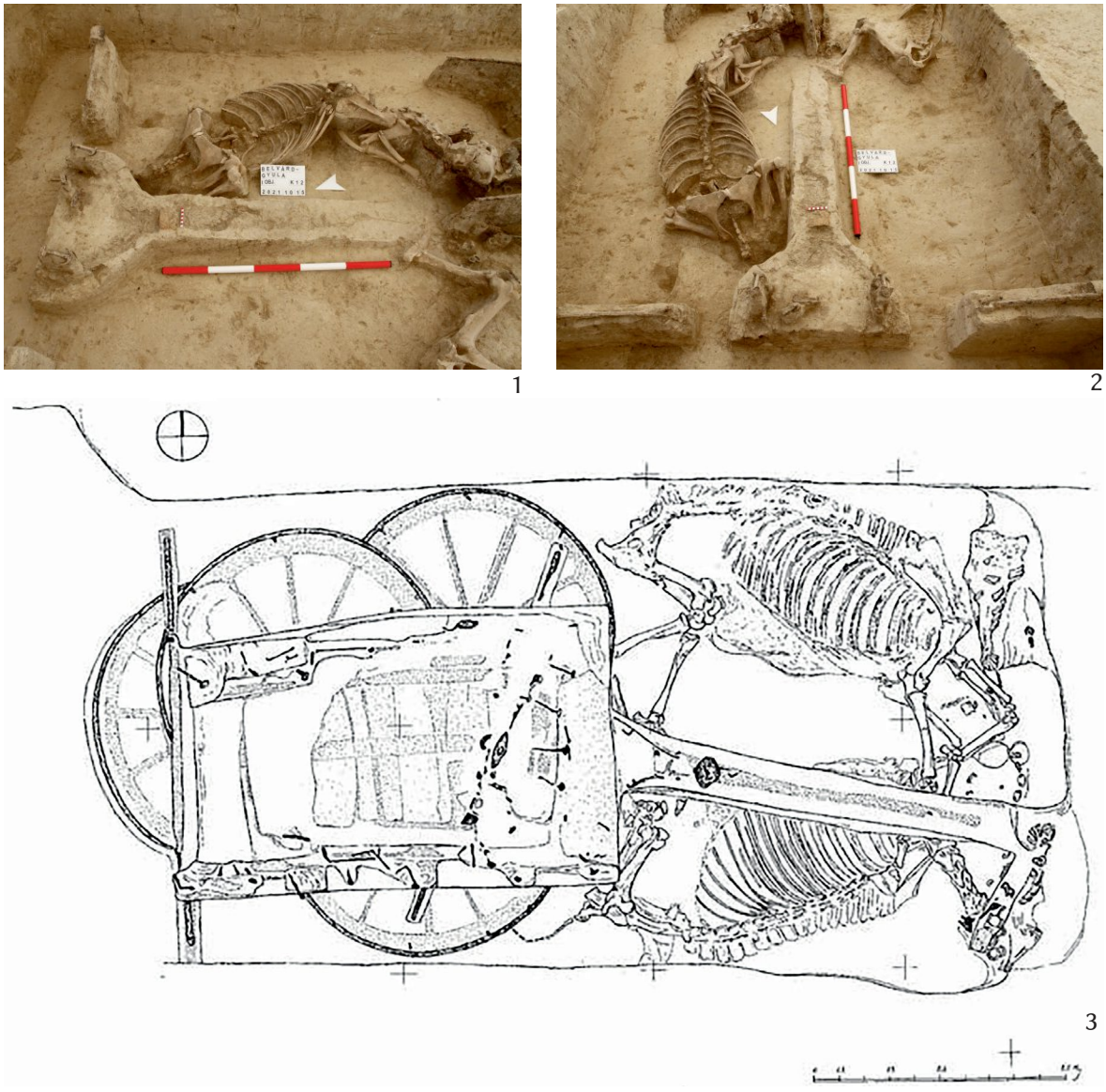


Fig. 10. 1 – Belvárdgyula, wagon burial. The draught pole with a forked end and the iron draught pole band (photo by R. Neményi), 2 – Belvárdgyula, wagon burial. The *in situ* draught pole and fore axle (photo by R. Neményi), 3 – Mikri Doxipara-Zoni (Evros, GR), Wagon Grave C. *In situ* position of the oval draught pole band and the darker soil stains of the draught pole (after Trantalidou 2010).

29 Kiss 1989, 20, Nr. 20.

The carriage seat had been removed and laid separately on the grave floor. Its form, type, and dimensions could be reconstructed from the five vertical iron bars of the armrests and backrest of the seat. Two had been attached to the front of the armrests, two to the rear corners, and one to the middle of the backrest (Fig. 11.2). The iron bars, curved at the bottom and leaning slightly outwards at the top, were attached to the seat board with two nails. Iron corrosion on the surface of the bars preserved the imprints of wickerwork, an indication that the seat rests had been of the wickerwork type (Fig. 11.3). These imprints provide the first archaeological evidence for the use of wickerwork seats on Roman-period carriages that have hitherto only been known from various depictions.[30]



1



2



3

As noted above, only certain structural elements of the carriage had been deposited in the grave pit: the front and rear axles of the undercarriage, the latter together with the bolster, the floor plate, and the seat of the carriage box. Absent from among the structural components were the iron supports of the front bolster, the pivoted front axle, and the reach pole,[31] meaning that they had not been placed in the grave. The lack of the massive king bolt and the draught bolt is not surprising because these were generally also missing in the case of graves containing carriages that had been previously disassembled.[32]

Fig. 11. 1 – Belvárdgyula, wagon burial. *In situ* bronze mount with a lion figure, upside-down, covering the terminals of the Y-perches (photo by B. Simon), 2 – Belvárdgyula. *In situ* iron bars of the wickerwork seat (photo by M. Szabó), 3 – Belvárdgyula, wagon burial. A bar of the carriage's seat with traces of wickerwork (photo by Zs. Mráv).

30 Zsolt Visy reconstructed the Kozármisleny carriage as having a wickerwork seat woven around a metal frame (Visy 2013, 111, Fig. 18). Zsolt Mráv proposed a similar reconstruction for the four-wheeled carriage from Graves 1 and 2 in Környe (Mráv 2016, 510, Fig. 13.4).

31 The reach pole is a straight pole connecting the fore-carriage with the hind-carriage, transferring traction power from the front axle to the rear axle.

32 Mráv 2016, 514.

By contrast, it is quite unusual that none of the four wheels had been placed in the grave, even though there was ample space for them.[33]

In this respect, the grave uncovered at Belvárdgyula is the single Pannonian wagon grave to contain no wheels at all. This is even more odd because wheels are what made a vehicle a functional means of travelling. An animal-drawn carriage is useless without wheels. It remains a matter of speculation whether there was a practical rationale for leaving out the four wheels, namely that wheels were expensive components that could be re-used and the descendants and/or heirs therefore decided to retain them instead of depositing them in the grave. Alternately, it is possible that the grave reflects yet another, rather extreme example of the *pars pro toto* practice in Pannonia, in which preserving the functionality of the deposited carriage, or at least its most important outward traits, was not a consideration. The two rationales may well have operated simultaneously. From this point of view, a wagon burial excavated in the cemetery of the *canabae* of the Aquincum legionary fortress under 96b Bécsi Road (District 3 of Budapest) represents an interesting analogy. The carriage placed into the grave pit was dismantled into parts; iron parts and stripped-off decorative bronze elements were thrown onto the bottom of the pit without any order (Fig. 12.1).[34] Although parts of the wheel hubs were buried here, the iron tyres were not, which indicates that the wheels were also broken, destroyed, and only some parts were deposited in the grave pit.



1 2

Fig. 12. 1 – Bécsi street 96b (District 3 of Budapest). Wagon grave from the cemetery of the *canabae* of the Aquincum legionary fortress, with the skeletons of the two draught horses and the remains of the destroyed carriage (photo by Zs. Mráv), 2 – Intercisa (Dunaújváros). Depiction of a family travelling on carriage, with a saddle horse accompanying them. The carriage drawn by a horse team, buried at Belvárdgyula, was a similar vehicle (Hungarian National Museum, photo by O. Harl).

Owing to the lack of certain components, the Roman-period carriage from Belvárdgyula can only be partially reconstructed. Nevertheless, if one wishes to envisage its former appearance, one shall imagine an elegant light carriage with a wide wheel track, small dimensions, and fixed bodywork lacking sideboards, with a wickerwork seat accommodating two persons (Fig. 12.2).[35]

Decorative programme of the carriage

The Belvárdgyula carriage has provided additional evidence for one of the recurrent traits of Pannonian carriages, namely that if the carriage was enhanced with bronze figural decoration, this

33 It could be excluded that the wheels were deposited in a separate pit nearby: neither the geophysical survey nor the deep-search metal detector survey detected any anomaly in the vicinity of the wagon grave indicating that.

34 Mráv 2009, 84.

35 For representations of wagons of a similar construction from Pannonia, see Visy 1997.



Fig. 13. The satyr mask adorning an edge of the box of the Belvárdgyula carriage (Janus Pannonius Museum, Pécs; photo by M. Helesfai)

was invariably drawn from Bacchic mythology. The visual programme of the Belvárdgyula carriage also reflects a consistent Bacchic mythological theme. The decorative nails or appliqués attached to both longitudinal sides of the bodywork's floor plate depicted masks of satyr boys (Fig. 13). The three surviving satyr masks, all very similarly modelled most probably made by the same craftsman, are characterised by a round, almost chubby face, a broad nose at the nostrils, and tall, pointed and hairy animal ears. Their brow is furrowed with massive frowning folds over each eye. There are frown lines between their eyebrows. Their hairline runs in a slightly wavy line across the top of the forehead, with locks of hair standing straight up or slightly waved above it, and one longer lock in the centre. The use of decorative appliqués depicting masks is not unprecedented in the decorative art of Roman carriages. The sides of the bodywork's floor plate of carriage No. 3, unearthed at Znepole (near the town of Tran, Sofia District, Bulgaria) in 1997, were also decorated with bronze appliqués attached to an iron band covered by a bronze sheet. These appliqués represented theatrical masks recalling gods (perhaps Dionysos and Attis) and goddesses (Demeter and Aphrodite).[36] The rear side of the rear bolster was adorned with a single bronze decorative bust and three discs bearing masks. All four figurative bronze representations evoked figures of the Bacchic mythological world. The bust occupied the visual focal point of the composition. A disc with a mask was placed both to the right and to the left of the bust, while a third was nailed beneath the bust (Fig. 14.1). Leather remains were preserved on the reverse of the discs. There appears to have been a predilection for decorative schemes based on three bronze discs in the adornment of the rear side of Roman-period carriages, although these were usually arranged in a row on the seat's back frame.[37] In contrast, compositions made up of six or even more bronze discs dominated the decoration of the rear bolster: six cast bronze discs—two larger and four smaller ones in symmetrical arrangements—were nailed to the carriage in Grave 162 in the Budaörs cemetery (Fig. 14.2–3),[38] and six or seven cast discs decorated with Bacchic busts adorned the Kozármisleny carriage (Fig. 14.4–5).[39] In Thrace, the rear bolster of Carriage B found at Mikri Doxipara-Zoni in Thrace (Evros, Greece) was decorated with five simple bronze discs; three smaller ones were attached to the upper part of the bolster and two larger ones to the lower part, below the smaller discs (Fig. 14.6).[40] Another carriage discovered in the same region at Vinarovo (Chirpan, Bulgaria) was equipped with at least five bronze discs with Bacchic busts, the exact position of which remains unknown in the lack of any archaeological observation.[41]

All three discs attached to the rear bolster of the Belvárdgyula carriage bore somewhat severely and clumsily modelled masks of more elderly satyrs, the *sileni*, or of Silenus himself (Fig. 15.1–2). The Silenus masks were modelled with significantly weaker artistic skill than satyr masks. The difference

36 Vladimirova-Paunova 2002, 34–35; Ignatov 2018, 151–152.

37 Mráv 2009, 85–86.

38 Mráv 2014b, 130-137; Mráv 2016, 506.

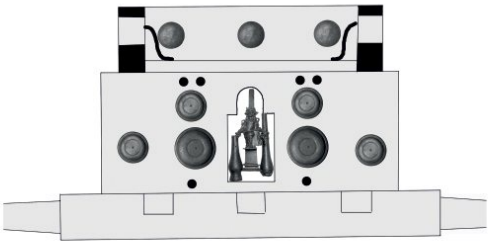
39 Kiss 1989, 25, Figs 34–35.

40 Triandaphyllos 2010, 33, 35, Fig. 15.

41 Ignatov 2018, 85–86, 152, Cat. no. 5.8.5.



1



2



3



4



5



6

Fig. 14. 1 – Belvárdgyula, wagon burial. Arrangement of the bronze discs adorning the rear bolster of the carriage (photo by Zs. Mráv), 2 – Budaörs-Kamaraerdei dűlő, Wagon Grave 162 from the cemetery of the Roman-period *vicus*. Cast bronze decorative discs once nailed to the backside of the rear bolster (reconstruction and drawing by Zs. Mráv), 3 – Budaörs-Kamaraerdei dűlő, Wagon Grave 162 from the cemetery of the Roman-period *vicus*. Reconstruction of the carriage, 2003 (reconstruction by Zs. Mráv; model built by L. Gyürki), 4 – Kozármisleny, wagon burial. Six Bacchic decorative busts on discs (after Kiss 1989), 5 – Kozármisleny, wagon burial. Reconstruction of the carriage, back view, 2024 (reconstruction by Zs. Mráv; 3D graphics by Pazirik Studio), 6 – Mikri Doxipara-Zoni (Evros, GR), Wagon Grave B. Decoration of the backside of the carriage *in situ* (after Triantaphyllos 2010).

is so great that one must assume that the satyr and Silenus appliqués were modelled by different craftsmen. The features and characteristics of the Silenus masks are highly schematised. They have stylised beards and hair with strongly articulated curls. Their moustaches are set high and asymmetrically. Silenus, the oldest satyr, who was also Bacchus's tutor, is often portrayed as a demonic or ridiculous deity when seized by drunkenness or, more rarely, as a wise god knowledgeable about the truths of existence.[42] Although Silenus generally appears as a bald old man in Roman Imperial period art, his 'younger version' with luxuriant hair is occasionally also depicted.[43]

A Silenos(?) mask with a physiognomy very similar to that of the Belvárdgyula examples was applied to the *discus* of a terracotta lamp from Tác (Fejér County, Hungary)[44] (Fig. 15.3). The degree of similarity is so great that it could have directly inspired the master who modelled the Silenos masks from Belvárdgyula.



Fig. 15. 1 – Belvárdgyula, wagon burial. Silenus mask on a disc that adorned the rear bolster of the Belvárdgyula carriage (Janus Pannonius Museum, Pécs; photo by M. Helesfai), 2 – Belvárdgyula, wagon burial. Another Silenus mask on a disc (Janus Pannonius Museum, Pécs; photo by M. Helesfai), 3 – Gorsium (Tác). Terracotta oil lamp decorated with a mask on its *discus* (Saint Stephen Museum, Székesfehérvár).

The central decorative bust of the composition was found in a strongly fragmentary and incomplete condition. Only its two fixing iron nails remained, the ends of which were bent down on the front side of the rear bolster. On the other end of each of the two iron nails a small broken bronze statuary detail was preserved. One preserves a smooth fragment of the chest, while the other depicts the left shoulder of the bust and above it the knot of the *nebris* with a deer's foot. The larger part of the bust between the two nails may have been broken off and taken away in Roman times, certainly before the burial of the carriage. The bronze of the bust was cast onto the iron nails; consequently, when an attempt was made to pry it off, it broke. Neither the circumstances nor the exact reason for this destructive intervention can be determined. Based on its central position, the decorative bust wearing *nebris* most probably represented Bacchus himself.

A recumbent lion figure with its head held high, holding a bull's head between its front paws, was secured to the rear, outward-curving end of the left arm of the Y-perch (Fig. 16.1–2). The densely incised lines on the neck imitating a mane are the only indication that the rather clumsily modelled

42 Barr-Sharrar 1987, 84–91.

43 Regarding the Silenus appliqué of the Belvárdgyula carriage, it is perhaps not mere chance that in the early Imperial period, similar portrayals of Silenus with a luxuriant hair are principally attested on the handles of bronze vessels and the handles of marble *krater*s and basins (Grassinger 1991, 40–42, 324–325). It seems quite possible that the Silenus masks found at Belvárdgyula had been modelled after the handle attachment of a bronze vessel.

44 Fitz n. y., 4.

large felid was intended to depict a lion. The lion tamed by Bacchus often took part in the ceremonial processions *(thiasos)* and the god himself often took the form of a ferocious lion when facing his enemies.[45] Dionysus was once captured by pirates, whereupon he turned into a lion to rid himself of them. His captors were so frightened that they threw themselves into the sea. Behind the image of the lion of the Belvárdgyula carriage, one may also recognise Bacchus, who, transforming into a terrible beast, forces the robbers to flee in panic, just like the pirates. These mythological meanings and hidden messages could have been the reason why lions were included in the carriage's Bacchic imagery. However, it must also be borne in mind that the image of lions with a bull's head or the head of another creature under or between their paws drew on a long tradition in the art of Antiquity and it can also be traced in other cultures.[46]



1 2

Fig. 16. 1 – Belvárdgyula, wagon burial. Figurine of a recumbent lion from the rear terminal of the rear Y-perch (Janus Pannonius Museum, Pécs; photo by M. Helesfai), 2 – Belvárdgyula, wagon burial. Backside of the lion statue (Janus Pannonius Museum, Pécs; photo by M. Helesfai).

The deceased associated with the graves

Regrettably, the wagon burial and horse burial uncovered at Belvárdgyula have not brought us closer to solving the greatest enigma relating to Pannonian wagon burials, namely the lack of a human burial associated with these graves.[47] No burial was found in the immediate proximity of the Belvárdgyula grave pits that could be clearly associated with the wagon grave. It is possible that the principal burial or perhaps a family graveyard lay somewhat farther from the wagon grave. In this case, this could likely be the pit (Fig. 17.1) uncovered some 20 m from the wagon burial; in addition to an antler burr and a pork trotter, this feature yielded a bronze pan (Fig. 17.2), an *ascia* (axe or hoe) (Fig. 17.3.a–b), and an iron knife. The presence of an *ascia* among the grave goods of this burial deserves special attention, as it may have had an additional sepulchral/symbolic meaning. This iron tool, primarily used for woodworking *(ascia lignaria)* and perhaps for stone carving *(ascia lapidaria)*,[48] was often depicted on tombstones as a symbol.[49] In Lugdunum

45 Horn 1972, 107–108.

46 The paws of the two lions often crowning the funerary monuments of the Middle Danubian provinces often rest on the heads of various prey animals (Scholz 2012, 315–320). Some of the lion statues recovered from sanctuaries of Mithras hold a bull's head (e.g., those in the Fertőrákos *Mithraeum* and *Mithraeums* I and III of Carnuntum in Pannonia), symbolising the triumph of divine power over evil, the latter represented by the bull. In a Mithraic context, the lion was a symbol of the Sun (Mastrocinque 2017, 60–61). The lion and the bull's head appear on four coins minted under Gallienus. The scene itself perhaps refers to Odaenathus's victory over the Persians (Manders 2012, 297–298).

47 For a discussion, see Mráv 2016, 520.

48 Gaitzsch 1980, 38–42; Duvauchelle 2005, 43–45; Rupnik 2014, 65–72.

49 In Pannonian provinces: Rupnik 2014, 64–65.

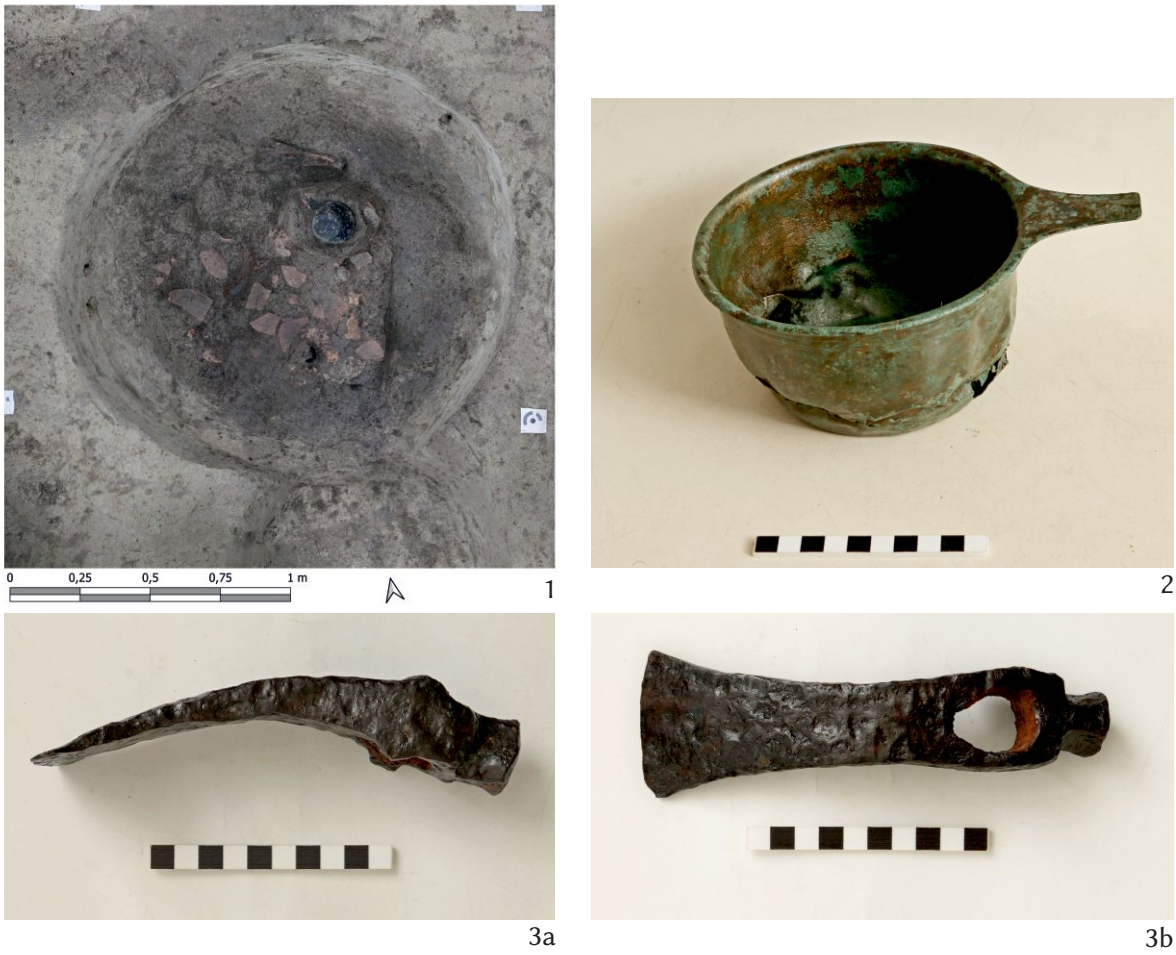


Fig. 17. 1 – Belvárdgyula, Feature 3. Cremation grave with a bronze vessel and iron implements (orthophoto by Zs. Győrffy-Villám), 2 – Belvárdgyula, Feature 3. Bronze pan from the cremation grave (Janus Pannonius Museum, Pécs; photo by M. Helesfai), 3.a–b – Belvárdgyula, Feature 3. *Ascia* from the cremation grave (Janus Pannonius Museum, Pécs; photo by M. Helesfai).

(Lyon, F) and its surroundings, the phrase *sub ascia dedicavit* appears particularly frequently in funerary epitaphs, although its interpretation is still problematic.[50] The *ascia* was also used as a grave good. We know one example of this practice from Augst (Switzerland),[51] and a cremation grave in Cemetery II of the civil town of Brigetio in Pannonia Superior (Komárom-Szőny, H); the latter find today is part of the Kállay collection.[52] The possibility that the deposition of the carriages and the horse was part of a mortuary rite that was not always performed after the death of their owner as part of the funeral ceremony cannot be excluded either. If an actual human burial was connected with the wagon and the horse burial, then the deceased—as in the case of other wagon graves[53]—could only be a man or perhaps a young boy. The harnessed saddle horse is considered a gender-specific grave good due to men.

50 For the meaning and interpretation of the phrase *sub ascia dedicavit* in funerary epitaphs, see De Visscher 1963, 285; Audin 1986, 23–31; Mattson 1990; Carroll 2006, 81.

51 Duvauchelle 2005, 44–45, Fig. 27, Pl. 17.92.

52 Rupnik 2014, 70.

53 Mráv 2009, 84.

The broader area and the local context of the wagon grave

Following the rescue excavation, a magnetometer survey was conducted in the broader area of the wagon grave.[54] To date, an one-hectare area was surveyed north and west of the wagon grave, and almost thirty archaeological features were identified. While some of these features could perhaps be interpreted as graves, the anomalies were not strong enough to suggest another undisturbed wagon grave with iron components.

The location of the settlement that can be associated with the burial ground is also known: a Roman-period site, a village or perhaps a villa, lies north-east of the graves.

The regional context of the Belvárdgyula wagon burial and the local elite in southern Transdanubia

Southern Transdanubia does not abound with lavishly furnished burials or wagon graves from the Roman Imperial period that can be associated with the local elite. The first wagon grave came to light in 1969 at Kozármisleny, east of Pécs,[55] and remained the only example of this remarkable funerary rite in Baranya County until recently. Only the grave pit into which the four-wheeled carriage and its horse team were deposited is known from the Kozármisleny burial (Fig. 18.1). The Kozármisleny carriage is one of the most outstanding vehicles known from Pannonia Inferior, owing partly to the magnificent Bacchic imagery of its figural ornamentation and partly to the superb artistic quality of its sculpted decoration.

Several decades elapsed before the discovery of the next wagon burial in Baranya County in 2020, when archaeologists from the Janus Pannonius Museum of Pécs uncovered on the outskirts of Ellend a grave containing a two-wheeled cart, two draught horses, a saddle horse, and two hunting dogs (Fig. 18.2).[56] Similarly to the carriage from Sárbogárd-Sárszentmiklós (Fejér County) and the cart from Zsámbék (Pest County),[57] two *beneficarius* insignia mounts had been



1

2

Fig. 18. 1 – Kozármisleny. Wagon grave uncovered in 1969 (photo by A. Kiss), 2 – Ellend, chariot grave discovered and unearthed in 2020 (photo by G. Kovaliczky).

54 We to thank Zsombor Győrffy-Villám and Róbert Lóki for conducting the survey.

55 Kiss 1989.

56 The excavation was conducted by Gergely Kovaliczky.

57 Mráv 2011; Mráv 2012.

applied to the Ellend cart, indicating that in addition to being a member of the local elite, its owner had served as a junior officer in the governor's office of Pannonia Inferior.[58] With the discovery of a new feature at Belvárdgyula, the number of Roman-period wagon burials known from Baranya County rose to three.

In addition to the north-eastern and southern Pannonian group identified previously, a new group wagon burials, comprising the two recently found wagon graves, can now be outlined in south-eastern Transdanubia. The presence of a native local elite in what is eastern Baranya County today is also indicated by a lavishly furnished burial dating from the late 2nd century, found in the area of Bóly in 2020.[59] In addition to a gold finger-ring with an *intaglio* depicting an eagle in its bezel, the cremation burial yielded a toiletry set consisting of bronze vessels forming a hand-washing and bathing set, strigils, and a folding iron chair, all of which had been deformed on the funerary pyre.[60] For the time being, it remains a matter of speculation whether any relevance can be attached to the fact that richly outfitted burials reflecting the presence of a local elite in Baranya County are concentrated in the southern Baranya Hills east and south-east of Pécs (Fig. 19), or whether this merely reflects our current knowledge and the unpredictability of archaeological discoveries.[61]

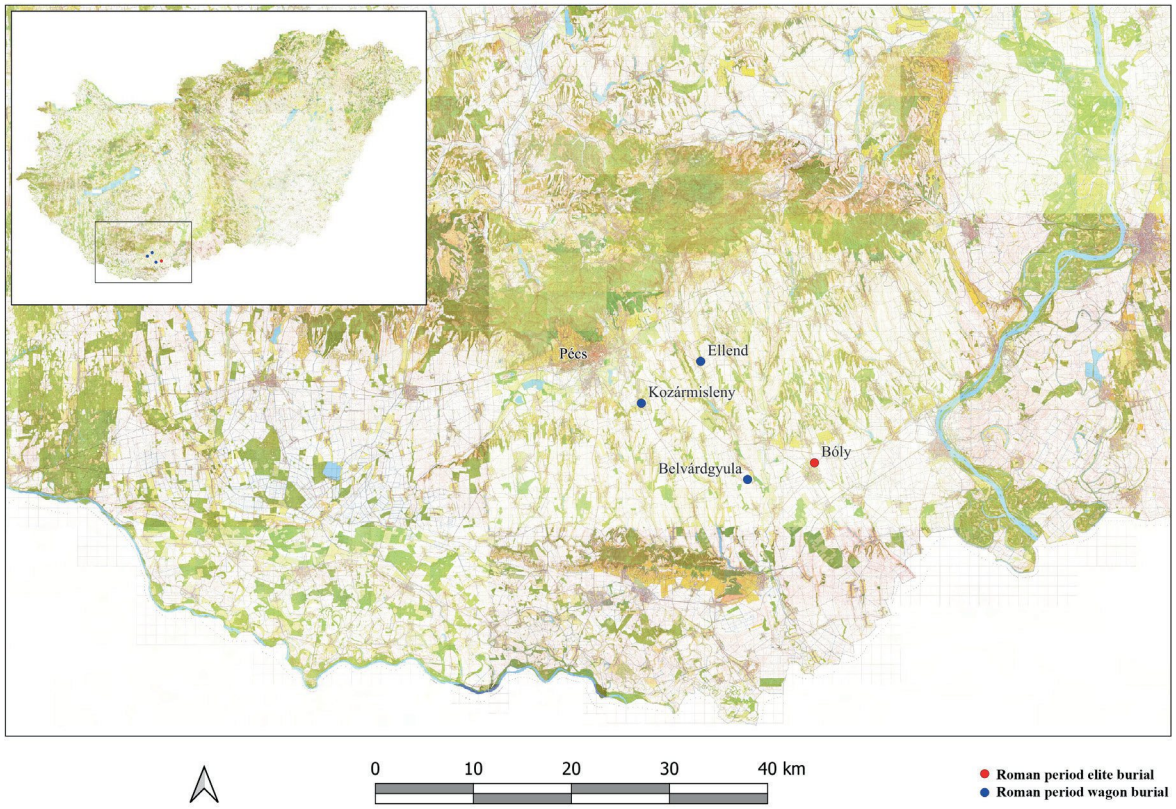


Fig. 19. Burials of the local elite in south-eastern Transdanubia (map by R. Neményi).

58 Mráv 2011, 32–39, 43–46.

59 Kovaliczky 2022, 39–52; Mráv 2024a, 135–137.

60 For a discussion of the role of iron folding chairs in bathing and personal hygiene and their function in the burials of the local elite, see Mráv 2013; Mráv 2014a; Mráv 2024a.

61 The examination of the textile and leather remains with a polarising microscope is currently still in progress; the results will be published later.

Acknowledgements

Viktor Réger, who can be credited with the discovery and the identification of the Belvárdgyula wagon grave, has also made other major contributions to archaeological research in Baranya County by identifying several more significant sites and find assemblages. We are also grateful to the participants of the preliminary field survey and the salvage excavation: archaeologists Zsombor Győrffy-Villám (JPM), Máté Szabó (Eötvös Loránd Research Network) and Ildikó Talabér (JPM), field technicians Márk Haramza (JPM), Gábor Nagy (JPM) and Béla Simon (JPM), and volunteer metal detectorists Zoltán Hendinger, Tamás Máté and István Megyeri. The conservation of the metal finds has been undertaken by conservator Kristóf Kiltau (JPM), while the study of the textile and leather remains is conducted by conservator Kornélia Pápay (JPM). We are grateful to archaeozoologist Annamária Bárány (Eötvös Museum of Natural History) who has undertaken the archaeozoological assessment of the horse skeletons recovered from the burials.

References

Alföldy-Thomas, S. 2008: Anschirrungszubehör und Hufbeschläge von Zugtieren. In: Künzl, E. (ed.): *Die Alamannenbeute aus dem Rhein bei Neupotz. Plünderungsgut aus dem römischen Gallien. Teil 1: Untersuchungen.* Römisch-Germanischen Zentralmuseums Monographien 34.1. Mainz, 331–344.

Audin, A. 1986: *Gens de Lugdunum.* Collection Latomus 190. Bruxelles.

Bánki, Zs. 1972: *Római kori figurális bronz, ezüst és ólom tárgyak – Objects romains figurés en bronze, argent et plomb.* Bulletin du Musée Roi Saint Étienne. B.30. Székesfehérvár.

Barkóczi, L. 1948: Két lósír Brigetióból (Deux tombes de cheval à Brigetio). *Archaeologiai Értesítő* 7–9, 169–182.

Barr-Sharrar, B. 1987: *The Hellenistic and Early Imperial decorative bust.* Mainz.

Bónis, É. 1982: Das kaiserzeitliche „Wagengrab" Nr. 3 von Környe. *Folia Archaeologica* 33, 117–161.

Brownrigg, G. – Crouwel, J. 2017: Developments in harnessing and draught in the Roman world. *Oxford Journal of Archaeology* 36:2, 197–220. https://doi.org/10.1111/ojoa.12112

Carroll, M. 2006: *Spirits of the dead. Roman funerary commemoration in Western Europe.* Oxford. https://doi.org/10.1093/oso/9780199291076.001.0001

Coulon, G. – Fauduet, J. 1990: Contribution à l'étude des fibules gallo-romaines: les fibules en forme de joug. *Revue Archéologique du Centre de la France* 29:2, 177–182. https://doi.org/10.3406/racf.1990.2631

De Visscher, F. 1963: *Le droit des tombeaux romains.* Milan.

Duvauchelle, A. 2005: *Les outils en fer du Musée Romain d'Avenches.* Avenches.

Eke, I. – Horváth, L. 2010: Későrómai temetők Nagykanizsán (Anyagközlés). *Zalai Múzeum* 19, 155–227.

Fitz, J. 1959: Seregélyes (Komitat Fejér, Kreis Székesfehérvár). *Archaeologiai Értesítő* 86, 205.

Fitz, J. 1962: Jelentés az István Király Múzeum 1958/59. évi tevékenységéről. *Alba Regia* 2–3, 97–127.

Fitz, J. n. y.: A táci római ásatások (leaflet).

Fülep, F. 1949: Római kori kocsitemetkezés Vajtán (Römerzeitliche Wagenbestattung in Vajta). *Archaeologiai Értesítő* 76, 40–54.

Gaál, A. 1979: Késő római sírok Mözs-Kakasdombon (Spätrömische Gräber auf dem Mözs-Kaksadomb). *A szekszárdi Béli Balogh Ádám Múzeum Évkönyve* 8–9, 23–85.

Gaitzsch, W. 1980: *Eiserne römische Werkzeuge I–II.* British Archaeological Reports – International Series 78. Oxford.

Gaul, K. 1889: Ókori kocsi helyreállítása a somodori sírlelet alapján. *Archaeologiai Értesítő* 9, 190–205.

Gaul, K. 1890: Ókori kocsi helyreállítása. *Archaeologiai Értesítő* 10, 193–205.

Grassinger, D. 1991: *Römische Marmorkratere.* Monumenta Artis Romanae 17. Mainz.

Hampel, J. 1892: Az eraviscus nép és emlékei. *Budapest Régiségei* 4, 31–72.

Horn, G. H. 1972: *Mysteriensymbolik auf dem Kölner Dionysosmosaik*. Beihefte der Bonner Jahrbücher 33. Bonn.

Ignatov, V. 2018: *Pogrebalni kompleksi s koli v rimskata provintsiya Trakiya (sredata na I–III v.) – Funeral complexes with carts in the Roman province of Thrace (mid 1st – 3rd c.)*. Sofia.

Kiss, A. 1989: *Das römerzeitliche Wagengrab von Kozármisleny* (Ungarn, Kom. Baranya). Régészeti Füzetek 2.25. Budapest.

Kovaliczky, G. 2022: 2. századi hamvasztásos sír Bólyból (Roman cremation burial, Bóly, 2nd century, Baranya County). *A Janus Pannonius Múzeum Évkönyve* 55, 39–52.

Manders, E. 2012: *Coining images of power. Patterns in the representation of Roman emperors on imperial coinage, A.D. 193–284*. Impact of Empire 15. Leiden–Boston, MA. https://doi.org/10.1163/9789004224001

Marosi, A. 1937: Római bronzdíszek Velencéről. *Székesfehérvári Szemle* 7, 26.

Márton, A. 2019: *Les pratiques funéraires en Pannonie de l'époque augustéenne à la fin du 3e siècle*. Archaeopress Roman Archaeology 62. Oxford. https://doi.org/10.2307/j.ctvwh8c7h

Mastrocinque, A. 2017: *The mysteries of Mithras. A different account*. Orientalische Religionen in der Antike 24. Tübingen. https://doi.org/10.1628/978-3-16-155118-5

Mattson, B. 1990: *The ascia symbol on latin epitaphs*. Göteborg.

Mráv, Zs. 2005: Die Deichselmanschette. Zugarmkonstruktion bei römischen Wagen. *Archaeologiai Értesítő* 130, 21–52. https://doi.org/10.1556/ArchErt.130.2005.1-2.2

Mráv, Zs. 2006: Paradeschild, Ringknaufschwert und Lanzen aus einem römerzeitlichen Wagengrab in Budaörs. *Archaeologiai Értesítő* 131, 33–73. https://doi.org/10.1556/ArchErt.131.2006.1.3

Mráv, Zs. 2009: Utas két világ között. A helyi elit kocsit tartalmazó temetkezései a császárkori Pannoniában. *Ókor* 8.3–4, 86–95.

Mráv, Zs. 2011: Auf Reisewagen applizierte "Benefiziarierabzeichen" aus zwei nordostpannonischen Wagengräbern. Die eraviskische Stammeselite im Dienste Roms. *Archaeologiai Értesítő* 136, 21–61. https://doi.org/10.1556/ArchErt.136.2011.2

Mráv, Zs. 2012: Utazókocsira applikált „beneficiarius jelvények" két ÉK-pannoniai kocsisírból. Az eraviscus törzsi elit Róma szolgálatában (Auf Reisewagen applizierte „Benefiziarierabzeichen" aus zwei nordostpannonischen Wagengräbern. Die eraviskische Stammeselite im Dienste Roms). In: Bíró, Sz. – Vámos, P. (eds): *FiRKák II. Fiatal Római Koros Kutatók II. Konferenciakötete*. Győr, 285–326.

Mráv, Zs. 2013: Eiserne Klappstühle aus kaiserzeitlichen Bestattungen der einheimischen Elite in Pannonien. Zu den Beigaben der Bade- und Reinigungsgarnitur pannonischer Wagengräber. *Archaeologiai Értesítő* 138, 105–144. https://doi.org/10.1556/ArchErt.138.2013.4

Mráv, Zs. 2014a: Összecsukható vasszékek a helyi őslakos elit császárkori temetkezéseiből Pannoniában. A pannoniai kocsisírok fürdő- és tisztálkodó készlet mellékleteinek értelmezéséhez (Eiserne Klappstühle aus Kaiserzeitlichen Bestattungen der Lokalen Ureinwohnerelite in Pannonien. Zu den Beigaben der Bade- und Reinigungsgarnitur pannonischer Wagengräber). In: Balázs, P. (ed.): *FiRKák III. Fiatal Római koros Kutatók III. Konferenciakötete*. Szombathely, 411–446.

Mráv, Zs. 2014b: A kocsiút végállomása: a Túlvilág. Császárkori kocsi és lósírok a Budaörs-Kamaraerdei dűlő vicusának temetőjében. In: Ottományi, K. – Mráv, Zs. – Filipszky, I. – Mester E.: *Antik gyökereink. Budaörs múltja a régészeti leletek fényében*. Budaörs, 114–137.

Mráv, Zs. 2016: Az eraviscus törzsi elit nyomában. Császárkori kocsi- és lósírok a budaörsi római vicus temetőjében (Auf den Spuren der Eravisker-Stammeselite. Kaiserzeitliche Wagen- und Pferdegräber der römischen Siedlung von Budaörs-Kamaraerdei-dűlő). In: Ottományi, K. (ed.): *A budaörsi római vicus temetője. Régészeti tanulmányok*. Budapest, 490–528.

Mráv, Zs. 2024a: Roman iron folding chairs in the Archaeological Collection of the Hungarian National Museum on which nothing has been published. New data on the interpretation of iron chairs recovered from the burial sites of provincial elites in the Roman period. *Folia Archaeologia* 58, 121–158.

Mráv, Zs. 2024b: A Roman period cremation burial with metal components of a bridle from Azaum/Odiavum (Almásfüzitő, Hungary). In: Csirke, O. (ed.): *"Afelé kell hajolnod, amerre tehetséged ereje vonz". Tanul-*

mánykötet Palágyi Sylvia 80. születésnapja alkalmából – "you must lean towards where the power of your talent draws you". Studies for Sylvia Palágyi on her 80th birthday. Veszprém, 187–212.

Mráv, Zs. – Neményi, R. 2023: A new carriage grave and horse burial from Belvárdgyula (Baranya County). *Hungarian Archaeology* 12:1, 10–22. https://doi.org/10.36338/ha.2023.1.4

Mráv in preparation: Two Roman period horse burials with weapons from Páty (Pest County, Hungary).

Palágyi, S. 1981: Die römische Hügelgräber von Inota. *Alba Regia* 19, 7–93.

Palágyi, S. 1989: Rekonstruktionsmöglichkeiten der Pferdegeschirrfunde aus Pannonien. In: Driel-Murray, C. van (ed.): *Roman military equipment: The sources of evidence. Proceedings of the fifth Roman military equipment conference.* British Archaeological Reports – International Series 476. Oxford, 123–142.

Palágyi, S. 1990: Römerzeitliches Pferdegrab in Tihany. *Alba Regia* 24, 17–45.

Palágyi, S. 2000: Joche aus Pannonien. *Kölner Jahrbuch* 33, 535–544.

Palágyi, S. 2003: *Római kori lószerszám- és járomveretek a veszprémi Laczkó Dezső Múzeum gyűjteményéből.* Veszprém.

Palágyi, S. – Nagy, L. 2002: *Römerzeitliche Hügelgräber in Transdanubien (Ungarn).* Budapest.

Raepsaet, G. 1982: Attelages antiques dans le nord de la Gaule. Les systèmes de traction par equidés. *Trierer Zeitschrift* 45, 215–273.

Raepsaet, G. 1995: Archéologie et iconographie des attelages dans le monde gréco-romain. *Annales. Histoire, Sciences Sociales* 50:5, 911–942.

Raepsaet, G. 2002: *Attelages et techniques de transport dnas le monde gréco-romain.* Bruxelles.

Raepsaet, G. 2016: *Attelages antiques, jougs et jouguets. Approches ethno-technologiques.* Études d'archéologie 9. Bruxelles.

Rupnik, L. 2014: *Római kori vasszerszámok Pannoniából (Roman Age iron tools from Pannonia).* PhD Dissertation, ELTE Eötvös Loránd University, Budapest. https://doi.org/10.15476/ELTE.2014.086

Scholz, M. 2012: *Grabbauten des 1.-3. Jahrhunderts in den nördlichen Grenzprovinzen des Römischen Reiches Teil. 1.* Monographien des Römisch-Germanischen Zentralmuseums 103.1–2, Mainz.

L. Sellye, I. 1940: Pannoniai áttört fémmunkák áttekintése (Übersicht der römischen Durchbrochenen Metallarbeiten aus Pannonien). *Archaeologiai Értesítő* 1, 236–245.

Simon, Ch. 2009: Die Rekonstruktion von römischen Zuggeschirr mit Halsjoch und Unterhalsbügel: die neue kummetartige Schirrung der römischen Kaiserzeit. In: Müller, M. (ed.): *Grabung – Forschung – Präsentation.* Xantener Berichte 15. Xanten, 85–128.

Trantalidou, K. 2010: Mikri Doxipara-Zoni. The horses from the tumulus. Osteometric data and comparisons with equid remains from southeastern Europe sites. In: Triantaphyllos, D. –Terzopoulou, D. (eds): *Horses and wagons in the ancient world. Proceedings of the one-day scientific meeting, Orestiada, Greece; September 30, 2006.* Orestiada, 55–124.

Triantaphyllos, D. 2010: The technology of the wagons in the tumulus of Mikri Doxipara-Zoni. In: Triantaphyllos, D. – Terzopoulou, D. (eds): *Horses and wagons in the ancient world. Proceedings of the one-day scientific meeting, Orestiada, Greece; September 30, 2006.* Orestiada, 25–52.

Τριαντάφυλλος, Δ. – Τερζοπούλου, Δ., 2005: Άμαξες και καύσεις νεκρών στον τύμβο της Μικρής Δοξιπάρας-Ζώνης Δήμου Κυπρίνου, *Το Αρχαιολογικό Έργο στη Μακεδονία και τη Θράκη* 17, 1–12.

Visy, Zs. 1997: *Wagendarstellungen der pannonischen Grabsteine.* Pécs.

Visy, Zs. 2013: Sopianae településtörténete. In: Vonyó, J. – Visy, Zs. (eds): *Pécs története I. Az őskortól a püspökség alapításáig.* Pécs, 93–152.

Vladimirova-Paunova, V. 2002: Thraco-Roman chariots from Znepole. *Athena Review* 2.3, 31–36.

Vörös, I. 2010: Adatok a római fémkantárok használatához Pannoniában. *Specimina Nova Universitatis Quinqueecclesiensis* 19, 147–170.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 385–396. 10.17204/dissarch.suppl.5.2026.385

ANNI BONI in Stobi

Gold glass in funerary context

Dimitar Nikolovski
NI Stobi, Gradsko, North Macedonia
dimitar.nikolovski@stobi.mk

Received 1 November 2025 | Accepted 2 April 2026 | Published 18 November 2026

Abstract: Rescue excavations conducted in 1992 and 1995 at the West Cemetery of Stobi, in advance of highway construction, resulted in the excavation of approximately 2,000 graves. Among the discoveries from the 1995 campaign, Grave 1810 yielded an exceptionally rare find for the cemetery: a fragmented base of a Late Antique gold glass vessel bearing the inscription *ANNI BONI* encircled by a wreath. The inscription, commonly translated as 'good years' or 'prosperous years', appears most frequently on gold glass vessels, although it also occurs on other media such as medallions, plaques, and coins, where it conveys wishes for stability and prosperity.
Despite the prevailing interpretation that such vessels functioned as votive or decorative objects intended for display in domestic or religious settings, securely documented examples from domestic contexts remain notably absent from the archaeological record. Instead, most specimens with known provenance originate from funerary contexts. The discovery of the Stobi fragment within a closed deposit is therefore of particular importance, given that most gold glass vessels preserved in museum collections or private holdings lack reliable archaeological documentation. This paper presents a typological classification of the vessel and contextualises it within its original funerary setting, contributing to the broader discussion of the function and use of gold glass in Late Antique burial practices.

Keywords: Gold glass, funerary context, *ANNI BONI*, Stobi

Stobi is a city in the Roman province of Macedonia, located at the confluence of two large rivers, the Axios and the Erigon (Fig. 1). It began as a small Hellenistic town, mentioned in the 2nd century BC by Livy as the "old town of Stobi",[1] and developed into an important administrative and trade centre during the Roman Imperial period; the grant of *municipium* status during the reign of Augustus promoted its growth.[2] The city underwent two major building phases, one at the end of the 1st and the beginning of the 2nd century AD, and another in the 5th and the beginning of the 6th century AD, when it became the capital of the province of Macedonia Secunda (Fig. 2).[3] Throughout its existence, it was a vibrant city with continuity of urban life for at least one millennium, from the 3rd century BC to the beginning of the 7th century AD.[4]

1 Liv. *Ab urbe cond.*, 39.53.15–16.

2 See Papazoglou 1986, 231; Wiseman 1994. The title *municipium* is mentioned for the first time in the coinage of Vespasian in AD 72–73, see Josifovski 2001; Josifovski 2010.

3 Blaževska 2021, 192, including two additional important periods of the city: the Augustan period, when the city was expanded, and the turn of the 4th century AD, when Stobi underwent gradual transformation into a Late Antique city. See also Wiseman 1986.

4 On the urban transformation of Stobi, see Blaževska 2021. On the end of the city at the end of the 6th and beginning of the 7th century AD, see also Wiseman 2007; Pavlovski – Blaževska 2018, 55–67; Nikolovski 2018, 321, 325; Radnjanski 2018; Blaževska – Nikolovski 2022.

✉ Corresponding author

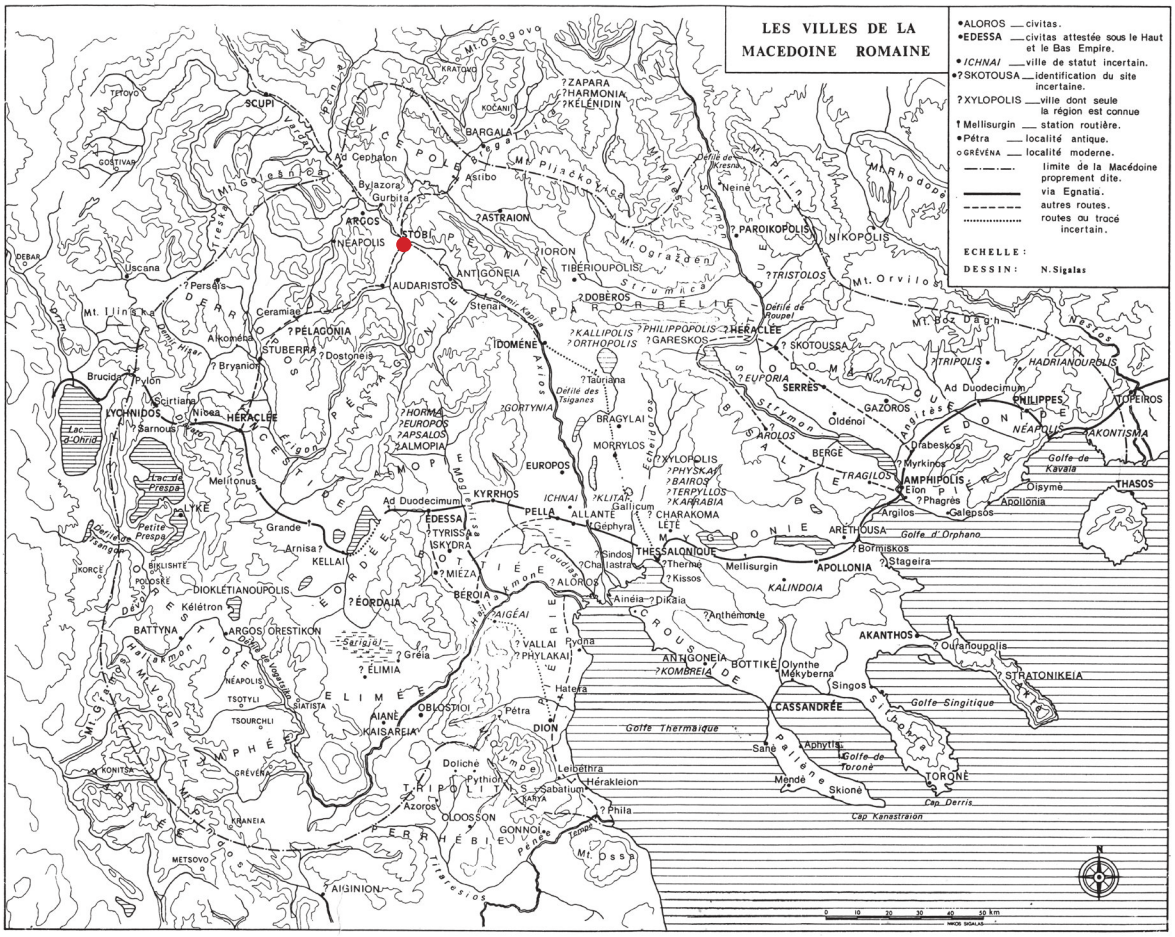


Fig. 1. Map of Roman cities in Macedonia, with Stobi in the north (after Papazoglou 1988).

The West Cemetery of Stobi is the principal burial ground of the Stobaeans identified to date (Fig. 3).[5] It was in use from the 1st century BC to the 4th century AD.[6] It extends from the Porta Heraclea towards the south-west. Excavations have been carried out there in several campaigns since the First World War.[7] In 1992 and 1995, extensive rescue excavations were conducted at the cemetery in preparation for the construction of a new highway. Close to 2,000 graves were excavated



Fig. 2. Stobi, aerial view of the excavation area in 2009, with the West Cemetery in the lower part of the photo (Archive of NI Stobi).

5 Another burial ground stretches along the outer side of the north-western fortification wall. It likely belongs to the later building phase and was established perhaps after the West Cemetery had been abandoned.

6 For the internal chronology of the West Cemetery, see Wesołowsky 1973, 103–104. For grave furnishings in the funerary practice followed in the West Cemetery, see Anderson-Stojanović 2018.

7 The first excavation in the West Cemetery of Stobi was carried out in 1918, when graves were discovered around the Cemetery Basilica; see Dragendorff 1919. For more details about the history of excavations of the West Cemetery of Stobi and publications of the findings, see Nikolovski 2020, 370, notes 4–5 and Blaževska 2024, 587, notes 1–4.

in total during the two campaigns. One of the burials uncovered during the 1995 campaign is particularly noteworthy because of a find unparalleled in cemeteries of this period throughout the province of Macedonia.

Before proceeding to the description of the burial and providing information on the context of the find, it should be noted that the various stages of its excavation were not documented, and the available data are limited to a series of photographs kindly provided by colleagues from the National Conservation Center in Skopje, and a brief report by the archaeologist who excavated it indicating the provenance of the find.[8]

Grave 1810 was constructed of rectangular, chiselled sandstone slabs carefully fitted together to form a rectangular cist of unknown depth, approximately 1.4 m wide and 2.2 m long, oriented north-east to south-west (Fig. 4).[9] The space between the slabs was filled with mortar. The grave was covered by three large, irregular stone slabs; all were fragmented, and about half of one was missing when discovered. Once in place, the covering slabs were sealed with mortar to one another and to the walls of the cist.



Fig. 3. West cemetery of Stobi, 2009 (Archive of NI Stobi).

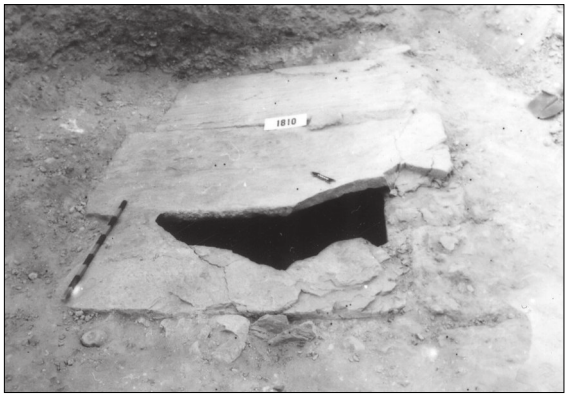


Fig. 4. Grave 1810 before the opening of the cist. Excavation photograph, 1995 (Archive of the National Conservation Center, Skopje).



Fig. 5. Grave 1810 after the removal of the cover slabs, with planks inside. Excavation photo, 1995 (Archive of the National Conservation Center, Skopje).



Fig. 6. Grave 1810 after excavation, with the skeletal remains of the deceased *in situ*. Excavation photograph, 1995 (Archive of the National Conservation Center, Skopje).

8 Dimitrovska 2020, 92–93. I thank my colleague Marina Dimitrovska from the National Conservation Center in Skopje for providing me with the excavation photos of the grave.

9 Dimitrovska 2020, 93.

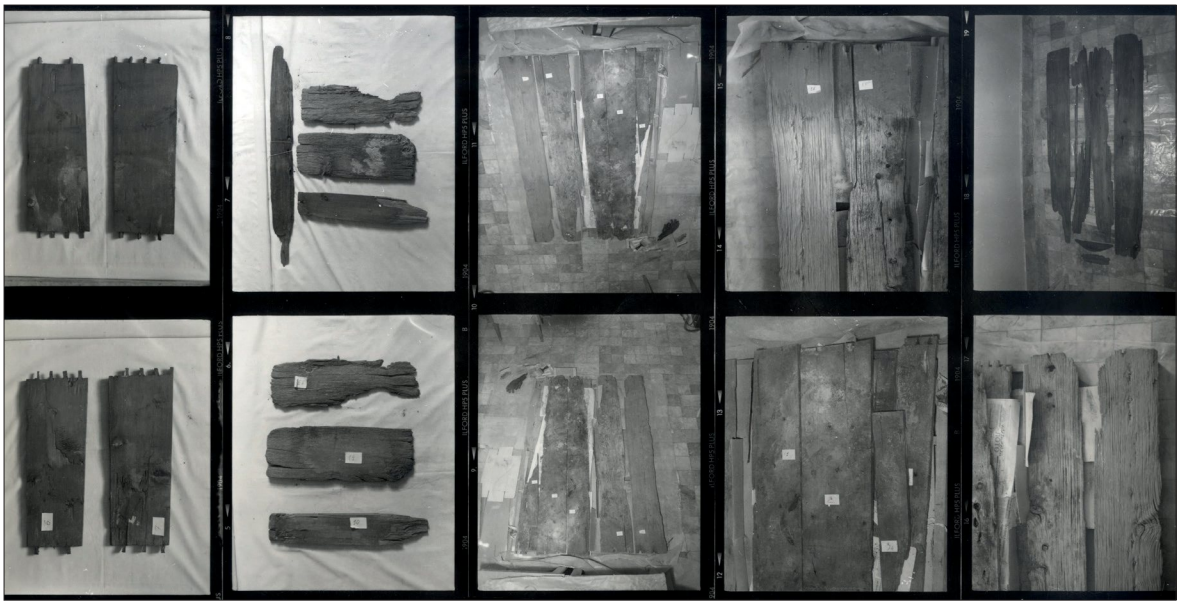


Fig. 7. Remains of the wooden coffin (Archive of National Conservation Center, Skopje).

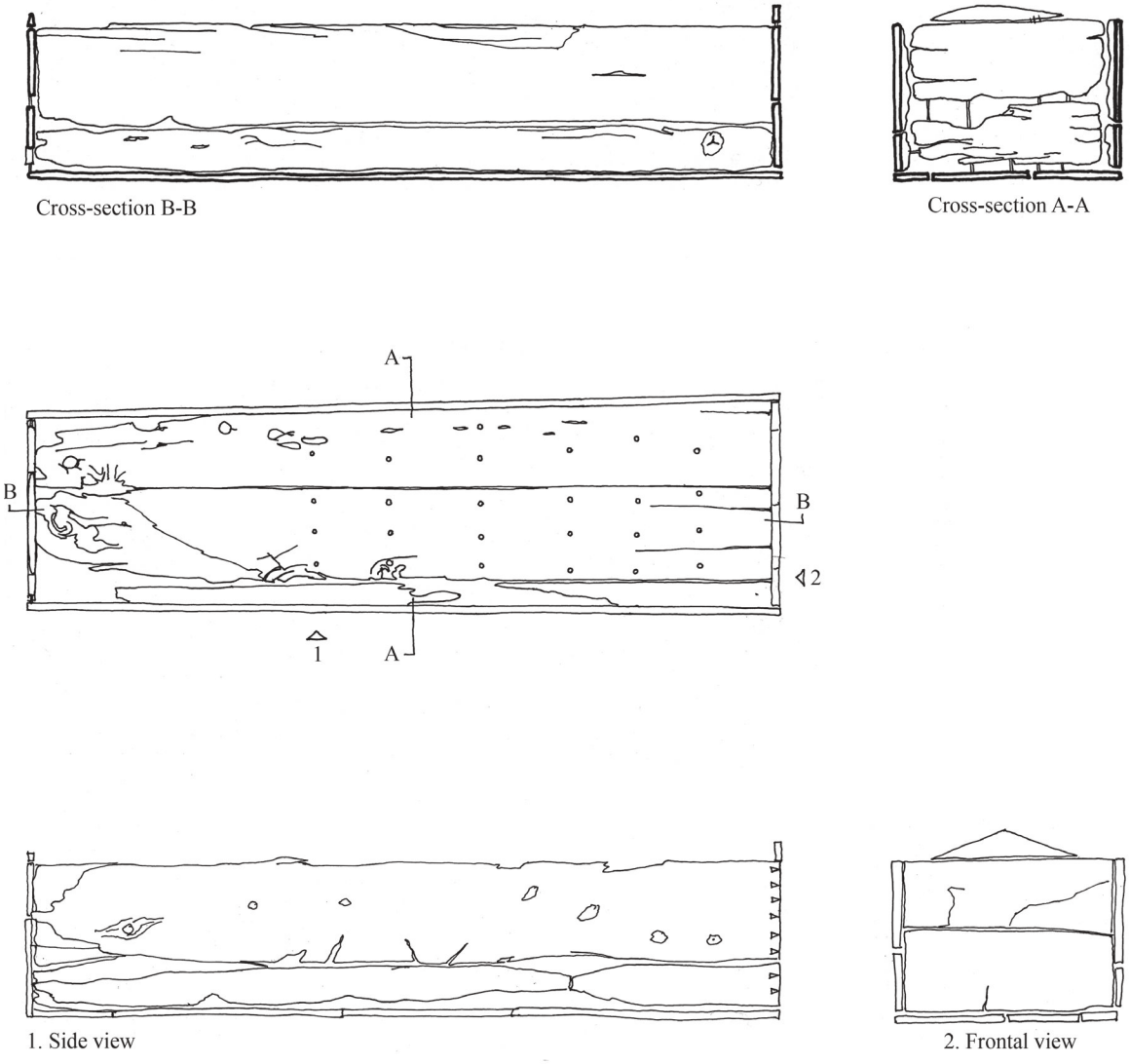


Fig. 8. Reconstruction drawing of the coffin (Archive of the National Conservation Center, Skopje).

A wooden coffin with a design resembling arched tile graves was placed within the cist (Fig. 5).[10] According to the field report, the planks were supposedly made of pine.[11] Wood does not always preserve well at Stobi, which makes this find unique in the West Cemetery.[12] A single skeleton in a supine position was found beneath the planks on the marble floor. Anthropological analysis determined that the deceased was a 40–45-year-old male (Fig. 6).[13] Beneath the skull, a compact pile of wood shavings, probably once wrapped in cloth, was discovered; it was interpreted as a makeshift pillow supporting the head of the deceased.

The coffin was constructed from fifteen wooden planks, with several dovetail joints preserved at the ends of the long boards and end boards (Fig. 7).[14] A few wooden coffins with such joinery have been discovered in the necropolis of Marina El-Alamein in Egypt (Fig. 8).[15] Two of the long boards at the bottom feature six vertical rows of four holes each, most probably for smaller planks that connected them. One end of each plank is dovetail-shaped for joining it to the end boards. Most of the wood was preserved, allowing an ideal reconstruction of the coffin (Fig. 9).[16]

Unfortunately, during documentation, more attention was given to the wooden coffin than to the exact positions of the grave finds and the osteological remains. The grave also included a few other organic finds: some cotton cloth, some woven wool, and worked leather, for which no photographic documentation is available, and the finds themselves have not survived. It is

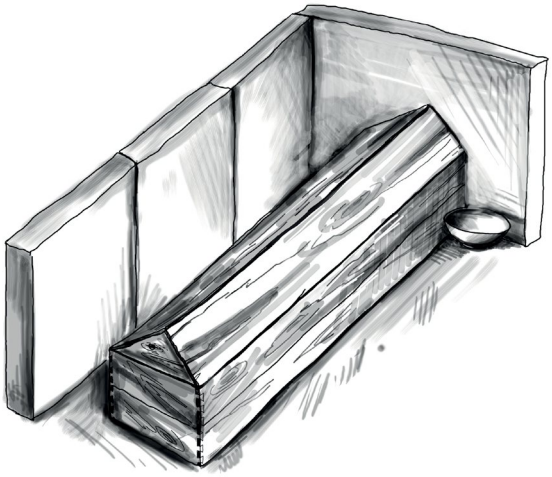


Fig. 9. Reconstruction drawing of Grave 1810 in the West cemetery of Stobi (by Tome Filov).



Fig. 10. Bone die from Grave 1810 (Archive of NI Stobi).



Fig. 11. Bone *pyxides* and a bone lid from Grave 1810 (Archive of NI Stobi).

10 On arched tile graves in the West Cemetery of Stobi, see Anderson-Stojanović 2018, 58, 60. Graves of this type have also been identified within the city walls, above the Building with Arches, and are dated after the last quarter of the 4th century and the early 5th century AD; see Shurbanoska – Jakimovski 2010, 97.

11 A hypothesis since the planks have not been analysed.

12 The mortar used for sealing the grave and its solid walls and bottom contributed greatly to the preservation of the wooden coffin.

13 The analysis was carried out by Fanica Veljanovska. I thank Nikola Hadzi-Nikolov, documentation officer at the Archaeological Museum of North Macedonia, for sharing the results of the morphological analysis.

14 Zych 2003, 73–78 mentions three different joinery techniques used in coffins of the period.

15 Zych 2003, 77, Fig. 4.b.

16 The reconstruction of the coffin and the technical documentation were prepared by Tome Filov from NI Stobi.

therefore difficult to discuss how these materials were used, whether they formed part of clothing, bags, or something else.[17] The grave also contained a bone die (Fig. 10), a very common find in the West Cemetery of Stobi; two bone *pyxides*, one with its circular lid (Fig. 11); a single Middle Roman colour-slipped bowl (Fig. 12); and a few glass tokens (Fig. 13) that may have functioned as inlays for furniture or, more likely, as gaming pieces, especially in light of the die. The bottom of the grave had been paved with local pink marble breccia, on top of which the wooden coffin and most of the grave offerings were placed.



Fig. 12. Middle Roman colour-slipped bowl from Grave 1810 (Archive of NI Stobi).



Fig. 13. Glass tokens from Grave 1810 (Archive of NI Stobi).

The focus of this paper is a gold sandwich-glass vessel. It was discovered in numerous fragments but was skillfully reassembled by a glass conservator at Stobi (Figs 14–15).[18] Fragments from the lower and upper parts of this vessel were inventoried as belonging to two different vessels and were refitted only during conservation. The bottle was made of transparent, slightly greenish, almost colourless glass; its rim broke off. The long cylindrical neck gradually widens before narrowing at the junction with the squat spherical body. The upper horizontal part of the shoulder is decorated with two concentric incisions, each about one millimetre wide and spaced several millimetres apart.[19] The vertical part of the belly is embellished with a horizontal band of roughly evenly spaced indentations, seven of which are at least partially preserved, while one is completely missing. Their width varies between 2.3 and 2.5 cm, while their height is around 2.1 cm. They were made while the vessel was still attached to the blowpipe, most probably by pressing the surface with a round object, perhaps jacks. The indentations correspond closely to the grasp of a human hand (Fig. 16), suggesting that they may have been designed as convenient grips in addition to serving a decorative, aesthetic purpose.

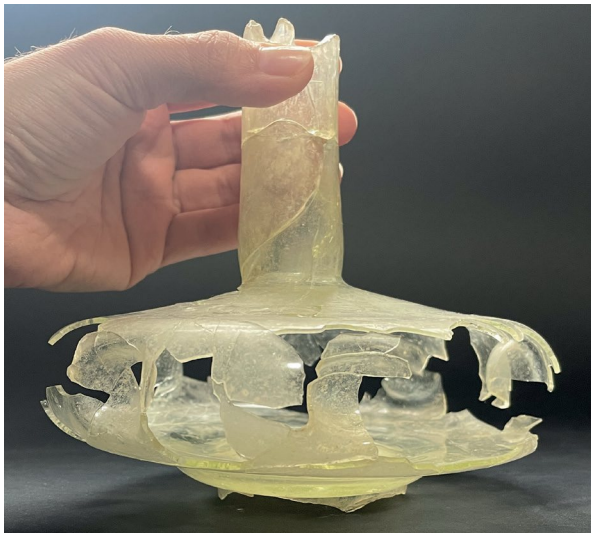


Fig. 14. Gold-glass vessel from Grave 1810 (Archive of NI Stobi).

The base of the vessel is decorated with an inscription (Fig. 17). Inside the base ring, the inscription *ANNI BONI*, framed by a circle of lozenges, is visible; the individual elements of the decoration were

17 All three materials were interpreted as parts of clothes on the preliminary report of the excavation; see Dimitrovska 2020, 93, Note 131.

18 I thank Biljana Jankulovska-Peeva, the glass conservator in NI Stobi, for her help.

19 For the technique of engraving glass vessels and the wheels of various sizes used throughout the process, see Nagel 2020.



Fig. 15. Glass sherds before conservation from Grave 1810 (Archive of NI Stobi).

formed from gold leaf (Fig. 18). The letters are well designed and evenly spaced, not compressed or staggered. The inscription and the decorative motifs were applied to the background before the sealing of the ring base. The base ring is only partially preserved, with several small fragments missing. During production, the base was prepared first, and the decoration was added to its surface (Fig. 19). Next, the vessel body was formed separately and attached to the top of the decorated base while still hot and malleable. The joint remains visible as a distinct line between the two parts of the vessel. The uneven distribution of glass around the ring base (Fig. 17), with one side showing a noticeable excess of material, demonstrates that the glassblower had to press the body of the vessel more on one side and was somewhat careless when attaching the two parts. As a consequence, the vessel itself is poorly balanced, a common issue in vessels made using this technique.



Fig. 16. Indentations fitting fingers perfectly (Archive of NI Stobi).

Several scholars have identified Rome as a centre of production for such vessels, based on the abundance of gold-glass finds in its catacombs;[20] however, others have suggested Cologne and

20 On gold-glass as grave finds in the catacombs of Rome, see Santis 2000. For a detailed analysis of the function of gold-glass vessels, see Rutgers 2017, 104–107. For data on the function and cost of gold-glass vessels, see Howells 2015, 60–65. For a distribution map of gold-glass finds, see Howells 2015, 54, Fig. 14; Zanone 2011, 64, Fig. 1.

the Rhine Valley as possible centres of origin.[21] Howells even suggests that "the production of these pieces centred on Rome itself, perhaps by a very small number of craftsmen of Egyptian origin".[22] Of course, the variety of gold-glass vessels is too great for them to have been made by a single workshop; the general consensus therefore holds that they were probably made in a few workshops at different locations.[23] The process of making a gold-glass vessel is quite simple, the only difficult part being the execution of the imagery.

Vessel form is a distinctive feature of the gold-glass vessel from Stobi. The technique is usually applied to open vessels, typically plates and bowls. Gold-glass items may not have been the most expensive objects to acquire—that distinction would belong to silver and gold plates—but they were evidently considered valuable possessions by their owners, as the context of this find, as a grave offering, underscores. To ensure that the gold leaf decoration remained visible and legible in the finished product, glassworkers generally applied it to open forms, in which the decoration embedded in the base could be seen clearly. At present, I am not aware of any other closed gold-glass vessel.

Perhaps a quarter of the known gold-glass fragments have inscriptions dedicated to hedonism and the enjoyment of life, the most common of which is probably the phrase *ΠΙΕ ΖΗCΑΙC* ('Drink, may you live!').[24] The phrase *ANNI BONI* on the glass vessel from Stobi appears on a few vessels of different types. Two parallels bearing the phrase *ANNI BONI* are known in gold sandwich-glass, both gold-trail glasses with their inscriptions set within a cartouche.[25] According to Filippini, the phrase means 'Happy New Year', a salutation representing an antique



Fig. 17. Photograph of the inscription. The uneven distribution of glass around the attachment site of the two parts is visible around the base ring (Archive of NI Stobi).



Fig. 18. Outline drawing of the gold leaf pattern on the base of the gold-glass bottle (by Tome Filov, Archive of NI Stobi).

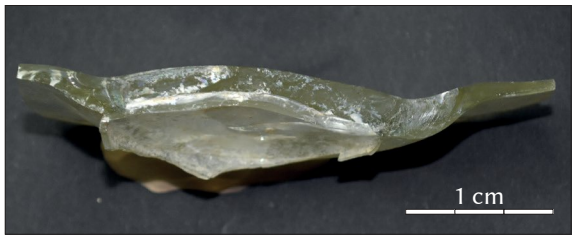


Fig. 19. Profile of the vessel base with the line of attachment of the two parts (Archive of NI Stobi).

21 Howells 2015, 53.

22 Howells 2015, 55. The assumption that the craftsmen were of Egyptian origin is based on the Alexandrian dialect of the Greek inscriptions on portrait medallions made in the gold-glass technique.

23 For an identification of workshops producing gold-glass vessels, see Engemann 1969; Rutgers 1995, 83; Nüsse 2008; Howells 2015, 57–58.

24 Vickers 2011, 610; Cameron 1996, 300; on the phrase *ΠΙΕ ΖΗCΑΙC* on glass vessels, see Auth 1995.

25 Filippini 1996, 122, 124; Howells 2015, 144, Cat. no. 55.

convivial tradition.[26] It can also be translated as 'good years' or 'prosperous years'; it was used to commemorate times of political stability, imperial success, or prosperity. It reflects the Roman belief that certain periods, particularly during an emperor's reign, were especially favourable or blessed. Morey's catalogue mentions two further gold-glass items with *ANNI BONI* inscriptions, both of unknown provenance.[27]

The identification of a glass vessel identical in form, decoration, and indentations in the archaeological record has proved challenging and, so far, unsuccessful. Nevertheless, the shape of the neck and its 'waist' are useful traits for placing the vessel within a broader chronological framework encompassing the 3rd century AD (Fig. 20).

No other gold-glass vessel is known from the province of Macedonia, let alone one with an entirely preserved profile. However, vessels of the same type—bottles with a cracked-off rim and a squat spherical body with indentations—have been found in other archaeological excavations across Macedonia. One example, dated to the 'advanced Roman period', was discovered in Veroia;[28] another, dated after AD 261, in Menis near Pella;[29] a third, dated to the first half of the 3rd century AD, in Nea Kerdyllia near Amphipolis;[30] and a fourth, dated to the end of the 3rd century AD, in Thessaloniki. The latter was found together with a fusiform flask, which typically appears in the region from the end of the 3rd century AD onwards.[31] Based on these parallels from within the province, the glass vessel from Stobi may tentatively be dated to the 3rd century AD.

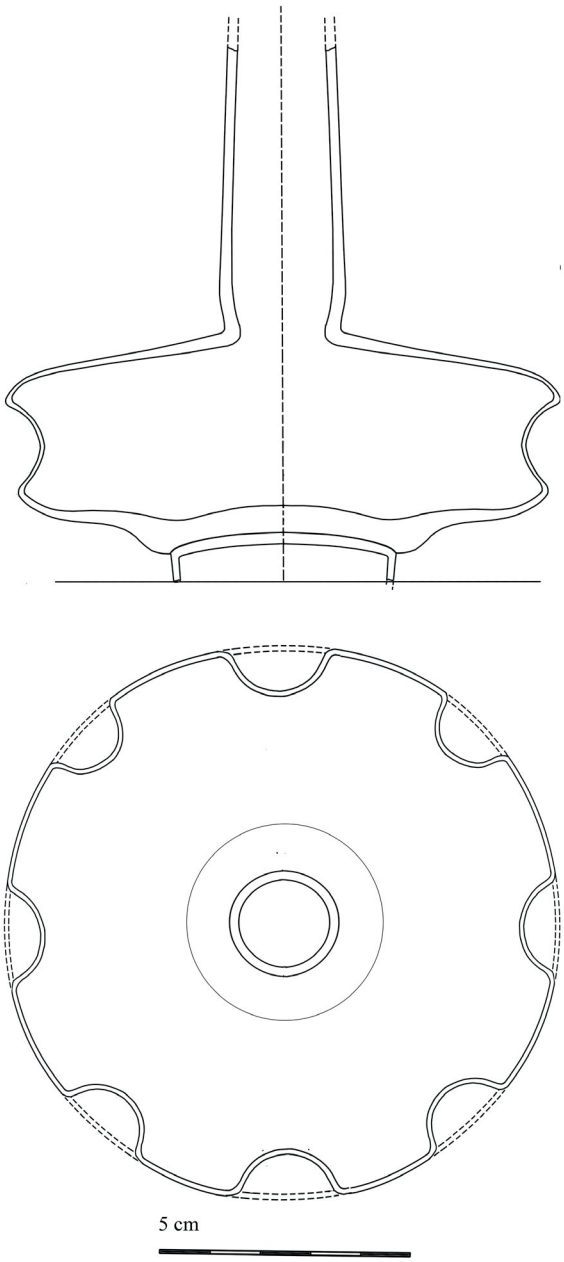


Fig. 20. Gold-glass vessel - profile view (top), top view (below).

Other finds in the associated assemblage may help refine the dating of the grave. Middle Roman colour-slipped bowls appear in funerary contexts at Stobi from the end of the 2nd century to the beginning of the 4th century AD.[32] Excavations at the Theatre in Stobi in 2021 brought to light several fragments of various Middle Roman colour-slipped vessels from a fill layer containing 3rd-century AD

26 Filippini 1996, 118.

27 Morey 1959, Cat. nos 304 and 409.

28 Petsas 1964, 353, pl. 414δ, mentions a fine example found in a grave.

29 Chrysostomou 2000, 455–467, Fig. 19.

30 Malama – Darakis 2008, 346, Pl. 78, MA 7076.

31 Antonaras 2017, 97, Cat. no. 205, Pl. 8, VII.

32 Anderson-Stojanović 1992, 120–121, Form 19, dates this shape between the late 2nd and the early 4th century AD.

material, which was used to form a level of use in the early 4th century CE.[33] The dating value of the bone artefacts (the two *pyxides* and the die) in the grave containing the gold-glass vessel is low and cannot help date the feature. The part of the Western Cemetery where the grave was discovered comprises five burial periods, distinguished on the basis of grave types, burial ritual, and grave goods.[34] A 50–70-year hiatus separated Burial Periods III and IV, during which the excavated part of the cemetery was not used.[35] Grave 1810 most probably belongs to Burial Period IV, spanning the entire 3rd century AD.

This grave type in the excavated part of the West Cemetery at Stobi was the most frequent during the 3rd century AD.[36] All finds in the grave assemblage can be broadly dated to the 3rd century AD, which corresponds to the general dating of gold-glass vessels.

The burial must have belonged to a person from the higher echelons of society who could afford such an elaborately decorated glass vessel, a wooden coffin, and a finely made stone-slab cist, all of which were well above the standard burial practice in the West Cemetery during the 3rd century AD. The vessel was placed in the grave as an offering for the deceased, so that it could serve him in the afterlife.

This unique glass vessel is the first example of its kind discovered in the entire province of Macedonia, placing Stobi among the few Roman cities across the empire to yield such a find. The discovery of a gold-glass vessel in a closed context is exceptionally rare, as most known examples are held in private or museum collections and were acquired with little or uncertain provenance data. Furthermore, the fact that the gold-glass vessel from Stobi is a closed one, which must be empty—and into which one must peep through the rim—for the inscription to be visible (unless it is filled with water), makes it even more intriguing and unusual. This find offers new insight into the presence of gold-glass vessels in the province of Macedonia during the 3rd century AD.

Sources

Liv. *Ab urbe cond.*: Titus Livius, *Ab urbe condita.*

References

Anderson-Stojanović, V. 1992: *Stobi: The Hellenistic and Roman Pottery*. Princeton. https://doi.org/10.1515/9781400852918

Anderson-Stojanović, V. 2018: The role of grave furnishings in the funeral rituals of the West Cemetery at Stobi. In: Blaževska, S. (ed.): *Studies in the Antiquities of Stobi IV*. Stobi, 49–82.

Antonaras, A. 2017: *Glassware and glassworking in Thessaloniki: 1st century BC – 6th century AD*. Archaeopress Roman Archaeology 27. Oxford. https://doi.org/10.2307/j.ctv170x4f0

Auth, S. 1995: Drink may you live! Roman motto glasses in the context of Roman life and death. In: *Annales du 13e Congrès de l'Association Internationale pour l'histoire du verre*. Lochem, 103–112.

Blaževska, S. 2021: Urban Transformation of Stobi. From Oppidum Civium Romanorum to Capital of Macedonia Secunda. In: Raycheva, M. – Steskal, M. (eds): *Roman provincial capitals under transition*. Österreichisches Archäologisches Institut, Sonderschriften 61. Wien, 189–213.

33 For the context of Middle Roman colour-slipped ware from the excavations of the Theater in Stobi, see Pavlovski forthcoming. The vessel in question was discovered in Basket F4.54.1, Sector 118, together with a barely legible *antoninianus*, also dated widely to the 3rd century AD.

34 Wesolowsky 1973, 103–104.

35 Wesolowsky 1973, 126–127.

36 A grave of two adults of the same type was discovered in the West Cemetery of Stobi in 2013. It contained an Isings Type 82, variant A1 bottle as the single addition (Isings 1957); it was dated to the end of the 2nd–beginning of the 3rd century AD.

Blaževska, S. 2024: Terracotta figurines from Stobi in funerary context. In: Zografou, E. – Koukouvou, A. – Palli, O. – Papadopoulou, E. (eds): *Figurines in Northern Greece from Prehistory to Roman Times*. Thessaloniki, 586–599.

Blaževska, S. – Nikolovski, D. 2022: The 6th century "House with Triclinium" at Stobi: A preliminary report. *New Antique Doclea* 13, 107–136.

Cameron, A. 1996: Orfitus and Constantius: A note on Roman gold-glasses. *Journal of Roman Archaeology* 9, 295–301. https://doi.org/10.1017/S1047759400016640

Chrysostomou, P. 2000: Το ταφικό ιερό μυστών του Διονύσου στη Μενιήδα Βοττιαίας: η ανασκαφή του 2000. *Αρχαιολογικό Έργο στη Μακεδονία και Θράκη* 14, 455–471.

De Santis, P. 2000: Glass vessels as grave goods and grave ornaments in the catacombs of Rome: Some examples. In: Pearce, J. – Millett, M. – Struck, M. (eds): *Burial, society and context in the Roman World*. Oxford, 238–243.

Dimitrovska, M. 2020: Западна Некропола на Стоби – типови на гробови од римскиот период (ископување од 1995 година). MA Thesis, University Ss. Cyril and Methodius, Skopje. http://hdl.handle.net/20.500.12188/7510

Dragendorff, H. 1919: Archäologische und kunstwissenschaftliche Arbeit während des Weltkrieges in Mazedonien. *Zeitschrift für bildende Kunst* 54, 259–270.

Engemann, J. 1969: Bemerkungen zu spätrömischen Gläsern mit Goldfoliendekor. *Jahrbuch für Antike und Christentum* 11–12, 7–25.

Filippini, P. 1996: Blown gold-sandwich glasses with gilt glass-trail inscriptions. In: *Annales du 13e Congrès de l'Association Internationale pour l'histoire du verre*. Lochem, 113–128.

Howells, D. T. 2015: *A catalogue of the Late Antique gold glass in the British Museum*. British Museum Research Publication 198. London.

Isings, C. 1957: *Roman glass from dated finds*. Groningen–Djakarta.

Josifovski, P. 2001: *Roman mint of Stobi*. Skopje.

Josifovski, P. 2010: *Stobi – Kolekcija Kuzmanović*. Makedonski numizmatički kolekcii 2. Skopje.

Malama, P. – Darakis, K. 2008: Νεκροταφείο ρωμαϊκών χρόνων στα Νέα Κερδύλλια Σερρών. Thessaloniki.

Morey, C. R. 1959: *The gold-glass collection of the Vatican Library, with additional catalogues of other gold-glass collections*. Città del Vaticano.

Nagel, S. 2020: *Die figürlich gravierten Gläser der Spätantike. Archäometrische und archäologische Untersuchungen*. Regensburg.

Nikolovski, D. 2018: Commercial space at Stobi: The semicircular court. In: Blaževska, S. (ed.): *Studies in the Antiquities of Stobi IV*. Stobi, 308–341.

Nikolovski, D. 2020: Roman jewellery in funerary context: Female adornment in late 2nd century Stobi. *Monumenta* 5, 369–382.

Nüsse, H. J. 2008: Römische Goldgläser – alte und neue Ansätze zu Werkstattfragen. *Praehistorische Zeitschrift* 83, 222–256. https://doi.org/10.1515/PZ.2008.013

Papazoglou, F. 1986: Oppidum Stobi civium Romanorum et municipium Stobensium. *Chiron* 16, 213–237.

Papazoglou, F. 1988: *Les villes de Macédoine à l'époque romaine*. Bulletin de correspondance hellénique – Supplément 16. Athens.

Pavlovski, G. forthcoming: *The Theater at Stobi: Study of the Cavea 2009–2025*. Studies in the Antiquities of Stobi Monograph Series II. Stobi.

Pavlovski, G. – Blaževska, S. 2018: Archaeological evidence for earthquakes in Stobi. *Monumenta* 2–3, 49–83.

Petsas, F. 1964: Βέροια. *Αρχαιολογικόν Δελτίον* 19, ΜΕΡΟΣ Β'3 – ΧΡΟΝΙΚΑ. Athens.

Radnjanski, J. 2018: North African pottery in Stobi in late 6th century context. In: Blaževska, S. (ed.): *Studies in the antiquities of Stobi IV*. Stobi, 362–391.

Rutgers, L. V. 1995: *The Jews in Late Ancient Rome: Evidence of cultural interaction in the Roman diaspora*. Boston. https://doi.org/10.1163/9789004283473

Rutgers, L. V. 2017: A new gold-glass from the Jewish catacombs of ancient Rome. *Mitteilungen zur Christlichen Archäologie* 23. Wien, 92–112. https://doi.org/10.1553/micha23s92

Shurbanoska, M. – Jakimovski, A. 2010: *Forum Romanum Stobis II.* Skopje.

Vickers, M. 2011: The Wilshere Collection of Early Christian and Jewish antiquities in the Ashmolean Museum Oxford. *Kačić. Zbornik Franjevačke provincije Presvetoga Otkupitelja* 41–43, 605–614.

Wesolowsky, A. 1973: Burial customs in the west cemetery. In: Wiseman, J. (ed.): *Studies in the antiquities of Stobi I.* Belgrade, 97–137.

Wiseman, J. 1986: Archaeology and history at Stobi, Macedonia. In: McClendon, C. B. (ed.): *Rome and the provinces. Studies in the transformation of arts and architecture in the Mediterranean world.* New Haven, 37–50.

Wiseman, J. 1994: Municipal tribes and citizenship in Roman Macedonia. In: *Ancient Macedonia V 3.* Thessaloniki, 1757–1763.

Wiseman, J. 2007: Environmental deterioration and human agency in ancient Macedonia: A case study. *Geoarchaeology* 22.1, 85–110. https://doi.org/10.1002/gea.20148

Zanone, A. 2011: Vetro dorato: testimonianze archeologiche, centri di produzione e interazione tra Oriente e Occidente nella tarda antichità. In: Diani, M. G. – Medici, T. – Uboldi, M. (eds): *Produzione e Distribuzione del Vetro nella Storia: Un Fenomeno di Globalizzazione.* Venezia, 63–72.

Zych, I. 2003: Wooden and leaden coffins from the Graeco-Roman burial ground of Marina El-Alamein. *Polish Archaeology in the Mediterranean* 14, 72–83. https://doi.org/10.11588/diglit.41370.10

© 2026 The Author(s).

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 397–422. 10.17204/dissarch.suppl.5.2026.397

Was there a doctor in Brigetio?

Rita Helga Olasz
Institute of Archaeological Sciences, ELTE Eötvös Loránd University, Budapest, Hungary
olasz.rita@btk.elte.hu

Received 1 December 2025 | Accepted 22 June 2026 | Published 18 November 2026

Abstract: My doctoral thesis focuses on the Roman burials of Brigetio. During the related research in the Roman Collection of the Hungarian National Museum, I found two interesting cremation graves, acquired in 1935. Only a terse note in the inventory book informs us that the finds came from Szőny and were sold to the museum by Jenő Petrovics. The first assemblage was recorded as a physician's grave and the second as a woman's grave. Some of the grave goods have been published over the years due to their type or material, but the complete burials have never been examined. According to records in the legacy of István Paulovics, the two graves come from the western cemetery of Brigetio's civil town. The basis for identifying the first grave as a doctor's burial was a bronze 'medical box', a spoon probe, two long needles, tweezers, and a stone palette. A similarly interesting grave is known from the western cemetery of the military town. That assemblage also has some items, such as a bronze box with a sliding lid, a scalpel, a stone palette and a needle, that can be linked to medical use; therefore, in this paper I compare these three burials. However, after closer examination it is safe to assume that the original assemblage from the civil town is cosmetic rather than medical (as in the second grave), and that none of the objects can be securely linked to a medical practitioner. The third grave from the military town is also quite rich, but its evidence is unsuitable for determining whether the deceased was a professional physician.

Keywords: Roman, burial, Brigetio, medical tools, cosmetic equipment

Brigetio was one of the four legionary fortresses of Pannonia, located on the right bank of the Danube, along the *limes* between Carnuntum and Aquincum. The town had a triple settlement system, which consisted of the *castra legionis*, the military town surrounding it, and a civil settlement slightly further west of the fortress.[1] The main goal of my PhD research was to collect and process all the available data on this subject, and then examine and evaluate all the burials and grave goods known from these settlements. The information available on some of the burials, including the three graves discussed here, is very limited. The details of the graves and the circumstances of their discovery are rather uncertain, and the only evidence on which one can rely is the grave goods. The first feature (Grave PNY2.1) was identified as a doctor's grave, while the one obtained in the same batch was recorded as the grave of a rich female (Grave PNY2.2); both were related to the civil town. The third assemblage (Grave KNY1.104) comes from the cemetery of the military town, and the grave goods also have a medical aspect. However, all finds from these graves could also be easily interpreted as cosmetic items.

Data could be collected on approximately 1,500 graves linked to Brigetio, mostly from the cemeteries of the *canabae*, where more than half of the graves originated from. Brigetio has cemeteries dated to the 1st–3rd centuries AD, belonging to the civil and military towns, systematically organised

1 Barkóczi 1951, 8.

✉ Corresponding author

along the *limes* road and the road leading to Tata, as well as others dated to the late Roman period surrounding the legionary camp. Since tradition and law forbade burial within the city limits, these cemeteries[2] also mark the largest extent of the town at the respective time. In the Roman period, the topographic structure of Brigetio changed when the former civil town and most of the *canabae* were abandoned due to an increasing number of barbarian intrusions accompanied by a decrease in the level of public security.[3] For safety reasons, the remaining population moved first closer and later eventually inside the *castra legionis*. The shrinkage of the inhabited area and the reuse of the abandoned land as a cemetery may have been a longer process; the absolute dating of the graves established in the area of the former *canabae* may illustrate the gradual cessation of inhabitation in various parts of the settlement.[4]

General problems with research on the cemeteries of Brigetio

Although Brigetio has been a well-known (and extensively plundered) Roman site for centuries, systematic archaeological excavations in Komárom-Szőny only started in the 1920s. Unfortunately, these were mostly poorly documented, or in some cases all the records have since been lost. The situation improved after the Second World War, when new excavations were carried out because of the reconstruction and expansion of the so-called MOLAJ oil works. During these rescue excavations several late Roman burials came to light, which were published later by László Barkóczi. Since then, fieldwork carried out on the site was mostly well documented, although some excavations have not been processed and published yet. Most early finds from Brigetio, discovered from the 19th century until the mid-1960s, ended up in the collection of the Hungarian National Museum. After that until the early 1990s, the finds were entered into the collection of the Kuny Domokos Museum in Tata. Since the establishment of the Klapka György Museum in Komárom, the find material from all new excavations has been stored there. In addition, there is a private collection, owned by Ödön Kállay in Tata, who obtained archaeological finds gathered at the Brigetio site from the 1920s to the 1940s.[5]

The problem with some of the finds housed in the Hungarian National Museum (HNM) is that their original context is uncertain. Many objects were added to the collection only a considerable time after their discovery, through donations, confiscation or sale. These finds may come from private collections or the antiquities market, or they may have been family heirlooms for decades, or freshly looted and collected objects. For this reason, it is often impossible to reconstruct or identify the exact archaeological context, and sometimes even the find's association with the site may be questioned. Moreover, many finds of unknown provenance could have come from Brigetio. A few objects were recorded with additional information, for example the area or parcel from which they came, or whether they were found in a grave, such data must also be treated with caution. In fortunate cases, even the feature of origin can be identified, allowing one to determine in which part of the settlement the item was found.

Some artefacts from Brigetio in the HNM collection are in some way connected with Jenő Petrovics. He was not an actual archaeologist but began as an avid collector (and dealer) and later became a local 'commissioner' working on the site for the museum. Petrovics was active from the 1930s until the 1970s, but unfortunately, only some of his activities are properly documented. In the early years, he mainly sold finds and grave goods to the museum, and later, from the 1960s onwards, he wrote

2 Számadó 2010, 150.

3 Barkóczi 1951, 9.

4 Barkóczi 1961, 109.

5 Delbó 2017, 32.

monthly reports on the archaeological phenomena found in Szőny. His reports are rather brief and concise, which makes it difficult to subsequently match the objects (or graves in this case) with the finds and inventory units in the collections, not to mention the problem of the topographic and chronological identification of the graves. Another issue is the difficulty of navigating through his monthly reports because some of them are missing. As for the remaining ones, assemblages are mentioned in some only as "the grave of the previous month" (as sarcophagi were often transported to the museum only weeks or months after discovery owing to the difficulties of transportation).

Unfortunately, identifying grave finds in the Kállay collection is also challenging. Ödön Kállay was the notary of Ószőny and an enthusiastic researcher and collector of local history. During his life, he amassed a large archaeological collection accompanied by many records. Many finds and objects owe their survival to him.[6] After his death, his collection was moved to the Kuny Domokos Museum in Tata, but some of the records accompanying the finds did not survive, and today we can rely only on the entries of the inventory book. However, the inventory record is far from perfect, and some of the grave finds and those from other archaeological phenomena cannot be unambiguously associated with a feature any longer. One can only assume that items under the same inventory number came from the same archaeological context. Kállay could also be connected with the so-called 'Járóka' cemetery (KNY1, the western cemetery of the *canabae*), since in 1927, he collected finds from 217 graves unearthed during the construction of József Járóka's house. These finds are also in his collection, and Feature K341 = Grave KNY1.104, the focus of this paper, came from this part of the cemetery. The importance of Kállay's work is indisputable because the discovery of these graves urged István Paulovics to start excavating at the site two years later, uncovering another 130 graves.[7] The only information known about Grave K341 is that it was a cremation burial and that the nine items associated with it (Cat. 24–32) were probably placed together in the grave pit.

The cemeteries of the civil town are poorly researched, because the area was quickly built up and not all the graves found have been recorded or collected. In his work, László Barkóczi separated these cemeteries into three parts: No. I between the civil town and the military town, on the eastern side of the *municipium*, while Nos II–III were located west of the civil town and the pottery workshop. Only about 250 graves are known from these burial sites, most from the western cemetery of the *civil town*. The only large-scale excavation took place there in 2009, prior to the construction of a supermarket, exposing 87 graves.[8] Ödön Kállay reports on about 130 graves from the area,[9] but their original positions are difficult to identify. The other known burials from this part of the town have been found during road or drainage works. At this point, the issue of the division should be highlighted between the eastern cemetery of the civil town and western cemetery of the military town (Fig. 1). Over the years, the question emerged of where the dividing line lies between the two parts or whether there was one at all. Earlier scholars (such as István Paulovics[10] and Aladár Radnóti[11]) thought that all the burials between the two towns belonged to the *municipium*. They argued that the graves found in the area were not 'military' enough; however, this argument is not strong enough, since the residents of the *canabae* were not soldiers but traders, craftsmen, women, and children—people who served or were in contact with the soldiers of the *castra legionis*.[12] Therefore, the cemeteries should not be assumed to be solely military. Certainly, there are differences between

6 Kállay 1944, 6.

7 Delbó 2017, 32.

8 Borhy *et al.* 2018, 101–106.

9 Also stored at the Kuny Domokos Museum. Some notes by Kállay about these graves survived.

10 Paulovics 1930, 200; Paulovics 1941, 162–163.

11 Radnóti 1946, 92.

12 Tomas 2017, 18.

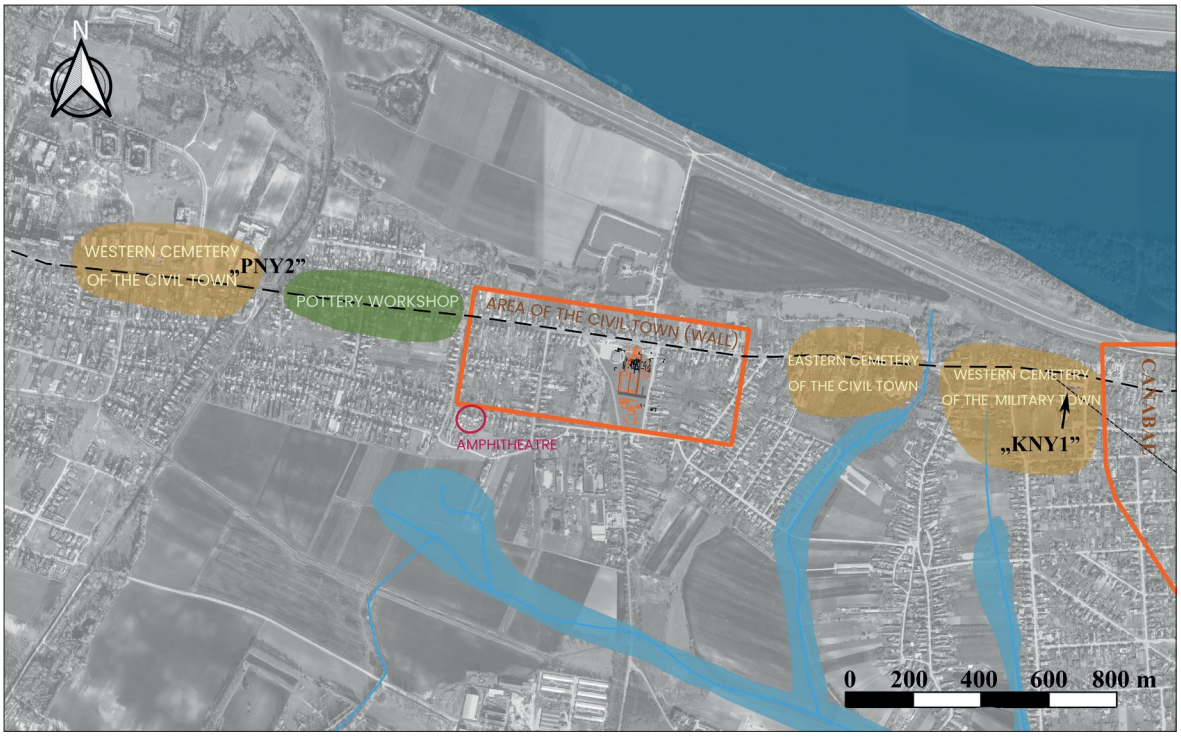


Fig. 1. Cemeteries of the civil town of Brigetio and the western cemetery of the military town. 'PNY2' marks the possible location of Graves PNY2.1–2, and 'KNY1' marks the location of József Járóka's house (map by B. Simon).

the character of the grave goods in the cemeteries of the civil and military towns, mainly in terms of richness, but it is still too early, at this point of research, to reach a conclusion on the issue. According to László Barkóczi, the boundary was at the Vámhíd (the toll bridge for the Zichy manor),[13] a bridge that stood over the small watercourse connecting the Danube and the Szőny–Füzitő Canal. It must have been in use at least until the time of the first Habsburg military survey (1782–1785), because its respective map depicts it as an actual bridge;[14] and the name has been preserved by oral tradition. Today, the Szőny–Füzitő Canal runs in the filled-up but still discernible bed of an ancient Danube branch[15] which, based on flood models of Brigetio and its surroundings in the Roman period, had a stream-like, small branch running towards the current Danube bed, which ran in a narrow trench in the area between the civil and the military town. This suggests that the line of the toll bridge, as Barkóczi suggested, could indeed be the natural dividing line between the cemeteries of these two settlements.[16]

'The doctor and the woman.' Two cremation graves from the civil town

Part of the finds discussed in this paper entered the possession of the HNM in 1935 and were sold by Jenő Petrovics for 100 *pengő*s. The 23 objects[17] were recorded in the inventory book in December 1935 as grave goods from two cremation graves (Figs 2–3). This was not his first sale to the museum; in 1932, he sold for 200 *pengő*s a rather rich assemblage of finds from a woman's grave with a side-

13 Barkóczi 1951, 8.

14 https://maps.arcanum.com/hu/map/firstsurvey-hungary/ (accessed on 23 February 2024).

15 Nagy *et al.* 2013, 279.

16 Nagy *et al.* 2013, 282, 2. ábra.

17 Cat. 1–23, HNM 5.1935.1–23.

wall niche.[18] These amounts of money were considered significant at the time. The inventory book would not have been sufficient to identify the location of the two graves, but fortunately, the papers from Paulovics István's bequest included a short note with matching logbook numbers from the inventory. The note said, "18 December 1935. By Jenő Petrovics, two 60–70 cm deep cremated graves from the 'Vitézi lot' between the southern railway and Komárom, next to the highway".[19] Paulovics was working in the Roman collection around that time, which makes it possible that he had records of the artefacts that entered the collection. Furthermore, according to the guide to the museum's Roman exhibition from 1938, Showcase 18 contained grave goods from the cemeteries of Brigetio's civil town. A photograph of this display case can be found in the notes of Paulovics, with a sketch identifying the logbook numbers with the artefacts. Thus, the material must have passed through his hands, and Petrovics probably informed him of the location where they had been found. Therefore, it can safely be said that the grave goods from this 1935 acquisition did indeed originate from the civil town, likely the western cemetery of the town.

The next problem is identifying the plot. The name 'Vitézi' in Paulovics's note is probably not a family name but a title, which makes it more difficult to identify, since several plots with a similar name can be found around Komárom/Szőny. The short description also mentions the southern railway and the highway, which narrows down the possible area considerably, but unfortunately, it is not clear whether the graves were found on the northern or southern side of the road. L. Barkóczi, in his publication of one of the glass finds (Fig. 3.7, Fig. 5.2) in 1966/67, stated that Feature PNY2.2, a cremation grave, was found in Cemetery III of the civil town.[20] According to his numbering, Cemetery III was located on the north side of the *limes* road. How reliable this information is remains unknown: did Barkóczi really know for certain thirty years later in which part of the cemetery these finds had been discovered? One can only tell that these two graves were probably found north of the road (Fig. 1.PNY2).[21]

The respective entry of the HNM inventory book mentions 23 objects, of which 13 allegedly came from Feature PNY2.1, a cremation burial known as 'the doctor's grave' (Cat. 1–13), while the rest came from Grave PNY2.2, simply called 'a female's grave' (Cat. 14–23). The basis for the medical interpretation of Grave PNY2.1 by the person compiling the inventory is likely to be the bronze box with a sliding lid (Fig. 2.1, Fig. 4.1), the needles (Fig. 2.8–9, Fig. 6.1–2), the spoon probe (Fig. 2.10, Fig. 4.4), and the stone palette (Fig. 2.6, Fig. 4.3). This assumption might seem correct at first glance, but a second glimpse at the find assemblage makes it less obvious, as the set could also be identified easily as a cosmetic kit. The grave also contained a simple bronze tweezer (Fig. 2.7, Fig. 4.2), a smaller hemispherical bronze bowl (Fig. 2.11), bronze parts of a chest (handle, nails, straps; Fig. 2.3–5), and a Drag. 54 *(olla) terra sigillata* beaker (Cat. 13). Unfortunately, the latter has been lost since; according to the inventory, it was undecorated. As Drag. 54-type cups were only manufactured in Rheinzabern,[22] the lost vessel must also have been made there. The inventory also mentions a lead object (Cat. 12), also missing today. The woman's burial contained gold and silver jewellery (Fig. 3.5,9), a bronze mirror (Fig. 3.8, Fig. 4.5), two perfume bottles (Fig. 3.6–7, Fig. 5.2–3), two *gemmae* (Fig. 3.3–4, Fig. 5.4–5), a bone hairpin fragment (Fig. 3.1, Fig. 5.6, Fig. 6.7), an amber bead (Fig. 3.2), and an imitation thin-walled pottery cup (Fig. 3.10, Fig. 5.1). Based on the grave goods, this burial was quite rich, and it may safely be assumed that the woman buried here was wealthy. The only information about these two cremation graves is that they were 60–70 cm deep from the surface,

18 Prohászka 2006, 79–82.

19 HNM Archive, Inv. no. 104.Sz.II.

20 Barkóczi 1967, 89, no. 27b.

21 Barkóczi 1951, 6.

22 Gabler 2006, 72, 78; the type was dated to between the mid-2nd century AD and 270 AD.

which is average for such features at the site. The complete grave find assemblages have not yet been published; only some parts and items have been studied separately and without consideration of their original contexts.

Anikó Bózsa discussed a significant proportion of the objects in her PhD thesis[23] on items of Roman beauty care from the part of Pannonia that corresponds to present-day Hungary. Bózsa published the 'medical' box (Fig. 2.1, Fig. 4.1), the spoon probe (Fig. 2.10, Fig. 4.4), the mirror (Fig. 3.8, Fig. 4.5), the tweezer (Fig. 2.7, Fig. 4.2), and the stone palette (Fig. 2.6, Fig. 4.3) in her catalogue (Fig. 4). The artefact seen as conclusive evidence for the medical association of the burial, the bronze box (Fig. 2.1, Fig. 4.1), has survived in a very fragmentary state. Its size and design can be deduced from the fragments: it had four small compartments and one large compartment under the sliding lid framed by plain incised lines. The small handle of the sliding lid is also preserved on one of the shorter sides of the box. These so-called medical boxes are generally of uniform design: they are flat, rectangular, and have three to five compartments. The compartments can be divided, sized, and shaped in a variety of ways, including even semi-circular partitions. Most boxes are made of bronze, but some made of bone, ivory, or wood are also known. The small compartments had their own lids and handles and could be operated via hinges or small pegs. The sliding lids are usually decorated with incised lines, but some had more complex decorations. This lid possibly also served as a working surface for mixing, measuring, etc., which raises the question of general use. Since such boxes are known from both medical and cosmetic contexts, they seem to have been used for a variety of purposes and should be interpreted in the light of the accompanying finds or the remains inside them rather than based solely on design.[24] Occasionally, solid, porous mineral or organic pastilles and other amorphous residues are preserved inside the compartments. Occasional analyses of these did not yield results specific enough to estimate the original function of the substances and, thus, of the use context of the box. The residue from a bronze box found in Aquincum (Gázgyár Cemetery, Grave J5) contained zinc hydrate, graphite oxide, malachite, cuprite, cassiterite, azurite, and myrrh. According to Paula Zsidi, the box was the property of an eye doctor (ophthalmologist); however, apart from the 'medical' box, the grave only contained a large iron knife, which alone might not be enough to support her theory.[25] It should also be acknowledged that besides storing medicine, make-up materials or pigments, these boxes simply could have been reused for storing jewellery, money, and other small items. While their design did not change much between the 1st and 4th centuries AD, a change of function is possible. Most pieces from Pannonia are known from the 2nd–3rd centuries AD.[26] Two boxes are known from burial contexts from Intercisa: both contained some residue, and one was found with a stone palette, like the aforementioned pieces from Brigetio.[27]

The spoon probe from this grave (Fig. 2.10, Fig. 4.4) is similar in design to the other probe from the Kállay Collection (Fig. 7.5, Fig. 8.3). These instruments are basically multifunctional spoons with a long shaft and an olive-stone-like bulge at the other end of a long propeller-shaped spoon. Their original name is unclear: the Latin *specillum* refers to both *spatulae* and spoon probes, generally meaning 'probe'.[28] Its design was very handy: the spoon end was suitable for dosing, measuring, and mixing, while the probe end could be used to crush, powder, and grind the material. Such spoons appear in both medical and cosmetic contexts, often with an accompanying palette. Their spoon part is elongated, usually propeller-, paddle-, leaf- or petal-shaped, with a round or pointed

23 Bózsa 2016, Kat. 182, 831, 908, 962, 1023.

24 Bózsa 2016, 266–268.

25 Zsidi 2006, 54–57.

26 Bózsa 2016, 270–272.

27 Szabó 1984, 106, 110, no. 33–34; Bózsa 2016, Kat. 1017–1018.

28 Bliquez 2003; Bózsa 2017, 431–432.



Fig. 2. Grave goods from Grave PNY2.1 (Cats 12–13 are missing). 1 – Cat. 1, 2 – Cat. 6, 3 – Cat. 5, 4 – Cat. 4, 5 – Cat. 3, 6 – Cat. 11, 7 – Cat. 10, 8 – Cat. 8, 9 – Cat. 9, 10 – Cat. 7, 11 – Cat. 2.



Fig. 3. Grave goods from Grave PNY2.2. 1 – Cat. 20, 2 – Cat. 17, 3 – Cat. 19, 4 – Cat. 18, 5 – Cat. 15, 6 – Cat. 22, 7 – Cat. 21, 8 – Cat. 14, 9 – Cat. 16, 10 – Cat. 23.

end and U- or V-shaped cross-section. The shaft is sometimes decorated and segmented with rings and balusters, a spiral motif, or cannelures.[29] The U and V cross-sections can possibly be connected with different uses; for example, V-shaped spoons could have been more suitable for draining blood, while U-shaped ones were better for mixing. Unfortunately, typology is unsuitable for dating

29 Bózsa 2016, 233–234.

this find.[30] Cat. 7, the probe (Fig. 2.10, Fig. 4.4) has a segmented shaft with a spiral incision; it could be classified as a simpler version of Riha's Variante A or B comprising spoon probes with metal inlays or twisted shafts. This category roughly corresponds Group VIII/3 in Anikó Bózsa's system, which includes specimens on which only an incision imitates the metal inlay or the twisted shaft.[31]

Make-up and medical palettes were made from stone, usually black, green, or grey shale. They have a uniform design, a flat truncated cone shape with rounded edges and corners, but the specimens may differ in size. Signs of use often appear on the base or the top in the form of shallow holes or indentations. Palettes were used for a variety of purposes, as they are equally suitable for preparing and mixing make-up products, body lotions, medicines, and paints.[32] Palettes are often placed in graves together with spoon probes,[33] just as in the case of this grave (Fig. 2.6, Fig. 4.3) and the one from the *canabae* (Fig. 7.2, Fig. 8.6). The fact that they are commonly paired up in urban contexts as well as in men's graves, and not just as grave goods of females, testifies to their widespread everyday use.[34]

Bronze tweezers in the Roman period *(vulsella/volsella)* were used in both cosmetic and medical context, although beauty-care items are usually smaller and simpler. The ones intended for domestic use, were usually part of a 'cosmetic set' kept on a ring together with earspoons, nail pickers, nail files, and toothpicks. Earlier tweezer variants had an additional ring for suspension, while later ones had a loop apex. These items served diverse purposes; they could be used widely, in addition to hair removal, for example for grasping and moving small objects, or administering medicine.[35] The tweezer from this grave (Fig. 2.7, Fig. 4.2) has an eyelet-shaped jaw; its overall design corresponds to Riha's Gruppe G. Tweezers of this group were made simply by bending a bronze band, and have oval (eyelet-shaped) jaws and straight arms. This is one of the most common forms, used for both cosmetic and medical purposes. Between the 1st and 4th centuries AD, this type was widespread throughout the Roman Empire.[36] Therefore, Cat. 10 (Fig. 2.7, Fig. 4.2) cannot be dated based on morphological characteristics alone; besides, its simplicity makes medical use less likely. In the graves collected by Ernst Künzl that can be characterised as medical, there are generally more than one pair of tweezers, which are more complex and sometimes ornamented.[37]

The bronze mirror from Grave PNY2.2 (Fig. 3.8, Fig. 4.5) represents the most common type in both Pannonia and several other provinces. Such mirrors have a row of holes around the edge, their back is decorated with concentric circles, and feature a classic baluster-type handle;[38] only two specimens with loop handles[39] are known from Pannonia. The diameter of such mirrors can vary; They are usually made from a bronze alloy with high tin content. The appearance of mirrors in Pannonia can be linked to the process of Romanisation in the province; they became a tool for representation and a classic attribute of women. Like Cat. 14 (Fig. 3.8, Fig. 4.5), many examples are known from cremation graves. The number of metal mirrors in mortuary contexts decreases after the end of the 2nd century AD. Mirrors can also bear symbolic meaning in burial contexts, representing a link between this and the other world.[40]

30 Bózsa 2016, 241.

31 Riha 1986, 67–68, Variente A, Kat. 413–424; Variente B, Kat. 425–426.

32 Bózsa 2016, 260–262.

33 Bózsa 2017, 432.

34 Riha 1986, 80; Bózsa 2016, 265.

35 Bózsa 2016, 248–249.

36 Riha 1986, 37. Kat. 105–111. Riha's Gruppe G corresponds to Bózsa's Group 4 (Bózsa 2016, 257–258).

37 Künzl 1982, 76, Abb. 50, Gallia Lugdunensis-Paris. nos 8–12.

38 Bózsa 2016, 74–81, Type 2.2.2.

39 The mirror plate of both is missing, only the handles survived. Carnuntum: Humer 2009, 329, Kat. 1254; Brigetio: Olasz 2020, Kat. 225, 33. tábla 5.

40 Bózsa 2017, 426.

A special fragment of a bone hairpin (Fig. 3.1, Fig. 5.6, Fig. 6.7) was found in Grave PNY2.2, a cremation burial, belonging to a woman. The small yet elaborate hairpin head depicts a woman with an empress-like hairstyle. The slightly worn but still prestigious piece was published by Mária T. Bíró.[41] These hairpins with female busts are not rare; they are known from many archaeological sites. However, their design is similar throughout the empire, so it can be assumed that all were made by a single central workshop. Their quality is impressive: the distorted parts under magnification come together at a distance as a whole bust. Based on a hairpin from Savaria,[42] Bíró suggested that Iulia Domna is the empress depicted on the piece from Brigetio, dating it at least to the beginning of the 3rd century AD (Fig. 6.6,8). The turban-like hair is sharply separated in the middle, and several lines on the sides indicate the hair arranged in waves, imitating the empress's hairdo from marble statues. In my opinion, the two pieces from Savaria and Brigetio are not so similar. Proportionally, the hair is much bigger on the piece from Savaria, with five strong vertical lines imitating the distinct waves of the empress, while Cat. 20 (Fig. 3.1, Fig. 5.6, Fig. 6.7) features only one large vertical line and many smaller ones forming a net-like pattern. The second hairstyle seems simpler, resemble the smoother waves of Faustina the Younger (Fig. 6.5). If it indeed depicts Faustina, the dating of the item can be narrowed down to the second half of the 2nd century AD. The question arises as to whether the empress portrayed was the focus of such pieces, or simply the hairstyle was fashionable at the time.[43] Hairpins in general were functional objects, but the more prestigious pieces, such as this one, can be considered a decorative accessory.[44] It cannot be known with certainty whether this hairpin was already broken when it was placed in the grave. If it was, some kind of sentimental attachment to the headpiece must be assumed.

Two cameos were also placed in the grave. They are almost identical in size and with respect to the kissing pair of Amor and Psyche depicted on them, differing only in colour: Cat. 19 is milk-white (Fig. 3.3, Fig. 5.4), while Cat. 18 is light green (Fig. 3.4, Fig. 5.5).[45] Cat. 18 is of better quality; the image on the other is much blurrier. Both feature a depiction of a standing couple, Amor and Psyche, embracing and their heads bent together. Amor is naked and his wings are not visible, while Psyche wears a long *chiton* and has butterfly wings. According to T. Gesztelyi, they may be dated to the 1st–2nd century AD. The fact that these two cameos depicting lovers were found together in a grave suggests they had an intimate, personal meaning for the owner.[46] There is no record or remains of rings belonging to these *gemmae* in this burial.

Furthermore, the cremation grave contained two glass bottles (Fig. 3.6–7, Fig. 5.2–3). The placing of multiple *balsamaria* (even up to 5 pieces) into a cremation grave is common in Pannonia.[47] These *unguentaria* were first published by László Barkóczi in his work about the glass finds from Brigetio and Pannonia. The first bottle is a small greenish ointment jar (Fig. 3.7, Fig. 5.2), and the other is a conical make-up bottle (Fig. 3.6, Fig. 5.3). Barkóczi dated both types to the first half of the 2nd century AD; however, a later dating is also possible, given that such conical make-up containers appear in Italy even in 3rd-century AD contexts[48] and the small ointment jars are still present in small numbers at Cologne by the *limes* until the 3rd century AD. Jars such as Cat. 21 (Fig. 3.7, Fig. 5.2) are the smaller counterparts of the large glass urns and are considered common. They are usually oblate spherical and

41 Bíró 1994, 35. no. 381, 36.381; Bíró 1987, 176, Fig. 17.80.

42 HNM 132.1872 (Bíró 1994, no. 383).

43 Bíró 1987, 176–178, Fig. 16.b–c.

44 Márton 2019, 188.

45 AGUN 161, Kat. 263–264.

46 Gesztelyi 2005, 17, 52, Kat. 132–133.

47 Márton 2019, 163–194.

48 Barkóczi 1988, 129.

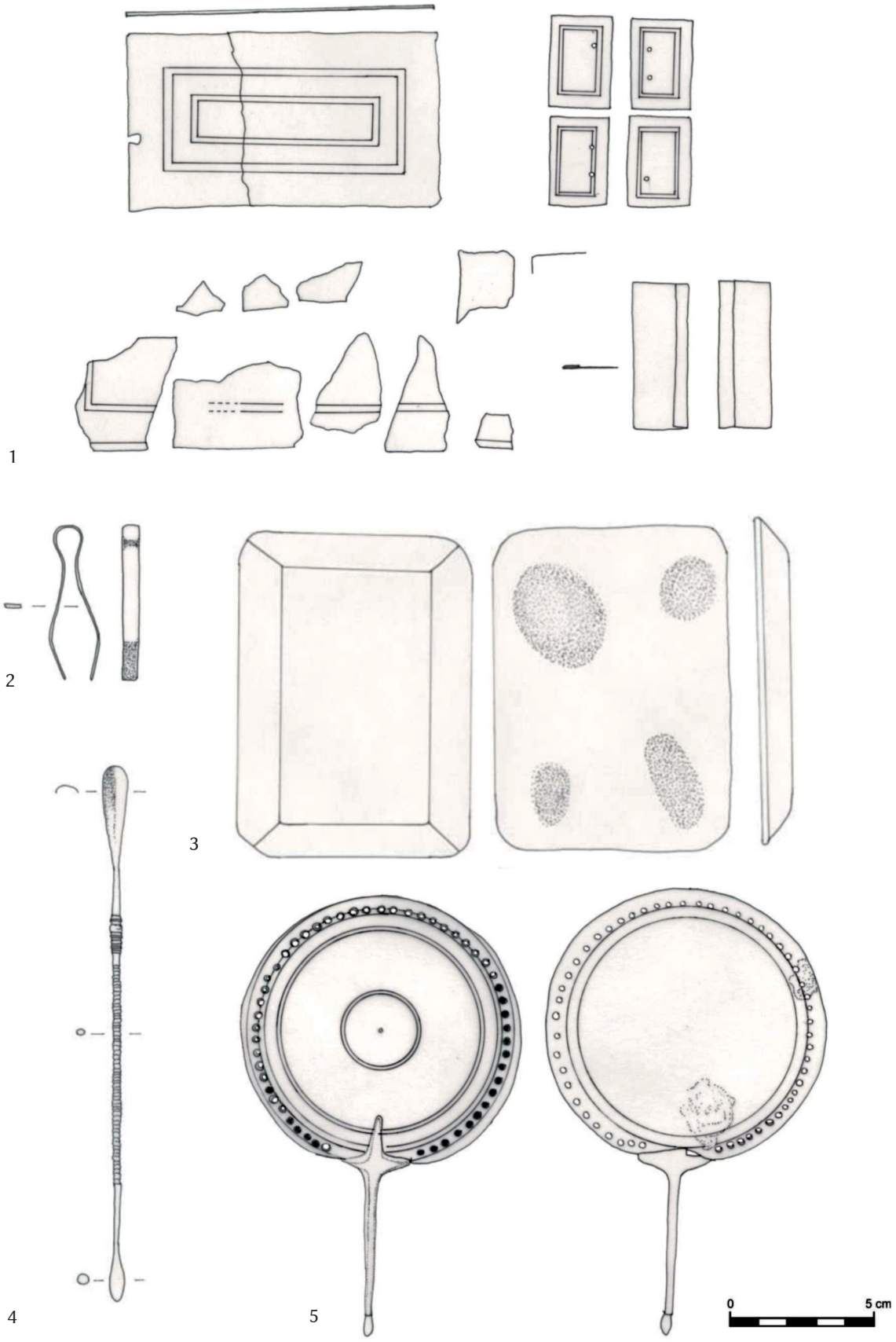


Fig. 4. Cosmetic items published by A. Bózsa (Bózsa 2016). 1 – Cat. 1 (121. tábla, Kat. 1023), 2 – Cat. 10 (109. tábla, Kat. 908), 3 – Cat. 11 (113. tábla, Kat. 962), 4 – Cat. 7 (105. tábla, Kat. 831), 5 – Cat. 14. (32. tábla, Kat. 182).

have a bluish-greenish hue. The first items came to Pannonia from Italy, and later, from the end of the 2nd century AD, they were imported from Cologne.[49] Glass bottles like Cat. 22 (Fig. 3.6, Fig. 5.3) had a characteristic conical shape and were used to store make-up or paint. Their occurrence in Pannonia is limited to the western part of the province and probably connected to the Amber Road. The thick-walled small bottles were easy to transport from northern Italy.[50] Both these glass finds fit perfectly into the female cosmetic set as equipment for storing make-up and other ointments.

Grave PNY2.2 contained only a single piece of pottery, but a rather fine one, an off-white thin-walled cup (Fig. 3.10, Fig. 5.1). 'Eggshell pottery' includes extremely thin-walled, hard-fired drinking or dining vessels in pale brown and shades of white, the attribute ('eggshell') referring to both their colour and average wall thickness (1–2 mm). Zita Kis was the first to publish Cat. 23 (Fig. 3.10, Fig. 5.1), assigning it to her Group II/c that includes cup with a hemispherical body and a slightly out-turned rim.[51] This fine drinking vessel has analogies in Poetovio and Carnuntum, was probably imported from Italy, and can be dated between the end of the 1st[52] and the beginning of the 3rd century AD.[53]

A pair of gold hoop earrings (Fig. 3.5), a twisted silver bracelet (Fig. 3.9) and an amber 'bead' (Fig. 3.2) were recovered from Grave PNY2.2. The gold earrings were made from a piece of simple gold wire; each hoop ends in a loop and a hook, respectively, corresponding to Facsády's Typ. I/b.[54] This type was common in Pannonia between the 2nd and 4th centuries AD. The bracelet was made from a piece of square-profiled silver wire with tapered ends, twisted around its own axis; it matches Riha's Typ 3.24/a.[55] It is a simplified version of the armrings made from twisting several wires together, and can be dated to the 2nd–4th century AD.[56] The small amber object (Fig. 3.2) looks like a relatively large biconical or barrel-shaped bead, but it is not drilled through. It may have been an unfinished piece or a broken-off part of a larger object, possibly a pendant. Amber pendants came in a variety of shapes, and this biconical, barrel-shaped piece could have been an amulet. While amber pendants, owing to their assumed beneficial properties, were associated primarily with children,[57] luxurious amber rings and spindle whorls[58] attest to adult women also valuing this expensive material for the same reasons, as well as decoration, and as status symbols. There is no comprehensive typology including the exceptionally wide variety of all known amber pendants, and they cannot be dated based on their design but only via the accompanying finds. Amber items were expensive in Pannonia—only the wealthiest could afford them, which suggests that the ones added to a grave had a deeper meaning or symbolic value for the deceased.[59]

Besides the finds listed above, PNY2.1, the 'doctor's grave' also included some bronze fittings and parts from a wooden box or chest. D. Gáspár published first the bronze handle with the cotter pin (Fig. 2.5), a simple bent bronze wire with profiled ends and no dating value.[60] Several bronze cotter pins, cotter pin hinges, and nails (Fig. 2.2–4) were found together with the handle, which are com-

49 Barkóczi 1988, 205.
50 Barkóczi 1967, 77–78.
51 Kis 2015, 161–163, Cat. 12, Fig. 2.12.
52 Istenič 1999, Pl. 89.10; Petznek 2000, Kat. 1454.
53 Kis 2015, 167.
54 Facsády 2009, 73, Type I/b.
55 Riha 1986, 60–61, Type 3.24/a.
56 Facsády 2009, 53. Type V.
57 Plin. *NH,* 37.50.
58 Sprincz 1957; Pásztókai-Szeőke 2011.
59 Márton 2019, 224.
60 Gáspár 1986, Kat. 1205.

mon[61] throughout the empire. Based on the number and quality of these items, the chest could have been a simple wooden box. Originally, the box possibly contained other objects from this grave, such as the bronze instruments and the palette.

The grave also contained a small bronze bowl (Fig. 2.11), a simple undecorated hemispherical vessel with a narrow, horizontal, inward-folded rim. It is too plain and bears no traces of attachment, which make it unlikely that it was part of a ladle or another bronze vessel. Such basic bronze or silver bowls sometimes occur in medical contexts, but E. Künzl also included them among the items he considered insufficient evidence for classifying a feature as a doctor's grave.[62] His collection of burials holds several parallels to our find. Their use is not very specific; they could have been used to mix and store things, perhaps even to collect blood, because they were more durable, less fragile, and easier to clean than similar bowls made of pottery.[63] A similar piece came to light, together with a shale palette, in a cremation grave at Cologne. The stone box found in that grave contained multiple tools, including scalpels, scissors, probes, and a spoon, besides the cremated remains; this assemblage could definitely be identified as a medical set.[64]

Two bronze needles (Fig. 2.8–9, Fig. 6.1–2) of different style and length were added to this burial, too. Bronze needles in general had a wide range of applications, from simple sewing needles to hairpins to surgical needles. Their use can be determined based mainly on morphological characteristics, size, archaeological context, or position, but some pieces are too simple or fragmented for that.

Bronze *styluses* are easier to identify from their thicker shafts and distinct pointed and flattened ends. Surgical needles and retractors were part of the surgeon's toolkit. Retractors had sharp or blunt hooked ends, sometimes on both sides. Their sharpness depended on their function: sharp hooks were used for penetrating the skin, hooking blood vessels, tissue, wounds, etc, while blunt ones were used attached to shafts.[65] Retractors with single hooks sometimes had baluster-shaped, profiled handles[66] similar to the Cat. 8 needle (Fig. 2.8, Fig. 6.2). The question arises whether originally, the needle in question could have been a retractor of which the hooked end broke off, or was it just a simple (or surgical) needle. This bronze object is unusually long, 20.5 cm. The pieces published by Riha are shorter (13–17 cm) but have more complex handles, with longer segmented parts and decorations. Closer analogies for the handle of Cat. 8 (Fig. 2.8, Fig. 6.2) are also known from Augusta Raurica, but they belong to hairpins. Riha's Groups 12.26.1 and 12.26.4 have profiled endings made up from circles and knobs, which are the closest to the one from Brigetio (Fig. 6.3–4). On the other hand, the actual length of the hairpins from these groups are questionable, because most of the pieces are broken, not whole. Although both shorter and longer hairpins are known from the Roman period, the 20+ cm of the Cat. 8 needle seems too long even for a hairpin[67]. It could have been a decorative pin for clothing but seems unlikely. The other 'needle' on the other hand (Fig. 2.9, Fig. 6.1) is actually a hairpin, because it has a key-like ending. The main characteristic of this type is the baluster decoration ending in a loop and a small key, similarly made like a key ring. In A. Facsády's typology of jewellery from Aquincum, this is Type XI of the hairpins.[68] Usually, the longer hairpins were in use in earlier periods—using a few long pieces to make a hairdo.[69]

61 For analogies to the cotter pin hinges from Augst, see Riha 2001, Kat. 340–351.

62 Künzl 1982, 5.

63 For analogies, see Künzl 1982, 45, Asia 1–Asia Minor, Fig. 13.1, 61, Gallia Belgica 3–Reims, Fig. 30.4–5.

64 Euskirchen 2022, 23–44, III.2, Arztgrab in der Richard-Wagner-Straße 47, Mitte des 3. Jahrhunderts n. Chr., Abb. 32–34, Cat. 18–19.

65 Riha 1986, 84–85.

66 Riha 1986, Taf. 58, Kat. 636–643.

67 The longest hairpin in Riha's collection is the 19.3 cm long, Kat. 2457; see Riha 1986, Taf. 56.

68 Facsády 2009, 87, 127, Type XI, Cat. 338.

69 Cool 1990, 173.

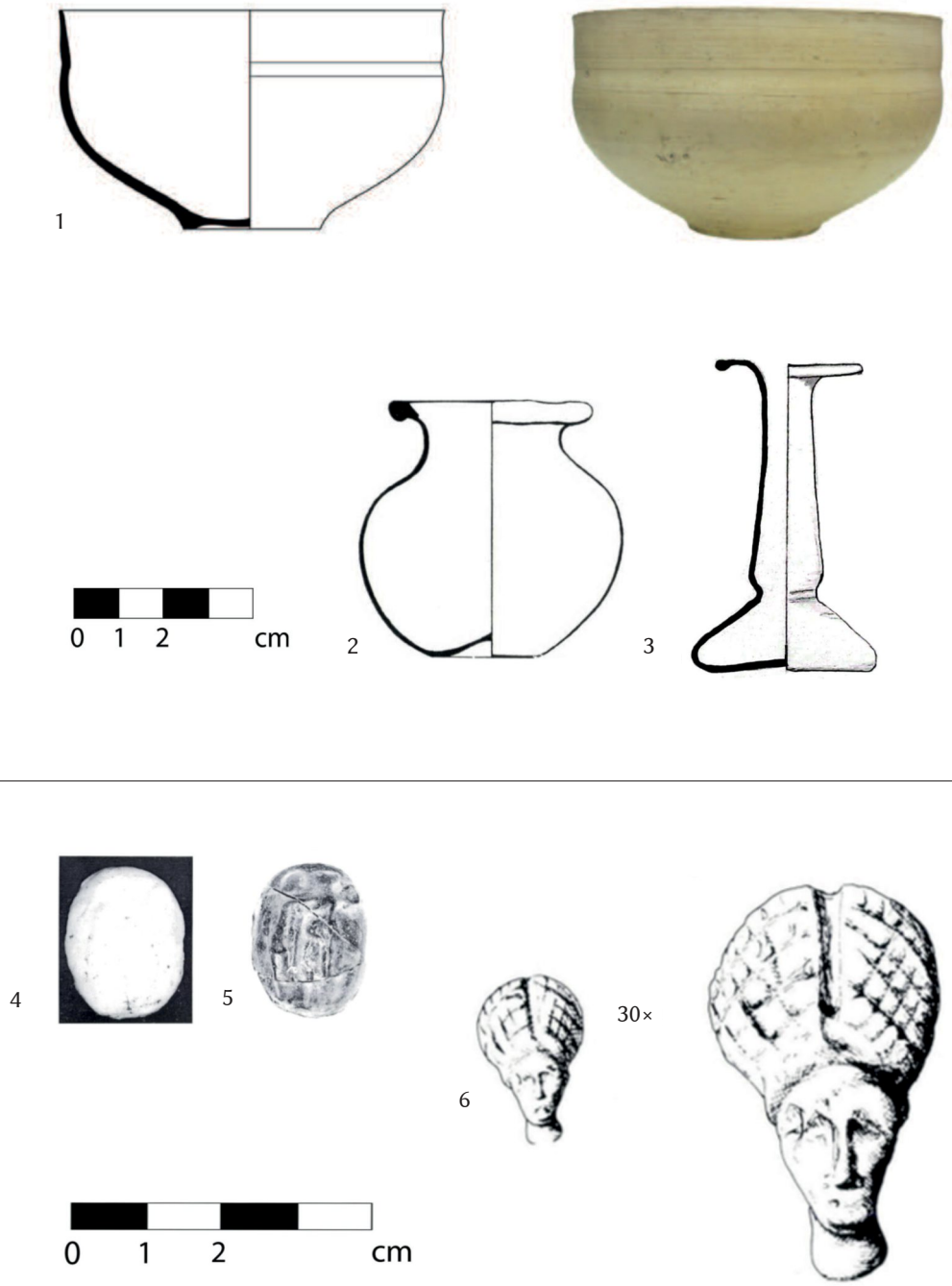


Fig. 5. Some of the already published objects and Cat. 22 from Graves PNY2.1 and PNY2.2. 1 – Cat. 23 (after Kis 2015, Fig. 2.12), 2 – Cat. 21 (after Barkóczi 1967, Kat. 27.b, Abb. 31.4), 3 – Cat. 22, 4 – Cat. 19. (after AGUN, no. 263), 5 – Cat. 18 (after AGUN, no. 264), 6 – Cat. 20 (after Bíró 1987, Fig. 17.80).

The one, or perhaps two, hairpins from this grave shed a different light on this so-called 'doctor's grave'. As I mentioned earlier, many of the objects found in the burial can easily be characterised as beauty-care or female items—the box with a sliding lid, the palette, the tweezers, and the spoon probe (Fig. 2.1,6–7,10, Fig. 4.1–4)—; together with the hairpins (Fig. 2.8–9, Fig. 6.1–2) the assemblage has a clearly cosmetic character. The collective work of E. Künzl and M. Euskirchen shows that doctor's graves usually include more specific items and instruments than this one, with multiple scalpels, retractors, tweezers, spatulas, and more amongst them.[70] Conclusively, the objects in Grave

70 Künzl 1982, Abb. 30–37; Euskirchen 2022, 7–138.

PNY2.1 most likely belonged to a woman and can be considered cosmetic. Considered together with Grave PNY2.2, undoubtedly another cremation burial of a woman interred with a few cosmetic items (a mirror, an ointment jar, a perfume flask) and jewellery (Cat. 14–22), these two cremations contained different kinds of women's sets. The first is more practical, intended for making, storing, and applying make-up, and complemented with hair products, while the other is more decorative and contains higher-value (silver, gold, and amber), more ornamental items (bone pin, *gemmae*), but only a few cosmetic products. Both burials can be considered rich based both on the number and quality of the grave finds and the presence of imported pottery, such as the *terra sigillata* bowl (Cat. 13) and the eggshell ware cup (Fig. 3.10, Fig. 5.1).

As mentioned above, these two graves came from the western cemetery of the civil town, north of the *limes* road. Both cremation graves belonged to women interred with numerous grave goods. Most objects from Grave PNY2.1 could not be dated. Boxes such as Cat. 1 (Fig. 2.1, Fig. 4.1) are known from Pannonia from 2nd–3rd-century AD contexts; this timeframe corresponds well with the operating period of the Rheinzabern *terra sigillata* workshop but cannot be narrowed down. Almost all items in Grave PNY2.2 could be dated to the 2nd century AD; the only chronological issue concerns the two glass bottles (Fig. 3.6–7, Fig. 5.2–3) and the broken bone hairpin (Fig. 3.1, Fig. 5.6, Fig. 6.7). Barkóczi dated that both bottles to the first half of the 2nd century AD, whereas, if the hairpin portrays Iulia Domna, it can only originate from end of the 2nd or rather the beginning of the 3rd century AD.[71] This contradiction can be resolved, as Barkóczi also notes that both types of glass could also occur in later periods, even in the 3rd century AD.[72] However, the identification of the representation on the hairpin as Iulia Domna still seems too late, in light of the dating of the *gemmae*, which T. Gesztelyi put to the 1st–2nd century AD.[73] If the carved pin depicts Faustina the Younger, an overall dating to the second half of the 2nd century AD can be proposed for this grave. In general, the dating of the two presented graves aligns well with the '2nd century–beginning of the 3rd century AD' dating of the burials excavated in 2009 in the same (western) cemetery of the civil town.[74]

Cremation grave from Cemetery KNY1

The Kállay Collection of the Kuny Domokos Museum holds another, though rather fragmentary, bronze box with a sliding lid (Fig. 8.7). If the data in the inventory book are correct, this box was found in a cremation grave in the western cemetery of Brigetio's military town, on the plot of József Járóka in 1927 (Fig. 1.KNY1). Unfortunately, only the bronze lid survived, but due to its characteristic size, design, and decoration, it could easily be identified as the former sliding lid of a box. Thirteen powdery pastilles were found with the box (Fig. 8.5), probably representing its contents, but sadly, the details of discovery and general notes about the grave are missing. The pastilles—slightly greasy rods coloured with different pigments, which leave marks on paper—have not been analysed yet.

In addition to the bronze box, Grave KNY1.104 (Figs 7–8) also contained a stone palette (Fig. 7.2, Fig. 8.6), a spoon probe (Fig. 7.5, Fig. 8.3) and a needle (Cat. 30)—akin to Grave PNY2.1 (discussed above)—, as well as a *Spruchbecher* (Fig. 7.1, Fig. 8.4), a scalpel (Fig. 7.4, Fig. 8.2), fragmentary shears (Fig. 7.3, Fig. 8.1), and a fragmentary cylindrical bronze case (Cat. 27). Unfortunately, the needle and the cylindrical bronze case are now missing. A medical or even surgical interpretation may be raised especially because of the scalpel, which is a typical element of medical sets.[75] The objects

71 Bíró 1987, 176, Fig. 17.80.

72 Barkóczi 1988, 129, 205.

73 Gesztelyi 2005, 52, Kat. 132–133.

74 Borhy *et al.* 2018, 106.

75 Künzl 1982, 81.

analogous with those in Grave PNY2.1 do not reveal much more about this burial, because most of the box is missing; only the length, not the type, of the needle is known (9.6 cm); and palettes are generally too uniform. The spoon probe (Fig. 7.5, Fig. 8.3) is simpler than Cat. 7 (Fig. 2.10, Fig. 4.4); it corresponds to Bózsa's Type V and Riha's Variante H, with an undivided handle decorated with a baluster-shaped element at the junction of the handle and the spoon and a double circular ring.[76]

The bronze scalpel (Fig. 7.4, Fig. 8.2) from Grave KNY1.104 has a spatula on one end and an iron blade on the other. The replaceable blade did not survive; only some corroded remains can be seen on the bronze handle. The spatula is flat, slightly pointed, tapered towards the ends. The handle is shorter than the hexagonal-profile spatula part. This type is not very common, though analogies are

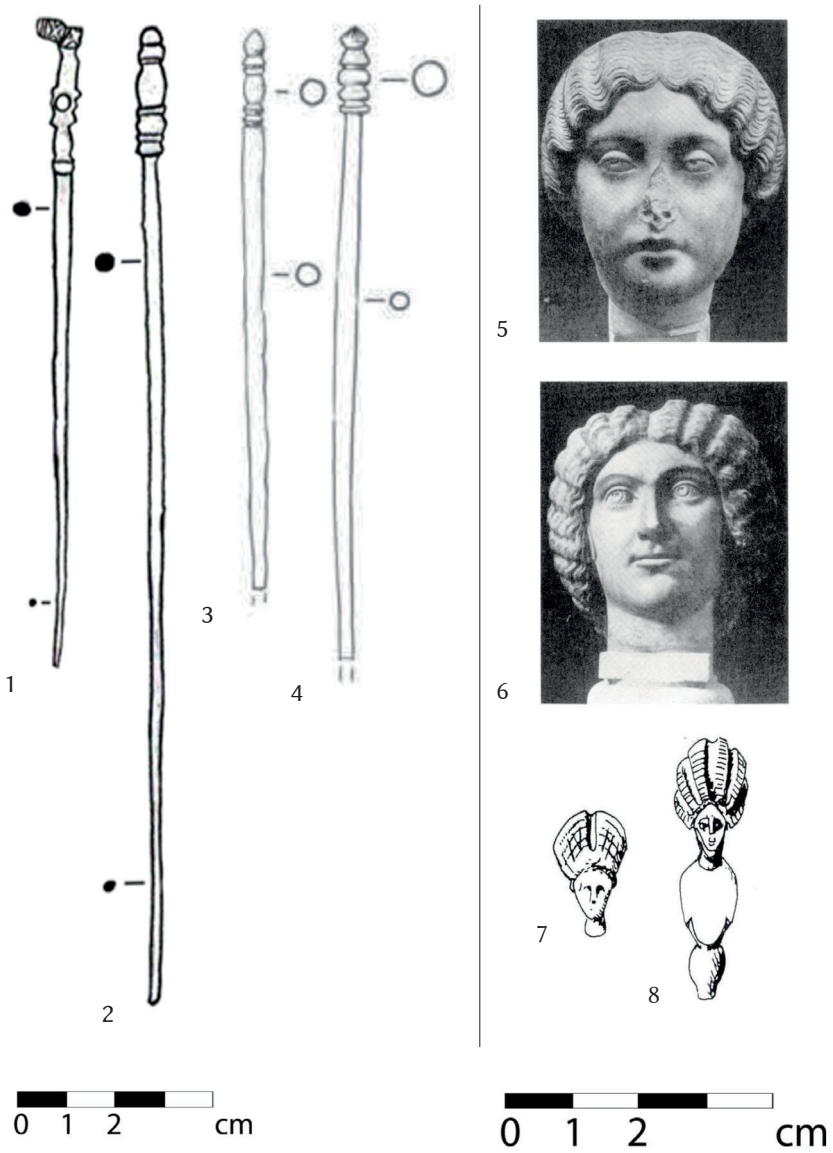


Fig. 6. Bronze needles from Grave PNY2.1 and bone hairpin from Grave PNY2.2. 1 – Cat. 9, 2 – Cat. 8, 3 – Riha Type 26/1 bronze hairpin (after Riha 1990, Taf. 60, Kat. 2552), 4 – Riha Type 26/4 bronze hairpin (after Riha 1990, Taf. 62, Kat. 2595), 5 – portrait of Faustina the Younger, Rome, National Museum (after Baharal 1992, 120, Pl. 2.8), 6 – portrait of Iulia Domna, Rome, National Museum (after Baharal 1992, 120, Pl. 2.7), 7 – Cat. 20 (after Bíró 1994, 174, Pl. 36.381), 8 – bone hairpin from Savaria (after Bíró 1994, 174, Pl. 36.83).

76 Bózsa 2016, 236–237, Kat. 783–798; Riha 1986, 71, Kat. 519–527.

known from Aquincum,[77] Augst, and two pieces from a sarcophagus from Nijmegen, representing different contexts from the 3rd century AD.[78] The excavator interpreted the numerous objects in the Nijmegen grave as a cosmetic rather than a medical set.[79] The scalpel at Aquincum was found in a small inhumation grave, probably of a girl, which made this object a rather unusual grave good. The fourth example did not come from a burial but from a deposit of medical tools with multiple scalpels, an ophthalmological stamp, a bronze cauldron, a box, and other equipment. The ophthalmological stamp makes this deposit clearly medical.[80]

The shears (Fig. 7.3, Fig. 8.1) in the grave were fragmentary; only parts of the iron blades survived. The term 'shears' is used to refer to objects consisting of two blades linked by a spring (essentially scissors). Shears were multifunctional tools: simple iron shears are usually connected with textile production (i.e. used for shearing sheep or cutting fabrics).[81] Such shears had massive springs made from a bronze band that also served as arms. Their curved arms were wide and often ended in decoration imitating flower buds or leaves. The blades were attached to the grip with two rivets. Based on its fine manufacturing, the scissors in focus were probably used in a context other than textile production.

Surgical shears also existed but were rare: into his collection of medical graves, E. Künzl included only six specimens found in five burials—a number insufficient for developing a typological framework.[82] The previously mentioned Nijmegen grave with the cosmetic or medical kit also included a pair of plain iron shears.[83] A close analogy to Cat. 31 (Fig. 7.3, Fig. 8.1) is known from the so-called doctor's tomb in Verona, where two cremation urns and many grave goods in a brick-walled tomb with niches on all four sides were discovered at Via Paradiso in 1910. Glass urns containing the cremains of a man and a woman, respectively, were found inside the local limestone urns.[84] and two pairs of bronze and iron shears were recovered from niches A and C. One of them is very similar to the piece from Brigetio, but it has three rivets instead of two, and the ends of its arms are more ornate. It was associated with the woman's grave because Niche A primarily contained items associated with the female gender. The other pair of scissors is simpler and more functional since its blades are not riveted to the arms but are replaceable like those of scalpels. This tool, together with the other objects in Niche C, were attributed to the doctor's grave.[85] A further pair of bimetal shears, similar to the one from Brigetio but more ornate—with multiple engraved lozenges on its arms—, was found in the cremation grave of a doctor at Cologne.[86]

The only information available about the cylindrical bronze case (Cat. 27) in the Kállay Collection is that it had a 1.7 cm base diameter. Allegedly, the thin sheet bronze case contained the scalpel (Fig. 7.4, Fig. 8.2), the spoon probe (Fig. 7.5, Fig. 8.3) and the needle (Cat. 30). Such cases are usually 10–20 cm long and have a long cylindrical body and a cap or lid to close them. Their exterior is often decorated with incised circular lines, while their bottom and cap with concentric circles. They are well-suited to holding long medical or cosmetic instruments, such as probes, spoons, needles, or scalpels, but

77 Testvérhegyi villa, Grave 6 (2003): Hümpfner 2019, 12. tábla 5.

78 Riha 1986, 82. Kat. 628.

79 Künzl 1982, 94–96, Germania Inferior 8–Nijmegen, Abb. 75.15.

80 Riha 1986, 90, Kat. 680.

81 Busana *et al.* 2020, 287.

82 Künzl 1982, 20, Fig. 2.a–b.

83 Künzl 1982, 93, Abb. 74.3.

84 Bolla 2004, 193–194, 233.

85 Bolla 2004, 207, Cat. 31, Tab. 4.31, 215, Cat. 44, Tab. 6.44.

86 Euskirchen 2022, 42, Taf. 3.2, Arztgrab in der Richard-Wagner-Straße 47, Mitte des 3. Jahrhunderts n. Chr., Kat. 29.

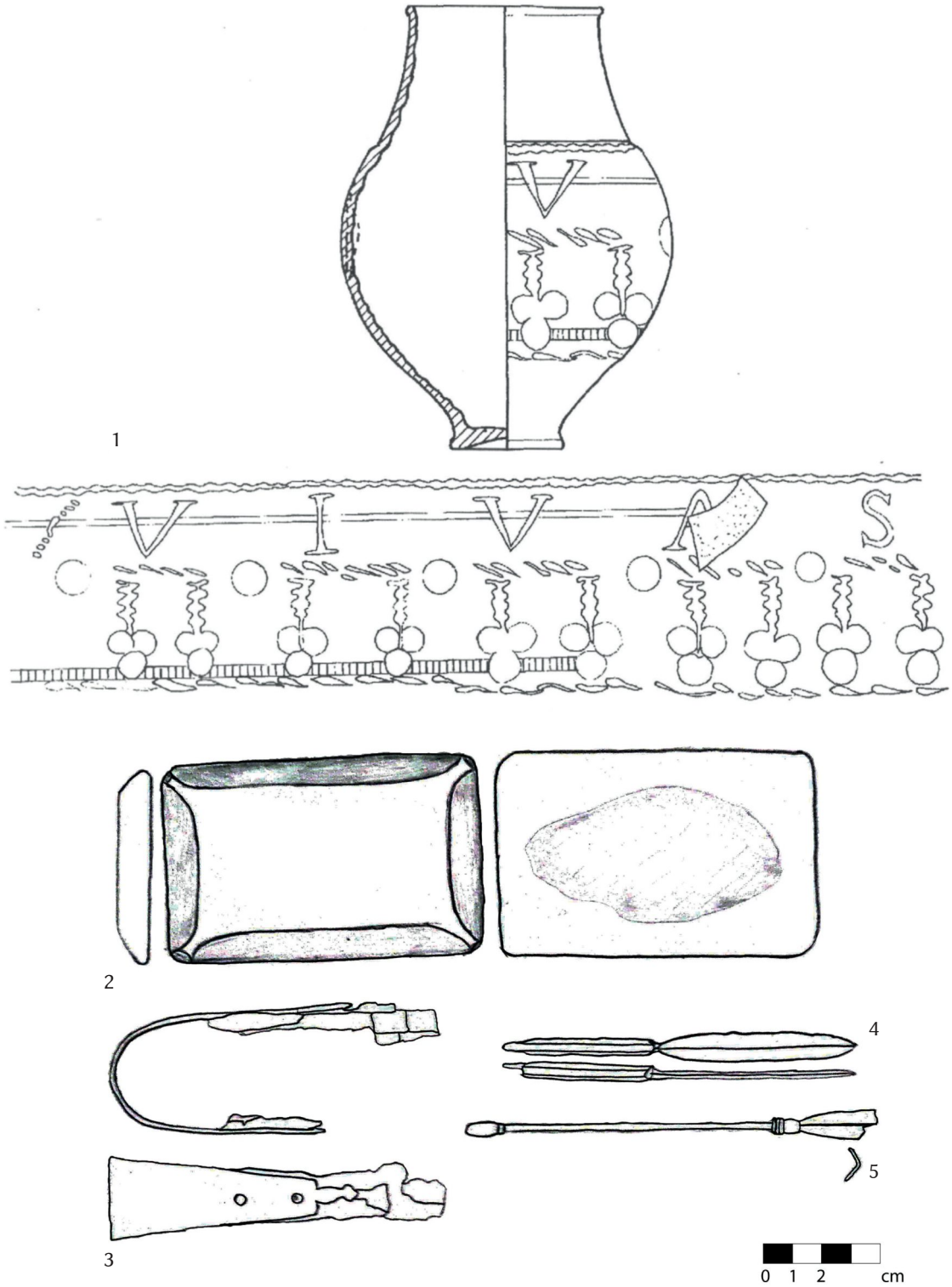


Fig. 7. Grave goods from Grave KNY1.104. 1 – Cat. 24 (after Fényes 2003, 46, 10. tábla 1), 2 – Cat. 25, 3 – Cat. 31, 4 – Cat. 28, 5 – Cat. 29.

there is also evidence for the storage of raw materials, cosmetics, and medicine inside them.[87] Their length and use depend on the stored items or materials; they are commonly found in burial contexts, mostly in graves of women. The cylindrical case with the largest capacity in Pannonia was found in a

87 Bózsa 2016, 280.



Fig. 8. Grave goods from Grave KNY1.104. 1 – Cat. 31, 2 – Cat. 28, 3 – Cat. 29, 4 – Cat. 24, 5 – Cat. 32, 6 – Cat. 25, 7 – Cat. 26.

medical context—the brick tomb of a doctor—at Savaria in 1897. The grave contained iron and bronze instruments including tweezers, scalpels, probes, a knife, and an enamelled disc fibula.[88]

Undoubtedly, the most special find from the cremation grave in focus is a *Trierer Spruchbecherkeramik* beaker (Fig. 7.1, Fig. 8.4). The thin-walled, black-slipped beaker was made in Gallia Belgica, probably in Augusta Treverorum.[89] It is decorated with white engobe and '*VIVAS*' is written around the

88 Kárpáti 1897, 72–74, 4. ábra; Künzl 1982, 118, Pannonia 4.

89 Fényes 2003, 15.

upper part of its body. The form and decoration of the beaker correspond S. Künzl's Group II, dated to 260–270 AD.[90] These so-called saying cups or motto beakers are famous for their witty, sometimes even vulgar Latin or Greek inscriptions. The texts are varied; they include tavern dialogues, good wishes, erotic phrases, and jokes.[91] This type of pottery is mostly known from urban areas and civil towns in Pannonia. Only rarely were Trierer black-slipped vessels added to burials because they were very expensive in the province. E. Harsányi collected more than 340 black-slipped vessels from Pannonia, only 45 of which originate from burial contexts; and only 14 of the 45 are cups similar to Cat. 24 (Fig. 7.1, Fig. 8.4).[92]

The best analogy to this find assemblage has been published from Frankfurt-Praunheim: an ornate rectangular bronze box with a sliding lid and pastilles, a stone palette, two spoon probes (one of them is the same type as Cat. 29 (Fig. 7.5, Fig. 8.3) and a pair of bronze and iron shears similar to Cat. 31 (Fig. 7.3, Fig. 8.1) but presented only in a poor-quality photograph (Fig. 9).[93] The assemblage was identified as a cosmetic set based on the absence of medical tools[94] and the analysis of the pastilles found in the bronze box with a sliding lid. The contents of the box were 'broken sticks, the size of thin pencils', which were studied using a laborious microchemical method. The sticks all had high lead and zinc content (25–35%); some were higher in copper, others in calcium, and they also contained carbon dioxide. They were interpreted as make-up sticks with a composition close to today's make-up products (save for the toxic lead component, obviously).[95] A similar composition and use can be assumed for the contents of the box from Brigetio (Fig. 8.5). Except for the scalpel (Fig. 7.4, Fig. 8.2), all items from Grave KNY1.104 can be considered cosmetic, while specimens of the traditional surgical tool are also known from non-medical contexts.[96]

Scalpel (Fig. 7.4, Fig. 8.2) dates this grave to the 3rd century AD, while the Cat. 24 (Fig. 7.1, Fig. 8.4), the motto beaker, narrows down the timeframe to the second half to end of the century; the rest of the finds from the grave have no significant dating value. Therefore, Grave KNY1.104 from the western cemetery of the *canabae* is almost a century younger than the two cremation graves from the civil town. It belongs to the third phase of this cemetery, starting from the mid-3rd century AD distinguished by L. Barkóczi based on coin and glass finds from cemeteries KNY2 and KNY4.[97] Barkóczi associated only a couple of unfurnished or poorly furnished inhumation graves with this phase, which are particularly difficult to identify and date.[98] Although the circumstances of discovery of the objects in the Kállay Collection are not always certain, the cohesion of this group of finds is probable based on the inventory book; this indicates that not only inhumations but also cremations occurred in the third phase of the western cemetery of the military town.

Why can the objects be medical and why are they not?

To answer the rather rhetorical question in the title, there was probably a doctor, or even several doctors in Brigetio, as the epigraphic evidence suggests,[99] but the person buried in the cremation grave

90 Künzl 1997, 129.

91 Fényes 2003, 15.

92 Harsányi 2013, 105–106.

93 Woelcke – Jassoy 1931, 36–37, Abb. 1.

94 Künzl 1982, 86, Germania Superior–Nida.

95 Woelcke – Jassoy 1931, 39–40.

96 Aquincum-Testvérhegyi villa, Grave 6.

97 'KNY2': Járóka cemetery (1929) by I. Paulovics; 'KNY4': Sörházkert cemetery (1946) by A. Radnóti.

98 Barkóczi 1968, 62.

99 Zimonyi 2014, Kat. 16: Aemilius Deciminus *medicus ordinarius legionis I Adiutricis*. RIU 3, 682 = CIL III, 4279, Kat. 6: Septimius Diomedes *capsarius legionis I Adiutricis*, RIU 3, 680.

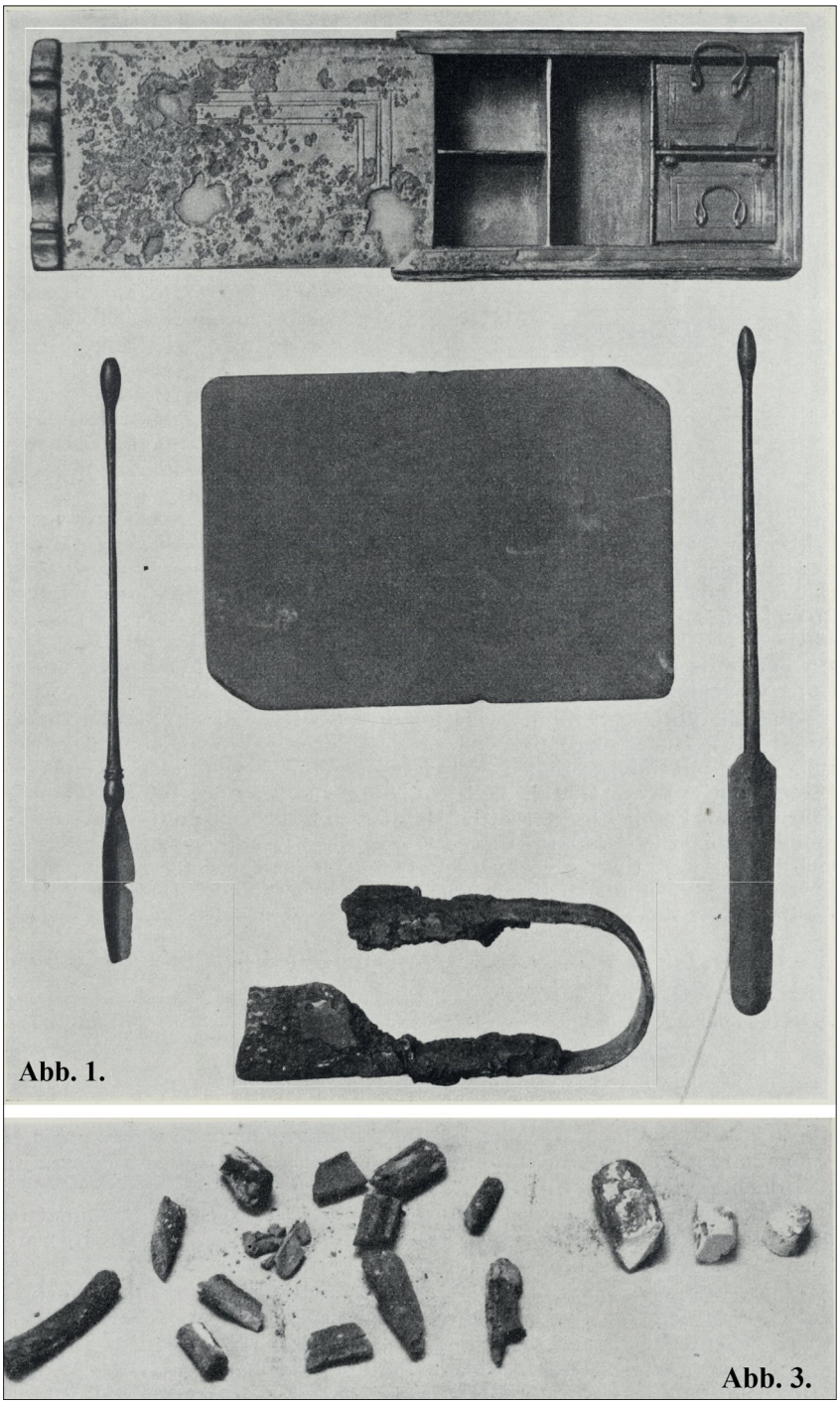


Fig. 9. Cosmetic grave goods from Frankfurt am Main-Praunheim (after Woelcke – Jassoy 1931, Abb. 1, 3).

PNY2.1, found in 1935 by Jenő Petrovics, was probably not one of them. Moreover, it is reasonable to assume that all three presented graves contained different types of cosmetic sets. The items from Grave KNY1.104 in the Kállay Collection may also indicate some form of medical use, but the assemblage is not composed of exclusively of medical objects—only the scalpel lends it such a character.

Acknowledgments

I thank Zs. Mráv for making the finds from the HNM available for research. I am also grateful to R. Schmidtmayer for the possibility of studying the finds in the Kállay Collection of the KDM.

Catalogue of the discussed graves[100]

Western cemetery of the civil town ('Vitézi lot' (PNY2) – J. Petrovics, 1935)

Grave PNY2.1. Cremation grave. Depth: 60–70 cm. Grave finds:

1. Fragments of a bronze box with a sliding lid (HNM 5.1935.1) (Fig. 2.1, Fig. 4.1). Rectangular bronze box made of sheet metal, with five rectangular compartments, four smaller and a bigger rectangular cover decorated with incised rectangular lines and small holes indicating the position of the handles. The overlaying sliding lid is decorated with incised horizontal and vertical lines; it was found, broken in two, together with several fragments of the body of the box. 10.5 × 5.8 cm; first published: Bózsa 2016, Kat. 1023.

2. Hemispherical bronze bowl (HNM 5.1935.2) (Fig. 2.11). With a slightly oblate bottom and a straight, inward-folded rim. The walls are incomplete. Diameter (rim): 5.8 cm, (base): 2.1 cm, height: 2.3 cm.

3. Handle of a bronze box or chest (HNM 5.1935.3) (Fig. 2.5). U-shaped chest handle with a folded, tapered stem ending in a knob on either side and two cotters. The two fastening cotter pins were bent from a small bronze band each. 9.6 × 4.8 cm, thickness: 0.3–0.6 cm. Rivets: length: 2.6 cm, thickness: 0.2 cm; first published: Gáspár 1986, Kat. 1203.

4. Three bronze cotter pin hinges (HNM 5.1935.4) (Fig. 2.4). Hinged structure bent from three flat, tapered bronze bands, each mounted on an iron hinge with knobs at the end, which is still functioning. The central cotter is longer and has straight ends while the outer ones are shorter and curved and slightly bent outwards. They could be part of the opening mechanism of a bronze sheet lid. 2.3 × 5 cm, thickness: 0.1–0.3 cm.

5. Two bronze cotter pins (HNM 5.1935.5) (Fig. 2.3). Looped cotter pins made of thin bronze bands; stem of one is broken off. 4 × 0.8 cm, thickness: 0.2 cm.

6. Two bronze nails (HNM 5.1935.6) (Fig. 2.2). Small bronze pins, one fragmentary, with spherical heads and apered stems, bent at 2 cm. Diameter (pin): 1.3 cm; (head): 0.4 cm.

7. Bronze spoon probe (HNM 5.1935.7) (Fig. 2.10, Fig. 4.4). A propeller-shaped, oval spoon with a long, round-profile handle and an olive-shaped bulging opposite end. Horizontal incisions run along the stem from the profiled rings separating the handle and the spoon to about 2 cm from the knob. Length: 18.6 cm, height: 0.9 cm, thickness: 0.5 cm, type: Riha Variant A;[101] first published: Bózsa 2016, Kat. 831.

8. Bronze needle (HNM 5.1935.8) (Fig. 2.8, Fig. 6.2). Long thin bronze needle with a multi-profiled balustrade head ending in a knob. Possibly a hairpin. Length: 20.5 cm, thickness: 0.1–0.4 cm; head: 2.8 × 0.6 cm, type: Facsády VIII.[102]

9. Bronze needle (HNM 5.1935.9) (Fig. 2.9, Fig. 6.1). A shorter bronze hairpin, with a profiled, pierced 'keyring' head with incised decoration. Length: 13.8 cm, thickness: 0.1–0.3 cm, head: 3.1 cm, type: Facsády XI.[103]

10. Bronze tweezer (HNM 5.1935.10) (Fig. 2.7, Fig. 4.2). A pair of tweezers with straight arms and jaws, bent from a thin bronze band. Length: 5.4 cm, height: 5 cm, thickness: 0.1 cm; first published: Bózsa 2016, Kat. 908.

11. Stone palette (HNM 5.1935.11) (Fig. 2.6, Fig. 4.3). Rectangular stone palette from grey shale with a rounded, truncated, cone-shaped stump, small indentations at the bottom corners, and a slight indentation in the centre. 11 × 7.7 cm, height: 0.9 cm; first published: Bózsa 2016, Kat. 962.

12. Lead object (HNM 5.1935.12) Lost.

13. *Terra sigillata* beaker (HNM 5.1935.13) Lost. Undecorated Drag. 54 beaker made in Rheinzabern. Diameter (rim): 10 cm, height: 11 cm.

Grave PNY2.2. Cremation grave. Depth: 60–70 cm. Grave finds:

14. Bronze mirror (HNM 5.1935.14) (Fig. 3.8, Fig. 4.5). Round, silver-plated, slightly convex bronze mirror with a row of perforations around the edge and a bronze handle. Its backside is divided by concentric circular ribs and engraved circles; the mirror side only bears a simple incised circle. The edge of the panel is chipped where the handle joined. Burnt and blistered at points. The handle fell off; it has a rounded cross-section and ends in

100 Abbreviations (based on the cemetery database of Brigetio): PNY2 = Civil town, Western cemetery, North of the *limes* road (= Barkóczi Cemetery III of the civil town). KNY1 = 'Járóka lot' (1927).

101 Riha 1986, 67–68.

102 Facsády 2009, 87.

103 Facsády 2009, 87.

a knob. Mirror part: diameter: 9.2 cm, thickness: 0.1 cm; handle: length: 7.1 cm, H: 2.2 cm, thickness: 0.3 cm; first published: Bózsa 2016, Kat. 182.

15. Gold earrings (HNM 5.1935.15) (Fig. 3.5). Pair of earrings made of thin gold wire. With hook-and-loop clasp. Diameter: 1.3 cm, type: Facsády I/b.[104]

16. Silver bracelet (HNM 5.1935.16) (Fig. 3.9) Small, open hoop bracelet made from a piece of thin, square-profile, twisted silver wire. One of its ends is tapered. It could be a small bracelet or maybe a hair ring. Diameter: 3.8–3.4 cm, thickness: 0.2 cm, type: Riha 3.24/a.[105]

17. Amber bead (HNM 5.1935.17) (Fig. 3.2). Semi-perforated barrel-shaped amber bead or a broken pendant. 2 × 1.2 cm, thickness: 0.9 cm.

18. *Gemma* depicting Amor and Psyche (HNM 5.1935.18) (Fig. 3.4, Fig. 5.5). Light green oval cameo in translucent glass with a convex front and a flat back, broken into three pieces. Cupid and Psyche are standing side by side with their heads bent together, embracing each other. Cupid is naked and wingless; Psyche wears a long *chiton* and has butterfly wings. 1st–2nd centuries AD. 1.9 × 1.4 × 0.5 cm; published: AGUN, 264; Gesztelyi 2005, Kat. 133.

19. *Gemma* depicting Amor and Psyche (HNM 5.1935.19) (Fig. 3.3, Fig. 5.4). Oval cameo in milk-white glass, with a convex front and a flat back. The contours are slightly blurred. Cupid and Psyche are standing side by side with their heads together, embracing each other. Amor is naked and wingless; Psyche wears a long *chiton* and has butterfly wings. 1st–2nd century AD. 1.9 × 1.4 × 0.5 cm; published: AGUN, 263; Gesztelyi 2005, Kat. 132.

20. Bone pin fragment (HNM 5.1935.20) (Fig. 3.1, Fig. 5.6, Fig. 6.7). Bone hairpin with a small female bust for a knob. The back of the carving is unfinished; the front is detailed. Analogies and size suggest that it was an ornately carved pinhead; now the needle is missing, only the part from the neck up of the female figurine survived. The incised hairdo and head, including the eyes, mouth, nose, and ears, are rich in details. The hair style matches representations of Faustina the Younger or Iulia Domna (end of the 2nd –first half of the 3rd century AD). 1.1 × 1.8 × 0.4 cm; first published: Bíró 1994, Kat. 381.

21. Small glass jar (HNM 5.1935.21) (Fig. 3.7, Fig. 5.2). Small spherical ointment jar with a slightly pressed body made of bluish, transparent, slightly bubbly glass. The rim is outcurved and back-folded, the base is slightly indented. First half of the 2nd century AD. Diameter (rim): 4.8 cm, (base): 2.5 cm, height: 6.6 cm; published: Barkóczi 1967, Kat. 27.b; Barkóczi 1988, Typ. 181, Kat. 516.

22. Glass makeup flask (HNM 5.1935.22) (Fig. 3.6, Fig. 5.3). Conical makeup container glass with a long cylindrical neck and a polished, horizontal, flared and, folded-back rim. Slight indentations between the body and the neck. The base is almost straight and has a pontil mark. Good quality, thick-walled, greenish-blue, bubbly glass. Diameter (rim): 4.8 cm, (base): 4.2 cm, height: 7.6 cm; first published possibly in Barkóczi 1988, Typ. 104, Kat. 259 under an incorrect inventory number, 5.1933.22.[106]

23. Thin-walled cup (HNM 5.1935.23) (Fig. 3.10, Fig. 5.1). Eggshell ware cup from Italy, with a light yellow or off-white, uncoated material, cylindrical body, and a wide mouth. The lip is straight, slightly flared and tapered at the rim. The sides are articulated by shallow indentations tapered towards the bottom; the base is straight. Made of high-quality, porous material. Diameter (rim): 8.8 cm, (base): 3.3 cm, height: 5.1 cm; first published: Kis 2015, Cat. 12.

Western cemetery of the canabae ('Járóka' cemetery (KNY1) – Ö. Kállay, 1927)

Grave KNY1.104. Cremation grave. Grave finds:

24. *Schwarzfirniskeramik* beaker (KDM K341a) (Fig. 7.1, Fig. 8.4). *Trierer Spruchbecher*, a so-called *Trierer* 'motto' beaker with a flared body, five round indentations on the sides, and smaller vertical dents between them, and a sharp ridge at the neck with a white, slightly wavy engobe line and a faint incised groove underneath. The decorated horizontal band at the middle of the body is closed at the bottom by fine ridge with a wavy line comprised of short engobe strokes underneath. The round indentations in the decorative band are emphasised by large white engobe dots. Above their zone is the inscription *VIVAS*, with a missing part at the letter A, as well as a slant row of small dots between the S and the initial V. A light groove below and above the letter band indicates pre-measured letter height. The spaces between the large dots at the centres of the indentations are filled with short horizontal lines comprised of slanted strokes, from each end of which a stylised

104 Facsády 2009, 73.

105 Riha 1986, 60–61.

106 L. Barkóczi's publications often contain incorrect inventory numbers.

bunch of grapes, marked by three white dots, are hanging. The beaker is reddish-brown, hard-fired, with a glossy brownish-grey coating on the exterior and interior, slightly worn in places. Smeared fingerprints at the base. Diameter (rim): 6.9 cm, (base): 3.6 cm, height: 15.3 cm, type: Künzl 1.3.3, Gruppe II;[107] published: Kállay 1944, Fig. 21; Fényes 2003, c/8; Harsányi 2013, Kat. 364.

25. Stone palette (KDM K341b) (Fig. 7.2, Fig. 8.6). Flat, rounded truncated pyramidal palette made of green slate. The surface is flat and smooth; there is an irregular, slightly oval indention at the bottom. 10.5 × 7 cm, height: 1 cm.

26. Lid of bronze box (KDM K341c) (Fig. 8.7). A flat, thin bronze plate in the shape of a rectangle. Incomplete, broken at the corners, with holes at several places, with a smaller, rectangular-profile frame at its centre. It was the sliding lid of a bronze box, the rest of which is missing. 11.8 × 6.8 cm, thickness: 0.05 cm.

27. Bronze cylindrical case (KDM K341d) Lost. "Only a small part of the case remains. Cylindrical tube, made of thin bronze plate, with one end lying flat. A knife, spoon and needle belonging to the find."[108] Diameter: 1.7 cm.

28. Fragment of a bronze scalpel (KDM K341e) (Fig. 7.4, Fig. 8.2) with a double-edged spatula at one end and a hexagonal-profile handle; at the other end the blade is missing. Burnt. 3rd century AD. Length: 12+ cm, height: 0.6–1 cm, thickness: 0.2–0.6 cm.

29. Bronze spoon probe (KDM K341f) (Fig. 7.5, Fig. 8.3). A propeller-shaped, oval, incomplete spoon with a long, round-profile handle and an olive-shaped bulge at the opposite end. Three profiled ribs separate the handle and the spoon. Length: 14+ cm, height: 0.2–1 cm, thickness: 0.2–0.4 cm.

30. Bronze needle (KDM K341g) Lost. "Long, burnt, broken bronze needle."[109] Length: 9.6 cm.

31. Fragmentary shears (KDM K341h) (Fig. 7.3, Fig. 8.1). Bronze handle of a pair of shears with iron blades, with the corroded remains of the broken iron blades once riveted to the U-shaped handle at two points on each side. Each arm of the U-shaped handle ends in a bud motif, one of which is broken off. 11.2 × 4 cm, height: 1.2–3 cm, thickness: 0.1–0.7 cm.

32. Thirteen powdery pastilles (KDM K341i) (Fig. 8.5). Greasy sticks of different sizes, slightly brown, *terre verde*, and two with reddish pigment. Length: 0.6–2 cm, thickness: 0.3–0.8 cm.

Funding

The research behind the present paper was supported by the National Research Development and Innovation Office (NKFI ADVANCED 153301).

Sources

AGUN: Gesztelyi, T. 2000: *Antike Gemmen im Ungarischen Nationalmuseum.* Catalogi Musei Nationalis Hungarici, Series Archaeologica 3. Budapest.

CIL III: Mommsen, Th. (ed.): *Corpus Inscriptionum Latinarum. Inscriptiones Asiae, Aegypti, Graeciae, Illyrici, Thraciae, Daciae, Moesiae Superioris et Inferioris, Pannoniae Superioris et Inferioris, Norici, Raetiae.* Berlin, 1863.

Plin. *NH:* Plinius Secundus, Gaius, *Naturalis Historia.*

RIU 3: Barkóczi, L. – Sándor, S. 1981: *Die Römischen Inschriften Ungarns 3. Lieferung: Brigetio (Fortsetzung) und die Limesstrecke am Donauknie.* Budapest–Bonn.

References

Baharal, D. 1992: The portraits of Iulia Domna from the years 193–211 AD and the dynastic propaganda of L. Septimius Severus. *Latomus* 51:1, 110–118.

Barkóczi, L. 1951: *Brigetio.* Dissertationes Pannonicae II.22. Budapest.

Barkóczi, L. 1961: Adatok Brigetio késő római történetéhez (Zur spätrömerzeitlichen Geschichte Brigetios). *Folia Archaeologica* 13, 95–116.

Barkóczi, L. 1967: Die datierten Glasfunde aus dem II. Jahrhundert von Brigetio. *Folia Archaeologica* 18, 67–91.

107 Künzl 1997, 129.

108 Description in the inventory book of the Kállay Collection (KDM).

109 Description in the inventory book of the Kállay Collection (KDM).

Barkóczi, L. 1968: Die datierten Glasfunde aus dem 3.-4. Jahrhundert von Brigetio. *Folia Archaeologica* 19, 59–86.

Barkóczi, L. 1988: *Pannonische Glasfunde in Ungarn.* Studia Archaeologica 9. Budapest.

Bíró, T. M. 1987: Bone-carvings from Brigetio in the Collection of the Hungarian National Museum. *Acta Archaeologica Academiae Scientiarum Hungaricae* 39, 153–192.

Bíró, T. M. 1994: *The bone objects of the Roman Collection.* Catalogi Musei Nationalis Hungarici – Series Archaeologica 2. Budapest.

Bliquez, L. J. 2003: Roman surgical spoon–probes and their ancient names. *Journal of Roman Archaeology* 16, 322–330. https://doi.org/10.1017/S1047759400013143

Bolla, M. 2004: La "tomba del medico" di Verona. *Aquilea Nostra* 75, 193–264.

Borhy, L. – Dévai, K. – Bózsa, A. – Számadó, E. 2018: The western Cemetery of the Civil Town of Brigetio. In: Borhy, L. – Dévai, K. – Tankó, K. (eds): *Celto – Gallo – Roman: Studies of the MTA–ELTE Research Group for Interdisciplinary Archaeology.* Paris, 97–188.

Bózsa, A. 2012: Tükör, mint szimbólum? (Mirror as symbol?). In: Bíró, Sz. – Vámos, P. (eds): FiRKák II. *Fiatal Római Koros Kutatók II. konferenciakötete.* Győr, 31–46.

Bózsa, A. – Szabó, Á. 2014: Tükör vagy nem tükör? Ólomkeretek a Magyar Nemzeti Múzeum gyűjteményében (Mirror or not? – Lead frames from the collection of the Hungarian National Museum). In: Balázs, P. (ed.): *FiRKák III. Fiatal Római Koros Kutatók III. konferenciakötete.* Szombathely, 195–204.

Bózsa, A. 2016: *A szépségápolás tárgyi emlékanyaga Pannonia Magyarországra eső részén.* PhD Dissertation, ELTE Eötvös Loránd University, Budapest.

Bózsa, A. 2017: Instruments of beauty care from the Hungarian part of Pannonia. *Dissertationes Archaeologicae* 3.5, 423–438. https://doi.org/10.17204/dissarch.2017.423

Busana, M. S. – Francisci, D. – Spagiari, F. 2020: Shears in the Roman world: Preliminary study of the evidence from Northern Italy. In: Bustamante Álvarez, M. – Sánchez López, E. H. – Jiménez Ávila, J. (eds): *Redefining Ancient textile handcraft structures, tools and production processes. Proceedings of the 7th international symposium on textiles and dyes in the ancient Mediterranean world (Granada, Spain 2–4 October 2019).* Granada, 287–294.

Cool, H. E. M. 1990: Roman metal hair pins from Southern Britain. *Archaeological Journal* 147, 142–182. https://doi.org/10.1080/00665983.1990.11077943

Delbó, G. 2017: A brigetiói Járóka temető helyi készítésű kerámiamellékletei (Die lokal gefertigten Keramikbeigaben des Járóka-Friedhofs zu Szőny). *Kuny Domokos Múzeum Közleményei* 23, 31–81.

Euskirchen, M. 2022: Römische Artzgräber in Köln. *Kölner Jahrbuch* 55, 7–172.

Facsády, A. 2009: *Aquincumi ékszerek – Jewellery in Aquincum.* Az Aquincumi Múzeum Gyűjteménye 1. Budapest.

Fényes, G. 2003: Import kerámiák és helyi utánzataik Brigetióból (kivétel *terra sigillát*ák). *Komárom-Esztergom Megyei Múzeumok Közleményei* 10, 5–53.

Gabler, D. 2006: *Terra Sigillata, a rómaiak luxuskerámiája.* Budapest.

Gáspár, D. 1986: *Römische Kästchen aus Pannonien.* Antaeus 15. Budapest.

Gesztelyi, T. 2005: *Antik gemmaörökségünk.* Debrecen.

Harsányi, E. 2013: *Die Trierer schwarz engobierte Ware und ihre Imitationen in Noricum und Pannonien.* Austria Antiqua 4. Graz.

Humer, F. 2009: *Von Kaisern und Bürgern. Antike Kostbarkeiten aus Carnuntum. Ausstellung aus Anlass des Jubiläums "1700 Jahre Kaiserkonferenz in Carnuntum".* Wien.

Hümpfner, D. 2019: *A testvérhegyi villa leletanyagának feldolgozása.* BA Thesis, ELTE Eötvös Loránd University, Budapest.

Istenič, J. 1999: *Poetovio: The western cemeteries I. Grave-groups in the Landesmuseum Joanneum, Graz.* Catalogi et monographiae 32. Ljubljana.

Kállay, Ö. 1944: *Adatok Szőny község történelméhez.* Szőny.

Kárpáti, K. 1897: A Sabariai leletekről. *Archaeologiai Értesítő* 17, 68–74.

Kis, Z. 2015: Eggshell ware or not? Whitish thin-walled pottery from Brigetio. In: Borhy, L. – Tankó, K. – Dévai, K. (eds): *Studia Archaeologica Nikolae Szabó LXXV annos Nato dedicate.* Budapest, 161–172.

Künzl, E. 1982: Medizinische Instrumente aus Sepulkralfunden der Römischen Kaiserzeit. *Bonner Jahrbücher* 182, 1–131.

Künzl, S. 1997: *Die Trierer Spruchbecherkeramik. Dekorierte Schwarzfirniskeramik des 3. und 4. Jahrhunderts n. Chr.* Trierer Zeitschrift – Beiheft 21. Trier.

Márton, A. 2019: *Les pratiques funéraires en Pannonie de l'époque augustéenne à la fin du 3e siècle.* Archaeopress Roman Archaeology 62. Oxford. https://doi.org/10.2307/j.ctvwh8c7h

Nagy, B. – Deák, M. – Viczián, I. – Jámbor, Zs. – Rupnik, L. 2013: A jó időben a jó helyen: Duna-menti ártérfejlődés és a római kori Brigetio. *Földrajzi Közlemények* 137:3, 278–286.

Olasz, R. 2020: *A Komárom/Szőny-Nagymagtár lelőhely római kori leletanyagának feldolgozása.* MA Thesis, Eötvös Loránd University, Budapest.

Paulovics, I. 1930: A Magyar Nemzeti Múzeum gróf Vigyázó ásatásai. Római kor I. *Archaeologiai Értesítő* 44, 198–202.

Paulovics, I. 1941: Funde und Forschungen in Brigetio (Szőny). *Dissertationes Pannonicae* II.11, 118–164.

Pásztókai-Szeőke, J. 2011: "The mother shrinks, the child grows. What is it?" The evidence of spinning implements in funerary context from the Roman province of Pannonia. In: Alfaro Giner, C. – Martínez García, M. J. – Ortiz García, J. (eds): *Mujer y vestimenta. Aspectos de la identidad femenina en la Antigüedad.* Valencia, 125–140.

Petznek, B. 2000: Römerzeitliche Gebrauchskeramik aus Carnuntum. Ausgrabungen des Bundesdenkmalamtes 1971 und 1972, Teil 3. *Carnuntum Jahrbuch 1999*, 193–319.

Prohászka, P. 2006: Gazdag padmalyos temetkezés Brigetio/Komárom-Szőny Gerhát temetőjéből. *Folia Archaeologica* 52, 79–104.

Radnóti, A. 1946: A Magyar Történeti Múzeum Régészeti Tárának ásatása Szőnyben. *Magyar Múzeum* 1, 90–92.

Riha, E. 1986: *Römisches Toilettgerät und medizinische Instrumente aus Augst und Kaiseraugst.* Forschungen in Augst 6. Augst.

Riha, E. 1990: *Der römische Schmuck aus Augst und Kaiseraugst.* Forschungen in Augst 10, Augst.

Riha, E. 2001: *Kästchen, Truhen, Tische – Möbelteile aus Augusta Raurica.* Forschungen in Augst 31. Augst.

Sprincz, E. 1957: Római borostyánkő gyűrűk a Nemzeti Múzeumban (Anelli d'ambra nell Museo Nazionale Ungherese). *Folia Archaeologica* 9, 101–117.

Szabó, K. 1984: Balsamaires en bronze provenant de la Pannonie. In: Fitz, J. (ed.): *Bronzes romains Figurés et appliqués et leurs problèmes techniques. Actes du VIIe Colloque International sur les bronzes antiques.* Alba Regia 21. Székesfehérvár, 99–114.

Számadó, E. 2010: *Régészeti kutatások Komárom/Szőny területén, a római kori Brigetióban, 1990–2010 között.* http://www.cclbsebes.ro/docs/Sebus_2_2010/08_Szamado_Emese.pdf (accessed: 22 November 2025).

Tomas, A. 2017: *Living with the army I. Civil settlements near Roman legionary fortresses in Lower Moesia.* Warsaw.

Woelcke, K. – Jassoy, A. 1931: Ein bronzenes Schminkkästchen aus einem römischen Skelettgrab von Frankfurt am Main-Praunheim. *Germania* 15, 36–40.

Zimonyi, Á. 2014: Physicians and health care in Roman Pannonia. *Hungarian Polis Studies* 21, 189–208.

Zsidi, P. 2006: Doctoring in the border of province of the Roman Empire, the relics of healing in Pannonia Inferior and in Aquincum the proconsul's seat. In: Zsidi, P. – Németh, Gy. (eds): *Ancient medicine and Pannonia. Studies in medical practice in Antiquity.* Aquincum Nostrum II.4. Budapest, 49–61.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 423–440. 10.17204/dissarch.suppl.5.2026.423

Getting to know each other

Examining trade across the Roman *limes* at Porolissum (Moigrad, Romania)

Coriolan Horațiu Opreanu ✉
Institute of Archaeology and History of Art Cluj-Napoca, Romanian Academy – Cluj Branch, Cluj-Napoca, Romania
choprean@yahoo.com

Vlad-Andrei Lăzărescu
Institute of Archaeology and History of Art Cluj-Napoca, Romanian Academy – Cluj Branch, Cluj-Napoca, Romania
lazarescu_vlad@yahoo.com; vlad.lazarescu@acad-cj.ro

Received 7 November 2025 | Accepted 25 March 2026 | Published 18 November 2026

Abstract: This paper explores the complex dynamics of interaction between Roman and local barbarian populations at Porolissum, a major frontier settlement in northern Dacia. Established during Trajan's Dacian campaigns and subsequently reorganized under Hadrian, Porolissum developed into both a strategic military centre and a significant commercial hub facilitating regulated exchange across the frontier. Archaeological and epigraphic data indicate the existence of a customs station *(statio portorii)* and a fortified gate *(burgus)* integrated into a *clausura* system primarily intended to monitor mobility and trade rather than to serve a defensive function. The identification of a *commercium*, a designated market area, near the customs gate highlights the settlement's economic function. Material evidence from this area, including over 180 coins, Przeworsk-type brooches, amber, and Roman manufactured artifacts, demonstrates the intensity of trade and cross-cultural contact. Inscriptions dedicated to emperors Commodus and Septimius Severus as *restitutores commercii* further underscore the political and ideological significance of such commercial activities. Collectively, these findings reveal that frontier interactions at Porolissum not only served Roman economic and strategic objectives but also stimulated social and technological transformations among neighbouring barbarian groups. Porolissum thus emerges as a dynamic contact zone where diplomacy, commerce, and frontier administration intersected.

Keywords: Roman Dacia, Barbaricum, trade, customs station, Roman coins, Roman *limes*

Historical background

At the end of the second expedition of Trajan's Dacian War (AD 105–106), the province of Dacia was created North of the Danube. Two military diplomas offer information about the beginnings of the province: one from Porolissum, dated to 11 August 106,[1] the other one, from Ranovac (Serbia), dated to 14 October 109.[2] The recent analysis[3] of the two diplomas concluded that the province was not set up earlier than 109, when the first governor, Decimus Terentius Scaurianus is first

1 IDR I, DiplDI, 72.
2 Garbsch 1989.
3 Opreanu 2023a.

✉ Corresponding author

recorded, in contrast with the traditional interpretation that Dacia was already a province before 11 August 106.

Trajan's Dacia was reorganized by Hadrian (AD 117–138), after the Sarmatians from the Western and Eastern vicinity of Dacia, the Iazyges and the Roxolani, were defeated by the general of Hadrian, Quintus Marcius Turbo.[4] After the initial division of the Dacian territories into two provinces, Dacia Inferior and Dacia Superior, a subsequent administrative reorganization took place sometime between 12 November 119[5] and 14 April 123,[6] resulting in the creation of the province Dacia Porolissensis from the northern sector of Dacia Superior (Fig. 1). This reconfiguration most likely occurred at the beginning of the aforementioned interval.[7] The name of the newly established province was evidently derived from a pre-existing native toponym. The toponym Porolissum is attested in ancient literary and cartographic sources,[8] as well as in Latin inscriptions discovered at the site identified on Pomet Hill.[9] Porolissum represented a strategic node within the defensive system along the north-western frontier of Roman Dacia.[10] Its primary function was to control movement through the Meseș gateway, which connected the Western Plains with the inner Transylvanian Plateau (Fig. 2). At the same time, Porolissum occupied a strategically advantageous position for facilitating trade across the *limes*.

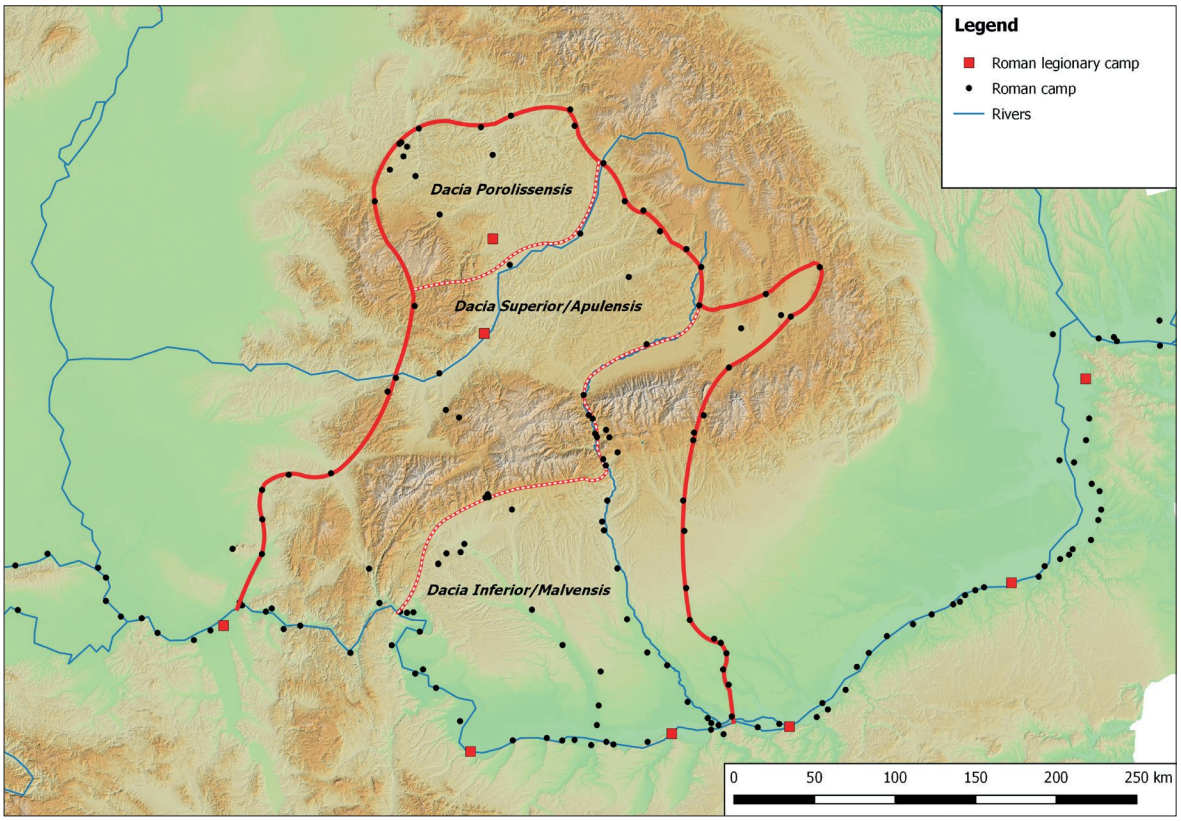


Fig. 1. Map depicting the province of Dacia during the reign of emperor Hadrian.

4 Absil 1997, 166–167; Piso 2013, no. 72, 67–110; Miletić – Bijađija 2014.

5 See the significance of a new military diploma of Upper Dacia in Eck *et al.* 2001, 27–34; Eck – Pangerl 2005, 63.

6 Pferdehirt 2004, no. 22.

7 Opreanu 2011, 147.

8 Daicoviciu 1953, col. 265–266.

9 CIL III, 7986; CIL XVI, 132; Daicoviciu 1940, no. 7b = AE 1944, no. 52; no. 7c = AE 1944, no 53; no. 7d = AE 1944, no. 54.

10 Opreanu – Lăzărescu 2015, 25–27, with a detailed discussion.

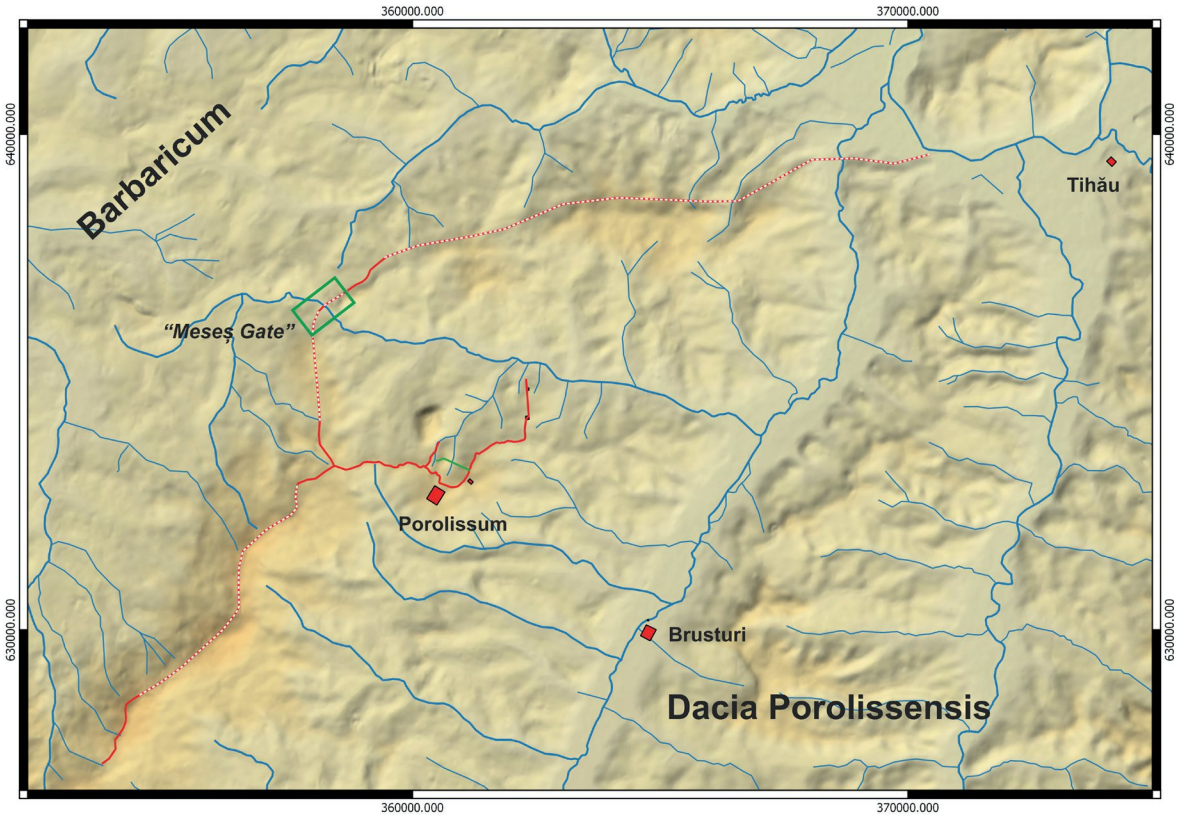


Fig. 2. Principal defensive structures along the north-western frontier of Dacia.

Roman–barbarian trade

Numerous Roman manufactured goods[11] and a substantial quantity of Roman coinage[12] have been discovered in the Barbaricum. Most of these finds reflect the long-distance trade activities of Roman merchants *(negotiatores)*, although some may have been the result of diplomatic exchanges, or, in certain cases, came from war booty and plunder. Trade across the *limes* toward the barbarian territories was regulated by the Roman administration through a network of customs stations. Porolissum represented the terminal point of the imperial road that crossed the Danube via Trajan's Bridge at Drobeta and continued through the main military bases and urban centres of Roman Dacia. At the end of the road, at Porolissum, a *statio portorii* is documented epigraphically[13] and archaeologically.[14]

In several other frontier provinces, the involvement of the Roman army in trade across the *limes* is epigraphically attested. A funerary inscription discovered north of the Danube, in present-day Slovakia (but originally brought there from Carnuntum, modern Bad Deutsch-Altenburg, Austria) mentions a certain Quintus Atilius Primus, *centurio* and *negotiator*, who served as *interprex* of the *legio XV Apollinaris*.[15] Alongside such officially mediated exchange, another form of frontier trade also existed, involving direct transactions between Romans and local barbarian communities,

11 Opreanu 2011; Hrnčiarik – Kuzmová 2016.

12 Dymowski 2020.

13 Dobó 1975.

14 Gudea 1996; Pop *et al.* 2015.

15 Kolník 1978, 69; AE 1978, no. 635. For the implication of *beneficiarii consularis* in trade control, see Fitz 1980, 332; Vaday 1989, 189.

through which manufactured and raw goods were exchanged. In the case of Pannonia, the zone immediately beyond the *limes*, where a significant concentration of Roman artifacts has been recorded, was referred to as the "third zone".[16] The territory located approximately 200 km beyond the *limes*, within Germania *libera*, has likewise been defined as a "contact zone".[17] The *canabae* of the legionary fortress at Carnuntum have been proposed as places where Romans purchased cattle and slaves from the barbarians and sold fine pottery and bronze manufactured goods in return on the Middle Danube frontier.[18] Trade across the *limes* was of considerable importance to both the Roman army and the political administration of the frontier provinces, since a central objective of Roman 'foreign' policy was the control of barbarian mobility, an essential factor in maintaining political and military stability within the Barbaricum.[19] Consequently, politics, diplomacy, and commerce were closely interconnected. The interactions between the Roman Empire and the Barbaricum operated according to a 'centre–periphery model',[20] in which tribal societies functioned on a system of 'prestige goods', many of which were obtained through trade with the Empire.'

Clausurae and *burgi* at Porolissum: Military or trade control?

The Roman frontier in Dacia differed substantially from the European river frontiers along the Rhine and the Danube. The absence of major rivers flowing in a west-east direction, combined with the topography of Transylvania, required the Roman military command to devise original solutions in the

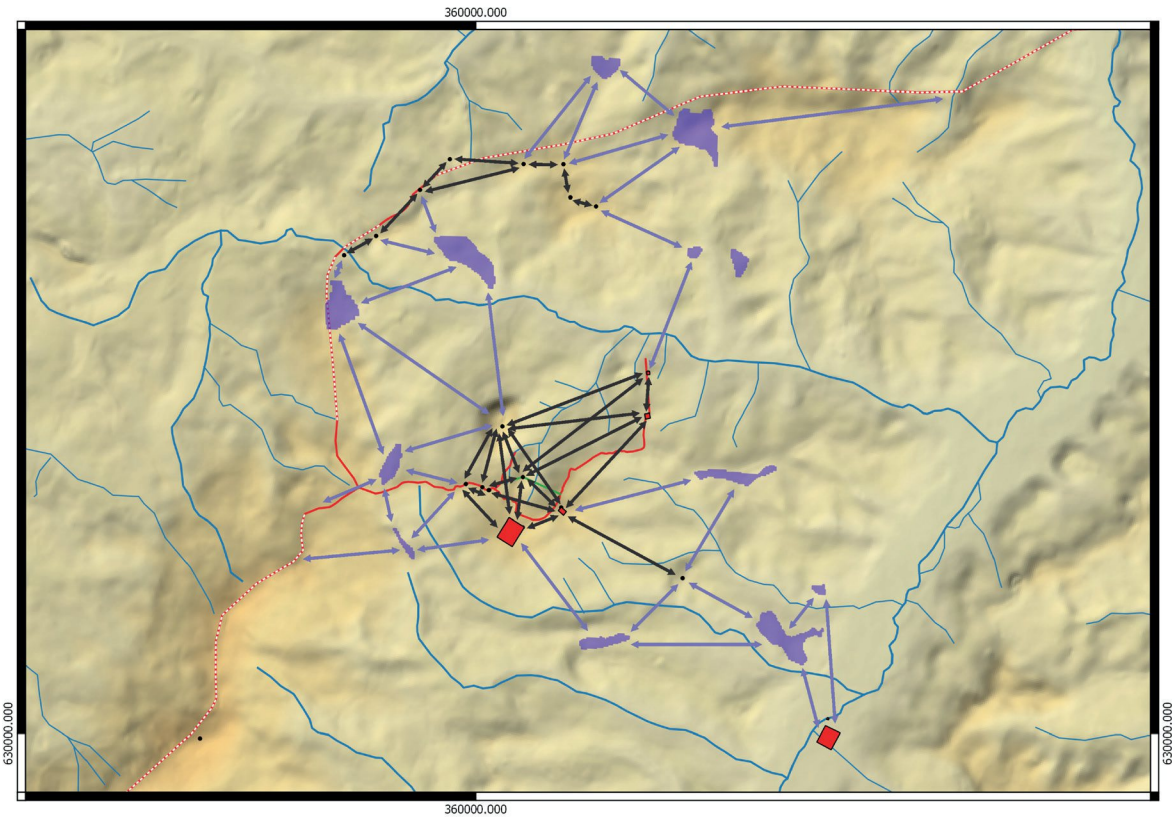


Fig. 3. The early warning and defensive network in the broader Porolissum region, including GIS-based predictive modelling of potential watchtower locations.

16 Bouzek – Ondrejová 1990, 22–35.

17 Hedeager 1978, 126–128.

18 Vaday 2005, 19.

19 Opreanu 1998, 25.

20 Rowlands *et al.* 1987; for the Rhine frontier of Germania Inferior, see the analysis of Verhagen 2023.

design of their frontier structures. The main function of the auxiliary fort at Porolissum was to monitor the most important passageway from the western lowlands to the inner Transylvanian Plateau, across the Meseș Mountains, the sole natural corridor, known as the 'Meseș Gate', a strategic route in use since the Late Iron Age. This explains why the Romans established a defensive network in the region, cantered on the hills surrounding Porolissum. The earliest fortifications, dating to the reign of Trajan (AD 98–117), consisted of turf-and-timber forts on the Pomet and Citera hills, complemented by an earthen rampart extending along the hilltops, and numerous wooden watchtowers. During the reigns of Hadrian and Antoninus Pius (AD 138–161), the defensive system was substantially reinforced: the forts were rebuilt in stone, and numerous watchtowers, *burgi*, and *clausurae* were added. These installations were interconnected through a sophisticated signalling network (Fig. 3).[21] Over short segments, stone walls of the *clausura* type were erected to block the narrow access valleys leading towards Porolissum (Fig. 4). The *clausurae* are frequently mentioned in written sources, especially in connection with the control of mountain, hill or valley passes.[22] Rather than serving a primarily defensive purpose, they functioned chiefly as control barriers associated with customs duties, restricting natural routes of access in order to regulate the movement of people and goods.[23]

Between 1986 and 1988, N. Gudea excavated a *burgus* located near the terminus of the imperial Roman road, integrated into the stone wall of the *limes*.[24] The excavator identified this structure as the customs building *(statio portorii)*. It consisted of a rectangular fortification measuring 35 × 47 m, with a gate flanked by two rectangular towers oriented towards the interior of the settlement (Fig. 5).

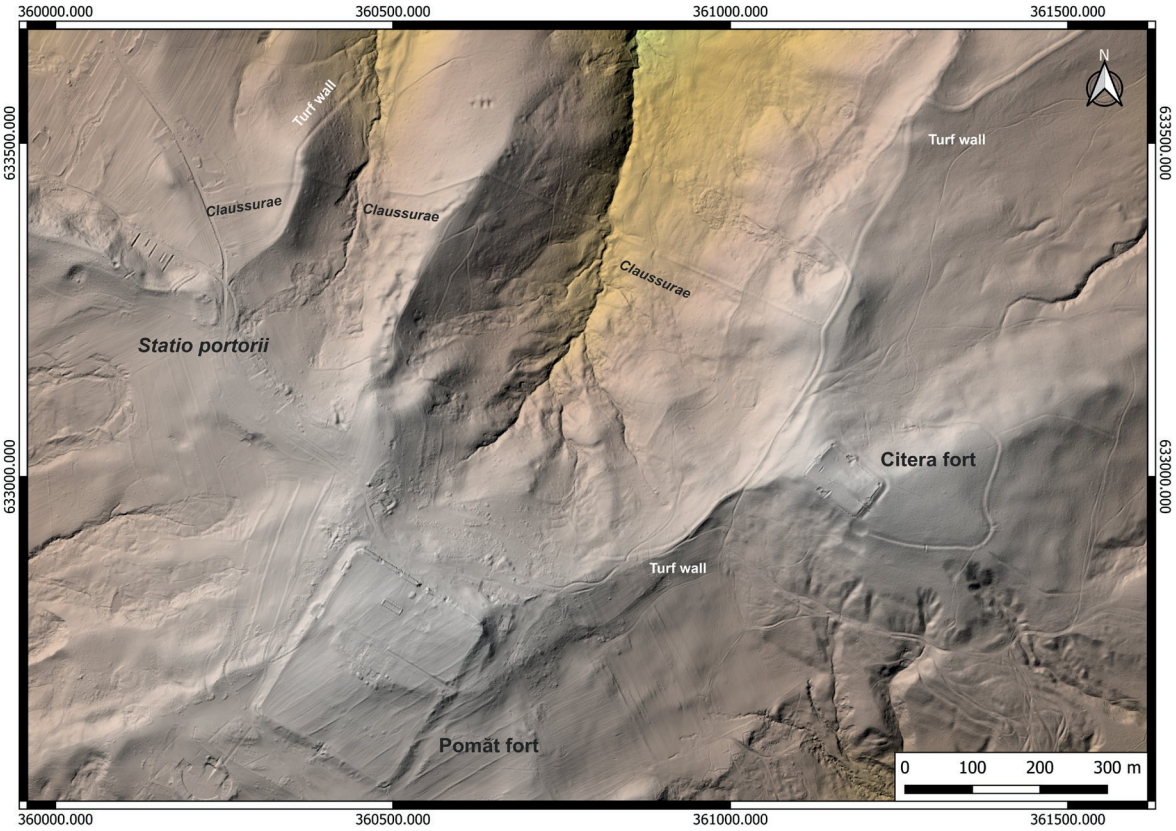


Fig. 4. Defensive installations at the Porolissum site, showing the two forts and the substantial barrier constructions restricting access to the area, such as turf walls and *clausurae*.

21 Lăzărescu *et al.* 2016.

22 Napoli – Rebuffat 1993, 37.

23 Mattingly 2005, 191–192.

24 Gudea 1996.

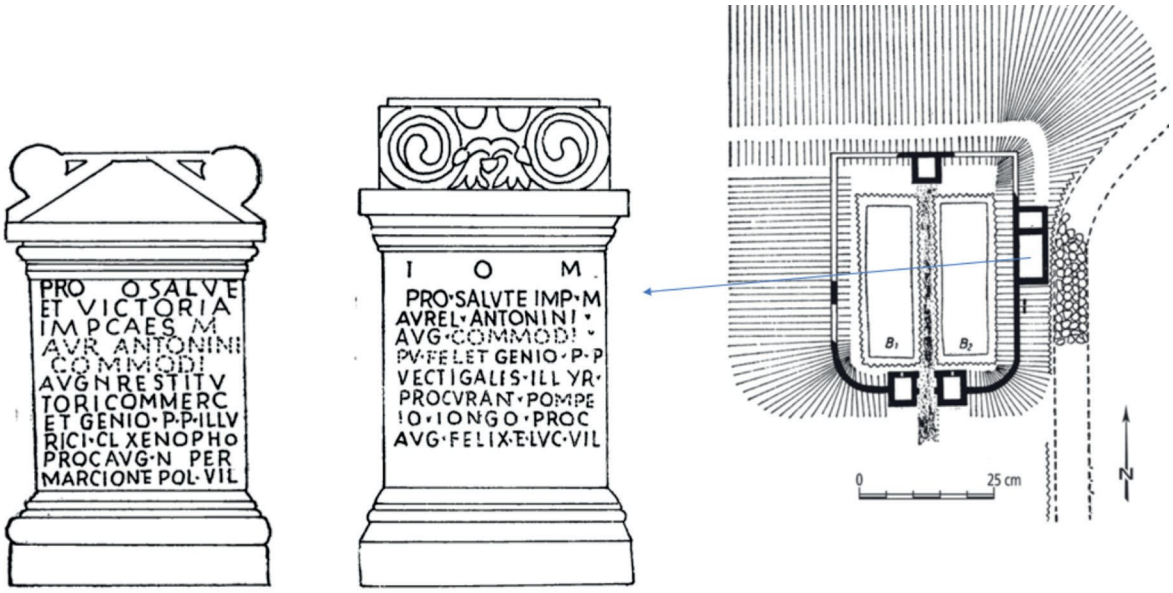


Fig. 5. Plan of the excavations undertaken during the 1980s at the customs station of Porolissum, including the two inscriptions identified at the time (based on Gudea 1996).

Along its central axis ran a cobbled paved road, bordered on each side by two wooden barracks. Opposite to the rear gate, incorporated into the *limes* wall, stood a tower aligned with the inner road. Adjacent to the eastern wall of the *burgus*, a small two-room annex was attached; Gudea interpreted this as office of the customs clerks and *tabularium*.[25] According to the same author, the *burgus* was garrisoned by a detachment of approximately 50–100 soldiers responsible for supervising customs operations.[26]

The plan and positioning of the *burgus* are reminiscent of the milecastles along Hadrian's Wall, eighty of which allowed controlled passage through the frontier.[27] Similar gateways are also known on the Rhaetian and Upper German *limites*.[28] The layout of the *burgus* at Porolissum closely parallels that of Milecastle 48 on Hadrian's Wall,[29] differing mainly by the presence of a second gateway that opened beyond the wall line, into the Barbaricum. Reconstructions of British milecastles with exterior gateways suggest that access from outside the Wall was provided through a vaulted gate-tower, an interpretation that likely also explains the function of the exterior tower of the *burgus* at Porolissum.[30]

The *burgus* at Porolissum functioned as a customs station, with the two interior barracks serving as offices for customs officials. Inside one of these barracks, archaeologists discovered seventy-one coins, fifteen writing implements *(stili)*, and an iron branding tool marked with the letter 'P', interpreted as *P(ublicum) P(ortorium)*, a device used for branding cattle, providing clear evidence for the building's use as a customs facility.[31] During restoration work in 2014, a building inscription was also uncovered, dedicated to the *numen* of the emperor and to the *genius* of the *publicum portorii Illyrici*.[32] This discovery indicates that the small two-room structure attached to the exterior of the

25 Gudea 1996, 35.
26 Gudea 1996, 76.
27 Hodges 2005, 183.
28 Hodges 2005, 185–188; Sommer 2015.
29 Symonds 2013, Fig. 4.3.
30 Opreanu 2023b, 333.
31 Opreanu 2023a, 335.
32 Piso *et al.* 2016.

burgus was not a *tabularium*, as previously thought, but rather a shrine dedicated to the *genius* of the Illyricum customs administration (Fig. 6).[33] A close parallel is provided by a statue base found at Novae (near Svishtov, Bulgaria), dedicated to the *numini Augusti* and the *genio publici portorii*.[34]

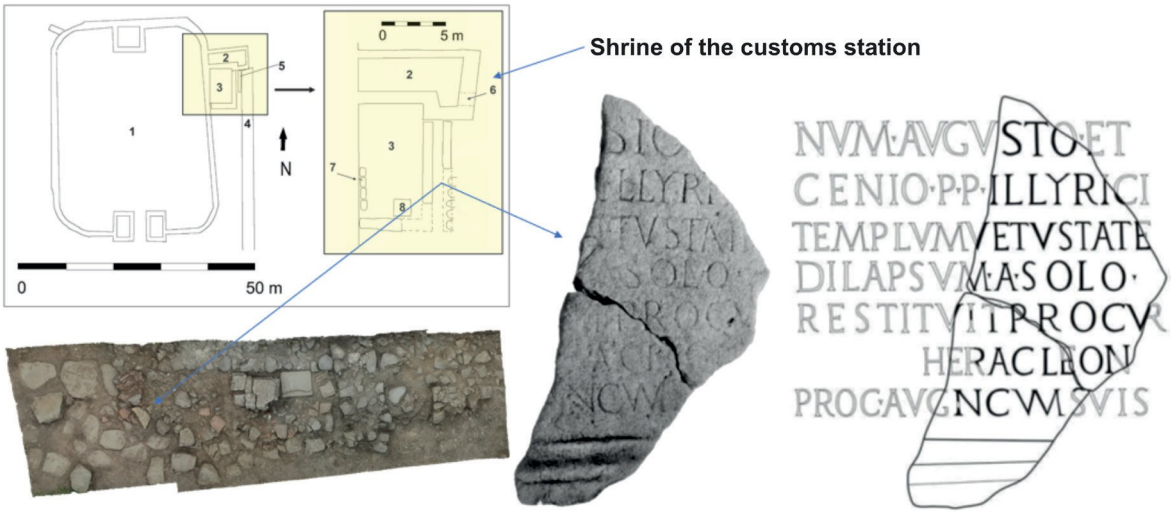


Fig. 6. Plan of the 2014 excavations at the customs station of Porolissum, illustrating the discovery of a third inscription (based on Piso *et al.* 2016).

The customs gate at Porolissum was integrated into a *clausura*, a stone wall extending from the vicinity of the smaller stone fort on Citera Hill, crossing deep valleys and ascending the surrounding slopes (Fig. 7). This structure closely resembles numerous examples known from North Africa, such as those at Bir Oum Ali, Tebaga, and Hadd Hajan, where gates in *clausurae* were flanked by rectangular towers similar to those of fort gates and housing soldiers and customs clerks managing administrative



Fig. 7. Artistic reconstruction of the *statio portorii* at Porolissum, showing its relationship to the defensive system and the imperial road (drawing by Flaminiu Taloș).

33 For a detailed analysis of the text and the chronology of the inscription, see Opreanu 2021, 231–234.

34 Sarnowski 2017.

control.[35] The customs gate at Porolissum served a comparable function, regulating entry along the principal access road that crossed the *limes* through the *clausura*. Additional analogies can be drawn from the Claustra Alpium Iuliarum, the Late Roman system controlling major routes from Nauportus (Vrhnika, Slovenia) to Aquileia (Italy), where passage through the defensive wall was consistently organized via gate-towers.[36] In this context, a particularly close and more architecturally complex parallel is represented by the fortified gate at Ad Pirum (on the Hrušica Plateau in Slovenia).[37]

Face to face: The power of Roman coins

Within the building recently identified as the shrine dedicated to the *genius publici portorii Illyrici* (Fig. 6), two honorific altars were discovered during Gudea's excavations in 1986–1988.[38] Both altars bear inscriptions mentioning Emperor Commodus (AD 180–192), though one is of particular interest. The text of this inscription reads as follows (Fig. 5):

Pro saluteet victoria
imp(eratoris) Caes(aris) [[M(arci)
Aur(elii) Antonini
Commodi p(ii) fel(icis)]]
Aug(usti) n(ostri) restitu
toris commer(ciorum)
et Genio P(ublici) P(ortorii) Illy
rici Cl(audius) Xenophon
proc(urator) Aug(usti) n(ostri) per
Marcion(em) et Pol(ionem) vil(icos)

The name and titles of the emperor were deliberately hammered out, as he was subjected to *damnatio memoriae*.[39] In the other inscription from the same shrine, and in many comparable cases throughout the Empire, only the name Commodus was erased, while the remaining portion, Marcus Aurelius Antoninus, was left intact, since it also referred to the emperor's father, Marcus Aurelius (AD 161–180).[40] In the inscription presented above, however, the erasure was executed differently: the entire imperial name was obliterated, rendering any association with Marcus Aurelius impossible. The new text that remained visible to contemporary readers was:

Pro salute
et victoria
imp(eratoris) Caes(aris)
Aug(usti) n(ostri) restitu
toris commer(ciorum)

If the identification with Marcus Aurelius was intentionally avoided, it suggests that the modified text was meant to associate the dedication with the new emperor, Septimius Severus (AD 193–211). Consequently, the erasure must have taken place after 31 March 194, when Severus emerged victorious in the conflict against Pescennius Niger.[41] The most remarkable epithet of Commodus, attested only in the inscription at Porolissum, is that of *restitutor commerciorum*. In the context of this in-

35 Mattingly 2005, Fig. 5.16,18,20.
36 Kos 2014, 25–27, Figs 68,69,71.
37 Kos 2014, 307–311, Figs 295–299.
38 Gudea 1996, 47–49,75–82.
39 Opreanu 2021, 230.
40 Højte 2005, 20.
41 Kienast *et al.* 2017, 149.

scription, the most appropriate interpretation of *commercium* is that of a designated area where lawful trade and regulated exchanges were conducted.[42] The title *restitutor commerciorum* thus undoubtedly refers to the emperor's restoration of official trade relations with the Barbaricum.

Ancient literary sources describe Commodus as having re-established the function of those sites along the imperial frontiers where barbarians were legally permitted to trade with Roman merchants,[43] places known as *commercia*. The most compelling parallel supporting this interpretation is provided by a 4th-century inscription (AD 371) from Solva (modern Esztergom, Hungary), on the Danube frontier of Pannonia. This inscription records both the name and the function of a *burgus*: "*burgum cui nomen Commercium qua causa et factus est a fundamentis et construxit…*",[44] indicating that the fort served to house and supervise a frontier market where Romans and barbarians engaged in regulated exchange.[45] A *commercium* across from Solva likely existed already in the 2nd–3rd centuries AD, as well as in Carnuntum,[46] attesting to the persistence of an institutionalized mechanism for controlling cross-border commerce.

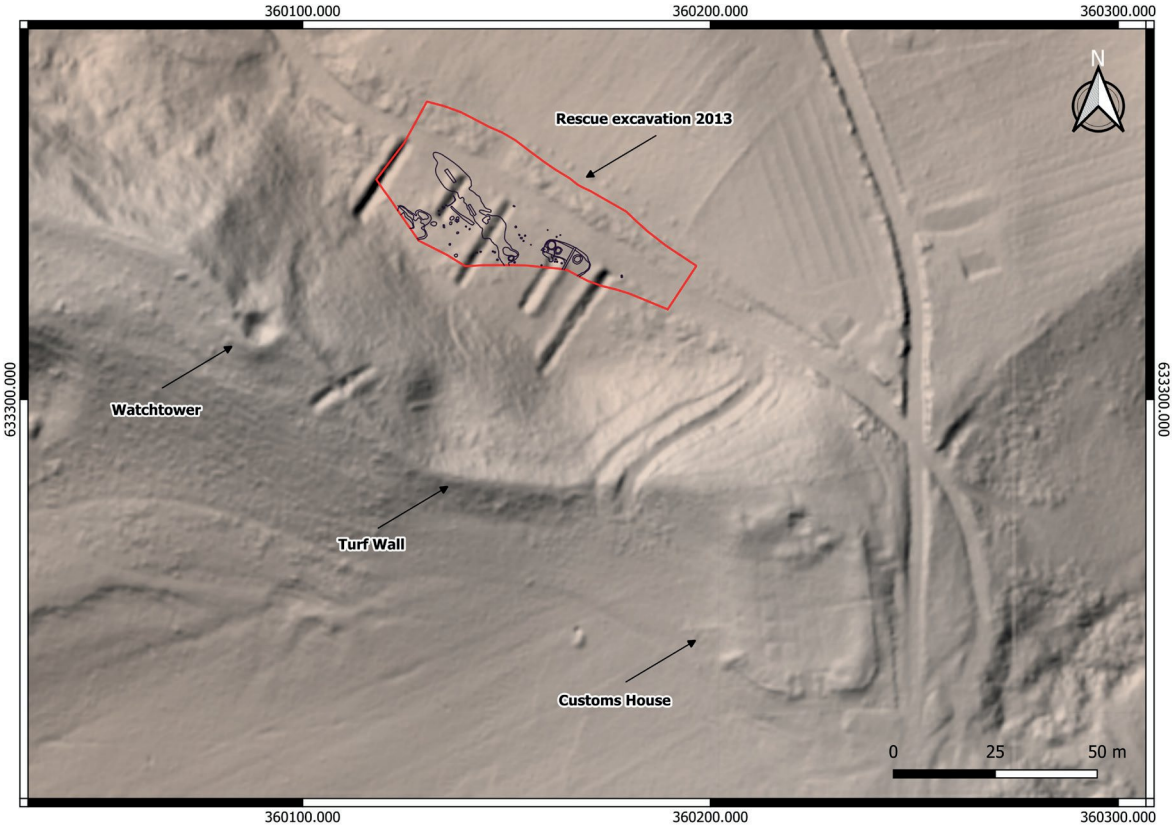


Fig. 8. Plan of the rescue excavations conducted in the marketplace at Porolissum, indicating the principal archaeological features uncovered.

42 Moatti 2011.

43 Dio Cass. *Hist. Rom.*, 71.11, 15.

44 CIL III 3653 = ILS 775 = RIU 771.

45 Poulter 2014, 40. In fact, the situation at Porolissum appears to have been similar: a *burgus*, the so-called 'customs building', oversaw the adjacent marketplace, and it is not impossible that certain transactions also took place within it. Otherwise, it is difficult to explain the discovery of 71 'lost coins' (see Gudea 1996) inside one of the interior barracks, an unusual circumstance for a customs facility where money would typically have been collected rather than lost. In the same context an iron branding tool used for marking cattle was also found, further confirming the building's role in the supervision of trade and the movement of goods.

46 Stoklas 2019, 187, Abb. 1.

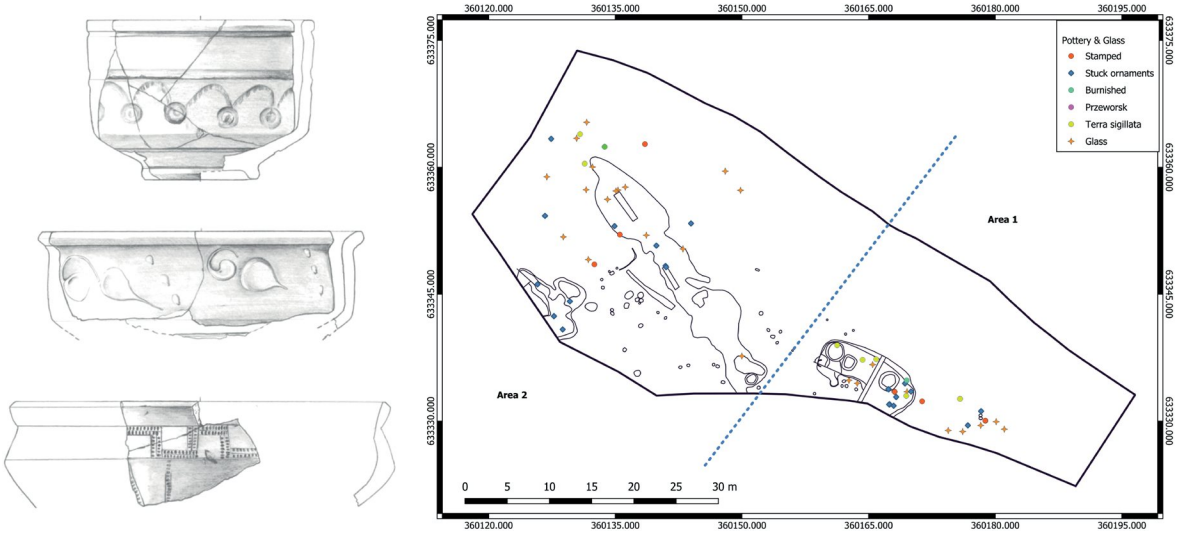
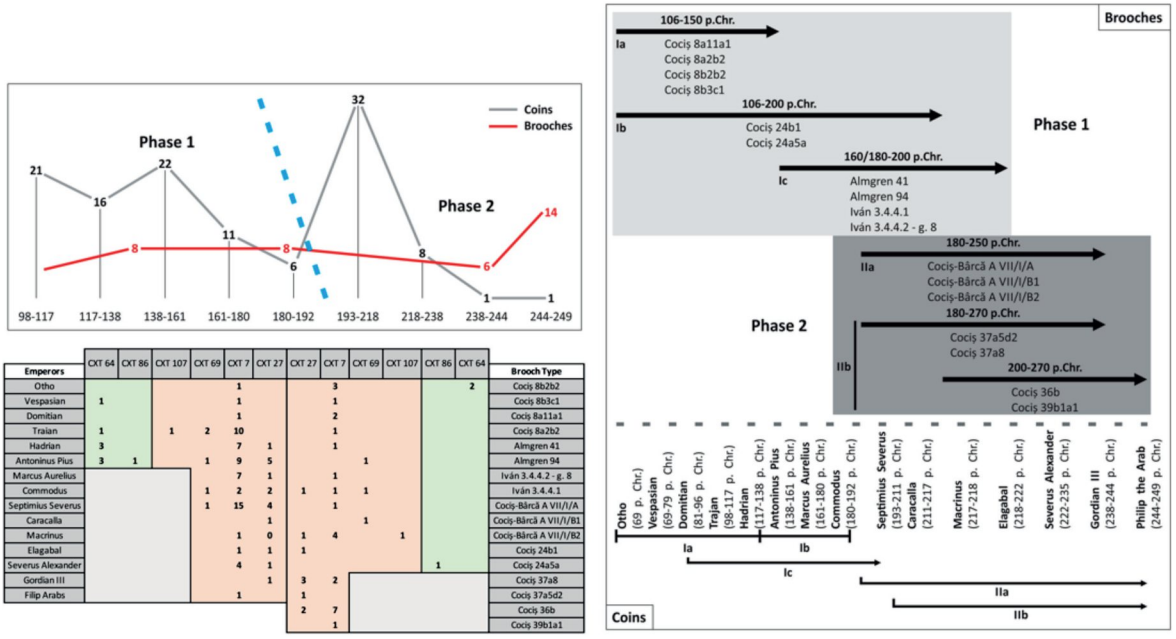


Fig. 9. Representative types of pottery documented during the 2013 rescue excavations and their spatial distribution.

At Porolissum, a fortunate rescue excavation carried out in 2013, in the immediate vicinity of the customs *burgus*, provided the opportunity to identify archaeologically a *commercium* such as those mentioned in the ancient written sources. This appears to have been the location of a periodic marketplace, situated directly in front of a watchtower belonging to the *limes* wall.[47] The inscription at Porolissum may be directly connected to this *commercium*, considering that it is the only known inscription in the Empire to preserve this unique epithet of Commodus.[48]



Emperors	CXT 64	CXT 86	CXT 107	CXT 69	CXT 7	CXT 27	CXT 27	CXT 7	CXT 69	CXT 107	CXT 86	CXT 64	Brooch Type
Otho					1			3				2	Cociș 8b2b2
Vespasian	1				1			1					Cociș 8b3c1
Domitian					1			2					Cociș 8a11a1
Traian	1		1	2	10			1					Cociș 8a2b2
Hadrian	3				7	1		1					Almgren 41
Antoninus Pius	3	1		1	9	5			1				Almgren 94
Marcus Aurelius					7	1		1					Iván 3.4.4.2 - g. 8
Commodus				1	2	2	1	1	1				Iván 3.4.4.1
Septimius Severus				1	15	4		1					Cociș-Bârcă A VII/I/A
Caracalla						1			1				Cociș-Bârcă A VII/I/B1
Macrinus					1	0	1	4		1			Cociș-Bârcă A VII/I/B2
Elagabal					1	1	1						Cociș 24b1
Severus Alexander					4	1					1		Cociș 24a5a
Gordian III						1	3	2					Cociș 37a8
Filip Arabs					1		1						Cociș 37a5d2
							2	7					Cociș 36b
								1					Cociș 39b1a1

Fig. 10. Chronological sequence of the marketplace at Porolissum, established through the correlation of brooch and coin finds.

Within an excavated area of approximately 3,500 m², no permanent buildings were identified; instead, several pits, numerous post-holes, and stake-holes were recorded, most likely the remains

47 More details in Opreanu 2020.

48 Opreanu 2020, 82.

of temporary wooden stalls (Fig. 8). The assemblage included 129 coins, 43 brooches, over 300 iron hobnails, a large quantity of pottery (Fig. 9), and nearly 800 small finds. The site's chronology indicates that it began functioning after the Marcomannic Wars, during the reign of Commodus, as part of the diplomatic arrangements established with the barbarian communities neighbouring Dacia.[49] A second occupational phase in the 3rd century continued until the end of the Roman occupation of Dacia around AD 270 (Fig. 10). As the rescue excavation was confined to the area affected by modern construction activity, it remains possible that additional, earlier occupation zones existed nearby.

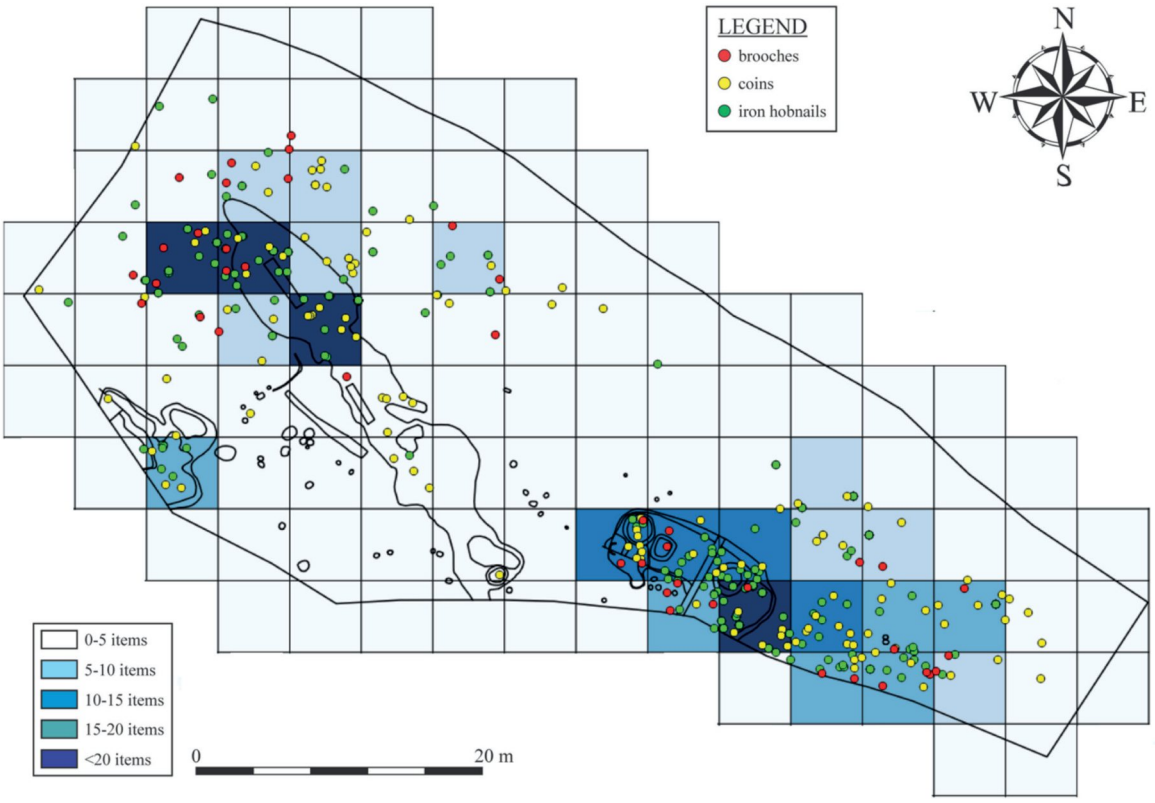


Fig. 11. Spatial and quantitative distribution of brooches, coins, and iron hobnails within the marketplace area at Porolissum.

Of particular significance is the analysis of the 129 coins recovered during the excavation (Fig. 11). In addition, 53 coins had previously been discovered by chance in the same area, bringing the total to 182 specimens.[50] These coins provide clear evidence of commercial activity, as they represent 'lost coins', money misplaced during exchanges, demonstrating their use as a medium of payment by both Roman and barbarian traders.[51] The study of coin circulation within the marketplace area indicates an increase in monetary penetration during the reign of Commodus,[52] followed by a more substantial rise under Septimius Severus. This pattern supports the interpretation that the epithet *restitutor commerciorum*, recorded in the Porolissum inscription, could also aptly describe Severus, whose reign marked a period of stability and prosperity that was highly favourable to trade. Moreover, within the area of the marketplace, a statue base bearing an inscription dedicated to Septimius Sever-

49 Dio Cass. *Hist. Rom.*, 72.3.1.

50 Opreanu – Lăzărescu 2015, Tabs 2–3.

51 A phenomenon well attested in the archaeological and historical record of Roman–barbarian frontier trade, see Hrnčiarik – Kuzmová 2016, 154.

52 For the monetary circulation at the Middle Danube frontier, see Stoklas 2019.

us was discovered,[53] together with a fragment of a bronze statue that might be associated with this imperial monument (Fig. 13.c).[54] After the first decades of the 3rd century, the circulation of coinage declined significantly, with only a brief resurgence observed during the reign of Philip I (AD 244–249).[55]

The most remarkable numismatic discovery was a silver *denarius* of Hadrian, dated to 125–128 AD, which had later been plated with a thin layer of pure gold (Fig. 12).[56] The coin has been interpreted as a counterfeit, possibly produced in a Roman workshop presumed to have been operating at Porolissum, although such a facility has not yet been identified archaeologically.[57] At first glance, the counterfeiter's intention appears to have been to present the plated *denarius* as a genuine gold coin, despite its lighter weight, in order to deceive barbarian traders in the marketplace. However, a second scenario cannot be entirely excluded, namely that the coin represents a barbarian product and that the forgery was, in fact, produced within the Barbaricum. Among the small finds recovered from the marketplace was also a gold pendant decorated using the granulation technique (Fig. 13.a). This object recalls the products of northern barbari-

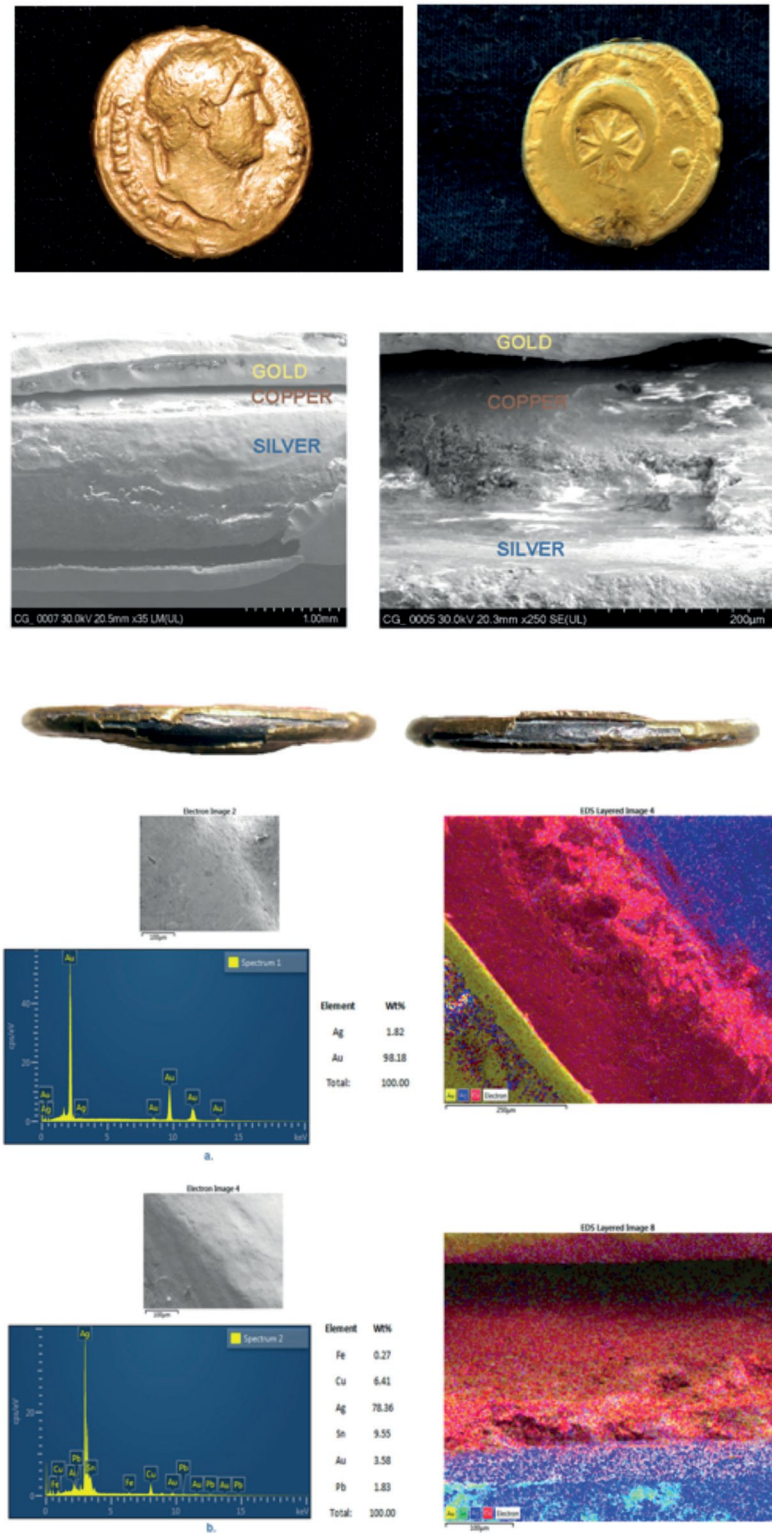


Fig. 12. Counterfeit denarius issued during the reign of Hadrian, recovered during the 2013 rescue excavations.

53 Piso – Opreanu 2019.

54 Opreanu – Lăzărescu 2015, Pl. 26.

55 Opreanu – Lăzărescu 2015, 58.

56 Opreanu – Lăzărescu 2015, 130, no. 129; 134–135.

57 Opreanu – Găzdac 2016.



Fig. 13. Selected artefacts recovered during the 2013 rescue excavations. a – gold pendant, b – Baltic raw amber, c – fragment from a bronze statue.

an workshops well known for their specialisation in the manufacture of gold ornaments and decorative clothing accessories.[58]

The strongest evidence for the presence of barbarians in the marketplace at Porolissum is provided by the 43 brooches, most of which belong to barbarian types characteristic of the Przeworsk culture (Fig. 14). The correlation between the brooches and the coins, both recovered from well-documented archaeological contexts, confirms the two chronological phases of activity in the marketplace.[59] The brooches, like the coins, should be regarded as objects accidentally lost. As functional dress fasteners, they were immobile items worn on the body rather than merchandise intended for exchange. Given their context of discovery within a marketplace, it is highly unlikely that they were items offered for sale, since Roman tastes in dress accessories differed markedly. Moreover, all the brooches show traces of wear, and most belong to elements of female attire, indicating that they were not commercial goods but personal possessions.[60] We propose that at least some of these brooches were lost when barbarian women were sold to Romans as slaves,[61] or concubines, a practice well attested in written sources describing the barbarian world.[62] The primary source of slaves originating from the Barbaricum was warfare among local tribes, with prisoners captured after raids or intertribal conflicts being sold into Roman slavery.[63]

The most unexpected discoveries within the marketplace area refer to several fragments of raw amber (Fig. 13.b). Scientific analysis identified the presence of the 'Baltic amber shoulder', confirming their Northern European provenance.[64] At that time, it was proposed that a secondary branch of the

58 Natuniewicz-Sekuła 2017, the study also describes various techniques of silver and gold ornamentation, including gilding by the application of gold foil, and presents the results of spectrometric analyses conducted on several artifacts (Tab. 1). The spectrographic analysis of the coin from Porolissum revealed that the gold foil possessed a purity of 98.18%.

59 Opreanu *et al.* 2020.

60 Godłowski 1970; Godłowski 1993; Dabrowska 1995, 23; Mączyńska 1998, 420; Opreanu 1998, 112; Opreanu – Cociş 2002.

61 For a similar oppinion, see Vaday 2005, 19.

62 Kolendo 2000, 116–119.

63 Kolendo 2000, 127.

64 Opreanu – Lăzărescu 2015, 136–139, Figs 32–34.

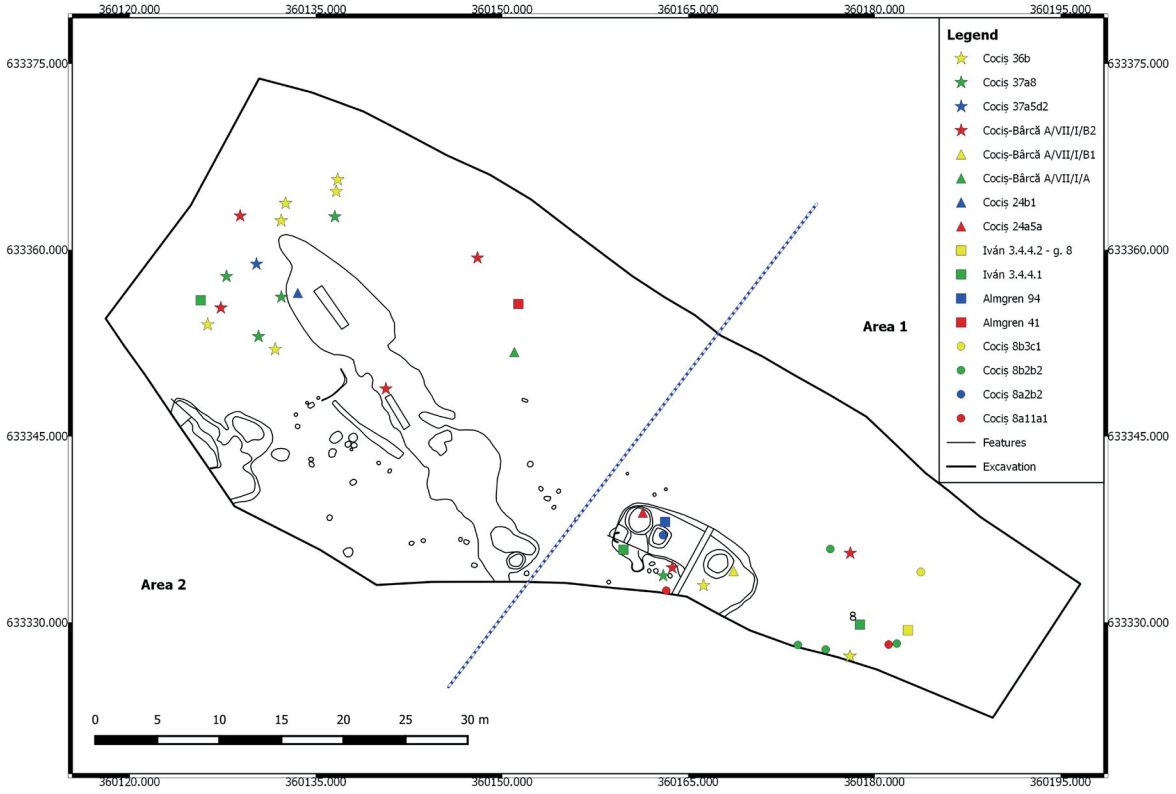


Fig. 14. Spatial distribution of brooches by typological category within the marketplace at Porolissum.

Amber Road extended as far as the northern frontier of Dacia.[65] However, it is unlikely that these raw amber fragments reached Porolissum directly from the Baltic region.[66] More plausibly, they arrived through intermediary exchange networks involving major barbarian settlements, such as Pasohlávky in south-eastern Moravia, which functioned as significant political and economic centres, and that were contemporaneous with the Porolissum marketplace. At Pasohlávky, a raw piece of northern amber has likewise been documented, supporting the hypothesis of its role as a regional intermediary in the amber trade.[67] Such a route to Porolissum currently appears the most plausible explanation for the presence of raw amber inside the marketplace, although future archaeological discoveries may further refine or revise this interpretation.

Final thoughts

Based on the categories of the identified products, we can state that the frontier marketplace at Porolissum represented a space of peaceful encounter between Romans and barbarians. The medium that most effectively connected them was most probably Roman coinage. The bearded image of Septimius Severus, familiar beyond the *limes* through the circulation of coins, and perhaps also through the bronze statue displayed in or near the marketplace, must have deeply impressed the barbarian visitors, who may have perceived the emperor as the supreme deity of the Romans. Yet, economic interest remained the primary motive on both sides during these interactions. Through such exchanges, the two populations gradually came to know one another more closely. The barbar-

65 Opreanu – Lăzărescu 2015.

66 For the distribution patterns and the main trading routes, see Quast 2017, 59–64, Figs 3–5.

67 Komoróczy – Vlach 2022, 351, Fig. 21.18. The connections between the populations of the Far North and those of Moravia developed along the Vistula River, following the Amber Route, a trade network controlled by the Aestii from the north, see Jovaiša 2025.

ians supplied the Romans with amber, slaves, cattle, and furs, while they, in turn, were particularly attracted to Roman fine pottery, bronze and glass vessels, and other manufactured goods (Fig. 15). Just as northern amber reached Dacia through intermediary trading stations, Roman products likely followed similar routes, being redistributed within the tribal world according to the 'prestige goods' model characteristic of barbarian social systems.

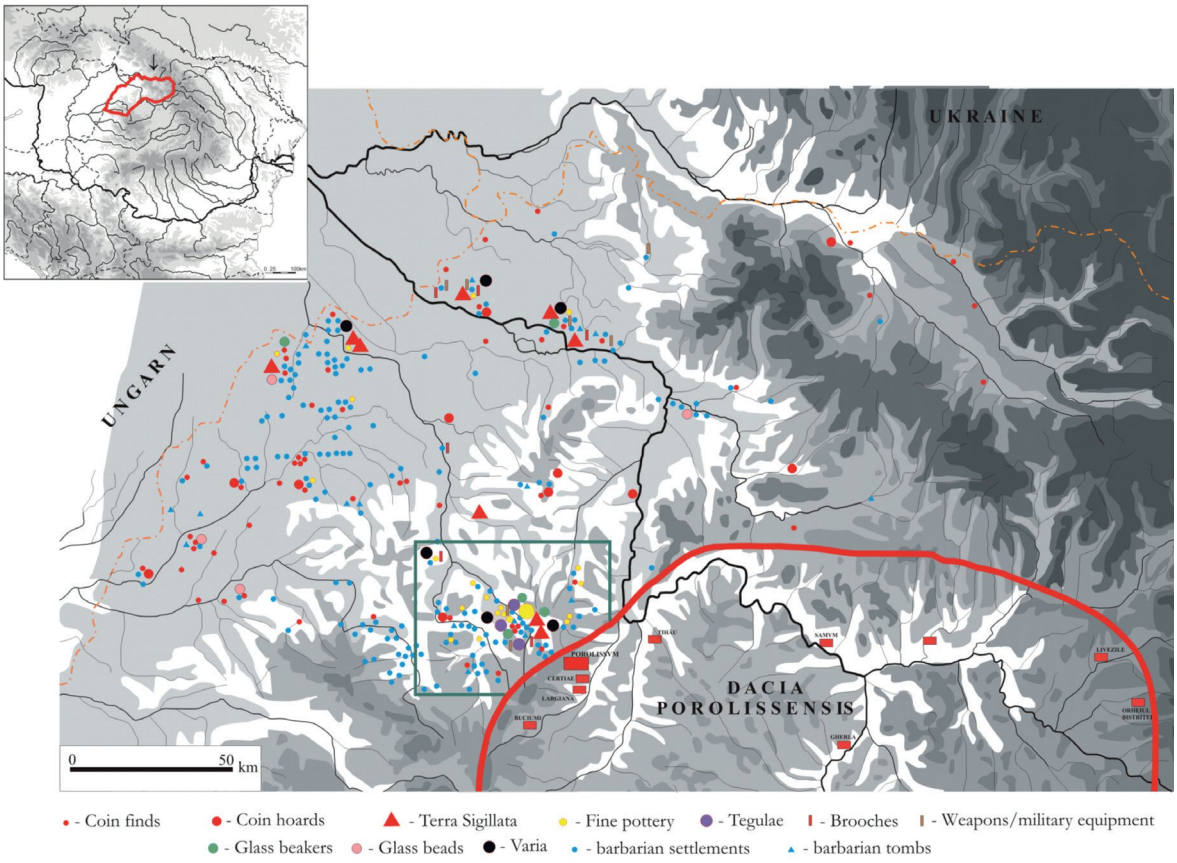


Fig. 15. Map illustrating the distribution of Roman imports in the Barbaricum north of Porolissum (courtesy of Dr. Ioan Stanciu).

Frontier trade exerted a profound influence on barbarian society, notably through the transfer of technology from the Roman Empire.[68] The ultimate outcome of sustained contact with the Roman economy was the acceleration of social differentiation within the tribal communities, marking, in effect, the onset of an interesting acculturation process.

Sources

AE: *L'Année Épigraphique: Revue des publications épigraphiques relatives à l'antiquité romaine.* Paris.

Dio. Cass. *Hist. Rom.:* Cassius Dio *Historia Romana.*

CIL III: Mommsen, Th. (ed.): *Corpus Inscriptionum Latinarum. Vol. III. Inscriptiones Asiae, provinciarum Europae Graecarum, Illyrici Latinae.* Berlin, 1873.

CIL XVI: Nesselhauf, H. (ed.): *Corpus Inscriptionum Latinarum, Vol. XVI. Diplomata Militaria.* Berlin, 1936, 1955.

IDR I, DiplDI: Russu, I. I. (ed.): *Inscriptiones Daciae Romanae, Vol. I. Diplomata Daciae Inferioris.* Bucharest, 1975.

ILS: Dessau, H. (ed.): *Inscriptiones Latinae Selectae.* Berlin, 1892–1916.

RIU: Barkóczi, L. et al. (eds): *Die römischen Inschriften Ungarns, Vols 1–6.* Budapest–Bonn, 1972–2001.

68 Bazowský 2019.

References

Absil, M. 1997: *Les préfets du prétoire d'Auguste à Commode*. Paris.

Bazowský, I. 2019: Technologischer Transfer entlang des römischen Limes in Mittlere Donauraum. In: Karkowski, M. – Komoróczy, B. – Trebsche, P. (eds): *Auf den Spuren der Barbaren – archäologisch, historisch, numismatisch*. Archäologie der Barbaren 2015. Brno, 89–94.

Bouzek, J. – Ondřejová, I. 1990: "Treti zóna" mezi Římem a barbarikem při noricko-pannoniském limitu. *Archeologické rozhledy* 42, 22–35.

Dabrowska, T. 1995: Późne odmiany fibul silnie profilowanych w Polsce. *Wiadomości Archeologiczne* 53, 3–34.

Daicoviciu, C. 1940: Neue Mitteilungen aus Dazien. *Dacia* 7–8, 299–336.

Daicoviciu, C. 1953: Porolissum, s.v. *Paulys Realencyclopädie der Classischen Altertumswissenschaft* 72.1, col. 265–270.

Dobó, Á. 1975: Contribution à l'histoire de la douane en Dacie. *Acta Classica Universitatis Scientiarum Debreceniensis* 10–11, 145–150.

Dymowski, A. 2020: Ancient coinage in Central, Eastern and Northern Europe prior to the Middle Ages. The use overview. In: Bogucki, M. – Dymowski, A. – Śnieżko, G. (eds): *Slivers of antiquity: The use of ancient coins in Central Eastern and Northern Europe in the medieval and modern periods*. Warszawa, 17–42. https://doi.org/10.31338/uw.9788323547051.pp.17-42

Eck, W. – MacDonald, D. – Pangerl, A. 2001: Neue Diplome für die Auxiliartruppen in den dakischen Provinzen. *Acta Musei Napocensis* 38:1, 27–48.

Eck, W. – Pangerl, A. 2005: Ein Diplom für die Truppen von Dacia Superior unter dem Kommando des Marcius Turbo im Jahr 119 n. Chr. *Acta Musei Napocensis* 41–42.1, 61–67.

Fitz, J. 1980: Economic life. In: Lengyel, A. – Radan, G. T. B. (eds): *The archaeology of Roman Pannonia*. Budapest, 323–335.

Garbsch, J. 1989: Die älteste Militärdiplome für die Provinz Dakien. *Bayerische Vorgeschichtsblätter* 54, 137–151.

Godłowski, K. 1970: *The chronology of the late Roman and early Migration Periods in Central Europe*. Zeszyty Naukowe Uniwersytetu Jagiellońskiego 217. Krakow.

Godłowski, K. 1993: Barbaren nördlich der Westkarpaten und das Karpatenbecken-Einwanderungen, politische und militärische Kontakte. *Specimina Nova* 9:1, 65–89.

Gudea, N. 1996: *Porolissum. Un complex daco-roman la marginea de nord a Imperiului Roman. II Vama romană. Monografie arheologică. Contribuții la cunoașterea sistemului vamal din provinciile dacice (Porolissum. A Daco-Roman complex on the northern edge of the Roman Empire, vol. II. The Roman customs station. An archaeological monograph. Contributions to the understanding of the customs system in the Dacian provinces)*. Cluj-Napoca.

Hedeager, L. 1978: A quantitative analysis of Roman imports north of the limes (0–400 A.D.) and the question of Roman–Germanic exchange. In: Kristiansen, K. – Paludan-Müller, M. (eds): *New directions in Scandinavian archaeology*. Studies in Scandinavian prehistory and early history 1. Copenhagen, 191–216.

Hodges, N. 2005: Gates and passages across the frontiers: the use of openings through the barriers of Britain, Germany and Raetia. In: Visy, Zs. (ed.): *Limes XIX. Proceedings of the XIX international congress of Roman frontier studies held in Pécs, Hungary, September 2003*. Pécs, 183–188.

Højte, J. M. 2005: *Roman imperial statue basis: from Augustus to Commodus*. Aarhus Studies in Mediterranean Antiquity 7. Aarhus–Oxford. https://doi.org/10.2307/jj.35529147

Hrnčiarik, E. – Kuzmová, K. 2016: Evidence of trade and exchange during the Roman period Barbaricum (territory of Slovakia). In: Rubel, A. (ed.): *Die barbaren Roms. Inklusion, Exklusion und Identität im Römischen Reich und im Barbaricum (1.-3. Jahrhundert n. Chr.)*. Konstanz, 149–162.

Jovaiša, E. 2025: Sūdinai Gintaro kelyje ar sūdinų Gintaro kelyas? (Sudinians on the Amber Road or the Amber Road of the Sudinians?). *Archaeologia Lituana* 26, 42–67. https://doi.org/10.15388/ArchLit.2025.26.1

Kienast, D. – Eck, W. – Heil, M. 2017: *Römische Kaisertabelle. Gründzuge einer römischen Kaiserchronologie*. Darmstadt.

Kolendo, J. 2000: Eksport niewolników pochodzących z Europy barbarzyńskiej na teren Cesartswa Rzymskiego. *Światowit* 43:B, 112–127.

Kolník, T. 1978: Q. Atilius Primus – interprex centurio und negotiator Eine bedeutende Grabinschrift aus dem 1. Jh. U. Z. im quadischen Limes-Vorland. *Acta Archeologica Academiae Scientiarum Hungaricae* 30:1–2, 61–75.

Komoróczy, B. – Vlach, M. 2022: The Mušov region: A complex scene of Roman–Germanic interactions during the Marcomannic Wars. In: Olędzki, M. – Dubicki, A. (eds): *Rome and the Barbarians. An Interplay between two worlds*. Łódź, 327–362.

Kos, P. 2014: *Ad Pirum (Hrusiča) e i Claustra Alpium Iuliarum*. Vestnik 36:1. Ljubljana.

Lăzărescu, V.-A. – Bilaşco, Ş. – Vescan, I. 2016: Big Brother is watching you! Approaching Roman surveillance and signalling at Porolissum. In: Opreanu, C. H. – Lăzărescu, V.-A. (eds): *Landscape archaeology on the northern frontier of the Roman Empire at Porolissum. An interdisciplinary research project*. Corpus Limitis Imperii Romani. Porolissum Monographs 2. Cluj-Napoca, 275–303.

Mączyńska, M. 1998: Die Fibel als Tracht- und Schmuckelement in der Przeworsk-Kultur. In: Kunow, H. (ed.): *100 Jahre Fibelformen nach Oscar Almgren. Internationale Arbeitstagung 25.-28. Mai 1997, Kleinmachnow, Land Brandenburg*. Wünsdorf, 417–424.

Mattingly, D. J. 2005: *Tripolitania*. London.

Miletić, Ž. – Bijađija, B. 2014: Quintus Marcius Turbo Fronto Publicius Severus. *Vjesnik za arheologiju i historiju dalmatinsku* 107, 309–330.

Moatti, C. 2011: La mobilité négociée dans l'Empire romain tardif: le cas des marchands étrangers. In: *Le relazioni internazionali nell'alto medioevo. Atti delle Settimane di studio della Fondazione Centro italiano di studi sull'alto Medioevo, 58, Spoleto, 8–12 aprile 2010*. Spoleto, 159–188.

Napoli, J. – Rebuffat, R. 1993: Clausurae. In: Roman, Y. (ed.): *La frontière. Séminaire de recherche*. Lyon, 35–43.

Natuniewicz-Sekuła, M. 2017: The craft of the goldsmith in Wielbark culture in the light of the finds from the cemetery of Weklice, Elbląg commune and other necropolis of Roman period from Elbląg Heights. Technological studies of selected aspects. *Sprawozdania Archeologiczne* 69, 185–233. https://doi.org/10.23858/SA69.2017.008

Opreanu, C. H. 1998: *Dacia romană şi Barbaricum*. Bibliotheca historica et archaeologica Banatica 17. Timişoara.

Opreanu, C. H. 2011: The barbarians and Roman Dacia. War, trade and cultural interaction. In: De Sena, E. C. – Dobrzanska, H. (eds): *The Roman Empire and beyond: archaeological and historical research on the Roman and native cultures in Central Europe*. British Archaeological Reports – International Series 2236. Oxford, 125–136.

Opreanu, C. H. 2020: Commodus restitutor commerciorum. The role of Palmyrene trading community at Porolissum. *Ephemeris Napocensis* 30, 79–100. https://doi.org/10.33993/ephnap.2020.30.79

Opreanu, C. H. 2021: Revisiting three inscriptions of Commodus from Porolissum. In: Mihăilescu-Bîrliba, L. – Dumitrache, I. (eds): *Persevera lucere. Studia in memoriam Octaviani Bounegru*. Wiesbaden, 227–236.

Opreanu, C. H. 2023a: The setting up of Roman Dacia. Same sources, new approach. In: Bondoc, B. – Timoc, C. (eds): *In honorem Constantin C. Petolescu*. Craiova, 232–238.

Opreanu, C. H. 2023b: Barbarians from Dacia's northern frontier. Enemies, or trading partners? Daily life sequences at Porolissum. In: Mihăilescu-Bîrliba, L. – Piso, I. (eds): *Romans and natives in the Danubian provinces (1st–6th c. AD)*. Wiesbaden, 325–339.

Opreanu, C. H. – Cociş, S. 2002: Artefakte barbarischer Herkunft aus dem römischen Dakien. In: Rustoiu, A. – Ursuţiu, A. (eds): *Interregionale und kulturelle Beziehungen im Karpatenraum (2. Jahrtausend v. Chr – 1. Jahrtausend n. Chr)*. Cluj-Napoca, 228–265.

Opreanu, C. H. – Găzdac, C. 2016: Deceiving the barbarians? A Roman golden forgery from a frontier marketplace at Porolissum (Romania) and its archaeological context. In: Bârcă, V. (ed.): *Orbis Romanus and Barbaricum. The barbarians around the province of Dacia and their relation with the Roman Empire*. Cluj-Napoca, 25–36.

Opreanu, C. H. – Lăzărescu, V.-A. 2015: *A Roman frontier marketplace at Porolissum in the light of numismatic evidence. Contribution to the knowledge of the Roman limes economy*. Corpus Limitis Imperii Romani. Porolissum Monographs 1. Cluj-Napoca–Zalău.

Opreanu, C. H. – Cociș, S. – Lăzărescu, V.-A. 2020: Barbarian brooches in Roman context. Analysis of the finds from the frontier marketplace at Porolissum (Romania). In: Rubel, A. – Voß, H.-U. (eds): *Experiencing the frontier and the frontier of experience. Barbarian perspectives and Roman strategies to deal with new threats.* Archaeopress Roman Archaeology 76. Oxford, 67–93. https://doi.org/10.2307/j.ctv1ddcm17.9

Pferdehirt, B. 2004: *Römische Militärdiplome und Entlassungsurkunden in der Sammlung der Römisch-Germanischen Zentral-Museums.* Mainz–Bonn.

Piso, I. 2013: *Fasti provinciae Daciae II. Die ritterlichen Amtsträger.* Antiquitas I.60. Bonn.

Piso, I. – Opreanu, C. H. 2019: Eine Weihung aus Porolissum für das Severischen Kaiserhauses. *Zeitschrift für Papyrologie und Epigraphik* 209, 295–296.

Piso, I. – Opreanu, C. H. – Deac, D. 2016: Das Heiligtum der Zollstation von Porolissum. *Zeitschrift für Papyrologie und Epigraphik* 200, 544–548.

Pop, H. – Pripon, E. – Deac, D. – Tamba, D. 2015: Porolissum, com Mirșid-Creaca, jud. Sălaj, Punct: Porolissum, Moigrad-Jac. *Cronica Cercetărilor Arheologice din România. Campania 2014.* București, 118–119.

Poulter, A. 2014: Illyricum and Thrace from Valentinian I to Theodosius II: The radical transformation of the Danubian provinces. In: Jacobs, I. (ed.): *Production and prosperity in the Theodosian period.* Interdisciplinary Studies in Ancient Culture and Religion 14. Leuven–Walpole, MA, 27–68.

Quast, D. 2017: Amber and beaver furs: Trade with raw material for the production of luxury goods. In: Hilgner, A. – Greiff, S. – Quast, D. (eds): *Gemstones in the first millenium A.D. Mines, trade, workshops and symbolism. International conference, October 20th–22nd, 2015.* Römisch-Germanisches Zentralmuseum Mainz. RGZM Tagungen 30. Mainz, 59–70.

Rowlands, M. – Larsen, M. – Kristiansen, K. 1987: *Centre and periphery in the ancient world. New directions in archaeology.* Cambridge–London–New York–Rochelle–Melbourne–Sydney.

Sarnowski, T. 2017: Statio publici portorii in Novae (Niedermoesien) und ein neue Statuenbasis aus dem Stabsgebäude der 1. Italischen Legion. *Studia Europea Gnesnensia* 16, 71–89. https://doi.org/10.14746/seg.2017.16.5

Sommer, S. C. 2015: No way to go? Gates and gaps in the Raetian wall. In: Breeze, D. – Jones, R. H. – Oltean, I. A. (eds): *Understanding Roman frontiers. A celebration for professor Bill Hanson.* Edinburgh, 37–53.

Stoklas, B. 2019: Der Einfluss der Markomannenkriege auf die Zirkulation der römischen Münzen im Mitteldonaugebiet in der 2. Hälfte des 2. Jahrhunderts – aktuelle Forschungen. In: Karkowski, M. – Komoróczy, B. – Trebsche, P. (eds): *Auf der Spuren der Barbaren – archäologisch, historisch, numismatisch.* Archäologie der Barbaren 2015. Brno, 185–194.

Symonds, M. F. A. 2013: Gateways or garrisons? Designing, building and manning the milecastles. In: Collins, R. – Symonds, M. F. A. (eds): *Breaking down boundaries: Hadrian's Wall in the 21st century.* Journal of Roman Archaeology Supplementary Series 93. Portsmouth, RI, 53–70.

Vaday, A. 1989: *Die sarmatischen Denkmäler des Komitats Szolnok. Ein Beitrag zur Archäologie und Geschichte des sarmatischen Barbaricums.* Antaeus 17–18. Budapest.

Vaday, A. 2005: *Corpus der römischen Funde im europäischen Barbaricum, Ungarn. Band 1, Komitat Szolnok.* Budapest.

Verhagen, P. 2023: Centrality on the periphery: An analysis of the rural hierarchy in the Dutch part of the Roman limes. *Archaeological and Anthropological Sciences* 15:45. https://doi.org/10.1007/s12520-023-01745-0

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 441–452. 10.17204/dissarch.suppl.5.2026.441

Romanisation

An evolving historical concept

Simone Pastor

Sovrintendenza Capitolina ai Beni Culturali, Museo dei Fori Imperiali, Mercati di Traiano, Roma, Italy
simone.pastor@comune.roma.it

Received 1 October 2025 | Accepted 25 February 2026 | Published 18 November 2026

Abstract: This article examines Romanisation as a complex and multifaceted phenomenon that characterised Roman imperial expansion, tracing its theoretical evolution from 19th-century perspectives to contemporary postcolonial interpretations. The contribution maps the historiographical debate from Theodor Mommsen's initially imperialistic conception to recent theories of cultural hybridisation, *métissage*, and creolisation, which recognise the active agency of local communities in processes of cultural transformation. Through regional analyses of western and Danubian provinces, the article demonstrates that Romanisation was not a monolithic process, but rather a multiplicity of localised adaptations that maintained systemic coherence derived from central political and military power. The study proposes an interpretative synthesis that reconciles Roman domination—characterised by ideological hegemony and urbanisation as the foundation of the imperial system—with recognition of reciprocity and local agency in acculturation phenomena. The research underscores how the strength of the Roman model lay precisely in its capacity to forge unity through diversity, transforming a multiplicity of peoples into a *communis patria* that valorised local particularisms within a shared imperial framework.

Keywords: Romanisation, *métissage*, hybridisation, creolisation, Balkan provinces

Introduction

This international congress has the merit of reviving a topic that was thoroughly studied between the 1990s and the early years of this century: studies on Romanisation. In the contributions of these proceedings, we understand through archaeology and material evidence the numerous facets of this complex process. This process is difficult to capture within a single definition. For this reason, I believe it is appropriate to provide a brief compendium of the origins of studies and the notion of Romanisation. I will attempt to explain the main theories that have dominated the study of Roman provinces for several years. The debate on Romanisation has passed through different interpretative phases. It has evolved from an initially imperialist vision to post-colonial and globalizing perspectives.[1] As Versluys emphasised, Romanisation revolves around understanding 'objects in movement.' This requires particular attention both to globalization theory and to material culture studies.[2]

The origins of the concept and the 19th-century context

From the end of the 19th century, the adoption of the Latin language, Roman citizenship, and the *toga* was described as the effect of a definitive process of 'Romanisation.' This process assumed

1 Gardner 2013, 1–25.

2 Versluys 2014, 1–20.

✉ Corresponding author

linguistic and material connotations. Theodor Mommsen demonstrated the potential offered by literary tradition, epigraphy, and numismatics. He created a new interpretative approach to history aimed at understanding the dynamics of Roman expansion.[3]

Mommsen is generally credited as the one who coined the term "Romanisation" in 1885. However, he never provided a precise definition of the concept.[4] Nevertheless, the German school developed a rich specialised terminology to describe these processes. The term *Romanisierung* became central in German-language studies. It was accompanied by complementary concepts such as *Latinisierung* (Latinisation) to specifically describe the adoption of the Latin language in the provinces. This terminological distinction reflected a more sophisticated understanding of the process. It recognised that the assumption of Roman culture *(Romanisierung)* and the adoption of Latin *(Latinisierung)* could proceed at different rates and with variable intensity in different regions of the Empire.[5] The German academic tradition also distinguished between different forms of cultural integration: *Akkulturation* (acculturation), *Assimilation* (assimilation), and *Integration* (integration). Each had specific nuances that we now recognise as fundamental for understanding the complexity of cultural transformation processes in the Roman provinces.[6]

Mommsen's vision was deeply influenced by the imperial context of his time. It considered Roman culture as superior to native cultures. As Freeman observed, Mommsen and his contemporaries operated in a context where European imperialism sought historical justifications for its own colonial expansion.[7] Although we cannot consider Mommsen as the exclusive father of Romanisation studies, we owe to the German scholar—and subsequently to authors like Pelham and Haverfield—the merit of having laid the foundations of modern studies on the provinces and Roman imperialism.[8] Francis Haverfield, Mommsen's student and often considered the "father of Romano-British studies," further developed the concept. He argued that Romanisation began mainly in post-conquest societies through the creation of veteran colonies that would have a romanising effect on native communities.[9]

Simone Weil's criticism and early contestations

On the immediate eve of World War II, the theme of Romanisation asserted itself with exceptional vigour. However, it came with polemical tones regarding the reasons for Rome's dominion compared to contemporary European regimes. The philosopher Simone Weil was the major architect of this critical tendency. She affirmed that "Rome was the first not only to threaten, but to annihilate the freedoms of the world." Weil painted a highly critical picture of the situation of provincials dominated by Rome. She based this on some literary sources such as the speech of the British chief Calcagus that Tacitus reports in the *Agricola*.[10]

In the famous speech, Calcagus denounces the Romans with the words: *"Auferre trucidare rapere falsis nominibus imperium, atque ubi solitudinem faciunt, pacem appellant"*—"To steal, massacre, rape with false names they call empire, and where they make a desert, they call it peace."[11] Commenting on Tacitus' text, Weil arrived at a provocative consideration: "Roads and bridges, and even

3 Mommsen 2010.
4 Hingley 2005, 15.
5 Pilhofer 2006.
6 Schörner 2005.
7 Freeman 1997, 27–50.
8 Pelham 1911; Haverfield 1905.
9 Haverfield 1905, 10–15.
10 Tac. *Agr.*, 21, 30–32.
11 Tac. *Agr.*, 30.5.

material well-being, assuming it existed during certain periods, are not civilisation. But if Germany, thanks to Hitler and his successors, had enslaved European nations and destroyed most of the treasures of the past"—as Rome would have done according to Weil—"history would certainly say that it civilised Europe." In fact, Weil did not take into consideration the process of uniformity of the Imperium Romanum. This was based on an unparalleled aggregating capacity that the imperialist powers of the 19th and 20th centuries totally lacked. Her criticism, although radical, anticipated many of the themes that would be developed by post-colonial criticism decades later.

The modern debate: post-colonial perspectives and new theories

In the last thirty years, studies on Romanisation have been enriched with contributions that characterise the long debate between admirers and detractors of the Roman imperial model. As Gardner observed, Roman archaeology has sought for over twenty years ways to go beyond the traditional concept of Romanisation. It has proposed a range of alternative approaches.[12] The paradigm shift in studies has led to the introduction of new theoretical models derived from contemporary social sciences. The concept of *métissage*, initially developed in French studies on colonialism, has been applied to the Roman world to describe processes of cultural mixing. These go beyond the simple imposition of Roman elements on local substrates. As Le Roux observes, *métissage* "helps to go beyond the linguistic sphere to which the word 'creolisation' belongs."[13]

The theory of cultural hybridisation has offered a further conceptual tool to understand how different cultures merge creating new syncretic forms. However, as Stockhammer emphasises, the term "hybrid" is necessarily rooted "in its even more problematic counterpart: purity."[14] If we accept the existence of something hybrid, we must accept the encounter between two pure entities. We thus incur the paradox of freeing ourselves from essentialist visions of Roman culture while simultaneously introducing essentialist models of native culture.

Webster has developed the concept of creolisation, defining it as "a process of resistant adaptations." This emphasises "the possibility that this cultural development from below could take place."[15] This approach recognises that local communities were not passive recipients of Roman culture. They were active actors in the process of cultural transformation.

However, these models present intrinsic limitations. As Jiménez notes, they refer to processes of linguistic (creole) and cultural (metisse, hybrid) mixing that originate from the encounter of entities that were unknown to each other until the 16th-century conditions of slavery, plantation, and colonisation. Neglecting this fact when dealing with Mediterranean and European contexts of Roman archaeology would create more problems than it solves.[16]

The active intellectual debate between the late 1940s and early 1970s, when the decolonisation process began in France and England, profoundly influenced the perception of Romanisation. Webster and Cooper were among the first to explicitly propose post-colonial perspectives in the study of Roman imperialism.[17] Meanwhile, Hingley noted how classical historians have articulated a "deeply imperial understanding of the relationship between colonisers and colonised" in their writings and archaeological research.[18]

12 Gardner 2013, 2.
13 Le Roux 2004, 287–311.
14 Stockhammer 2012, 43–58.
15 Webster 2001, 209–225.
16 Jiménez 2007, 21–36.
17 Webster – Cooper 1996.
18 Hingley 2008, 327.

Among the most influential critics we can include authors like Broughton and Pflaum.[19] They defined the process of Romanisation as a concept that should be removed from publications as a product of colonial ideology.

Van Dommelen[20] shared the same opinion. He proposed abandoning the notion of Romanisation "because of the intrinsic nuances of assimilation and the implicit colonialist perspective." As he emphasised in his influential article "Beyond domination and resistance," it is necessary to recognise local and colonial cultural identities.

The semantic problem and new theoretical perspectives

Cecconi, entering the detail of the exegesis of the term, argued how the word 'Romanisation' hides legitimate semantic perplexities. It elaborates on a concept equally difficult to define: that of 'Roman.' The terms 'Rome' or 'Roman'—as well as the notion of *Romanitas*—present themselves as problematic concepts.[21] They lack a circumscribed and comprehensible meaning. They cannot refer to a so-called 'pure' culture but to a reality that is already, in turn, the product of stratifications of previous acculturations.

Greg Woolf, in his influential study "Becoming Roman," demonstrated how the changes inflicted by the process of Romanisation affected different regions and communities differently. This makes a unified definition of the effects of Romanisation impossible.[22] His article "Beyond Romans and Natives" explores changes both in Gallic and Roman cultures. He notes that Roman culture was not uniform throughout the empire due to the effect of native cultures.[23]

Wallace-Hadrill[24] is clear in this sense when he states that "Being Roman" in the 1st century BC and in the 1st century AD can be considered the same only superficially. His analysis of Rome's "cultural revolution" demonstrates how Rome itself underwent profound transformations through contact with other cultures, particularly Greek culture.

Regional diversity: examples from Romanisation processes

The complexity and non-univocity of the Romanisation process clearly emerges when analysing specific examples from different provinces of the Empire. Each region presents distinctive characteristics that demonstrate how Romanisation was not a monolithic phenomenon. Instead, it adapted to pre-existing local conditions.

In Gallia Narbonensis, Romanisation followed a relatively peaceful path characterised by the collaboration of local elites. Epigraphic evidence shows a scarce presence of *peregrini* in the urban environment. This suggests rapid legal integration of native communities. The case of Divodurum (Metz, France) perfectly illustrates how creolisation was applied to urban development during the transition period between 100 BC and 200 AD.[25] Pre-existing Gallic structures gradually merged with Roman architectural models.

Britain presents a more complex picture, characterised by alternating phases of resistance and adaptation. As Millett demonstrated, the process was based on bidirectional interaction between

19 Broughton 1959; Pflaum 1961.

20 Van Dommelen 2001, 253–255; Van Dommelen 2014, 41–45.

21 Cecconi 2006, 81–94.

22 Woolf 1998.

23 Woolf 1997, 339–350.

24 Wallace-Hadrill 1998, 79–91; Wallace-Hadrill 2008.

25 Metz Excavations 2018.

Roman and local elites. The natives "had adopted Roman cultural values and ornaments" and "personal advancement was obtained through service in the Roman army or in civil life."[26] Sociolinguistic evidence along Hadrian's Wall shows a complex stratification of identities. Celtic, Roman, and Germanic elements coexisted in syncretic forms.[27]

Hispania presents perhaps the most varied picture of all. The Iberian Peninsula showed significant regional differences in the Romanisation process. While southern Baetica rapidly developed strongly Romanised urban centres like Corduba (Córdoba, Spain) and *Hispalis* (Seville, Spain), the northern regions maintained indigenous social structures longer.[28] Archaeological evidence from Emerita Augusta (Mérida, Spain) demonstrates how veteran colonisation created new urban landscapes. These overlapped, without necessarily cancelling, pre-Roman structures.[29]

Dacia represents an extreme case of "conscious Romanisation." It was the result of a domination policy aimed at building a new society by uprooting the old one and transplanting veterans and elites from other already Romanised territories. Epigraphic analysis reveals about 4,354 attested individuals from 2,645 inscriptions. There is a predominance of data from Dacia Superior explained by the presence of the two major urban centres of the province: Sarmizegetusa (Sarmizegetusa, Romania) and Apulum (Alba Iulia, Romania).[30]

Particularly significant is the data on *peregrini*: they constitute only 15% of the total names attested in Dacian epigraphy. This suggests either rapid legal integration or, more probably, massive demographic replacement. Unlike other provinces, Dacia shows a scarcity of native *peregrinus* names.[31] This indicates the intensity of Trajan's colonisation process.

In the eastern provinces, Romanisation had to confront pre-existing Hellenisation and millennial cultural traditions. In Cilicia (Turkey), epigraphic evidence shows a process of Romanisation very different from the western one. Syria maintained Greek as the language of culture and local administration. Latin remained limited mainly to military and governmental environments.

Egypt presents unique characteristics that distinguish it from all other provinces. Here, Romanisation did not follow typical models of urbanisation and municipalisation. Instead, it maintained the ancient administrative structure based on *nomes*. The Greek element continued to dominate culturally. Latin remained confined to governmental and military environments. Only with Caracalla's edict of 212 AD was there greater legal integration. However, traditional cultural structures remained largely intact.

Toward an interpretative synthesis: Romanisation 2.0 and the limits of globalisation

While the terms 'Rome' or 'Roman' are difficult to define, they still refer to a State and a unitary constitutional organisation. These were the creators of imperialism and economic and cultural relations with provincial realities. In this case, Romanisation must be understood as a conscious process of conquest supported by central power. This is especially true for territories along the *limes* where the central government created veteran colonies to "assist" the Romanisation process of local ethnic groups.

26 Millett 1990, 53.
27 Mullen 2019, 102–105.
28 Edmondson 1994, 13–30.
29 Caballos Rufino 2010.
30 Varga *et al.* 2018.
31 Németi 2019, 351–394.

As Pitts observed, there is a need to move toward a 'Romanisation 2.0' with high-definition narratives that can capture the complexity of the process.[32] Versluys proposed that Romanisation should be reconceptualised through the lens of globalisation theory and material culture studies. However, it is important to note that the concept of globalisation itself seemed to describe an unstoppable process of world integration in the 1990s. Today it is deeply contested.[33] Various scholars now speak of 'deglobalisation' or 'slowbalisation' to describe the slowing or reversal of global economic integration processes.[34]

We are therefore at an interpretative crossroads that requires a synthesis between these theories. If it is clear that in a first phase of conquest, Roman domination translated into the imposition of its own 'culture' within a system governed by central power, it was equally evident in a second phase of acculturation between the 'Roman' substrate and local ethnic groups. The role that 'Romanised' provincial elites had in adopting this culture—in a regulated process of bidirectional relations—was to maintain and consolidate their position in their communities of belonging. Sherwin-White suggested that the process of Romanisation was guided by the natives themselves. This vision, although criticised for the improbability that native groups would voluntarily abandon their culture, opens important questions about local agency.[35] This perspective on Romanisation defines Roman domination as an acculturating phenomenon. It distinguishes a first phase of conquest from the subsequent political-administrative reorganisation of conquered territories.

Reciprocity and domination: the complexity of the process

We must not stop at the mere notion without specifically defining the relationships between the Roman substrate and the realities involved. Although there is no doubt that one can easily find a position of military, political, and 'cultural' superiority of Rome over provincial realities, one cannot ignore the role they played in the process of integration and *métissage*.

The process of Romanisation must be seen not only as an external imposition but also as the choice of a resilient culture. This culture seeks a balance between its own traditions and the demands that the new situation proposes. Webster's concept of 'creolisation' offers an alternative model for understanding these processes of cultural hybridisation.

Analysing this process, it is necessary to consider a certain reciprocity in acculturation phenomena. Keep in mind that these—given Rome's supremacy—were not symmetrical. We can thus speak of a process of homologation and assimilation certainly characterised by forms of consensus. However, this never lost, especially in some provinces, its characteristic of being an instrument of domination.

Rome's hierarchical superiority and its acculturating impact is evidenced on multiple levels. This includes the ability to eliminate or reduce peripheral 'resistances' through force or forced displacement of entire populations. This characterised the conquest process of Noricum and Dacia. As Oltean demonstrated, the conquest of Dacia involved massive deportations and resettlements that radically transformed the social fabric of the region.[36]

Although Arendt[37] argued that Rome's objective was never to systematically eliminate previous social and institutional structures to rebuild a new society above them, we must nevertheless note,

32 Pitts 2021, 117–135.

33 Paul 2023, 3–8.

34 Abdal – Ferreira 2021, 202–230.

35 Sherwin-White 1973, 380–395.

36 Oltean 2007, 46–72.

37 Arendt 1958.

at least for the Danubian and Balkan provinces, a 'conscious Romanisation.' This was the result of a domination policy aimed at building a new society by uprooting the old one and transplanting veterans and elites from other already Romanised territories.

Van Oyen proposed to deconstruct and reassemble the Romanisation debate through the lens of post-colonial theory. She emphasised the importance of moving from global to local and vice versa.[38] Her analysis of *terra sigillata* demonstrates how apparently standardised objects could facilitate different types of local actions and practices.[39]

While it appears incontestable that the heterogeneity of the Roman Empire, derived from the historical, geographical, and cultural legacies of multiple 'citizenships,' was never overcome by systematic and organic Roman action, the birth of a Roman 'superstructure,' a universal ideology, and a sense of belonging are precisely due to these numerous provincial particularisms. These transformed different peoples and territories into a *communis Patria.* This process culminated with the *Constitutio Antoniniana* of 212 AD.[40] Through this, Emperor Caracalla granted citizenship to almost all inhabitants of the Roman Empire who did not already possess it. As Garnsey noted, this represented the culmination of a centuries-long process of citizenship expansion.

Two examples from the Balkan-Danubian world

The first example comes from Rome through Trajan's Column, erected in 113 AD to celebrate the conquest of Dacia. In scene 38, a battle is depicted essentially reduced to a duel between two warriors. The character on the right is easily identifiable as a Dacian by his *pileus* (conical cap) and tunic. His antagonist, however, does not seem to be Roman as one might expect. He is depicted with a thick beard, bare-chested, holding a scythe, with the typical iconography of a Germanic warrior (Fig. 1).



Fig. 1. Scene XXXVIII of Trajan's Column.

38 Van Oyen 2015, 205–226.

39 Van Oyen 2016.

40 Condurachi 1958, 441–454; Garnsey 2004, 133–155.

Extending the analysis to the entire scene, no legionnaire is recognizable in the melee. The Roman camp was probably composed of auxiliary cohorts *(auxilia)*, warriors from ethnic groups previously allied or subjugated to Rome, as in this case the Germans. Haynes demonstrated how the Roman army served as Britain's "first information revolution," transforming economic life through the introduction of new practices and technologies.[41] Auxiliary cohorts represented about half of the Roman army and played a crucial role in spreading Roman culture.[42]

The scene clearly defines the propaganda message: the clash between civilisation and barbarism, where legionnaires never fight directly. Instead, peoples who have adapted to the Roman model clash against those who do not want to submit–Romanised barbarians fighting against other barbarians. Rome does not fight, it builds: in Trajan's Column many scenes show Roman legionnaires, easily identifiable by their *lorica segmentata* armour, engaged in construction.

The Romans are identified as 'civilisers,' bearers of a model of *civilitas* that means the attitude to live within an urban space ordered by *mores et moenia* (customs and walls). This is in opposition to the nomadic and tribal life of the barbarians of the Dacian *Regnum*.[43]

A new model overlaps the old one when Ulpia Traiana Sarmizegetusa (founded in 106 AD) semantically merges with Sarmizegetusa Regia, the ancient Dacian capital. This facilitates the gradual integration of the Dacian people through administration and urbanisation.

The second example comes from Carnuntum (Petronell, Austria), a site that already in the Tiberian age (14–37 AD) was characterized by a *castrum* and subsequently by a civilian city. Carnuntum, located on the Danube in present-day Austria, became the capital of the province of Pannonia Superior under Trajan.[44] The city had its own military amphitheatre during the Flavian age (69–96 AD). From the Hadrianic age (117–138 AD) it was also equipped with a civilian one.[45]

Epigraphic documentation allows us to identify the benefactor: Gaius Domitius Smaragdus, a rich Syrian merchant who probably did not have a prestigious place in the military amphitheatre.[46] *Smaragdus* used the money at his disposal to build a civilian amphitheatre where he could secure a better seat (Fig. 2).

Euergetism, the practice of making public donations to obtain social prestige, was a fundamental mechanism through which local elites negotiated their status in Roman society.[47] By employing the same imperialistic model and the same strategy of social control to obtain prestige within a Romanised urban society from which he had been excluded, Smaragdus Romanises himself by opposing the Roman model. This example perfectly illustrates what Woolf calls "becoming Roman"—an active process of cultural transformation guided by local aspirations.

Conclusion: rethinking Romanisation in the 21st century

The process of Romanisation, especially in the Balkan and Danubian provinces, envisaged the creation of an urban being that made the city the foundation of the imperial system. The city was the economic, religious, and cultural centre of Roman citizens' activities. Urbanisation represented not only a physical change of the landscape but a fundamental transformation of social and cultural structures.[48]

41 Haynes 2002, 111–126.
42 Goldsworthy 1996, 30–32.
43 Coulston 2003, 389–424.
44 Gassner *et al.* 2011, 15–99.
45 Humer 2014.
46 CIL III, 11095.
47 Zuiderhoek 2009, 53–112.
48 Laurence *et al.* 2011.



Fig. 2. Inscription of Caius Domitius Smaragdus from Carnuntum (Civil Amphitheater).

Beyond direct domination exercised through political and economic power, the Roman state apparatus benefited from an ideological 'hegemony.' This was an adherence of spirits to a new conception of the world that consolidated and justified it. As Ando observed, Roman imperial ideology operated through multiple channels to create consensus.[49]

To make this 'ideology of consensus' perceptible, the Roman apparatus needed mass communication tools directed at elites and provincial populations. Public monuments, inscriptions, coins, and gladiatorial spectacles all served as vehicles for the diffusion of imperial ideology.[50]

In light of recent theoretical developments, it is clear that Romanisation must be understood as a multifaceted phenomenon. It assumes different forms depending on regional contexts, pre-existing conditions, and specific temporal dynamics. The models of *métissage*, hybridisation, and creolisation, despite their conceptual limits, have contributed to a more sophisticated understanding of cultural transformation processes. These go beyond the simple dichotomy of dominators/dominated.

The specialised terminology developed by the German school *(Romanisierung*, *Latinisierung*, *Akkulturation)* offers valuable analytical tools to distinguish between different levels and intensities of cultural transformation. Regional examples demonstrate that there was no uniform 'Romanisation.' Rather, there was a multiplicity of 'Romanisations' that adapted to local specificities while maintaining systemic coherence derived from central political and military power.

The debate on Romanisation continues to evolve. While some scholars propose completely abandoning the term, others like Woolf suggest that it might still have value if adequately reconceptualised.[51] What is clear is that our understanding of this complex process will continue to be enriched by new archaeological discoveries, new theoretical approaches, and new perspectives. These recognise the complexity and diversity of the Roman imperial experience.

The challenge for future studies will be to develop 'high-definition' narratives that can simultaneously capture local specificity and systemic coherence. We must recognise that the strength of the Roman model resided precisely in its ability to create unity through diversity. It transformed a

49 Ando 2000, 73–130.

50 Noreña 2011.

51 Woolf 2014, 45–50.

multiplicity of peoples and cultures into a *communis patria* that maintained and valued local particularisms within a shared imperial framework.

Sources

CIL III: Mommsen, Th. (ed.): *Corpus Inscriptionum Latinarum. Vol. III. Inscriptiones Asiae, provinciarum Europae Graecarum, Illyrici Latinae.* Berlin, 1873.

Tac. *Agr.*: Tacitus, *Agricola.*

References

Abdal, A. – Ferreira, D. M. 2021: Deglobalization, globalization, and the pandemic: Current impasses of the capitalist world-economy. *Journal of World-Systems Research* 27:1, 202–230. https://doi.org/10.5195/jwsr.2021.1028

Ando, C. 2000: *Imperial ideology and provincial loyalty in the Roman Empire.* Berkeley. https://doi.org/10.1525/9780520923720

Arendt, H. 1958: *The human condition.* Chicago.

Broughton, T. R. S. 1959: *The magistrates of the Roman Republic.* Philological Monographs 15. New York.

Caballos Rufino, A. 2010: *Itálica-Santiponce: Municipium y Colonia Aelia Augusta Italicensium.* Ciudades romanas de Hispania 7. Rome.

Cecconi, G. A. 2006: Romanizzazione, diversità culturale, politicamente corretto. *Mélanges de l'Ecole française de Rome. Antiquité* 118:1, 81–94. https://doi.org/10.3406/mefr.2006.10972

Condurachi, E. 1958: La Constitutio Antoniniana et l'application du droit romain dans les provinces orientales de l'Empire. *Revue internationale des droits de l'Antiquité* 5, 441–454.

Coulston, J. C. 2003: Overcoming the barbarian. Depictions of Rome's enemies in Trajanic monumental art. In: de Blois, L. – Erdkamp, P. – Hekster, O. – de Kleijn, G. – Mols, S. (eds): *The representation and perception of Roman imperial power. Proceedings of the third workshop of the international network impact of empire (Roman Empire, c. 200 B.C. – A.D. 476), Rome, March 20–23, 2002.* Impact of the Empire 3. Amsterdam, 389–424. https://doi.org/10.1163/9789004401631_032

Edmondson, J. C. 1994: Creating a provincial landscape: Roman imperialism and rural change in Lusitania. *Studia Historica. Historia Antigua 10,* 13–30.

Freeman, P. W. M. 1997: Mommsen to Haverfield: The origins of studies of Romanization in late 19th-century Britain. In: Mattingly, D. J. (ed.): *Dialogues in Roman imperialism: Power, discourse, and discrepant experience in the Roman Empire.* Journal of Roman Archaeology Supplementary Series 23. Portsmouth, 27–50.

Gardner, A. 2013: Thinking about Roman imperialism: Postcolonialism, globalisation and beyond? *Britannia* 44, 1–25. https://doi.org/10.1017/S0068113X13000172

Garnsey, P. 2004: Roman citizenship and roman law in the late empire. In: Swain, S. – Edwards, M. (eds): *Approaching Late Antiquity.* Oxford, 133–155. https://doi.org/10.1093/acprof:oso/9780199297375.003.0006

Gassner, V. – Jilek, S. – Ladstätter, S. 2011: *Am Rande des Reiches. Die Römer in Österreich, 15 v. Chr. –378 n. Chr.* Wien.

Goldsworthy, A. K. 1996: *The Roman army at war 100 BC–AD 200.* Oxford. https://doi.org/10.1093/oso/9780198150572.001.0001

Haverfield, F. 1905: *The Romanization of Roman Britain.* Oxford. https://doi.org/10.1017/S0009840X00991285

Haynes, I. 2002: Britain's first information revolution. The Roman army and the transformation of economic life. In: Erdkamp, P. (ed.): *The Roman Army and the Economy.* Amsterdam, 111–126. https://doi.org/10.1163/9789004494374_007

Hingley, R. 2005: *Globalising Roman culture: Unity, diversity and empire.* London. https://doi.org/10.4324/9780203023341

Hingley, R. 2008: *The recovery of Roman Britain 1586–1906: A colony so fertile.* Oxford Studies in the History of Archaeology. Oxford. https://doi.org/10.1093/oso/9780199237029.001.0001

Humer, F. 2014: *Carnuntum: Wiedergeborene Stadt der Kaiser*. Darmstadt.

Jiménez, A. 2007: A critical approach to the concept of resistance: New 'traditional' rituals and objects in funerary contexts of Roman Baetica. In: Fenwick, C. – Wiggins, M. – Wythe, D. (eds): *TRAC 2007: Proceedings of the seventeenth annual theoretical Roman archaeology conference, University College, London and Birkbeck College, University of London, 29 March – 1 April 2007*. Oxford, 15–30. https://doi.org/10.16995/TRAC2007_15_30

Laurence, R. – Cleary, S. E. – Sears, G. (eds) 2011: *The city in the Roman west c. 250 BC–c. AD 250*. Cambridge. https://doi.org/10.1017/CBO9780511975882

Le Roux, P. 2004: La Romanisation en question. *Annales. Histoire, Sciences Sociales* 59:2, 287–311. https://doi.org/10.1017/S0395264900003826

Metz Excavations 2018: *Archaeological evidence from Divodurum excavations, 2018 campaign*.

Millett, M. 1990: *The Romanization of Britain: An essay in archaeological interpretation*. Cambridge.

Mommsen, T. 2010 [1862]: *A history of Rome*. Cambridge. https://doi.org/10.1017/CBO9780511707520

Mommsen, T. 2010 [1886]: *The provinces of the Roman empire from Caesar to Diocletian*. London.

Mullen, A. 2019: Sociolinguistics. In: Collins, R. – Symonds, M. (eds): *Hadrian's wall 2009–2019*. Kendal, 102–105.

Németi, S. 2019: The indigenous population of Roman Dacia. Archaeological sources. In: Németi, S. – Dana, D. (eds): *The Dacians in the Roman Empire. Provincial constructions*. Cluj-Napoca, 351–394.

Noreña, C. F. 2011: *Imperial ideals in the Roman west: Representation, Ccrculation, power*. Cambridge.

Oltean, I. A. 2007: *Dacia: landscape, colonisation and Romanisation*. London. https://doi.org/10.4324/9780203945834

Paul, T. V. 2023: The specter of deglobalization. *Current History* 122(840), 3–8. https://doi.org/10.1525/curh.2023.122.840.3

Pelham, H. F. 1911: *Essays*. Collected and edited by F. Haverfield. Oxford.

Pflaum, H. G. 1961: *Les carrières procuratoriennes équestres sous le Haut-Empire romain*. Paris.

Pilhofer, S. 2006: *Romanisierung in Kilikien? Das Zeugnis der Inschriften*. Quellen und Forschungen zur Antiken Welt 46. München.

Pitts, M. 2021: Towards Romanization 2.0: High-definition narratives in the Roman north-west. *Journal of Urban Archaeology* 3, 117–130. https://doi.org/10.1484/J.JUA.5.123679

Schörner, G. 2005: *Romanisierung – Romanisation: Theoretische Modelle und praktische Fallbeispiele*. British Archaeological Reports – International Series 1427. Oxford. https://doi.org/10.30861/9781841718668

Sherwin-White, A. N. 1973: *The Roman citizenship*. Oxford.

Stockhammer, P. W. 2012: Conceptualizing cultural hybridization in archaeology. In: Stockhammer, P. W. (ed.): *Conceptualizing cultural hybridization: A transdisciplinary approach*. Berlin, 43–58. https://doi.org/10.1007/978-3-642-21846-0_4

Van Dommelen, P. 2001: Beyond domination and resistance. Colonial culture and local identities in classical Sardinia. *American Journal of Archaeology* 105:2, 253.

Van Dommelen, P. 2014: Fetishizing the Romans. *Archaeological Dialogues* 21:1, 41–45. https://doi.org/10.1017/S1380203814000075

Van Oyen, A. 2015: Deconstructing and reassembling the Romanization debate through the lens of postcolonial theory: from global to local and back? *Terra Incognita* 5, 205–226.

Van Oyen, A. 2016: *How Things make history: The Roman empire and its terra sigillata pottery*. Amsterdam Archaeological Studies 23. Amsterdam. https://doi.org/10.1515/9789048529933

Varga, R. – Pázsint, A. – Boda, I. – Deac, D. – Lumezeanu, A. 2018: *Romans1by1 database: Dacian inscriptions*. http://romans1by1.com/ (Accessed: 16 February 2026).

Versluys, M. J. 2014: Understanding objects in motion: An archaeological dialogue on Romanization. *Archaeological Dialogues* 21:1, 1–20. https://doi.org/10.1017/S1380203814000038

Wallace-Hadrill, A. 1998: To be Roman, go Greek. Thoughts on hellenization at Rome. Austin, M. – Harries, J. – Smith, C. (eds): *Modus Operandi. Essays in honour of Geoffrey Rickman*. Bulletin of the Institute of Classical Studies Supplement 71. London, 79–91. https://doi.org/10.1111/j.2041-5370.1998.tb01695.x

Wallace-Hadrill, A. 2008: *Rome's cultural revolution*. Cambridge.

Webster, J. 2001: Creolizing the Roman provinces. *American Journal of Archaeology* 105:2, 209–225. https://doi.org/10.2307/507271

Webster, J. – Cooper, N. J. 1996: *Roman imperialism: Postcolonial perspectives*. Leicester.

Woolf, G. 1997: Beyond Romans and natives. *World Archaeology* 28:3, 339–350. https://doi.org/10.1080/00438243.1997.9980352

Woolf, G. 1998: *Becoming Roman: The origins of provincial civilization in Gaul*. Cambridge. https://doi.org/10.1017/CBO9780511518614

Woolf, G. 2014: Romanization 2.0 and its alternatives. *Archaeological Dialogues* 21:1, 45–50. https://doi.org/10.1017/S1380203814000087

Zuiderhoek, A. 2009: *The politics of munificence in the Roman empire. Citizens, elites and benefactors in Asia Minor*. Cambridge. https://doi.org/10.1017/CBO9780511576508

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 453–464. 10.17204/dissarch.suppl.5.2026.453

Callatis

A Greek city in the Roman Empire

Laurențiu Radu ✉
Callatis Museum of Archaeology, Mangalia, Romania
laurentziu2003@yahoo.ca

Received 27 October 2025 | Accepted 26 June 2026 | Published 18 November 2026

Abstract: Although integrated into the Roman world from an early date, Callatis remained a Greek city, little, if at all, permeable to Roman civilisation, owing to the particularly favourable legal status acquired through an alliance treaty with Rome. An important contribution was made by the orientation of its commercial relations towards areas of Greek culture in the Pontus Euxinus, such as Heraclea Pontica, or, in the case of long-distance commercial circuits, towards Byzantion, the Marmara Sea, the Greek islands, Cyprus, Rhodes, and the East: Egypt, Syria, and Palestine. This was a specific development determined by the persistence and resilience of Greek culture in the face of Roman culture. For comparison, one may consider Tomis (Constanța, Romania), which became the capital of the province of Scythia, a city in which Romanisation took place on a much greater scale than at Callatis. Unlike the Danube bank, where the army was the principal promoter of the phenomenon of Romanisation, no important military units are attested at Callatis; here, the urban area preserved its Greek character, with some oriental intrusions in respect of the funerary ritual. In the rural territory, Romanisation was mainly due to Roman colonists.

Keywords: Callatis, Dobrudja, Romanisation, acculturation

Introduction

In the following, an attempt is presented to trace the main directions of the social and political changes brought about by the Roman conquest in this micro-area of the Pontic basin. The chronological limits are represented by the first penetrations of Rome into the western Pontic area and the 4th century AD, when the expansion of Christianity modified the mental structures of the population, resulting in a relative homogenisation of society.

Acculturation can be defined as a process of interaction and mutual influence between two different civilisational cultures, producing visible and detectable changes in at least one of them through the adoption of ideas and objects and the replacement of ideas and objects from the indigenous culture.[1] Acculturation is considered to be a component of the phenomenon of Romanisation.

Romanisation is a complex process with many variants, adapted to local conditions, sometimes imposed by force, but more often achieved through persuasion and voluntary adherence, aiming at the intensive integration of the conquered territories, primarily by attracting local elites, through colonisation, and through the influence of the army as a means of expanding Roman culture, with the adoption of the Latin language as its principal characteristic.[2]

1 Cherry 1998, 78; Mihăilescu-Bîrliba – Dumitrache 2013, 75–92.

2 Rubel 2011, 13–27 with a critical review of opinions regarding these processes.

✉ Corresponding author

According to the information provided by Pseudo-Skymnos, Callatis or Kallatis (Fig. 1), a Dorian city, was founded by the Greeks of Heraclea Pontica at the end of the 6th century BC, during the reign of the Macedonian king Amyntas I (540–498 BC). As evidenced by early archaeological discoveries, the settlement underwent significant development from the 4th century BC onwards, and became one of the most important cities on the western Pontic coast. However, it became embroiled in the conflicts arising from the disintegration of Alexander the Great's empire. It led an uprising against Lysimachus, King of Thrace, but, after two lengthy sieges, finally surrendered to the illustrious general. Nevertheless, in the course of events it demonstrated its resilience and exceptional defensive capabilities. The following period was characterised by Rome's inexorable advance. The Roman army first arrived in the region during the Third Mithridatic War, when M. Terentius Varro Lucullus, the proconsul of Macedonia, captured the cities of West Pontus. Then, about ten years later, a revolt broke out against the abuses of the governor Gaius Antonius Hybrida, resulting in the loss of Roman control of the Danube estuary. Following a brief period under the rule of Burebista, leader of the Geto-Dacians, and the subsequent civil wars that erupted after Caesar's death, the Romans re-established their presence in the Lower Danube region with M. Licinius Crassus' expedition in 29/28 BC. This marked the beginning of more than 600 years of Roman domination. On this occasion, the Greek cities on the Pontic coast, Histria, Tomis and Callatis, were annexed by the Romans, and the rest of the region was assigned to the client kingdom of the Thracians until AD 46, when the territory of present-day Dobruja was annexed to the province of Moesia. Because of the increasingly serious problems arising on the Danube, the emperor Domitian divided this province in AD 86 for strategic reasons, establishing Moesia Superior in the west and Moesia Inferior between the Danube, the Black Sea, the Balkan Mountains to the south, and the Tibrita River to the west. The Romans imposed a typical provincial organisation in this area, but with a flexible policy adapted to local conditions, characterised by the presence of a large Getic population, as well as the Greek cities of the West Pontic region.[3]



Fig. 1. Map of the Black Sea (after Radu in prep.).

Prior to the expansion of Rome, this region was characterised by the presence of an urban area comprising the Greek cities along the Black Sea coast, their rural territory *(chora)*, mixed Greek-indigenous communities, and political formations of the indigenous Getic population led by various

3 Suceveanu 2001, 307–311; Whately 2016, 11–49; Alexandru 2024, 46–59.

local dynasts: Cassius Dio, in the context of the expedition of M. Licinius Crassus in 28–29 BC, mentions three Getic leaders: Rholes, who ruled in south-western Dobruja and became *"amicus et socius populi Romani"*; Dapyx, who ruled in central Dobruja; and Zyraxes, in northern Dobruja.[4] The Getic population, augmented by various alogenous elements and Roman colonists, became a solid basis of Dobrujan Romanity in the following centuries.[5]

Alliance treaty with Rome

One of the most significant epigraphic documents preserved at Callatis is the Treaty of Alliance concluded with Rome. Its stipulations are as follows:

> "[…] The Callatian people will not allow their domains, or those over which they exercise authority, to be used by their adversaries and enemies to launch war against the Roman people or those under Roman authority. Nor will they provide them with arms, ships or subsidies to do so. The Roman people will not, under any circumstances, allow the adversaries and enemies of the Callatian people to pass through their domains or those over which the Roman people exercises its authority. If anyone declares war on the Roman people or those under its authority, the Callatian people will immediately grant assistance. If anyone declares war on the Callatian people or those under their authority, the Roman people must immediately provide assistance to the Callatian people […]".[6]

Dated either to 114/107 BC or renewed in the era of Octavianus Augustus, the treaty was applied only after the Romans had firmly established themselves on the Lower Danube. The treaty was crucial in preserving the city's traditional internal organisation, including the council, the assembly of the people, and the civil and religious institutions. As a *civitas foederata*, the city had the right of jurisdiction over the entire rural territory, at least for a period of three centuries.[7]

In evaluating the consequences of the interaction between the two cultures, it is imperative to recognise their divergent trajectories of development. The Greeks established the foundations of European civilisation by opening new intellectual and artistic horizons, as well as innovative political and social systems, particularly in the domain of governance. Their dissemination was facilitated by the process of colonisation. In contrast, Rome was "forced to win in order to exist, to conquer in order to defend itself, to dominate in order not to be dominated",[8] and aimed to "guarantee order and well-being throughout its dominion, for the benefit of all peoples and with their participation".[9]

The disparities in social and cultural attitudes between the Greeks and the Romans were exceptionally summarised by Maud Gleason: "Greeks imagined themselves more as a kinship group, speaking a common language, descended from common ancestors (both historical and mythological), and worshipping a common pantheon, whose Olympian universality was balanced by deliberately distinctive forms of local cult. A Greek's first loyalty was always to his city, but the Greeks' prickly civic particularism was to some extent balanced by a tradition of joint activities in leagues. They saw 'Romans' sharing, not a kinship group, but a value-system, one that was conservative, respectful of social hierarchy, and scrupulous in the observation of religious taboos. 'Romans' were people whose own self-discipline, combined with their power to mobilize the labour of others, imposed a

4 Dio Cass., LI. 26, 2–3.

5 Vulpe – Barnea 1965, 33–34; Rădulescu – Petolescu 2001, 656–657.

6 ISM III, 1.

7 Avram 1999b, 144–145; Ruscu 2000, 57–68.

8 Vulpe 1968, 14.

9 Vulpe 1968, 19.

rational order over much of the known world. This rationalization of space involved a network of centuriated farmland, roads, and aqueducts whose critical nodes were cities, each of which replicated, on a grand or humble scale, the basic infrastructure of the capital city itself: *fora*, temples, *porticos*, and baths."[10]

The advantages offered by the new Roman administration, which allowed them to develop a flourishing economic life and to integrate into the great international trade circuits, led the Pontic cities to support Roman policy actively. At Callatis, the new political context brought important changes at the administrative, religious and social levels. This new era was felt to be a second foundation of the city. It is important to note that the construction of the Early Roman city wall was undertaken at an earlier date, with a smaller area, of about 50 hectares, protected by the enclosure wall.[11]

Roman citizens in Callatis

The earliest Roman name belongs to Tiberius Plautius Silvanus, 'son of the city', whose father acquired Roman citizenship during the time of Governor Tib. Plautius Silvanus Aelianus (ca. AD 57–67), but was written in Greek.[12] An inscription dedicated to Emperor Trajan (AD 98–117), dated between AD 103 and 116, refers to a *conventus civium romanorum*. The formula *cives Romani consistentes* was first used in Trajan's era and refers to a community of traders established in Callatis. This Roman penetration occurred at the same time as Roman inscriptions and names appeared in Callatis[13]. Although Roman citizens are documented in Callatis, the vast majority of them came from the Greek-speaking eastern provinces of the Empire (Asia Minor, especially Galatia, Pontus, and Bithynia, but also Syria). They only slightly influenced the ethnic and linguistic structure of the city.[14] However, the city of Callatis retained its ethnic structure, remaining largely impermeable to the penetration of Roman citizens, who are attested in a very small proportion: only 36 Roman citizens and the *collegium* of *cives romani consistentes* are documented, although the city's population has been estimated at around 5,000–10,000 inhabitants. There are few examples of people with Roman names in Callatis, probably because Roman citizenship was not highly sought after by the Callatiani, owing to the privileges offered by the city's status as a *civitas foederata*. Even after AD 212, there are only a few examples of Imperial names and six people with non-Imperial names:[15] Flavii,[16] Aelii,[17] Aurelii,[18] Iulii,[19] Claudii,[20] Herennios,[21] Minucius,[22] Valerius,[23] Plautius,[24] Turpilius,[25] and Rufus.[26]

10 Gleason 2009, 228.
11 Alexandru *et al.* 2012, 441; Alexandru 2024, 84, 109–110.
12 ISM III, 174.
13 Avram 2007, 91–93.
14 Curcă – Zugravu 2005, 317–327; Mihăilescu-Bîrliba 2009, 157; Mihăilescu-Bîrliba 2018, 367.
15 Ruscu 2014, 477–478.
16 ISM III, 74, 75, 117, 118, 184, 242, 249.
17 ISM III, 70, 74, 99, 100, 102.
18 ISM III, 92, 187, 237, 242.
19 ISM III, 74, 83, 84.
20 ISM III, 84.
21 ISM III, 74.
22 ISM III, 99–100.
23 ISM III, 74.
24 ISM III, 174.
25 ISM III, 83.
26 ISM III, 101.

Imperial cult at Callatis

Among the first attestations of Roman influence on the city of Callatis is the imperial cult. The imperial cult is widely regarded as one of the earliest manifestations of Roman influence there, as evidenced by the numerous historical sources that have survived to the present day. The discovery of eleven inscriptions referring to the imperial cult demonstrates the significance it held for the Callatians.[27] The practice was initiated by Roman emperors as a means of ensuring the loyalty of the inhabitants. In fact, the imperial cult represented one of the main factors that modified the internal political activity of the Greek cities within the Roman Empire.[28] The earliest evidence of the imperial cult is an inscription,[29] referring to a *portico* dedicated by the citizens of Callatis to Octavianus Augustus during his lifetime, the only reference to this type of sanctuary in Dobruja, but also to the introduction of the *festival of* Κεισάρεια in honour of the emperors from the mid-1st century AD.[30] In parallel with this development, the institution of the *gerusia* came into being, denoting an association entrusted with the oversight of the affairs pertaining to a single major cult or, alternatively, with performing the tasks associated with the Imperial cult. The majority of *gerusiae* that emerged throughout the Greek-speaking part of the Empire in the 1st and 2nd centuries AD were associations of aged people. These *gerusiae* engaged in activities around a certain cult or cults and around a *gymnasium*. It is also noteworthy that these *gerusiae* often included former magistrates and councillors. They were held in high esteem and enjoyed a significant degree of prestige and respect. A notable figure within the civic framework of Callatis, Apollonios,[31] is cited in the mid-1st century AD as a founding member of the *gerusia*.[32] In the same direction, the association of Western Pontic cities was also established: the West Pontic *koinovn* was created in the Roman era, during the reign of Augustus or Tiberius, in parallel with the incorporation of this region into the province of Moesia. At first, five cities set up the association: Histria, Tomis, Callatis, Dionysopolis and Odessos, but later Mesembria was also added. This association was a structure created to facilitate relations between the Greek cities of this area and the imperial authorities, a means by which they could demonstrate their loyalty to the emperor through the practice of the Imperial Cult. Among the *pontarchs* (leaders) of this association, nine Callatians are attested, out of a total of 29 *pontarchs*.[33]

The language of Roman period inscriptions from Callatis

Compared to the neighbouring towns of Istros (Histria, Romania) and Tomis (Constanța, Romania), in which, even though the number of Greek inscriptions far outweighs that of Latin inscriptions, the latter are still fairly well represented, Callatis provides only a small sample of Latin inscriptions: out of 260 entries, only 30 are in Latin. This is even less significant because most of these are either official documents (sometimes bilingual) or monuments originating from the territory of Callatis, which was inhabited during the Imperial period by a relatively small number of Roman colonists.

The first category includes:

- the Latin text of the Treaty between Rome and Callatis;[34]
- three of the five preserved fragments of the *limitatio* of Callatis' rural territory;[35]

27 ISM III, 31, 32, 58, 73, 75, 99, 100, 104, 112, 120, 122.

28 Bottez 2015, 51–52.

29 ISM III, 58.

30 ISM III, 31.

31 Avram 1999a, 267.

32 ISM III, 31; Ruscu 2014, 480–482.

33 Avram 1999a, 56–60, 71; Nawotka 1993, 342–350; Bărbulescu 2007, 145.

34 ISM III, 1, probably paired with a Greek translation.

35 ISM III, 52–53, 55, accompanied by their Greek translations.

- a dedication to Trajan;[36]
- the bilingual dedications erected under the governors T. Vitrasius Pollion[37] and M. Valerius Bradua;[38]
- other dedications from the Antonine period;[39]
- a dedication to Emperor Gordian III (AD 238–244) and his wife, Sabinia Tranquillina. It contains the official form of address to the emperor and his wife in Latin, while the rest of the text is in Greek;[40]
- a dedication to Emperor Aurelian from AD 274;[41] and
- the five milestones dated to AD 163.[42]

The second category, which includes monuments erected by the Romans, comprises the dedication of the *cives romani consistentes*,[43] as well as inscriptions from various rural sites: a boundary marker with the inscription *F(ines) terr(itorii) Call(atidis)*, discovered at Tvarditsa, BG,[44] and funerary inscriptions.[45]

The numerical relationship that can be established between the Greek and Latin inscriptions once again testifies to Callatis's predominantly Greek character during the Imperial period. Apart from the treaty between Rome and Callatis, which dates from around 100 BC and was exhibited from the time of Augustus, there are no Latin inscriptions prior to the reign of Trajan.

Roman soldiers and military units in Callatis

The presence of Roman soldiers in Callatis was negligible and incidental, with a total of only six soldiers recorded.

- An officer, *tribunus militum* Monianios, from the end of the 1st century BC and the beginning of the 1st century AD, was the beneficiary of a decree of gratitude from the council and the people;[46]
- Publius Aelius Villanus, *ex decurione alae*, from the 2nd century AD, dedicated a monument to a deity in Callatis;[47]
- Oulpios Paulos (Οὔλπιος Παῦλος), a veteran originating from Colonia Flavia Pacis Deultensium (Deultum in Thracia, today Debelt, Bulgaria), also from the 2nd century AD, is attested by his funerary inscription;[48] and
- Herennios Apollinaris, *beneficiarius consularis*, and other members of the hunting association dedicated an inscription for the health of Emperor Gordian III (AD 238–244) and his wife, Sabinia Tranquillina.[49]

36 ISM III, 59.
37 ISM III, 60.
38 ISM III, 97; the Greek text: ISM III, 98.
39 ISM III, 62, 64, 85.
40 ISM III, 74.
41 ISM III, 96.
42 ISM III, 195–199.
43 ISM III, 83.
44 ISM III, 241, dedications: ISM III, 247–249.
45 ISM III, 237, 250–253.
46 ISM III, 30.
47 Pázsint 2024, 31.
48 IG X, 3, 3, 1, 167; Pázsint 2024, 31; Matei-Popescu 2010, 50, no. 259.
49 ISM III, 74; Săveanu – Rădulescu 1968, 307–317.

Another soldier, the former *praetorian* Aurelius, son of Dalenus, is documented in the Callatian rural territory at Vicus Amlaidina (nowadays possibly 23 August village; Fig. 2), where his wife, Aurelia Cuthis/Uthis, erected his epitaph. They have Thracian names and obtained Roman citizenship under Caracalla, adopting the family name Aurelius. Based on their names, they were Romanised Thracians. After serving in the Praetorian Guard, Aurelius returned to Moesia Inferior (ISM III 237, 2nd–3rd centuries AD).[50]

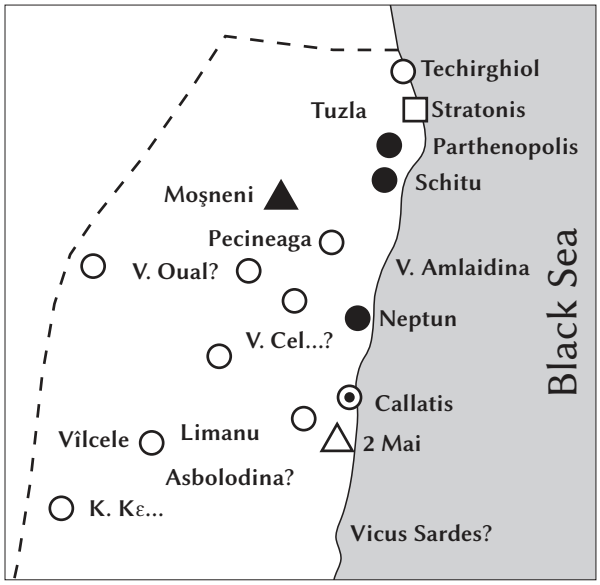


Fig. 2. Detail map of the Callatian rural territory (Chora) (after Radu in prep.).

Flavius Agathenodoros, possibly a Roman citizen, is also mentioned in a Greek inscription in the Callatian territory, at Vîlcele (Fig. 2).[51]

At Dionysopolis, M. Pompeius Lucius dedicated an altar to Deus Dolichenus (AD 212–217), as *beneficiarius consularis* of the *I Italica Antoniniana* legion and *bouleutēs* of the city councils of Dionysopolis, Callatis and Marcianopolis, probably in recognition of the services rendered to these cities in ensuring the security and safety of the inhabitants.[52]

The invasion of the Costoboci in AD 170 had serious repercussions for the city. Once the danger had passed, epigraphically documented restorations *ad fundamentis* of the city walls, defence towers, and other structures at the city gates were carried out under the supervision of the provincial governor, Marcus Valerius Bradua.[53] These events prompted the Roman authorities to deploy troops to the western Pontic cities and to reinforce the new defensive system with numerous intermediate fortifications. The *V Macedonica* legion may have had a temporary mission at Callatis, as evidenced by the discovery of bricks bearing the legion's stamp. From the third quarter of the 2nd century AD, however, local inscriptions[54] attest to the presence of centurions from the *XI Claudia* legion. Two other stamped bricks prove relations with soldiers of the *I Italica* and *XI Claudia* legions.

The evidence relating to Roman soldiers at Callatis is minimal and incidental. Two are attested in funerary inscriptions, one in a decree, and three in dedications. Two of the soldiers were *beneficiari consulari*, three were veterans (one was a former soldier from the *cohortes praetoriae* another an *ex-decurio* of the *ala*), and the last was a *tribunus militum*.[55]

Roman citizens documented in the rural territory of Callatis

During the early Roman period, Dobruja experienced an intense process of colonisation, with personnel from the provincial administration, veterans, and various businessmen arriving from all regions of the Roman Empire. This phenomenon affected the Callatian rural territory only to a

50 Pázsint 2024, 31; Mihăilescu-Bîrliba 2018, 70–71, 302; Mihăilescu-Bîrliba 2019, 133.

51 ISM III, 238; 2nd–3rd century AD; Rădulescu 1968, 332.

52 IGB I², 24; Matei-Popescu 2010, 83, 109, 283.

53 ISM III, 97–98.

54 ISM III, 56.

55 Pázsint 2024, 32.

small extent, but there is documented information regarding Roman penetration into the area. One of the earliest pieces of evidence is the Callatian *limitatio*, created during Trajan's reign to define the city's rural territory. Five fragments of this document, written in both Greek and Latin, have been preserved.[56] According to this document, the Callatian territory extended southwards to the locality of Tvarditsa in Bulgaria today,[57] located 25 km from Callatis, and northwards to the area of Lake Techirghiol.[58] This cadastral operation of the Callatian territory *(limitatio)* records, in addition to the old traditional settlements, the villages of the recently founded Roman colonists, an effect of the colonization process. Among the localities with Roman names, Vicus Amlaidina (perhaps at the present-day village of 23 August) stands out, the home village of the former *praetorianus* Aurelius Dalenus, who probably owned an *ager viritim adsignatus* in the respective area.[59] It is assumed that other settlements, κώμη Κε… and κώμη Ουάλ… (Vicus Oual…), were *vicii*, the typical Roman provincial form of organisation.[60] Other settlements with Roman organisation in the Callatian territory can also be considered: Stratonis (Tuzla), Parthenopolis (Schitu), V. Sardes, V. Cel…, and V. Asbolodina (Fig. 2).[61]

Another argument for Roman penetration into the territory of Callatis is the existence of *villae rusticae*, settlements in the rural Dobruja landscape that reflect the Roman method of agricultural organisation. An example of this can be found at Moşneni, 10 km north of Callatis, where a deposit of agricultural tools from the 2nd–3rd centuries AD was discovered, as well as traces of stone constructions from an important *villa*. However, these farms were, to a lesser extent, centres of Romanisation.[62]

A settlement and graves were reported from a site a few kilometres from Callatis on 2 Mai village of these, the tumulus grave of a Roman magistrate buried with a parade chariot and two sacrificed horses is particularly notable.[63]

The traditional relations established during the Hellenistic era were maintained in Callatis. This means that most of the rural territory was owned or leased by the city's citizens. However, there are also Roman influences in the form of *vicii*, albeit to a much lesser extent than in the other nearby Greek cities of Tomis and Histria.[64] Information on the rural area of Callatis, particularly regarding its population, is scarce.

Changes in funeral customs

Evidence of Rome's influence can also be seen in the daily lives of the Callatians, including changes to funeral customs and the widespread use of glass objects. Some graves, such as the particularly rich one discovered at Olimp,[65] belonged to rural farm owners. Both cremation and inhumation were practised in the Callatian necropolis, with inhumation being especially common. In terms of layout, cremation graves are of the *rug-busta* type, with the remains being placed in a simple pit or an urn. Burial graves could be simple pits protected by tiles or located in a lateral or longitudi-

56 ISM III, 51–55.
57 ISM III, 241.
58 Doruțiu-Boilă 1971, 325–333; Bărbulescu 2001, 63; Avram 1999a, 66.
59 ISM III, 237; Mihăilescu-Bîrliba 2019, 133.
60 Suceveanu 1977, 94.
61 Bărbulescu 2001, 61–67; Avram 2007, 92; Bounegru 2011, 238–240.
62 Suceveanu 1985, 113; Baumann 1983, 75–76.
63 Harțuche 1967, 231–257.
64 Suceveanu 1977, 55.
65 Rădulescu *et al.* 1973, 247–265.

nal niche. The niche was closed with a wall made of stones of various sizes. This type of burial in chambers with access shafts (42 graves have been discovered so far) may be associated with the presence of Orientals originating from the eastern Mediterranean, who arrived in context with the organisation of the Roman province or later, probably as officials or merchants, as evidenced by the discovery of a hoard of 15 Roman silver *denarii*, attributed to a wealthy person of eastern origin.[66] A distinctive feature of these graves is the abundance of glass vessels found within them. The first glass vessels appeared in Callatis during the Hellenistic period. Their number increased in the 1st century AD, reaching a peak in the 2nd and 3rd centuries AD. From the middle of the 4th century AD, however, they decreased considerably before finally disappearing from graves altogether as a result of changes in funeral rites determined by the precepts of the Christian religion.

Amongst glass vessels, *unguentaria* predominate, being the most common types discovered in graves. It is difficult to determine their role, whether as containers for perfumed oils or for cosmetic or pharmaceutical use, intended for use by the deceased in the afterlife, since they generally have similar shapes. They have a flared rim, turned and made in the form of a circular tube, hollow inside, a shape specific to the early Roman period (1st–3rd centuries AD); later their shape changed, and the rim was simply cut and left unprocessed, or slightly rounded. A difference has been observed between the types of vessels placed in graves (small bottles, flasks, drinking vessels, etc.) and those used in everyday life: plates, serving platters, and large vessels are absent from graves. In general, the glass finds from Callatis fit into the typology of the glass record of the Black Sea area, as well as that of the eastern Mediterranean. The glass trade benefited from traditional trade routes; consequently, forms originating from the East clearly predominate. However, we also note western influences, such as Mercury bottles and *modioli* cups. The glass objects discovered in the Roman period necropolis of Callatis highlight the city's commercial relations with the Syro-Palestinian and Egyptian regions.[67]

Callatian economy

Traditionally, the Black Sea region was connected to eastern trade routes that reached the eastern Mediterranean, Asia Minor, the Aegean Sea, the Syrian-Palestinian region, and the city of Alexandria in Egypt. From the second half of the 1st century AD, these routes also connected the region to Italy and Central Europe, owing to Roman expansion. Following the conquest of Dacia, the Danube also became an important trade route connecting central Europe with the Euxine Pontus.

Coin finds attest to intense commercial relations established with Tomis, an important city at a short distance north of Callatis. Most coins come from Tomis, followed by various other issues from Istros, Odessos, Marcianopolis, Nicopolis, Adrianopolis, Anchialos, Dionysopolis, Mesembria, Byzantion and Nicaea.

Conclusion

Although it was integrated into the Roman world from an early date, Callatis remained a Greek city, little, if at all, permeable to Roman civilisation, a fact also due to the orientation of its commercial relations towards areas of Greek culture in Pontus, such as Heraclea Pontica, or, in the case of long-distance commercial circuits, towards Byzantion, Asia Minor, the Sea of Marmara, the Greek islands, Cyprus, Rhodes, and the Middle East: Syria and Palestine. An important contribution was also made by the particularly favourable legal status acquired through an alliance treaty with Rome.

66 Radu 2016, 130–131.

67 Radu in prep.

A unique development can be traced here, determined by the persistence and resilience of Greek culture in the face of the Roman one, with the city of Tomis (Constanța) as a term of comparison. Tomis became the capital of the province of Scythia and the metropolis of the Left Pontus, a city in which Romanisation took place on a much higher scale than at Callatis. Unlike the Danube bank, where the army was the main promoter of the phenomenon of Romanisation, no important military units are attested at Callatis; here, the urban area preserved its Greek character, and adopted some oriental elements, manifest in some funerary customs and glass vessels deposited in the graves. In the countryside, the principal agents of Romanisation were the Roman colonists.

As a consequence of the integration of the region into the Roman world, the number of changes to be observed is comparatively low in relation to those occurring in Western Europe. Greek remained the language of the administration and the educated elite, the celebration of the old cults continued, and Roman literature and Roman education were clearly ignored; however, the Roman baths, the theatre and the *gymnasium*, all attested at Callatis, were adopted. In this region, the limits of the acculturation phenomenon are clearly visible. The Greek elites were well-versed in Roman modes of living; however, they selectively adopted aspects that aligned with their interests, with the exception of the administrative changes that they were forced to implement.

One can conclude that at Callatis the phenomenon of acculturation was present, determined by the commercial globalisation favoured by the Romans; one of the related changes was the use of glass objects, accompanied by an incipient process of orientalisation due to a population of oriental origin established at Callatis. Traces of the latter can be identified in funerary contexts through the adoption of the niche tomb structure. However, one cannot really speak of Romanisation in this case because Roman influence remained fundamentally limited to the countryside.

Sources

Dio Cass.: Cassius Dio, *Historia Romana.* Piatkowski, A. (transl.) 1977: *Istoria romană*, vol. 2. Bucharest.

IG X: Avram, A. (ed.): *Inscriptiones Graecae. Epiri, Macedoniae, Thraciae, Scythiae. Pars III. Faciculus III: Inscriptiones Scythiae Minoris, sectio I: Callatis et Ager Callatianus, Tropaeum, Durostorum, Sucidava, Axiopolis, Capidava, Carsium, Cius.* Berlin–Boston, 2022.

IGB I²: Mihailov, G. (ed.): *Inscriptiones Graecae in Bulgaria repertae. Vol. I: Inscriptiones orae Euxini Daciae et Moesiae Inferioris.* Sofia, 1970.

ISM II: Stoian, I. (ed.): *Inscripțiile din Scythia Minor: Tomis* și *teritoriul său.* București, 1987.

ISM III: Avram, A. (ed.): *Inscriptiones Scythiae Minoris graecae et latinae. Vol. III: Callatis et ager Callatianus.* Bucharest–Paris, 1999.

References

Alexandru, N. 2024: *Callatis. Oraș grecesc în ținutul geților.* Cluj-Napoca.

Alexandru, N. – Constantin, R. – Ionescu, M. 2012: Callatis – Stratigrafie, topografie și urbanism. *Pontica* 45, 437–463.

Avram, A. 1999a: *Inscriptiones Scythiae Minoris graecae et latinae. Vol. III: Callatis et ager Callatianus.* Bucharest–Paris.

Avram, A. 1999b: *Der Vertrag zwischen Rom und Kallatis: Ein Beitrag zum römischen Völkrrecht.* Amsterdam.

Avram, A. 2007: Les ciues Romani consistentes de Scythie Mineure: État de la question. In: Compatangelo-Sossignan, R. – Schwentzel, G. (eds): *Étrangers dans la cité romaine. Actes du colloque de Valenciennes (14–15 octobre 2004) "Habiter une autre patrie: des incolae de la République aux peuples fédérés du Bas-Empire"*. Rennes, 91–107. https:/doi.org/10.4000/books.pur.6730

Bărbulescu, M. 2001: *Viața rurală în Dobrogea romană (sec. I–III p.Chr.).* Constanța.

Bărbulescu, M. 2007: De nouveau sur le Koinon du Pont Gauche à partir d'une inscription inédite de Tomis. *Dacia* 51, 139–145.

Baumann, H. 1983: *Ferma romană din Dobrogea*. Tulcea.

Bottez, V. 2015: Implementing roman rule in Greek cities on the western Black Sea coast. The Role of the imperial cult. *Classica et Christiana* 10, 51–66.

Bounegru, O. 2011: Aspecte ale romanizării în mediul rural din Scythia Minor (sec. II–III p.Chr.). In: Rubel, A. (ed.): *Romanizarea. Impunere și adeziune*. Iași, 232–242.

Cherry, D. 1998: *Frontier and society in Roman North-Africa*. Oxford. https://doi.org/10.1093/oso/9780198152354.001.0001

Curcă, R. – Zugravu, N. 2005: "Orientaux" dans la Dobroudja Romaine. Une approche onomastique. In: Cojocaru, V. (ed.): *Ethnic contacts and cultural exchanges north and west of the Black Sea from the Greek colonization to the Ottoman conquest*. Iași, 313–329.

Doruțiu-Boilă, E. 1971: Zur Abgrenzung des Territorium von Kallatis. *Dacia* 15, 325–333.

Gleason, M. 2009: Greek cities under Roman rule. In: Potter, D. S. (ed.): *A companion to the Roman empire*. Oxford, 228–249. https://doi.org/10.1002/9780470996942.ch13

Harţuche, N. 1967: Un car de luptă roman descoperit în regiunea Dobrogea. *Apullum* 6, 231–257.

Matei-Popescu, F. 2010: *The Roman army in Moesia Inferior*. București.

Mihăilescu-Bîrliba, L. 2009: Străinii în Moesia Inferior. Posibilități de identificare. In: Mihăilescu-Bîrliba, L. (ed.): *Structuri etno-demigrafice la Dunărea de jos (sec. I–VII p. Chr.)*. Iași, 153–160.

Mihăilescu-Bîrliba, L. 2018: *Rure vivere in Moesia Inferiore. La population dans le milieu rural d'une province péripherique de l'Empire romain*. Wiesbaden. https://doi.org/10.2307/j.ctvcm4fkj

Mihăilescu-Bîrliba, L. 2019: Les vétérans dans les campagnes de Mésie Inférieure: les propriétaires ruraux. *Dialogues d'histoire ancienne* 45:1, 129–151. https://doi.org/10.3917/dha.451.0129

Mihăilescu-Bîrliba, L. – Dumitrache, I. 2013: Acculturation – Romanization – Colonisation: The role of the army in the Roman province of Moesia Inferior. *Mankind Quarterly* 54:1, 75–92. https://doi.org/10.46469/mq.2013.54.1.4

Nawotka, K. 1993: The "First Pontarch" and the date of the establishment of the Western Pontic KOINON. *Klio* 75, 342–350. https://doi.org/10.1524/klio.1993.75.75.342

Pázsint, A. 2024: Population at Callatis and Odessus: The Roman soldiers. *Electrum* 31, 29–38. https://doi.org/10.4467/20800909EL.24.002.19152

Radu, L. 2016: Un opaiț cu marca Hermes cyzicianul descoperit la Callatis. Note despre legăturile dintre orașul Cyzicus și vestul Pontului. *Peuce* 14, 129–144.

Radu, L. in prep.: *Callatis. Roman Glass*. In preparation.

Rădulescu, A. 1968: Note epigrafice I. *Pontica* 1, 319–339.

Rădulescu, A. – Coman, E. – Stavru, C. 1973: Un sarcofago di età romana scoperto nella necropoli tumulare di Callatis (Mangalia). *Pontica* 6, 247–265.

Rădulescu, A. – Petolescu, C. C. 2001: Campania lui M. Licinius Crassus. In: Petrescu-Dîmbovița, M. – Vulpe, A. (eds): *Istoria Românilor I. Moștenirea timpurilor îndepărtate*. București, 656–658.

Rubel, A. 2011: Problema romanizării în contextul românesc. Situația actuală și perspective noi. In: Rubel, A. (ed.): *Romanizarea. Impunere și adeziune în Imperiul roman*. Iași, 13–27.

Ruscu, L. 2000: Zur Datierung des Foedus zwischen Rom und Kallatis. *Acta Musei Napocensis* 37:1, 57–68.

Ruscu, L. 2014: Becoming Roman? Shifting Identities in the Western Pontic Greek Cities. In: Cojocaru, V. – Coşkun, A. – Dana, M. (eds): *Interconnectivity in the Mediterranean and Pontic world during the Hellenistic and Roman periods*. Cluj-Napoca, 473–488.

Săveanu, T. S. – Rădulescu, A. 1968: Inscripția lui Herennios Apollinaris din Callatis. *Pontica* 1, 307–317.

Suceveanu, A. 1977: *Viața economică în Dobrogea romană (secolele I–III e.n.)*. București.

Suceveanu, A. 1985: În legătură cu unele discuții recente privind procesul de romanizare. *Thraco-Dacica* 6:1–2, 105–115.

Suceveanu, A. 2001: Populația și organizarea administrativă. In: Protase, D. – Suceveanu, A. (eds): *Istoria Românilor II, Daco-romani, romanici, alogeni*. București, 307–311.

Vulpe, R. 1968: Perioada principatului (sec. I–III). In: Vulpe, R. – Barnea, I. (eds): *Din istoria Dobrogei II. Romanii la Dunărea de Jos*. București, 13–367.

Vulpe, R. – Barnea, I. 1965: *Din istoria Dobrogei. Vol. II: Romanii la Dunărea de Jos*. Biblioteca de Arheologie 9. București.

Whately, C. 2016: *Exercitus Moesiae. The Roman Army in Moesia from Augustus to Severus Alexander*. British Archaeological Reports – International Series 2825. Oxford. https://doi.org/10.30861/9781407314754

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 465–482. 10.17204/dissarch.suppl.5.2026.465

For old times' sake...

Dress accessories from a north-east Pannonian grave

Csilla Sáró
HUN-REN–ELTE Research Group for Interdisciplinary Archaeology, Hungarian Research Network, ELTE Eötvös Loránd University, Budapest, Hungary
sarocsilla@gmail.com

Received 2 March 2026 | Accepted 8 May 2026 | Published 18 November 2026

Abstract: The paper focuses on the grave of a woman (Grave 3) excavated at Páty-Malomi dűlő Site III in Pest County, Hungary. The grave is associated with a small burial site but is unrelated to the cemetery and *vicus* of Páty Site 13/9.
The grave contained numerous jewellery items, but no utilitarian objects or tools. The positions of all finds were documented during fieldwork, and the precise data collected enabled a complex analysis. Following the typological and chronological evaluation of the elements of the grave assemblage, the purpose of their inclusion in the grave could be determined: some may have formed part of the burial attire, while others were deposited in the grave as grave goods and personal belongings.
The most interesting object in the grave assemblage is a belt with metal fittings. The belt set includes parts made in the Norican–Pannonian style and various other mounts. It also comprised a wheel brooch that may have been used to decorate the belt. Analysis of the set has revealed that use-related damage was repaired and the missing mounts were replaced with new elements. The brooch was reused, acquiring a new function as part of the belt.

Keywords: Roman period burial, Norico-Pannonian belt, brooch, recycling, repairing

The archaeological site

The Páty-Malomi dűlő site is located in north-east Pannonia, within the former territory of the *Eravisci*, an indigenous population of the area. During a demolition project carried out under archaeological monitoring, a burial site comprising five Roman period graves was discovered at Páty-Malomi dűlő III in 2022 (Fig. 1).[1]

The Páty-Malomi dűlő archaeological site has been known since the 19th century. Based on the Hungarian Archaeological Topography, two sites (13/8, 13/9) were localised there. Extensive research was conducted at Site 13/9, where a Roman period settlement and a cemetery were discovered. The extent of the cemetery is only partially known: its north boundary is uncertain, while its eastern, western, and southern limits lie 50 m from the *vicus*. A total of 183 Roman period graves, including 127 from the early and 56 from the late Roman period, were discovered at the site. However, the newly excavated, seemingly isolated grave group is situated far from this cemetery and has no connection to previously unearthed burials; further investigations may reveal whether it was the burial ground of a single family. Based on preliminary results, the small grave group can be dated to the mid-2nd century AD at the latest.[2]

1 Sáró *et al.* 2024, 145–147, 1–2. kép.

2 Ottományi 2007; Ottományi 2019; Sáró *et al.* 2024, 145–147.

✉ Corresponding author

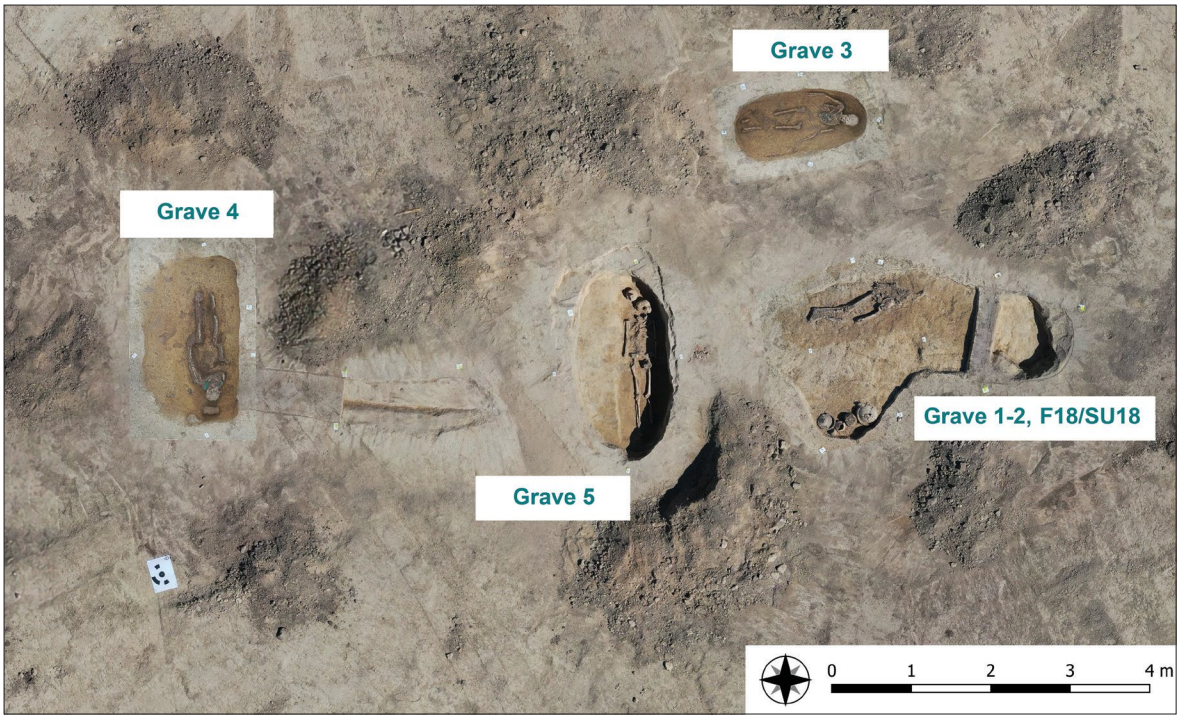


Fig. 1. Graves excavated in 2022 (photo by L. Rupnik, ELTE Eötvös Loránd University).

Graves at Páty-Malomi dűlő III

The graves were found close to each other, but their arrangement reflected no regularity or deliberate order. All of them except Grave 2 were inhumation burials. They yielded a relatively large number of diverse finds, including ceramic vessels, clothing items, and articles of daily life.[3] This study focuses on the detailed presentation and discussion of Grave 3.

Grave 3 (Figs 2–3) was found in the northern part of the excavation area, where no superposition was observed. The oval grave pit contained the remains of a woman aged approximately 30–50 years. Her head was oriented towards the east, her arms lay slightly open next to the body, and her legs were parallel and extended. The grave contained various types of dress accessory but no grave goods.[4] The dress accessories included two brooches (Fig. 2.1,5, Fig. 4) and a brooch pin (Fig. 2.2), two round mounts (Fig. 2.7–8, Fig. 5.6–9), a rectangular mount (Fig. 2.13, Fig. 5.5), a baluster-shaped mount (Fig. 2.9, Fig. 5.4), a boat-shaped mount (Fig. 2.10, Fig. 5.2–3), a mount with openwork decoration (Fig. 2.11, Fig. 5.1), a silver earring (Fig. 2.6, Fig. 7), six beads (Fig. 2.14–18, Fig. 6), and small pieces of metal sheet and wire (Fig. 2.3–4,12).[5]

Dress accessories: typology and chronology

The grave contained two brooches and a brooch pin (Fig. 2.1–2,5, Fig. 4). A strongly profiled brooch was found on the right shoulder, and a fragmented brooch pin on the left.

The strongly profiled brooch (Fig. 2.1, Fig. 4.1–2) was made of copper alloy and has a one-piece construction with a sprung pin of 4+4 coils. The head-end of the bow and the catchplate are rectangular. The bow is rhomboid, with a thick, semicircular-profile lower part and an undivided oval

3 Sáró *et al.* 2024, 145–147, 1–2. kép.

4 Sáró *et al.* 2024, 147, 149, 1. tábla 3.

5 Sáró *et al.* 2024, 149.

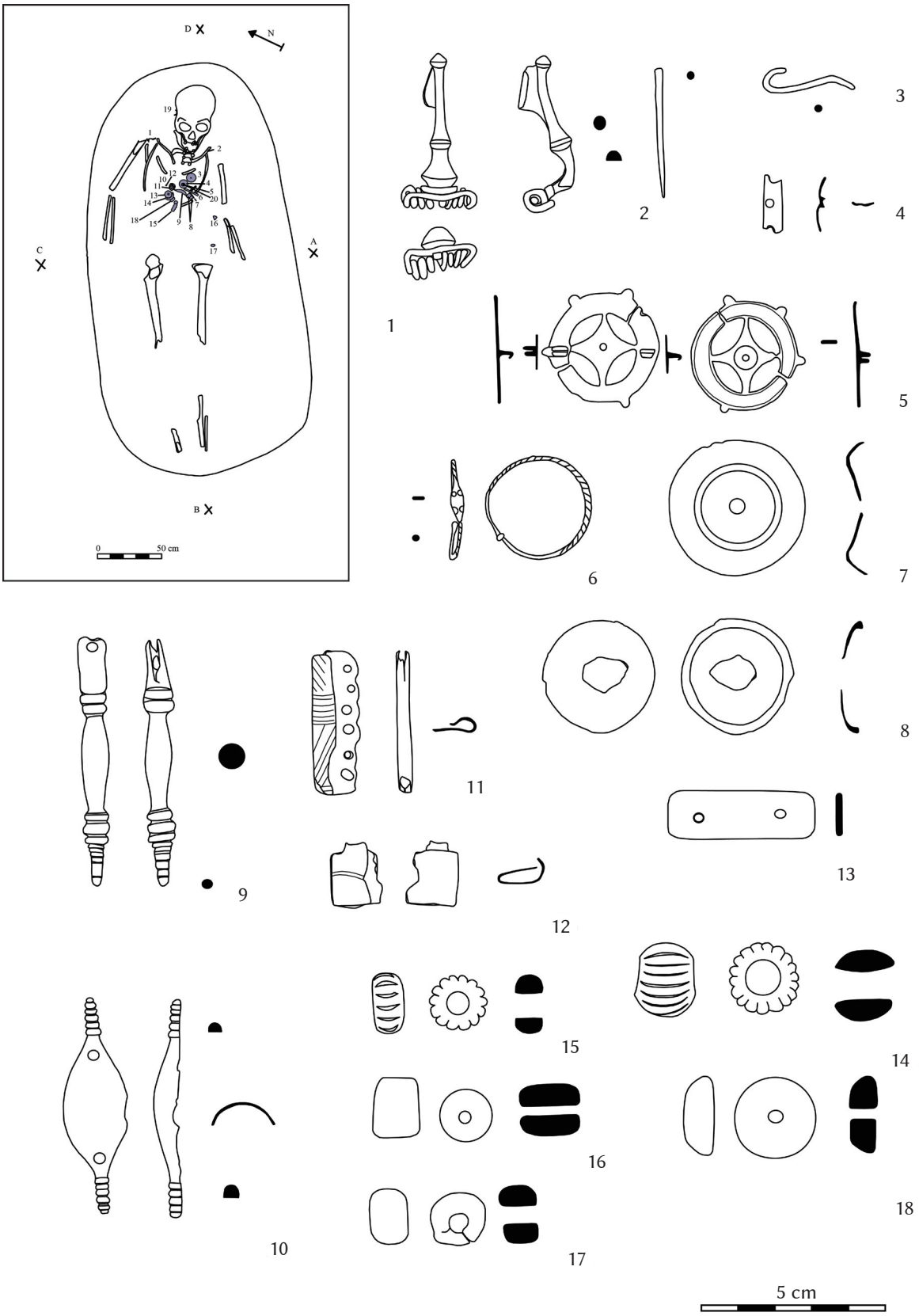


Fig. 2. Grave 3 and the grave finds (drawings by Cs. Sáró and A. Bózsa, Ferenczy Museum Centre).



Fig. 3. Detail photos of Grave 3 and a schematic survey of the grave finds on the chest (photos by A. Bózsa, Ferenczy Museum Centre; drawing by A. Bózsa and Cs. Sáró).

knob, followed by an oval-profile section ending in a collared, conical finial knob. The catchplate is trapezoidal and unperforated, ending in a hook on the right side.[6]

Based on its main characteristics and size, the brooch belongs to the Almgren 69 type, variant Cociş 8a1c2.[7] Diverse variants of the Almgren 69 and Almgren 69/70 brooches are well known from Pannonia. However, these brooches from the north-eastern region of Pannonia[8] differ from the specimen found at Páty. Although strongly profiled brooches remained in fashion for a long time,[9]

6 Find number: 1–2 (Sáró *et al.* 2024, 149); length: 4.2 cm, width (pin construction): 2 cm, width (bow 1): 1 cm, cross section (bow 1): 0.4 × 0.3 cm, cross section (bow 2): 0.3 × 0.3 cm; pin: 3.5 × 0. 2 × 0.2 cm.

7 Almgren 1923, 37, Taf. 4.69; Cociş 2004, 49.

8 Almgren 69: Merczi 2012, 484, 4. kép 1–2; Merczi 2017, 84, Kat. 34, 7. tábla 1; Almgren 69/70: Merczi 2012, 484–485, 4. kép 3–4; Merczi 2017, 84, Kat. 35–38, 2. tábla 5–7.

9 For an overview of the chronology of strongly profiled brooches from burials in north-eastern Pannonia, see Sáró 2020, Vol. 1, 37–38; Sáró 2020, Vol. 2, 162–170.



Fig. 4. Brooches. 1–2 – Almgren 69-type strongly profiled brooch, 3–4 – Riha 7.6-type wheel brooch (photos by B. Deim, Ferenczy Museum Centre).

each variant was produced only for a shorter period. According to S. Cociş, this variant was used in the second half of the 1st century AD.[10]

Another brooch from the grave was identified as an Ettlinger 40.1 = Riha 7.6 = Feugère 24c = Mazur 7.6 = Philippe 24c = Boelicke 7.5 = Gaspar 42 wheel brooch (Fig. 2.5, Fig. 4.3–4).[11] The pin of the fragmented copper-alloy plate brooch is missing. The two-piece brooch has a hinged pin between two lugs. The round plate has openwork decoration and a rhomboidal central part. Originally, the outer edge of the brooch was decorated with six small projections, an engraved line following the outer edge of each. The rhomboidal part was also decorated with an engraved line that originally framed a small rivet. The catchplate is rectangular, ending in a hook on the right side.[12]

This wheel brooch variant is well known from the western part of the Empire, i.e. Britannia, Gaul, and the Rhineland, but counts as rare in Pannonia,[13] where such brooches have been found only at Siscia and Perbál.[14] This variant was used mainly in the Claudian and Flavian periods;[15] however, the dating of the brooch from Perbál suggests that these brooches remained in use slightly longer and were also worn in Pannonia at the beginning of the 2nd century AD.[16]

10 Sáró 2020, 49.

11 Ettlinger 1973, 112; Riha 1979, 183; Feugère 1985, 335; Riha 1994, 156; Mazur 1998, 54; Philippe 1999, 139; Boelicke 2002, 123; Gaspar 2007, 47.

12 Find number: 14 (Sáró *et al.* 2024, 149); diameter: 3.2–3.1 cm; width (bow): 0.1 cm.

13 Riha 1979, 183; Feugère 1985, 340, 347–348, Fig. 50; Riha 1994, 156; Mazur 1998, 54; Philippe 1999, 139; Hattatt 2000, Fig. 202, 547, 1003; Boelicke 2002, 123; Gaspar 2007, 47; Mackreth 2011, 177, Pl. 119.11418; Merczi 2017, 72; Artefacts FIB-4107.

14 Košćević 1991, 131, T. 18.263–266, T. 19.267–269; Merczi 2017, 103, Kat. 1, 1. tábla 1.

15 Riha 1979, 183; Feugère 1985, 344; Mazur 1998, 54; Philippe 1999, 139; Boelicke 2002, 123; Gaspar 2007, 47. An object from Augst was found in a layer dated to the late Augustan–Tiberian period (Riha 1994, 156, Nr. 2796), suggesting that production and wearing started at that time.

16 Merczi 2017, 72.

The grave also contained various belt accessories, a few of which could be identified within J. Garbsch's well-known typological framework. J. Garbsch discussed different types of belt accessory in his monograph on the native attire of women in Noricum and Pannonia, and developed a classification for belt buckles (G1–G2), rectangular mounts with openwork motifs (B1–B7), boat-shaped mounts (K.a–c), elongated mounts with duck-shaped endings (E1–E3), and baluster-shaped mounts (R1–R4).[17]

A fragmentary object (Fig. 2.11, Fig. 5.1) is a rectangular mount with openwork decoration[18] (*Riemenkappen [durchbrochene Gürtelbeschläge B]*).[19] Some significant parts have perished, but the mount can be classified with relative certainty based on the rest. One of the ends is bent and decorated with bunches of engraved lines, while the other, fragmentary part is perforated by six rivet holes.[20] Six rivet holes are typical of the Garbsch B3a, B3c, B4a, B4d, and B5a[21] variants.[22] The bent ends differ; for example, the B3a and B3c are undecorated. On the basis of this detail, the possible categories are B4a, B4d, and B5a. However, the openwork motifs of B5a are different, and its design includes not only rivet holes but also small triangular ornaments. This leaves Garbsch B4a or B4d, which are characterised by six rivet holes and serried rows of openwork stars, drops, small dots, triangles, and blossoms. According to J. Garbsch, B4-type belt mounts were frequent in southern Pannonia, and the B4a variant was in fashion between the Tiberian–Claudian period and the mid-2nd century AD.[23]

J. Garbsch also classified boat- or spindle-shaped mounts *(Kähnchen, kahn- oder spindelförmige Beschlägen)*. Based on the ends and the middle part of the mounts, he distinguished three subtypes (Ka, Kb, Kc). One mount (Fig. 2.10, Fig. 5.2–3)[24] from the grave belongs to the Garbsch Ka variant.[25] This mount was made of copper-alloy; the central element is embossed, raised, and perforated by two holes, while its tapered ends each feature six crosswise rounded ribs. The classification of boat-shaped mounts seems to require further refinement: for example, Garbsch Ka mounts were produced with different ends (roundish or rectangular); thus, based on its main characteristics, the mount from Páty was classified as the Sáró G.Ka1 variant.[26] At present, information is available only on the distribution of the Garbsch Ka variant, which extends across the territory of present-day Austria, Hungary, Germany, Slovenia, Slovakia, and the Czech Republic.[27] J. Garbsch dated the sub-

17 Garbsch 1965, 80–106. The belt set also included rivets with large hemispherical heads (Garbsch 1965, 108, Abb. 58).

18 Probably another sheet fragment is also a belt mount with openwork motifs. Unfortunately, it survived in poor condition, lacking any distinctive features (Fig. 2.12). Find number: 15 (Sáró *et al.* 2024, 149).

19 Garbsch 1965, 83–94.

20 Find number: 15 (Sáró *et al.* 2024, 149); 3.9 × 1.2 × 0.4 cm.

21 Garbsch 1965, 89–92, Abb. 46–48.

22 All variants include square pieces. The fragmented object from Páty was probably also square, not simply rectangular.

23 Based on the monographic work of J. Garbsch, B4a variants were used simultaneously with G2g and B2g belt accessories and A238c Norico-Pannonian wing brooches. Garbsch G2b: from the Claudius Age to the end of the 1st century AD (Garbsch 1965, 82); Garbsch B2b: from the Claudius Age to the mid-2nd century AD (Garbsch 1965, 87). A handful of A238c brooches from Magdalensberg were dated to as early as the Tiberian–Claudian periods (Sedlmayer 2009, 29); this variant remained in fashion until the Trajanic period (Garbsch 1965, 53; Garbsch 1974, 173).

24 Find number: 9 (Sáró *et al.* 2024, 149). Length: 5.9 cm, width: 0.3–0.1–0.3 cm, thickness (sheet): 0.06 cm, height: 0.6 cm

25 Garbsch 1965, 101–102.

26 Sáró 2022a, 294. In the future, the number of ribs on the ends is worth investigating as part of the research into production centres.

27 Sáró 2022a, 294.

type from the late Augustan to the Hadrianic period.[28] Well-dated pieces have also been published from Poetovio (Flavianic period–first third/first half of the 2nd century AD), Muttendorf (Flavianic–Hadrianic period), and Mautern/Favianis (100/110–120/140 AD).[29]

A baluster-shaped strap end *(Riemenzunge)* (Fig. 2.9, Fig. 5.4) was also found in the grave. These elongated mounts have three distinct main parts: a forked fastening part, a baluster-shaped central part, and a segmented end. The fastening part is occasionally decorated with engraved lines.



Fig. 5. Belt mounts. 1 – mount with openwork decoration (Garbsch B4a or B4d), 2–3 – boat-shaped mount (Sáró Ka1), 4 – baluster-shaped mount (Garbsch R2), 5 – rectangular mount (~Hoss B.1.b), 6–9 – two round mounts (photos by B. Deim, Ferenczy Museum Centre).

J. Garbsch classified strap ends into four subtypes (R1–4). His typology is based on size and on the design of the baluster-shaped part (simple or faceted), the joining part connecting the forked and baluster-shaped parts, and the segmented end.[30] The mount from Páty fits into the R2 subtype,[31] characterised by an undivided joining, a plain baluster-shaped part, and an end consisting of multiple segments.[32] Garbsch R2-type mounts are known from Austria, Hungary, Germany, Slovenia, Slovakia, and the Czech Republic.[33] J. Garbsch dated the R2 subtype from the late Augustan to the Trajanic/Hadrianic period;[34] the dating of a recently published find from the *vicus* at Kalsdorf is in

28 Garbsch 1965, 102.

29 Istenič 1999, 64; Groh – Sedlmayer 2002, 336, 352–353; Hinker 2017, 79; Sáró 2022a, 294.

30 Garbsch 1965, 104–106.

31 Garbsch 1965, 105.

32 Find number: 6 (Sáró *et al.* 2024, 149); length: 6.8 cm, width (rectangular part): 0.8 cm, cross section (middle part): 0.7 × 0.7 cm, cross section (segmented part): 0.8 × 0.8–0.3 × 0.3 cm.

33 Sáró 2022a, 298.

34 Garbsch 1965, 105.

accordance with this time frame.[35] However, one object from Poetovio suggests that such fittings occasionally remained in use until the second half of the 2nd century AD.[36]

As J. Garbsch and, later, U. Rothe summarised, this type of belt was popular in eastern Noricum, the western part of Pannonia Superior, and it also occurred in Raetia, Italia, and the northern Barbaricum.[37] Moreover, a recent summary has revealed that such belts were also worn in north-eastern Pannonia. However, they were less fashionable in this area.[38]

Three copper alloy objects from the grave were also belt mounts (Fig. 2.7–8,13, Fig. 5.5–9). Their shape is simple and differs from Norico-Pannonian mounts. One is a plain rectangular mount with two rivet holes.[39] The others are round, convex mounts with one rivet hole at their centres.[40]

The rectangular mount (Fig. 2.13, Fig. 5.5) is similar to military belt mounts in the typology of S. Hoss. Hoss B1-type mounts are also rectangular, with two to four rivet holes and a white-metal cover.[41] The mount from Páty resembles the Hoss B1b variant,[42] in which the short sides were parallel to the edges of the leather belt. However, the mount from Páty lacks the two to four studs on the back and the longitudinal attaching part, which are also typical of this variant. In its present condition, and to the naked eye, no intentional manipulation can be seen on the surfaces or edges of the object. The Hoss B1b variant was in fashion in southern Britain, the Rhineland, and the Danube area. According to S. Hoss, these mounts were in fashion during the Claudian period and remained in use until the Flavian period.[43]

The present condition of the two round mounts (Fig. 2.7–8, Fig. 5.6–9) allows for two possibilities regarding their exact design. The first is simple: originally, they were round and perforated at the centre by a rivet. According to the second possibility, these objects were cut out of larger mount and reshaped for secondary use in order to prolong their use-life. The second option should be considered, because military belt mounts with such decoration are known: rectangular mounts with a central decoration (Hoss B3), more precisely the Hoss B3.1 variant, comprising mounts with a bulging central part.[44] Such belt accessories were worn in the Rhineland, the Alps, and Great Britain. The Hoss B.3.1 appeared in the Augustan period, was most popular in the Claudian period, and remained in use until the early Flavian period.[45]

The grave also contained five intact glass beads and a fragmented one. All intact pieces are undecorated.

Two melon beads *(Melonenperle)*[46] belong to the Guido Fig. 35.21–22, Tempelmann-Maczyńska XVIII, Riha 11.1 subtypes.[47] Their material, size, and colour differ. The turquoise opaque bead is made

35 Hinker 2017, 78.

36 Istenič 1999, 62.

37 Garbsch 1965, 164–222, Karte 14–16; Rothe 2012, 219, Map 8.

38 Sáró 2022a, 290–307, Fig. 7.

39 Find number: 7 (Sáró *et al.* 2024, 149); 3.9 × 1.2 × 0.2 cm.

40 Find number: 3–4 (Sáró *et al.* 2024, 149); 3: diameter (mount): 0.3 cm, diameter (hole): 0.4 × 0.4 cm, thickness (sheet): 0.1 cm, height: 0.5 cm; 4: diameter (mount): 0.3 cm, height: 0.5 cm.

41 Hoss 2014, 69.

42 Hoss 2014, 79.

43 Hoss 2014, 79.

44 Hoss 2014, 98–106, B.452–555.

45 Hoss 2014, 99.

46 For a recent comprehensive synthesis on melon beads, see the study on the glass finds from Savaria (Dévai 2025, 51–55, 150–154).

47 Guido 1978, 100; Tempelmann-Maczyńska 1985, 39–45; Riha 1990, 80–83.

of quartz ceramic (Fig. 2.14, Fig. 6.1);[48] it belongs to the van der Sleen Fig. 5.19, Guido Fig. 37.22, Tempelmann-Maczyńska *Gruppe* XVIII *Typ* 171, and Riha 11.1.1 variant.[49] The opaque white bead is made of glass (Fig. 2.15, Fig. 6.2) and fits the van der Sleen Fig. 5.19, Guido Fig. 37.22, Tempelmann-Maczyńska *Gruppe* XVIII *Typ* 156, and Riha 11.1.4 variant.[50] The former piece is also similar to Riha 11.1.4-variant beads, resembling their form and size, but not their colour range.[51] Blue was a popular colour because it was associated with magical and apotropaic properties in the ancient world; accordingly, blue melon beads were also in high demand.[52]



Fig. 6. Beads. 1 – quartz-ceramic melon bead (Riha 11.1.1), 2 – glass melon bead (Riha 11.1.4), 3 – short cylindrical bead with a round section (Guido 37.5), 4 – long cylindrical bead with a round section (Guido 37.4), 5 – ring-shaped bead (Riha 11.24) (photos by B. Deim, Ferenczy Museum Centre).

Various variants of melon beads are known not only from the Roman Empire but also from the Barbaricum.[53] Quartz-ceramic objects were in fashion and produced primarily in Egypt and the Near East. However, the great number of quartz-ceramic beads in the western Roman provinces points to local production, of which the finds from the military naval base at Köln Alteburg have provided conclusive proof.[54] Melon beads were in fashion and produced almost continuously throughout the Roman era, their popularity lasting from the 1st to the 3rd centuries AD and peaking between the third quarter of the 1st and the first half of the 2nd century AD.[55] C. Höpken studied this bead type in detail and categorised it into two subtypes based on size (small, ca. 1.2 cm long, and large, ca. 2.5 cm long beads). She also concluded that these objects were used not only as jewellery but also as decoration on horse harnesses.[56] In bead jewellery, they were worn alone or strung together with other beads.[57] Figurines wearing such beads were depicted on stone monuments in the Near East. Melon beads belonged to the attire of women and girls.[58]

Two glass beads are cylindrical, with a round cross-section. The short bright yellow opaque piece (Fig. 2.17, Fig. 6.3)[59] belongs to the van der Sleen Fig. 4.2, Guido Fig. 37.5, Tempelmann-Maczyńska *Gruppe* I *Typ* 16, and Riha 11.19 variants; the long brownish-red opaque bead (Fig. 2.16, Fig. 6.4)[60]

48 For more details on terminology and manufacturing techniques, see Höpken 2003, 355–357. For a recent summary on quartz ceramic, see Dévai 2025, 52–54, 151–152.

49 Find number: 10 (Sáró *et al.* 2024, 149); 2 × 2.1 × 1.6 cm.

50 Find number: 5 (Sáró et al. 2024, 149); 1.6 × 1.7 × 0.9 cm.

51 Riha 1990, 83.

52 Martin-Kilcher – Martin-Kilcher 1979, 25; Riha 1990, 77, 80; Höpken 2003, 353.

53 Tempelmann-Maczyńska 1985, 39–40.

54 Born 1975, 134; Riha 1990, 80; Höpken 2003, 355, 357–361.

55 Born 1975, 134; Tempelmann-Maczyńska 1985, 39–40; Riha 1990, 80–83, Footnote 303, Tab. 97.

56 Höpken 2003, 353–354, Abb. 1.

57 Martin-Kilcher – Martin-Kilcher 1979, 24; Riha 1990, 77, 81; Höpken 2003, 354.

58 Höpken 2003, 354.

59 Find number: 8/2 (Sáró *et al.* 2024, 149); 1.7 × 1.7 × 1.2 cm.

60 Find number: 18 (Sáró *et al.* 2024, 149); 1.7 × 1.7 × 1.4 cm.

fits the van der Sleen Fig. 4.2, Guido Fig. 37.4, Tempelmann-Maczyńska *Gruppe* I., and Riha 11.19 variant.[61] Cylindrical beads were used continuously throughout the Roman era. They were popular in the Rhine-Danube region and also fashionable in Britannia.[62]

The grass-green translucent ring-shaped bead (Fig. 2.18, Fig. 6.5)[63] has one straight side and one convex side. Ring-shaped beads were included in E. Riha's 11.8 subtype.[64] The form and size of ring-shaped beads from Augst and Kaiseraugst vary, some of them being similar to the bead from Páty.[65] Ring-shaped beads were widely distributed and used throughout the Roman era.[66]

The last bead was investigated *in situ*, but fell apart into crumbs.[67] However, its original shape is known, which makes its classification possible: it was a Kempten-type bead and belongs to the Tempelmann-Maczyńska *Gruppe* XIX *Typ* 193–194, and Riha 11.24 variant.[68] Beads of this type are typically large and round, with a slightly convex upper side and spiral patterns. Scholars have interpreted their function differently: as spindle whorls, hairpin decorations, or parts of necklaces.[69] The position of the bead in the grave at Páty suggests that it was part of some kind of jewellery, a necklace or a bracelet. T. E. Haevernick studied Kempten-type beads in detail. He collected 274 pieces and concluded that these objects were present from Portugal to the Near East and from Norway to North Africa.[70] The Artefacts database holds the most up-to-date catalogue of the type.[71] Based on the concentration of these objects, one of their production centres was certainly located somewhere in the territory of present-day Slovenia and northern Croatia.[72] Earlier, they were dated to the 1st century AD,[73] but today it seems that their use lasted longer, continuing into the 2nd century AD.[74]

A small copper-alloy clasp (Fig. 2.3) can also be connected with the beads.[75] This small piece of wire with a hook-like end was found near the beads, which suggests that it may have formed part of a bead jewellery item.

The last object to be discussed[76] is a silver open-hoop earring made of twisted wire (Fig. 2.6, Fig. 7). One of its ends is flattened, leaf-shaped, and decorated with four stamped circles, while the other terminates in a small sphere. The leaf-shaped end resembles a stylised snake head.[77]

61 van der Sleen 1973, 32, 34–35, Fig. 4.2; Guido 1978, 94–96, Fig. 37.4–5; Tempelmann-Maczyńska 1985, 27–29, Taf. 1.16; Riha 1990, 88, Taf. 38.1247–1250.

62 Riha 1990, 88, Tab. 111.

63 Find number: 8/1 (Sáró *et al.* 2024, 149); 2.2 × 2.2 × 0.9 cm.

64 Riha 1990, 85, Taf. 37–38, 1181–1211.

65 Riha 1990, Taf. 37.1192–1193.

66 Riha 1990, 85, Tab. 103, 105.

67 Find number:13 (Sáró *et al.* 2024, 149).

68 Haevernick 1972, 136, Abb. 1–2; Tempelmann-Maczyńska 1985, 45–47, Taf. 3.186–187,193–194; Riha 1990, 90, Pl. 39.1338–1340.

69 Haevernick 1972, 136–138; Riha 1990, 90; Feugère 1992, 146–147.

70 Haevernick 1972, 140–148, Abb. 3.

71 Artefacts, PRL–4002.

72 Tempelmann-Maczyńska 1985, 47; Riha 1990, 90; Feugère 1992, 148.

73 Riha 1990, 90, Tab. 117.

74 Feugère 1992, 148.

75 Find number: 20 (Sáró *et al.* 2024, 149); length: 2.3 cm, cross section: 0.2 × 0.2 cm.

76 Small copper alloy sheet fragments were also found in the grave, but they were too fragmented for identification. Find numbers: 11–12, 16–17 (Sáró *et al.* 2024, 149).

77 Find number: 19 (Sáró *et al.* 2024, 149); diameter: 2.7 cm, cross section (wire): 0.1 × 0.1 cm.



Fig. 7. Silver open hoop earring (photos by B. Deim, Ferenczy Museum Centre).

Roman period earrings came with a variety of locking and fastening mechanisms: a small hook on one end and an eye on the other, an S-shaped hook, and an open hoop.[78] Open-hoop earrings are included in numerous classification frameworks of Roman period earrings, including those by A. Facsády (Type XI), V. Lányi (Abb. 65.24–25, 27–28), B. Milovanović (Type I), and L. Ruseva-Slokoska (Type I, Variant 1).[79]

No exact analogy to this piece is yet known. However, its style seems similar to that of a handful of jewellery items from the Balkans. The shape of some silver bracelets in the treasure from Bare (Serbia) is closely comparable: their bodies are twisted, ending in a small sphere and a stylised snake head, respectively.[80] The torques in the same treasure bear similar decoration; their ends are decorated with small circles, and the terminals resemble stylised bird heads.[81] The find assemblage was dated to the second half of the 1st century AD.

The snake motif was a favoured decorative choice in Roman period ring jewellery, as it was attributed symbolic meaning at the time. As C. Johns pointed out, these snakes were associated with the Asclepian snake and its relatives, huge but non-venomous creatures. The main message of this symbol was healing, regeneration, and rebirth,[82] but snakes were connected not only with Aesculapius but also with the cults of numerous gods and goddesses.[83] Snake bracelets, rings formed from a single snake figurine, and double-headed jewellery items are also known from the Hellenistic period.[84]

C. Johns noted that silver was an unpopular choice for earrings: "...earrings could be made from a very small quantity of gold, and if a person aspired to something more noble than bronze, it might have been felt worth the extra expense to acquire gold rather than the less precious silver."[85] In light of that, the earring found at Páty might have been produced in a region where silver ore was significantly more common and easily available.

78 Facsády 2009, 78.

79 Lányi 1972, 88, Abb. 65; Facsády 2009, 83, Tab. 5; Milovanović 2003, 131, 133, Pl. 2; Ruseva-Slokoska 1991, 24–25.

80 Popović – Borić-Brešković 1994, 22, 30, 66, Cat. 14–15, Fig. 11.3–4; T. 11.3–4; Popović 1994, 207, Cat. 61–62.

81 Popović – Borić-Brešković 1994, 14, 64, Cat. 1, Fig. 1, T. 1.1; Popović 1994, 202, Cat. 50.

82 Johns 1996, 37–38.

83 Hamat – Georgescu 2022, 571.

84 Johns 1996, 38, 44–46, 109–111, Fig. 3.3.

85 Johns 1996, 132.

Open earrings were in vogue during the late Roman period,[86] but early Roman period pieces have also been published, for example from Grave 1 at Nagyvenyim (Fejér County, Hungary).[87]

Discussion

Besides the typological diversity of the dress accessories, their position and combination are also worth studying. The relative positions of all objects within the grave were documented with high precision during fieldwork (Fig. 3). Attention to detail made it possible to identify two types of object: dress accessories that formed part of the mortuary clothing and those that were placed in the grave as personal belongings.

The strongly profiled brooch (Fig. 2.1, Fig. 4.1–2) and the brooch pin (Fig. 2.2) were found on the two shoulders. The garment to which they belonged was most probably a dress fastened with a pair of brooches on the shoulders, a wearing style typical of Pannonia during the early Roman period. As many stone monuments and graves from Pannonia illustrate, strongly profiled brooches were paired either with identical brooches or with those of a different type.[88]

The single silver earring (Fig. 7) was found next to the right side of the skull. It was either worn alone or its pair has perished. Grave 1 at Nagyvenyim, belonging to a woman, also contained only a single copper-alloy open-hoop earring. Originally, it may have had a pair, as this grave was unfortunately disturbed.[89]

The beads (Fig. 6), belt accessories (Fig. 2.7–11,13, Fig. 5), and the wheel brooch (Fig. 2.5, Fig. 4.3–4) were scattered on the left side of the chest (Fig. 3.3–4). Depictions and grave finds suggest that plate brooches were frequently worn on the chest.[90] However, this brooch was found in a heap together with beads and belt accessories, which suggests that it was probably not pinned to the clothing. Considering the position of these objects, two dress accessories can be reconstructed: a bead jewellery item composed of all the beads and the copper-alloy clasp, and a mount-decorated belt. The mounts were categorised into two main groups, namely Norico-Pannonian and military belt mounts. The position of the wheel brooch suggests that it was probably also part of the belt, which indicates secondary use.

All the evidence suggests that the belt had a long use-life and perhaps more than one owner. The original belt was probably of the Norico-Pannonian type. When it became damaged in use and/or was redesigned, the missing mounts were replaced with the rectangular and round mounts and the reused wheel brooch, which thus acquired a new, secondary function. As mentioned above, the round mounts were probably reshaped, i.e. also recycled and reused.

In the Roman period, various materials were reused and recycled. J. Theodore Peña listed numerous categories, such as building materials and artefacts made of glass, pottery and other ceramics, metal, leather, textile, or papyrus, as well as furniture, watercraft, wheeled vehicles, animal bone, murex shell, organic ash, excrement, urine, pomace, and general refuse.[91] Repairing, reshaping, and reusing objects reflect a practical and cost-effective way of thinking.

86 Lányi 1972, 88, Abb. 65; Facsády 2009, 77, 83; Perok 2012, 16, Type 1.1, Cat. 1.

87 Sáró 2020, Vol. 2, 79, 41. tábla 4.

88 Sáró 2020, Vol. 1, 34, 132, 134, Sáró 2020, Vol. 2, 35, 40–41, 53–54, 104–105, 123, Kat. A58, A106, Kat. B98–99, B100, B108, B111–112, B116–117, B123–124, B129–130, B134–135; Sáró 2022a,172, 176, Kat. 7, Kat. 9.

89 Sáró 2020, Vol. 2, 79, 41. tábla 4; Sáró 2022b, 172, Kat. 7,9, 2. kép 7,9.

90 Berecz 2008, 190; Sáró 2020, Vol. 1, 170–171, 179–180.

91 Theodore Peña 2020, 50–60.

This habit can also be documented in Pannonia. The repair and recycling of ceramic, glass, bone, and metal objects are well attested in many cases. Not only objects of daily use but also dress accessories were repaired and recycled;[92] only a handful of examples of this practice are mentioned here. Metal vessels were regularly repaired: holes were patched, and missing parts were replaced. Based on a PhD dissertation on bronze workshops in the Roman period in Pannonia, repaired vessels have been found at Intercisa, Keszthely-Fenékpuszta, Nagyberki-Szalacska, and Savaria.[93] Broken and missing parts of brooches and jewellery items were often repaired. A workshop that repaired brooches is thought to have operated in Aquincum,[94] while repaired jewellery has been published from, for example, Brigetio (brooches)[95] and Aquincum (a gold necklace).[96] Simple objects used on a daily basis were also repaired; for example, the broken or missing rivets of combs were sometimes replaced with new ones.[97]

As it was previously mentioned, an object or a material could be recycled in many ways. Various types of product were created from broken, fragmented, or useless objects. Excellent examples are gaming counters, crafted by reshaping the bases of broken glass bottles and ceramic vessels, besides examples reported from Intercisa and Brigetio,[98] numerous gaming counters made in this way were found throughout Pannonia. Another, probably less well-known, recycled object is a hair ornament: the rectangular decorative pieces were riveted onto a metal sheet and reused as casket fittings (Intercisa).[99] Finally, a simple antler pendant from Aquincum was created at home from workshop waste.[100]

Summary

In 2022, five Roman period graves were unearthed at Páty-Malomi dűlő III. The grave group is situated far from the well-known Roman period cemetery and vicus at Páty Site 13/9. Investigations concluded that the grave group is unrelated to the cemetery excavated and published earlier. It could be the burial ground of a single family; however, proving that requires further investigation. Based on a preliminary analysis of the find material, the grave group was dated to the mid-2nd century AD at the latest.

A preliminary summary of the graves was published in 2024. My future aim is a detailed analysis of the excavation site and the finds. The present paper focuses on Grave 3, a woman's burial that contained numerous dress accessories and jewellery items: two brooches (Almgren 69, Riha 7.6) and a brooch pin, several mounts, including two round mounts, a rectangular mount (~Hoss B.1.b, B.3.1.),

92 According to N. Sey, late Roman metal workshops providing repair services are known from Aquincum and Keszthely-Fenékpuszta (Sey 2013, 118–119).

93 Sey 2013, 32–33, 40, 184–187, 192–193, 204–205, 211–212, 250, Kat. 100–110, Kat. 125–131, Kat. 171, Kat. 177, Kat. 204–208, Kat. 365, 3. tábla 1,3,5.

94 Sey 2013, 40.

95 The analysis encompasses a comprehensive study of all accessible brooches from the site of Brigetio, with particular emphasis on issues related to manufacture, production techniques, and wear. Repaired pieces from the site: a knee brooch (Merczi 2012, 12, Kat. 39, 4. tábla 6), an enamelled disc brooch (Berecz 2008, Kat. C185), a bow brooch with a pelte-shaped part (unpublished, Hungarian National Museum, Budapest), and a brooch with a backward-folded foot (unpublished, Hungarian National Museum, Budapest).

96 Facsády 2009, 115, Kat. 226.

97 Bózsa 2016, Vol. 2, 87, Kat. 387.

98 Bartus *et al.* 2017, 96–97, Kat. 11–12, 15. tábla 1–2; Dévai 2024, 88, Cat. 7–8, Figs 4–5.

99 Radnóti 1957, 305, 333, Abb. 70. 41, LIV.1.

100 T. Bíró *et al.* 2012, 79, Kat. 15.

a baluster-shaped mount (Garbsch R2), a boat-shaped mount (Sáró Ka1), and an openwork mount (Garbsch B4a or B4d), a single silver open-hoop earring, six beads (Riha 11.1.1, Riha 11.1.4, Riha 11.8, Riha 11.24, Guido Fig. 37.4, Guido Fig. 37.5), and small pieces of sheet metal and wire.

The relative positions of all objects were carefully documented during excavation, making possible a complex evaluation, which revealed that only some of the dress accessories and jewellery items formed part of the mortuary clothing, while others were personal belongings. Elements of attire include the Almgren 69-type strongly profiled brooch and, supposedly, another brooch, both of which were probably pinned to the garment on the shoulders. The silver earring was found next to the right side of the skull, and it was presumably worn in the right earlobe. Further objects were found on the left side of the chest. Of these, the beads formed part of the same jewellery item, a necklace or bracelet, while the various types of copper-alloy mounts and a wheel brooch decorated a belt. The belt was the most interesting find in this grave, not only because of the typological diversity of the mounts in the belt set, but also because of the inclusion of the wheel brooch, which is particularly noteworthy. The wheel brooch was likely recycled and reused as part of the belt, which was probably used for a long period. During its use-life, use-related damage was repaired, and the missing parts were replaced with whatever was at hand.

Funding

This paper was supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences (Grant BO/0083/23/2).

Acknowledgements

I am grateful to Anikó Bózsa (Ferenczy Museum Centre, Szentendre), who participated in the fieldwork and the preliminary processing of the artefacts, and contributed useful observations to the analysis. I also thank the Ferenczy Museum Center for the opportunity to conduct this research.

Conflict of interest

The author declares no competing financial or non-financial interests regarding the research, authorship, or publication of this article.

Sources

Artefacts: https://artefacts.mom.fr/en/home.php (last accessed: 12 May 2026).

References

Almgren, O. 1923: *Studien über nordeuropäische Fibelformen der ersten nachchristlichen Jahrhunderte mit Berücksichtigung der provinzialrömischen und südrussischen Formen.* Leipzig.

Bartus, D. – Borhy, L. – Delbó, G. – Dévai, K. – Juhász, L. – Hajdu, B. – Kis, Z. – Nagy, A. – Sáró, Cs. – Sey, N. – Számadó, E. 2017: Jelentés a Komárom-Szőny, Vásártéren 2015-ben folytatott régészeti feltárás eredményeiről (Report on the excavations in the civil town of Komárom-Szőny, Vásártér (Brigetio) on 2015). *Kuny Domokos Múzeum Közleményei* 23, 83–153.

Berecz, Vida Tivadarné, K. 2008: *Aucissa és emailos fibulák Pannoniában és a szomszédos Barbaricumban (Aucissa and enamelled brooches in Pannonia and neighbouring Barbaricum).* PhD Dissertation, ELTE Eötvös Loránd University, Budapest.

T. Bíró, M. – Choyke, A. M. – Vass, L. – Vecsey, Á. 2012: *Aquincumi csonttárgyak – Bone objects in Aquincum.* Budapest.

Boelicke, U. 2002: *Die Fibeln aus dem Areal der Colonia Ulpia Traiana.* Xantener Berichte 10. Mainz.

Born, H. 1975: Material und Herstellungstechnik antiker Melonenperlen. *Jahrbuch des Römisch-Germanischen Zentralmuseums* 22.2, 134–140.

Bózsa, A. 2016: *A szépségápolás tárgyi emlékanyaga Pannonia Magyarországra eső részén (Instruments of beauty care from the Hungarian part of Pannonia).* PhD Dissertation, ELTE Eötvös Loránd University, Budapest.

Cociş, S. 2004: *Fibulele din Dacia Romană – The brooches from Roman Dacia.* Cluj-Napoca.

Dévai, K. 2024: Roman glass counters from Intercisa. In: Csirke, O. (Ed.): *"afelé kell hajolnod, amerre tehetséged ereje vonz". Tanulmánykötet Palágyi Sylvia 80. születésnapja alkalmából – "you must lean towards where the power of your talent draws you". Studies for Sylvia Palágyi on her 80th birthday.* Veszprém, 83–94.

Dévai, K. 2025: *Üvegleletek a savariai Iseumból – Glass finds from the Iseum in Savaria.* Sistrum C.3. Szombathely.

Ettlinger, E. 1973: *Die römischen Fibeln in der Schweiz.* Bern.

Facsády, R., A. 2009: *Aquincumi ékszerek – Jewellery in Aquincum.* Budapest.

Feugère, M. 1985: *Les fibules en Gaule Méridionale de la conquête à la fin du Ve s. ap. J.-C.* Revue Archéologique de Narbonnaise Supplément 12. Paris. https://doi.org/10.3406/ran.1985.1668

Feugère, M. 1992: Les perles de type Kempten en Gaule méridionale. *Archéologie en Languedoc* 16, 146–148.

Garbsch, J. 1965: *Die norisch-pannonische Frauentracht im 1. und 2. Jahrhundert.* Münchner Beiträge zur Vor- und Frühgeschichte 11. Munich.

Garbsch, J. 1974: Ein Flügelfibelfragment vom Lorenzberg bei Epfach. Bemerkungen zu Fibeln der Frauentracht von Raetien und Iuvavum. In: Kossak, G. – Ulbert, G. (eds): *Studien zur vor- und frühgeschichtlichen Archäologie. Festschrift für Joachim Werner zum 65. Geburtstag.* Münchner Beiträge zur Vor- und Frühgeschichte, Ergänzungsband, 1.1. München, 163–183.

Gaspar, N. 2007: *Die keltischen und gallo-römischen Fibeln vom Titelberg. Les fibules gauloises et gallo-romaines du Titelberg.* Dossiers d'Archéologie du Musée National d'Histoire et d'Art 11. Luxembourg.

Groh, S. – Sedlmayer, H. 2002: *Forschungen im Kastell Mautern-Favianis. Die Grabungen der Jahre 1996 und 1997.* Der römische Limes in Österreich 42. Wien.

Guido, M. 1978: *The glass beads of the Prehistoric and Roman periods in Britain and Ireland.* Reports of the Research Committee of the Society of Antiquaries of London 35. London. https://doi.org/10.26530/20.500.12657/50812

Haevernick, T. E. 1972: Nadelköpfe von Kempten. *Germania* 50, 136–148. https://doi.org/10.11588/ger.1972.100448

Hamat, A. C. – Georgescu, Ş. V. 2022: Serpentiform rings from the Roman period in Romanian Collections. In: Mustaţă, S. – Lăzărescu, V. A. – Bârcă, V. – Rusu-Bolindeţ, V. – Matei, D. (eds): *FABER. Studies in Honour of Sorin Cociş at his 65th Anniversary.* Bibliotheca Ephemeris Napocensis 10. Cluj-Napoca, 559–587.

Hattatt, R. 2000: *A visual Catalogue of Richard Hattatt's Ancient brooches.* Oxford. https://doi.org/10.2307/j.ctvh1drxn

Hinker, C. 2017: Die norisch-pannonische Frauentracht im Spiegel der Kleinfunde aus dem Stadtterritorium von Flavia Solva. Ein Addendum zur Monografie von Jochen Garbsch unter besonderer Berücksichtigung der Neufunde seit 1965. *Jahreshefte des Österreichischen Archäologischen Institutes in Wien* 86, 33–105.

Hoss, S. 2014: *Cingulum Militare: Studien zum römischen Soldatengürtel des 1. bis 3. Jh. n. Chr.* PhD Dissertation, Leiden University, Faculty of Archaeology, Leiden.

Höpken, C. 2003: Herstellung quarzkeramischer Melonenperlen im römischen Flottenlager Köln Alteburg. Terminologie – Technologie – Befund. In: Liesen, B. – Brandl, U. (eds): *Römische Keramik: Herstellung und Handel. Kolloquium Xanten, 15.–17.6.2000.* Xantener Berichte. Grabung – Forschung – Präsentation 13. Mainz am Rhein, 353–363.

Istenič, J. 1999: *Poetovio, zahodna grobišča I. Grobne celote iz Deželnega muzeja Joanneuma v Gradcu. Poetovio, the western cemeteries I. Grave-Groups in the Landesmuseum Joanneum, Graz.* Katalogi in monografije 32. Ljubljana.

Johns, C. 1996: *The jewellery of Roman Britain. Celtic and Classical traditions.* Ann Arbor.

Košćević, R. 1991: *Antička bronca Siska. Umjetničko-obrtna metalna produkcija iz razdoblja Rimskog carstva.* Zagreb.

Lányi, V. 1972: Die spätantiken Gräberfelder von Pannonien. *Acta Archaeologica Academiae Scientiarum Hungaricae* 24, 53–213.

Mackreth, D. F. 2011: *Brooches in Late Iron Age and Roman Britain.* Oxford. https://doi.org/10.2307/j.ctvh1dv2x

Martin-Kilcher, M. – Martin-Kilcher, S. 1979: *Schmuck und Tracht zur Römerzeit.* Augster Blätter zur Römerzeit 2. Augst.

Mazur, A. 1998: Les fibules romaines d'Avenches I. *Bulletin de l'association Pro Aventico* 40, 5–104.

Merczi, M. 2012: A Budaörs-Kamaraerdei-dűlőben feltárt római vicus fibulái (Die Fibeln des römischen Vicus in Budaörs-Kamaraerdei-dűlő). In: Ottományi, K. (ed.): *Római vicus Budaörsön. Régészeti tanulmányok.* Budapest, 455–528.

Merczi, M. 2017: Római kori fibulák Perbálról és Zsámbékról (Roman fibulae from Perbál and Zsámbék). *Studia Comitatensia* 35, 71–119.

Milovanović, B. 2003: Earrings – Symbol of Feminity of Roman Ladies of Viminacium. In: Novotná, M. – Dufková, M. – Kuzmová, K. – Hnila, P. (eds): *Proceedings of the international conference: Schmuck und Tracht der Antike im Laufe der Zeit (Seit der Bronzezeit bis zur Spätantik). Ancient jewellery and costume in course of time (From the Bronze Age to the Late Antiquity). Modra-Harmónia, 19–22.11.2003.* ANODOS. Studies of the Ancient World 3. Trnava, 131–143.

Ottományi, K. 2007: A pályi római telep újabb kutatási eredményei (Die neuen Forschungsergebnisse der römischen Siedlung von Páty). *Studia Comitatensia* 30, 7–238.

Ottományi, K. 2019: *A pályi temető római sírjai (Malom-dűlő) – Die römische Bestattungen im Gräberfeld von Páty.* Szentendre.

Perok, N. 2012: *Rimske zlatne naušnice iz Arheološkog muzeja u Zagrebu – Roman gold earrings from the Archaeological Museum in Zagreb.* Zagreb.

Philippe, J. 1999: *Les fibules de Seine-et-Marne du 1er siècle av. J.-C. au 5e siècle ap. J.-C.* Mémoire archéologiques de Seine-et-Marne 1. Nemours.

Popović, I. (ed.) 1994: *Antique silver from Serbia.* Belgrade.

Popović, I. – Borić-Brešković, B. 1994: *The Bare hoard.* Archaeological Institute Belgrade Monographies 8. Belgrade.

Radnóti, A. 1957: Möbel- und Kästchenbeschläge, Schlösser und Schlüssel. In: Alföldi, R. M. – Barkóczi, L. – Fitz, J. – Sz. Póczy, K. – Radnóti, A. – Salamon, Á. – Sági, K. – Szilágyi, J. – B. Vágó, E. (eds): *Intercisa II. (Dunapentele). Geschichte der Stadt in der Römerzeit.* Budapest, 241–363.

Riha, E. 1979: *Die römischen Fibeln aus Augst und Kaiseraugst.* Forschungen in Augst 3. Augst.

Riha, E. 1990: *Der römische Schmuck aus Augst und Kaiseraugst.* Forschungen in Augst 10. Augst.

Riha, E. 1994: *Die römischen Fibeln aus Augst und Kaiseraugst. Die Neufunde seit 1975.* Forschungen in Augst 18. Augst.

Rothe, U. 2012: Clothing in the Middle Danube provinces. The garments, their origins, and their distribution. *Jahreshefte des Österreichischen Archäologischen Instituts* 81, 137–231.

Ruseva-Slokoska, L. 1991: *Roman jewellery. A collection of the National Archaeological Museum – Sofia.* Sofia.

Sáró, Cs. 2020: *Hagyományőrzés és romanizáció az eraviscus viselet tükrében (Tradition and romanization by the dress of the Eraviscus tribe).* PhD Dissertation, ELTE Eötvös Loránd University, Budapest.

Sáró, Cs. 2022a: Norico-Pannonian belt accessories from North-Eastern Pannonia. In: Budai Balogh, T. – Láng, O. – Vámos, P. (eds): *Aquincum aeternum. Studia in honorem Paula Zsidi.* Aquincum Nostrum II.9. Budapest, 289–309.

Sáró, Cs. 2022b: Római kori fibulák az Aquincum/Budapest-Graphisoft Park területén végzett feltárások anyagából (Roman fibulae from the cemetery of the Civil Town in Aquincum/Budapest-Graphisoft Park). *Archaeologiai Értesítő* 147, 155–186. https://doi.org/10.1556/0208.2022.00033

Sáró, Cs. – Bózsa, A. – Gátfalvi-Delbó, G. 2024: Előzetes beszámoló a Páty-Malomi-dűlő III. lelőhelyen feltárt római kori sírcsoportról (Preliminary report on the group of Roman graves found at the Páty-Malomi-dűlő III excavation site). *Studia Comitatensia* 42, 144–159.

Sedlmayer, H. 2009: *Die Fibeln vom Magdalensberg.* Archäologische Forschungen zu den Grabungen auf dem Magdalensberg 16. Klagenfurt am Wörthersee.

Sey, N. 2013: *A pannoniai római kori bronzművesség műhelykérdései (Issues of the bronze working workshops in the Roman Age in Pannonia).* PhD Dissertation, ELTE Eötvös Loránd University, Budapest.

Tempelmann-Maczyńska, M. 1985: *Die Perlen der römischen Kaiserzeit und der frühen Phase der Völkerwanderungszeit im mitteleuropäischen Barbaricum.* Römisch-Germanische Forschungen 43. Mainz.

Theodore Peña, J. 2020: Recycling in the Roman World. Concept, Questions, Materials, and Organization. In: Duckworth, N. C. – Wilson, A. (eds): *Recycling and reuse in the Roman economy.* Oxford, 9–58. https://doi.org/10.1093/oso/9780198860846.003.0002

van der Sleen, W. G. N. 1973: *A handbook on beads.* Liège.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 483–523. 10.17204/dissarch.suppl.5.2026.483

Bohemia and Moravia in the Migration Period — Contacts reflected through glass vessels

A preliminary report on form groups

In honour of Jaroslav Tejral (1933–2024)

Hedvika Sedláčková ✉
The Museum of Decorative Arts Prague, Prague, Czech Republic
Hedvika.glass@seznam.cz

Dana Rohanová
Department of Glass and Ceramics, University of Chemistry and Technology Prague, Czech Republic
dana.rohanova@vscht.cz

Pavel Fojtík
Institute of Archaeological Heritage Brno, v.v.i., workplace Prostějov, Prostějov, Czech Republic; Department of Archaeology, Faculty of Arts, Charles University, Prague, Czech Republic
fojtik@uapp.cz

Miroslav Popelka
Institute of Archaeological Heritage Brno, v.v.i., Brno-Husovice, Czech Republic
popelka@uapp.cz

Jaroslav Peška
Archaeological Centre Olomouc, Olomouc, Czech Republic
peska@ac-olomouc.cz

Received 9 December 2025 | Accepted 19 October 2026 | Published 18 November 2026

Abstract: This contribution presents a comprehensive overview of glass vessels—most of them from graves dating to the 5th and 6th centuries AD—found at 29 sites in what is now Bohemia and Moravia. Some were recovered between the 1870s and 1945, while others come from post-war excavations, especially those conducted after 2000. Some of the material is already published ('old finds', Slatiňany, Vlíněves, and Praha-Zličín), but there are also unpublished vessels (Držovice, Vrchoslavice, and Všetuly). The finds are discussed in groups of rounded forms and cone beakers, each represented by several variants and evaluated in the context of other sites. An integral part of the study is the analysis of the composition of 26 natron-glass vessels, in some cases with the deliberate addition of raw materials containing Fe and Mn to obtain a desired yellow-green or green hue. By comparing the results with published data, it is possible to estimate their areas of origin. It is also noteworthy that their chemical compositions consistently show slight differences, indicating production at various locations in the Middle East. This study provides evidence for incorporating this lesser-known component of material culture into the broader picture of the Migration Period.

Keywords: Migration Period, glass vessels, forms, Bohemia, Moravia, chemical analyses

✉ Corresponding author

Introduction

The first two authors of this article have been systematically engaged for many years in the study and evaluation of archaeological glass finds from the Middle Ages and the Renaissance, Baroque and later periods, particularly from Moravia, Bohemia, Poland,[1] Austria and Slovakia.[2] They have also studied glass from the earlier Great Moravian Period.[3] Owing to their long-standing friendship with Jaroslav Tejral, they have also studied glass from princely tombs in Blučina and Žuráň,[4] and more recently from Roman urn graves in Třebusice in Bohemia.[5] Their recently published monograph is devoted to the collection of ancient glass in the Museum of Decorative Arts in Prague.[6] The other three authors are researchers specialising in prehistoric cultures and have provided unpublished finds and related information.

The authors returned to the vessels from the Migration Period at the request of Jan Jílek in connection with his preparation of a comprehensive study assessing the finds from two skeletal graves uncovered near Slatiňany, Chrudim District in central Bohemia.[7]

Current state of research into glass vessels in Bohemia and Moravia

Bohemia

When preparing an article on the vessels from Slatiňany, we familiarised ourselves with other vessel finds from Bohemia (Fig. 1.1–17). It was surprising to discover that the last overview and evaluation of this part of the Migration Period material culture was published in Bedřich Svoboda's monograph.[8] It lists finds from approximately 1870 to 1945; Svoboda divided them into two time periods, the earlier ('Vinařice') phase and the later ('Merovingian' culture). At that time, he included 62 sites in the Vinařice phase[9] and as many as 86 sites, mostly with graves and fewer with settlements, in the 'Merovingian' culture.[10] According to this list, glass vessels were found in graves at twelve sites of the Vinařice culture and at only three sites of the 'Merovingian' culture.

Finds of glass vessels were known in 1965 (in alphabetical order) from

- Čertova ruka, a hillfort near Mašov in Semily District: a rare find, fragments of two vessels, Vinařice phase (Fig. 1.1, Fig. 2, Fig. 4.1/1, Fig. 7.1/2a–c);[11]
- Kolín-Gasworks, Grave 4/1942, an inhumation burial: cone beaker/lamp found beside the head, Vinařice phase (Fig. 1.2, Fig. 3.2/3);[12]
- Měcholupy near Žatec, Louny District, inhumation grave of a woman, discovered around 1930: a semi-ovoid beaker and a golden *solidus* of Emperor Constantin III (407–411), minted in Trier, Vinařice phase (Fig. 1.4, Fig. 2.4/11);[13]

1 E.g., Sedláčková 2006; Sedláčková *et al.* 2016; Sedláčková 2018; Sedláčková 2019; Rohanová *et al.* 2024 and numerous articles in professional journals.

2 E.g., Sedláčková *et al.* 2014; Sedláčková *et al.* 2016.

3 Galuška *et al.* 2012; Sedláčková – Rohanová 2020.

4 Sedláčková 2016.

5 Sedláčková – Rohanová 2024.

6 Sedláčková 2024.

7 Jílek *et al.* 2025, 287–352.

8 Svoboda 1965, 109–112.

9 Svoboda 1965, 298–299, Fig. 78.

10 Svoboda 1965, 300–301, Fig. 79.

11 Filip 1947, 227, Tab. 46.1–13; Svoboda 1965, 299, no. 25 (Mašov); Turnov Museum, Inv. nos A 2294–A 2299.

12 Svoboda 1965, 248, 249, 299, no. 19, Tab. 38.1; Kolín Museum, Inv. no. A 14 543.

13 Svoboda 1965, 299, no. 26, Tab. 28.6; Droberjar 2008, 188, Fig. 109.1; Žatec Museum, Inv. no. 2270.

- Praha-Bubny: a bowl with white arcs, now missing; 'Merovingian' culture (Fig. 1.5);[14]
- Praha-Kobylisy (Fig. 1.6): inhumation Grave III/1932: a semi-ovoid beaker (Fig. 2.6/13),[15] inhumation Grave IV/1932: a complete Kempston-type beaker, and Grave I: a Kempston-type beaker fragment, Vinařice phase (Fig. 4.6/14–15);[16]
- Praha-Podbaba, saved from disturbed graves at the end of the 19th century: a cone beaker and a ribbed bottle attributed to the Vinařice phase (Fig. 1.7, Fig. 3.7/16, Fig. 8.7/17);[17]
- Praha-Veleslavín, brickyard at the Bank of Vienna, inhumation grave found in 1915: Kempston-type beaker; only a photo has survived (Fig. 1.8, Fig. 4.8/18);[18]

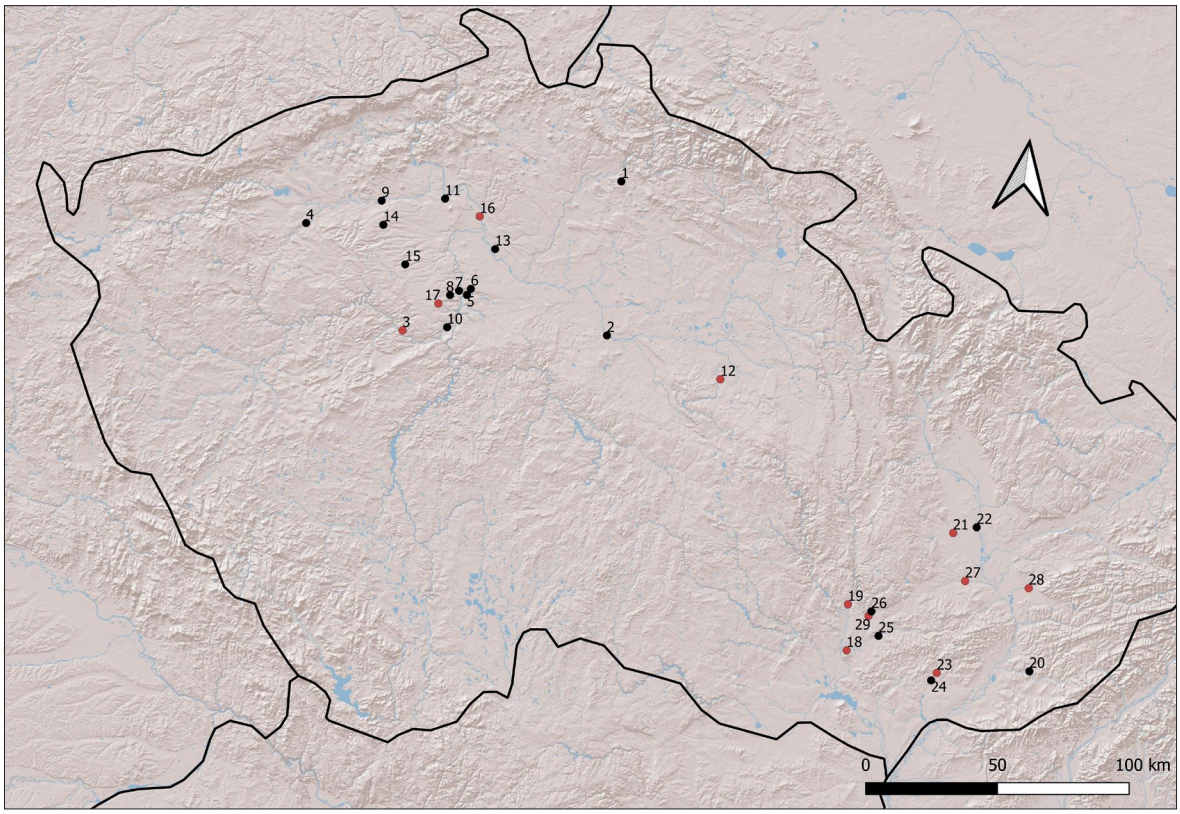


Fig. 1. Map showing the locations of sites yielding glass vessels from the Migration Period in Bohemia and Moravia (prepared by Jan Musil). Black dots represent finds dated to before 1945, red dots represent finds up to 2024. 1 – Čertova ruka hillfort near Mašov, k. ú. Karlovice, Semily District, 2 – Kolín-Gasworks, 3 – Kozel hillfort near Hostim, Beroun District, 4 – Měcholupy near Žatec, Louny District, 5 – Praha-Holešovice, Bubny, 6 – Praha-Kobylisy, 7 – Praha-Podbaba, 8 – Praha–Veleslavín, 9 – Radonice n. Ohří, Louny District, 10 – Radotín, Praha-západ, 11 – Roudnice n. L. – Hracholusky, Litoměřice District, 12 – Slatiňany Chrudim District, 13 – Tišice, Mělník District, 14 – Úherce, Louny District, 15 – Vinařice, Kladno District, 16 – Vlíněves, Mělník District, 17 – Praha-Zličín, 18 – Blučina, Cézavy near Blučina, Brno-venkov District, 19 – Brno-Černá Pole, 20 – Drslavice, Uherské Hradiště District, 21 – Držovice, Prostějov District, 22 – Charváty, Olomouc District, 23 – Kyjov, Hodonín District, 24 – Mistřín, Svatobořice-Mistřín, Hodonín District, 25 – Šaratice, Vyškov District, 26 – Velatice, Brno-venkov District, 27 – Vrchoslavice, Prostějov District, 28 – Všetuly, Holešov-Všetuly, Kroměříž District, 29 – Žuráň, near Podolí, Brno-venkov District.

14 Svoboda 1965, 259, 300, 301, no. 51.

15 Svoboda 1965, 299, no. 39, Tab. 27.7. National Museum Praha, Inv. no. 43 936.

16 Grave IV/1932: Svoboda 1965, 299, no. 39, Tab. 27.6; Droberjar 2008, 188, Fig. 109.7; Jiřík *et al.* 2015, 187 above; National Museum Praha, Inv. no. 43 935; Grave I: Svoboda 1965, Tab. 28.3, missing.

17 Svoboda 1965, 299, no. 42, Tab. 28.5, 10; Droberjar 2008, 188, Fig. 109.10; Jiřík *et al.* 2015, 187, below rights; National Museum Praha, Inv. no. H1-508 320 and missing.

18 Svoboda 1965, 299, no. 43, Tab. 28.11; destroyed.

- Radonice nad Ohří, Louny District, inhumation graves: beakers or lamps (missing) (Fig. 1.9, Fig. 5.9/19);[19]
- Radotín, Praha-Západ (West) (today Praha), Grave 1/1924: beaker fragments (missing), an aureus of Emperor Arkadius (AD 395–408); Grave 3/1924: a complete semi-ovoid beaker, Vinařice phase (Fig. 1.10, Fig. 2.10/20);[20]
- Roudnice nad Labem – Hracholusky, Litoměřice District, disturbed graves: vessel fragments (decayed), 'Merovingian' culture (Fig. 1.11);[21]
- Tišice, Mělník District, inhumation grave from 1912: a Snartemo beaker, Vinařice phase (Fig. 1.13, Fig. 4.13/25);[22]
- Úherce, Louny District, inhumation grave: an indented bowl, Vinařice phase (Fig. 1.14, Fig. 7.14/26);[23]
- Vinařice, Kladno District, inhumation graves discovered about 1870: a semi-ovoid beaker, a lamp, and a decorated bowl, Vinařice phase (Fig. 1.15, Fig. 2.15/28, Fig. 5.15/27, Fig. 7.15/29).[24]

The Migration Period in Bohemia began only at the start of the 5th century AD with the Vinařice phase, which ended sometime in the last decades of century and was followed by the 'Merovingian' culture that lasted until the mid-6th century AD.[25]

New finds appeared in Bohemia after 2000, i.e. many decades—almost half a century—later. The first published examples resulted from research conducted at an inhumation burial ground in Vlíněves near Mělník in central Bohemia. At the burial ground, uncovered in 2007 and dated to the earlier Vinařice phase, 21 inhumation graves containing 22 individuals were unearthed, of which three contained glass vessels (Fig. 1.16). One vessel, interpreted as a lamp, was found above the head in Grave 188 (Fig. 5.16/30 – A4[26]);[27] the second, a beaker, was placed in a niche above the head in Grave 195 (Fig. 3.16/31 – A3);[28] the last one, likewise a beaker, has not yet been published (Fig. 3.16/32).

An extensive burial ground with 197 graves from the 5th and 6th centuries AD was excavated in 2005–2006 in Zličín in the western part of present-day Praha; 18 glass vessels were recovered from the graves (Fig. 1.17).

A comprehensive publication, with contributions from several authors, presented the research results and their significance for the study of this period in the Barbarian era to the general public. The groups of finds assessed also included glass vessels.[29] In the monograph, which comprehensively covers all aspects of the Praha-Zličín burial ground, Jaroslav Jiřík also included a chapter on glass vessels, assessing

19 Svoboda 1965, 299, no. 47, Tab. 28.7; Maul 2002, Vol. II, Taf. 72.4.

20 Svoboda 1965, 299, no. 48, Tab. 32.14.

21 Svoboda 1965, 301, no. 65.

22 Svoboda 1965, 299, no. 55, Tab. 28.9, Jiřík *et al.* 2015, 188; Tejral 2016, 105 and 107, Fig. 1. National Museum Praha, Inv. no. H1-524700.

23 Svoboda 1965, 299, no. 57, Tab. 31.17; Droberjar 2008, 188, Fig. 109.2. National Museum Praha, Inv. no. 50 796.

24 Svoboda 1965, 299, no. 59, Tab, 28.1,8; Droberjar 2008, 188, Fig. 109.4,6; Jiřík *et al.* 2015, 144; Tejral 2016, 105, 107, Fig. 1. National Museum Praha, Inv. nos H1-50 754, H1 50 755 and H1 50 756.

25 Svoboda 1965, 219–220.

26 The 'A+number' following each image reference is the test number of the sample taken from the object; detailed information on these samples is provided in Tab. 1.

27 Limbursky *et al.* 2010, 127, 144, Photo 14.4.

28 Limbursky *et al.* 2010, 134, 135, 144, Fig. 25.3, Foto 14.3.

29 Jiřík *et al.* 2015, 24–33.

vessels from individual graves in a broader chronological and cultural context.[30] He created his own categories, which are difficult to compare with the scheme presented below; we therefore do not use them.

After the aforementioned publications, beakers of several variants were identified in Graves 15, 31, 76, 89, and 91; in Graves 76 and 91, the vessel was placed in a niche above the head of the deceased[31] (Fig. 2.17/34, 35 – A5, 39, 42, and 44). Cone beakers, both plain ones and those with applied decoration, were found in niches above the head in Graves 37, 78, 94, 129, and 157 (Fig. 3.17/36, 40 – A6, 46 – A7, 47, 50).[32] Only one Snartemo beaker was discovered in a niche, namely in Grave 87 (Fig. 4.17/41).[33]

In Graves 10, 49, and 93, vessels found in the niches are presumed to have served as lamps (Fig. 5.17/33, 37, 45).[34] The spectrum of vessel forms from Zličín is completed by bottles from Graves 70, 90, 143, and 144, all of which were placed in niches (Fig. 8.17/38, 43 – A8, 48 – A9, 49).[35]

The latest discovery, in 2018, was that of the aforementioned graves near Slatiňany, dating to the late 5th century AD. An archaeology enthusiast accidentally unearthed an unexpected find at the hillfort of Kozel near Beroun in central Bohemia in 2022. The 'treasure' comprised seven vessels, two complete and five fragmentary, six of which had been inserted into the seventh. This unique find has so far only been presented on Czech Television;[36] for completeness, it was included in the list (Fig. 1.3).[37] The assemblage consists of two Snartemo-type conical beakers, lamp/beakers, and a small bottle (Fig. 4.3/4, 5, Fig. 5.3/6, Fig. 8.3/7) dated to the 5th century AD, most likely to its beginning. At this point, further vessels could not be identified.

Moravia

At the end of the Second World War, only a few inhumation graves with glass vessels were known in Moravia (Fig. 1.18–29). The first was discovered in 1926 near Charváty, Olomouc District, and contained a semi-ovoid beaker and a gold necklace (Fig. 1.22, Fig. 2.22/57).[38] A year later, another grave was found near Mistřín, Hodonín District; it contained unidentified glass fragments, which went missing since (Fig. 1.24).[39] Yet another burial, containing a beaker, was found at Drslavice near Uherské Hradiště in 1934 (Fig. 1.20, Fig. 2.20/55 – A24);[40] an Grave 10 in Velatice, an inhumation burial containing a cone beaker was uncovered in 1936, but also went missing (Fig. 1.26);[41] and a

30 Jiřík 2019, text, 3.11, *Skleněné nádoby*, 139–150.

31 Grave 15: Jiřík *et al.* 2015, 189; Jiřík 2019, Catalogue, Tab. 4.1. Grave 31: Jiřík 2019, Catalogue, Tab. 7.5. Grave 76: Jiřík *et al.* 2015, 190; Jiřík 2019, Catalogue, Tab. 15.6. Grave 89: Jiřík 2019, Catalogue, Tab. 17.14. Grave 91: Jiřík 2019, Catalogue, Tab. 17.13.

32 Grave 37: Jiřík *et al.* 2015, 201 above; Jiřík 2019, Catalogue, Tab. 8.2. Grave 78: Jiřík *et al.* 2015, 191, top middle; Jiřík 2019, Catalogue, Tab. 15.7. Grave 94: Jiřík *et al.* 2015, 144 centre; Jiřík 2019, Catalogue, Tab. 18.1. Grave 129: Jiřík *et al.* 2015, 191 top right; Jiřík 2019, Catalogue, Tab. 26.1. Grave 157: Jiřík *et al.* 2015, 86 top right; Jiřík 2019, Catalogue, Tab. 32.8.

33 Jiřík *et al.* 2015, 191 top left; Jiřík 2019, Catalogue, Tab. 17.3.

34 Grave 10: Jiřík 2019, Catalogue, Tab. 3.3. Grave 49: Jiřík *et al.* 2015, 191 below; Jiřík 2019, Catalogue, Tab. 11.5. Grave 93: Jiřík *et al.* 2015, 144 below; Jiřík 2019, Catalogue, Tab. 18.1.

35 Grave 70: Jiřík *et al.* 2015, 187 below left; Jiřík 2019, Catalogue, Tab. 14.18. Grave 90: Jiřík *et al.* 2015, 202 above; Jiřík 2019, Catalogue, Tab. 17.12. Grave 143: Jiřík *et al.* 2015, 202 below; Jiřík 2019, Catalogue, Tab. 28.30. Grave 144; Jiřík *et al.* 2015, 199; Jiřík 2019, Catalogue, Tab. 29.1.

36 https://ct24.ceskatelevize (last access: 15 September 2026).

37 We thank Jan Musil from the Pardubice Museum for editing the photos of the vessels.

38 Tejral 2011, 138, Abb. 95; Loskotová 2012; VMO, Inv. no. A 9110.

39 Inhumation grave from 1927: Adamíková 2020, Cat. 50, fragments not identified, missing.

40 Tejral 2011, 137, Fig. 94; Adamíková 2020, Cat. 44. MZM Brno, Inv. no. 68 417.

41 Tejral 1982, 220, Fig. 25.2; Adamíková 2020, Cat. 98; fragments of the cone beaker are known only from drawings.

glass goblet was found in a grave in Brno-Černá Pole in 1941 (Fig. 1.19, Fig. 6.19/54 – A23).[42] After the war, a find of bottle with a spherical body from Šaratice, Vyškov District, is mentioned in 1955; the vessel was dated to the first half of the 6th century AD (Fig. 1.25).[43]

Two 'royal' graves from the Migration Period to include glass vessels are also known from Moravia. The first was excavated at Žuráň Hill near Slavkov in 1949,[44] while the second in Cézavy near Blučina in 1953.[45] The burial of a man with a sword near Blučina, dated to the second half of the 5th century AD, contained three vessels, two of which have a highly unusual flute-like shape and are accompanied by a bottle with a spherical body (bulbous flask) (Fig. 1.18). An artistic reconstruction of the burial shows that the vessels were placed at the bottom of the grave near the right foot of the buried man.[46]

A woman's grave at Žuráň Hill was professionally excavated in 1949 but published only in 1995, with marking of the location of the finds, except for the fragments of four glass vessels. The fragments with repair holes include those of a yellowish glass goblet with facets; of a second vessel, also made of yellowish glass, of which only fragments with embossed blue Greek letters have been preserved; the fragment of a blue glass bowl with cut decoration with a circus scene; and a fragment of a blue cone beaker with a cut multi-storey build-up (Fig. 1.29). It was dated to the first half of the 6th century AD.[47]

New finds come from rescue excavations conducted after 2000 in central Moravia. During the construction of a motorway in 2004, the southern part of a burial ground with 12 skeleton graves—only three of which had not been plundered—was uncovered near the village of Vrchoslavice near Kojetín, Prostějov District (Fig. 1.27). Glass vessels were preserved in three disturbed graves: the lower part of a bicolour Snartemo-type beaker was found slightly to the right behind the head in Grave H6 (Fig. 4.27/63 – A13);[48] a complete monochrome beaker of the same type stood between the grave wall and the remains of the skeleton in Grave H9 (Fig. 4.27/64 – A14);[49] and three human skulls and a beaker/lamp were placed in the upper part of Grave H7 (Fig. 5.27/62 – A15), while beneath them, at the bottom of the grave pit, the skeletal remains of an individual without a skull were found in a non-anatomical position.[50] The burial ground dates to the mid-5th century AD.[51] Information about Moravian finds up to 2020 was included in Barbora Adamíková's[52] (later Vymazalová)[53] work on glass vessels in 5th-century AD graves in the Central Danube region.

During the expansion of the Nestlé car park near Holešov, Kroměříž District, in the administrative area of the village of Všetuly, a burial ground with 12 skeletal graves was discovered in 2024 (Fig. 1.28). In ten cases, the western part of the grave, from the head to the pelvis, was disturbed shortly after burial. One undisturbed grave contained a child, another, a woman with an artificially deformed skull.[54] In four disturbed graves, glass vessels were preserved thanks to their placement: in a niche above the head. Grave 500/800 contained a body fragment of a Snartemo-type beaker

42 Tejral 1982, 199; Adamíková 2020, Cat. 14; MZM Brno, Inv. no. 107 296.
43 Svoboda 1965, 224; Tejral 1982, 218; Adamíková 2020, Cat. 92.
44 Poulík 1995; Sedláčková 2016.
45 Tihelka 1963; Sedláčková 2016.
46 Jiřík *et al.* 2015, 91.
47 Sedláčková 2016.
48 Berkovec 2006, Fig. 57; Tejral 2016, 115, Abb. 4.b; Museum Prostějov, Find no. 19/2004-806-4.
49 Berkovec 2006, Fig. 60; Tejral 2013, 386, 391; Museum Prostějov, Find no. 19/2004-809-7.
50 Berkovec 2006, Fig. 62; Museum Prostějov, Find no. 19/2004-809-7.
51 Berkovec 2006, 5.
52 Adamíková 2020.
53 Vymazalová 2025.
54 Popelka 2024, 12–13.

(Fig. 4.28/65 – A16);[55] Grave 507/807, a complete Snartemo-type beaker (Fig. 4.28/66 – A17);[56] Grave 510/810, a purple glass goblet with blue parts (foot and rim, Fig. 6.28/68 – A18);[57] and Grave 508/808, a complete small bottle (Fig. 8.28/67 – A19).[58] The burial ground dates to the 5th century AD.[59]

Držovice, Prostějov District. The burial ground, excavated between 2020 and 2024, has so far yielded almost two dozen graves, most of which were reopened ('looted'). Grave 13/2024 contained the skeleton of an adult woman, lying, unusually, supine in an irregular oval grave pit. The conspicuously compact arrangement of the bones undoubtedly indicates that the body was tightly wrapped, or rather drawn, into a burial shroud or fabric. A small gilded silver pin inlaid with almandine and possibly ivory was discovered near the left shoulder. This is a very rare but highly reliable dating object, which places the grave in the first decades of the 6th century AD. Surprisingly, a secondarily modified glass vessel fragment, perhaps serving as an ornament, amulet, or 'substitute offering', was hidden under the left arm (Fig. 11.21/56 – A12).[60] Fragments of glass vessels were found in several graves in the cemetery with 240 inhumation burials at Kyjov, Hodonín District, dating to the late Migration Period.[61]

Chemical analyses

The analyses presented in this study derive from several sources. Samples from Slatiňany, Drslavice, Brno-Černá Pole, Blučina, and Žuráň were analysed by our team at the University of Chemistry and Technology Prague (UCT Prague) and the Institute of Inorganic Chemistry of the Czech Academy of Sciences in Řež. Samples from Všetuly and Držovice were provided by Pavel Fojtík from the Institute for Archaeological Heritage in Brno, and the analyses were carried out at Palacký University Olomouc (Lukáš Kučera and Pavla Kučerová). Additional analyses were cited from published and unpublished sources: Vlíněves (A3–A4),[62] Vrchoslavice (A13–A15),[63] and Praha-Zličín (A5–A9).[64] Analyses of vessels from the Čertova ruka and Vinařice sites will be published by Jaroslav Jiřík's team.

For chemical composition analysis, SEM/EDS[65] and XRF methods were employed. For SEM/EDS, miniature samples (approximately 1 × 1 mm) were carefully removed from the glass. Another ap-

55 Popelka 2024, 17–18, Fig. 4; Museum Kroměříž, Inv. no. AU 547.

56 Popelka 2024, 23, Fig. 11; Museum Kroměříž, Inv. no. AU 562.

57 Popelka 2024, 25–26, Fig. 12; Museum Kroměříž, Inv. no. AU 564.

58 Popelka 2024, 23–24, Fig. 12; Museum Kroměříž, Inv. no. AU 569.

59 Popelka 2024, 3.

60 Unpublished information by the leading archaeologist, Pavel Fojtík. The finds are held in Museum Prostějov.

61 Šmerda 2017; we are grateful for the information provided on glass.

62 Limburský *et al.* 2010, 111–168, Tab. 9.

63 Berkovec 2006, 375–376, table of analyses (data provided by V. Hulínský).

64 Jiřík *et al.* 2015, 200, table of analyses (data provided by S. Greiff).

65 Scanning electron microscopy (SEM) was used to observe glass morphology and to identify the chemical composition of the samples using energy-dispersive spectroscopy (EDS). To minimize destruction, very small samples were taken from the edges of rings and bracelets. After cleaning the surfaces from debris and corrosion, the samples were embedded in epoxy resin in a perpendicular position. They were then sanded with SiC sandpapers (grit sizes 120, 600, and 1200) and polished on a textile wheel with diamond paste (1 μm). Analyses were performed using a Jeol JSM 6510 electron microscope equipped with an Inca EDS SSD detector (Oxford Instruments) in back-scattered electron (BSE) mode, providing chemical contrast. Measurements were carried out at an accelerating voltage of 20 kV under low vacuum (30 Pa). Each reported value represents the average of three analyses with the data normalized to 100%. Reference glasses were prepared from p.a. purity chemicals (K_2O–CaO–SiO_2 and Na_2O–CaO–SiO_2) in a molar ratio of 75 mol% SiO_2, 15 mol% CaO, and 10 mol% Na_2O or K_2O. Glasses were melted from Sigma Aldrich chemicals and clean glass sand. In addition, standards (59 metal/mineral combinations) from a certified laboratory (SPI Supplies® Brand) were used. All measurements were conducted at the Institute of Inorganic Chemistry of the Czech Academy of Sciences, 250 68 Husinec-Řež.

proach involved XRF[66] analysis, where larger, uncorroded glass samples from Kostelec na Hané (A25–A26) were available and analysed in powdered form (for reference). Other instruments and methods used are detailed in the relevant publications. Each method has inherent limitations in terms of accuracy; however, we assume that the concentrations of major elements did not significantly affect the results of the applied methods and that the observed trends are reliable. The analyses are organised in Table 1 primarily by main location (Bohemia vs Moravia) and in alphabetical order within these groups. A comprehensive evaluation is provided in chapter titled 'Chemical composition and possible origin of glasses'.

Classification of vessels by form

The comprehensive collection includes a more than seventy vessels and fragments thereof, comprising several basic types. Based on body shape, beakers could be classified into two groups, those with rounded semi-ovoid and bell-shaped bodies, respectively (Fig. 2). Another group consists of cone beakers, including several variants, such as simple beakers and beakers with an everted rim (Fig. 3), Kempston and Snartemo I and II-type beakers (Fig. 4); besides, there are lamps, including lamps/beakers (Fig. 5), goblets and bowls (Figs 6–7), and bottles (Fig. 8). A special group consists of finds from Blučina and Žuráň (flute-like bottles) (Figs 9–10).

In most cases, only the form of the vessel is assessed; lamps/beakers are an exception, since in their case, shape and function overlap.

Semi-ovoid beakers

Clasina Isings classified vessels with a semi-ovoid body and an outsplayed, often unworked rim as Type 107 (Fig. 2). However, only mould-blown vessels with relief patterns and cups with coloured blobs from the 4th century AD are listed, probably products of glasshouses in the Eastern Mediterranean.[67] Numerous undecorated vessels in Western Europe, described as bowls or beakers, provide evidence for the earliest appearance of the type at the end of the 3rd century AD, with the youngest examples from the first half of the 5th century AD, with a main concentration in the 4th century AD. Undecorated vessels also include vessels with blue glass prunts.[68] László Barkóczi created Type 37b for undecorated finds from Pannonia, dating them from the 3rd to the first half of the 5th century AD (Intercisa and Csákvár, Grave 41),[69] while for vessels with blue prunts, he created a special type (67b),[70] to which he devoted special attention (see below). In connection with his study of the Danube cultural circle, Jaroslav Tejral collected information on the presence of these hemispherical vessels, including several specimens with blue prunts, at least two dozen sites in present-day Hungary, Slovakia, and Lower Austria.[71] Based on the table summarising the coin-dated examples of both variants, they occurred from the beginning of the second half of the 4th to the first decades of the 5th century AD. Vessels from Radotín and Měcholupy are also listed.[72]

66 The analyses were carried out using an ARL 9400XP+ X-ray fluorescence spectrometer. The data were subsequently evaluated with the UNIQUANT™ software, version 4. This is a standardless, semi-quantitative analytical method that, in addition to determining the concentrations of major elements, also provides information on trace elements present in the glass. The acquired data were normalised to 100%. The measurements were performed on very finely ground, uncorroded glass. The analysis was conducted in the Central Laboratories of UCT Prague by S. Randáková.

67 Isings 1957, 133–134.

68 Isings 1957, 113–114.

69 Barkóczi 1988, 76, Nos 79–80.

70 Barkóczi 1988, 37.

71 Tejral 2011, 136, 139, 146, 147, 150, 158, 178, 231, 232, 234-237, 239, 256, 258, 266, 267, 270, 274, 276, 314.

72 Tejral 2011, 276, Abb. 210.

This brings us to finds from Bohemia, where six beakers with semi-ovoid bodies are known, one of which features blue prunts. Only one comes from Moravia, namely, Drslavice (Fig. 2.20/55 – A24). In Bohemia, one complete beaker was found in Grave III in Praha-Kobylisy (Fig. 2.6/13), while only three unverified fragments of another similar beaker have been preserved in Praha-Radotín (Fig. 2.10/20). Another specimen is known from Vinařice (Fig. 2.15/28; its analysis will be published in a forthcoming study by J. Jiřík's team), and one from Praha-Zličín, Grave 15, which was described as a thimble-shaped beaker[73] (Fig. 2.17/34). A common feature of all of them, as well as of those depicted in the aforementioned work by Jaroslav Tejral, is the form of the body, with a flat or slightly concave base. None of them bears pontil marks. Their lower parts are bowl-shaped, and their rims are outsplayed, straight-cut, and unworked. They are small, 6.5–9.1 cm tall, and were made of clear, only slightly corroded, light green glass. The finds are dated to the Vinařice period.

The beaker from Měcholupy is thin-walled, 6.5 cm tall, and made of colourless glass. It bears a series of five irregular blue glass prunts with a horizontal cut line above them[74] (Fig. 2.4/11). It was found in the 1930s in a grave containing gold jewellery decorated with precious stones, typical of the Danube region, along with a *solidus* of Emperor Constantine III (407–411), dating the beaker to the first decades of the 5th century.

L. Barkóczi divided the beakers with blue prunts from Pannonia into three groups.[75] The beaker from Měcholupy belongs to Group II, with its characteristic hemispherical body and a clearly marked, short, wide lip/mouth[76] with an unworked rim. A series of several such beakers from ancient Cherson and Pantikapaion in Crimea, dated to the mid-4th to early 5th centuries AD, provide evidence for the spread of the type to the east.[77] In the west, they occur in France: undecorated vessels with blue prunts from the Mediterranean region, found in early to mid-5th century AD contexts, were classified by Danielle Foy as Group 13a–c;[78] they also form a distinct category within the Merovingian glass typology.[79]

Bell-shaped beakers

Bell-shaped beakers resemble the previous group in overall body shape, but they have an outsplayed rim (Fig. 2). However, they differ fundamentally in technical features: the rims are thickened and sealed, and some have a pontil mark on the in-turned base, indicating they were blown. Such vessels are known primarily from Graves 31, 76, 89, and 91 in Praha-Zličín (Fig. 2.17/35, 39, 42, 44); specimens from Graves 31 and 89 were described as beakers with a distinctly bell-shaped form,[80] while a beaker of the same shape with diagonal ribs from Grave 76 was described as thimble-shaped or hemispherical.[81] Given their general shape and reinforced rims, beakers from Charváty and Praha-Zličín Grave 31 are also included in this group lacking pontil marks (Fig. 2.22/57, 17/35 – A5). Four beakers are undecorated, and one bears a bundle of two to three partially sealed threads on its curved rim (Fig. 2.17/42). The body of the above-mentioned beaker from Grave 76 is

73 Jiřík 2019, 140, thimble-shaped beaker, Tab. 4.

74 The beaker is on display at the Žatec Museum and cannot be removed from the case. Therefore, it was not possible to make drawings or examine the details. Only a work photo is available, for which we thank the museum management.

75 Barkóczi 1972, 69–74.

76 Lazar 2003, 19, Fig. 6.7.

77 Kunina 1997, 337, Cat. 419–420, 422.

78 Foy 1995, 199, 227, Pl. 9.71–79.

79 Feyeux 1995, 116–117, 133, Pl. 12.T.54.6r.

80 Jiřík 2019, 142–143, Grave 31: Tab. 7.5, Grave 89: Tab. 17.14.

81 Jiřík 2019, 145, Tab. 15.6.

covered up to the rim with shallow, spirally twisted ribs, and the rim also bears a wide bundle of horizontal threads, partially sealed into the body of the vessel (Fig. 2.17/39). It was made using the pattern-blowing technique, which spread in both the East and the West from the second half of the 4th century, as Marianne Stern notes in her commentary on a similarly decorated Mayen-type beaker of North Galician provenance, dated c. 370–410 AD.[82] This technique is documented in our region on only three vessels from Praha-Zličín: in addition to the aforementioned beaker, there is a bottle from Grave 144 (Fig. 8.17/49) and a Gellep-type cone beaker from Grave 157 (Fig. 3.17/50). They have no identical analogy.

Simple cone beakers (lamps) and cone beakers with outsplayed rims

Simple, undecorated beakers with a slightly outsplayed rim and an oval edge (Fig. 3) come from burial grounds in Kolín and Praha-Podbaba. The beaker from Kolín is made of yellowish glass and has a clear pontil mark on its base (Fig. 3.2/3, 7/17). An undecorated beaker from Vlíněves, with a more distinctly flared rim, can also be assigned to this group (Fig. 3.16/32). Clasina Isings classified the shape as Form 106, cone beakers or lamps with several variants. Our specimens correspond to Variant 106c, which has been found in burial grounds in France, Belgium, the Netherlands, and Germany, in contexts dating from the second half of the 4th to the 6th century.[83] One beaker from this group has pre-blown diagonal ribs. It is taller, slender, and has a solid, flat base and an outsplayed rim. The ribs start beneath several rows of threads at the mouth (Fig. 3.17/50). Cone beakers, referred to as the Gellep type, sometimes up to 19 cm tall, were widespread mainly along the Lower and Middle Rhine, with isolated specimens in Belgium and France. They appear in graves from the mid-5th century AD, with a larger number in its second half and late decades, while the latest examples date to the early 6th century AD.[84] The specimen in focus, the only one outside this area so far, can be safely interpreted as an import from the Rhine region.[85]

Cone beakers with outsplayed rims come from Grave 195 in Vlíněves and Graves 37, 78, 94, and 129 in Praha-Zličín. Four beakers from Zličín bear distinct decoration in the form of single or multiple arcs on the body. One beaker from Vlíněves features a bundle of fine lines below the rim (Fig. 3.16/31 – A3), while two from Praha-Zličín also have fine lines on the lower part of the body (Fig. 3.17/40 – A6, 17/46 – A7). Their bases are concave, with only one bearing a pontil mark. They are made of colourless or greenish glass, with only one deep green glass specimen, the one from Grave 129 in Praha-Zličín (Fig. 3.17/47).[86] Such beakers in Bohemia are known only from burial grounds dating to the Vinařice phase. Based on the similarity of decoration, Jaroslav Jiřík places an incomplete beaker from Grave 37 (Fig. 3.17/36) and a small bottle from Grave 90[87] (Fig. 8.17/43 – A8) in the group of vessels decorated with a relief garland. The beaker from Grave 129, made of distinctly green glass and featuring two rows of simple wavy lines, is similar to the one from Grave 78, made of colourless glass, and the beaker from Vlíněves; they are thought to be analogous to a specimen from a grave in Fürst, dating from the second third of the 5th century AD (Fig. 3.17/47, 17/40 – A6, 16/31 – A3).[88] However, the rich green colour of the glass and the simple wavy pattern of the beaker from Fürst correspond to the design of a vessel from Grave 129,[89] or possibly a lower beaker from

82 Stern 2001, 342, Cat. 31 and 190.

83 Isings 1957, 126–129.

84 Koch 1987, 83–86, Abb. 31.

85 Jiřík 2019, 149–150, Tab. 32.8.

86 Jiřík *et al.* 2015, 191 top row right.

87 Jiřík 2019, 143–144, Grave 37: Tab. 8.2, Grave 90: Tab. 17.12.

88 Jiřík 2019, 145, Tab. 26.1a, 15.7; Jiřík *et al.* 2015, 191, top row centre and right.

89 Tejral 2011, 238, Abb. 181.1, 2, 312, Abb. 240.



Fig. 2. Bell-shaped beakers. 4/11 – Měcholupy, photo Museum Žatec, 6/13 – Praha-Kobylisy, Grave III, 10/20 – Praha-Radotín, 15/28 – Vinařice, 17/34 – Praha-Zličín, Grave 15 (after Jiřík 2019, Tab. 4.1), 20/55 – Drslavice (restoration: Tereza Malínková, photo: Vít Klouček), 17/35 – Praha-Zličín, Grave 31 (after Jiřík 2019, Tab. 7.5), 17/39 – Praha-Zličín, Grave 76 (after Jiřík 2019, Tab. 15.6), 17/42 – Praha-Zličín, Grave 89 (after Jiřík 2019, Tab. 17.14), 17/44 – Praha-Zličín, Grave 91 (after Jiřík 2019, Tab. 17.13), 22/57 – Charváty (photo VM Olomouc, drawings by Hedvika Sedláčková, technical preparation by Anne-Marie Rohanová and Karolína Pánová).

Zeiselmauer[90] and one from Grave 28 in Linz-Tiefen Graben.[91] In Pannonia, L. Barkóczi classified beakers with arc decoration from Brigetio, Várdomb, and Intercisa as Group 62, a variant of the

90 Tejral 2011, 264, Abb. 199.

91 Tejral 2011, 268, Abb. 203, top row centre.

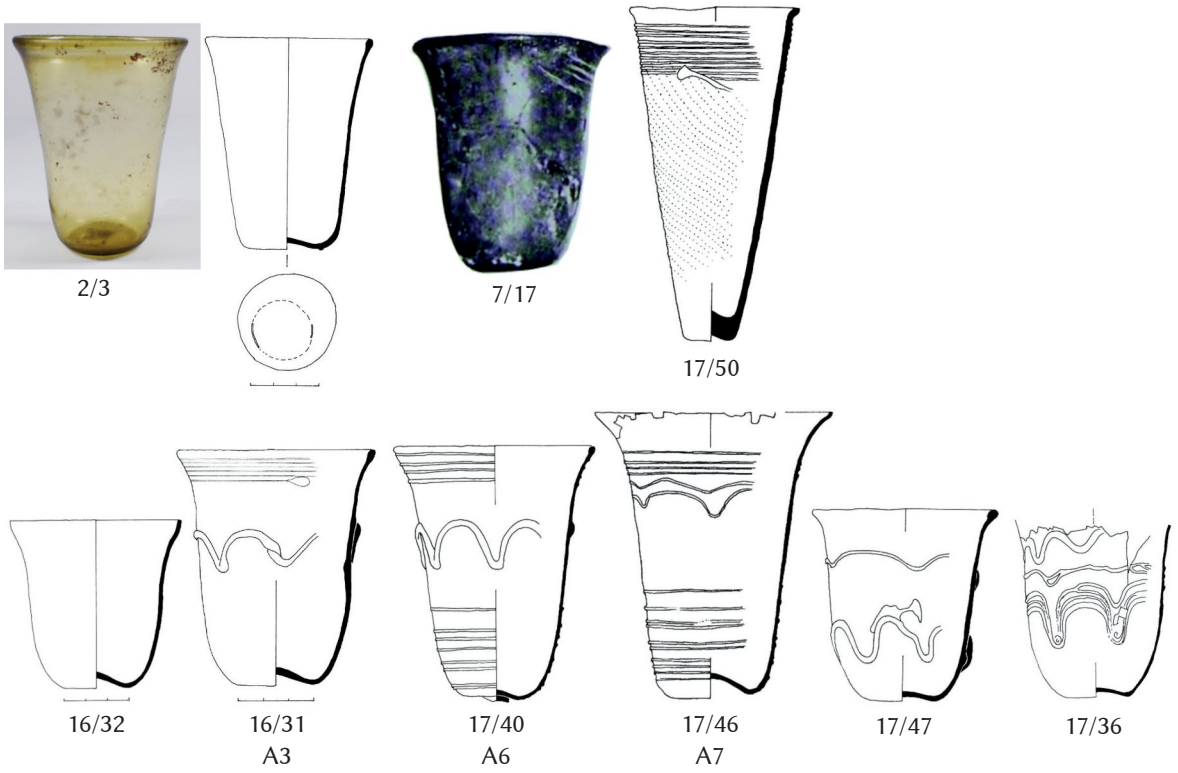


Fig. 3. Simple cone beakers (lamps) and cone beakers with outsplayed rims. 2/3 – Kolín-Gasworks (photo M. Kolín), 7/17 – Praha-Podbaba (after Svoboda 1965, Tab. 28.5), 16/32 – Vlíněves grave?, 16/31 – Vlíněves, Grave 195, 17/50 – Praha-Zličín, Grave 157 (after Jiřík 2019, Tab. 32.8), 17/40 – Praha-Zličín, Grave 37 (after Jiřík 2019, Tab. 15.7), 17/46 – Praha-Zličín, Grave 94 (after Jiřík 2019, Tab. 18.6), 17/47 – Praha-Zličín, Grave 129 (after Jiřík 2019, Tab. 26.1), 17/36 – Praha-Zličín, Grave 37 (after Jiřík 2019, Tab. 8.2) (drawings by Hedvika Sedláčková, technical preparation by Anne-Marie Rohanová and Karolína Pánová).

undecorated beakers described as Group 37b, and compiled a list of such vessels found on other sites in the province.[92] He classified white opaque glass beakers with a similar design and multiple arcs, probably from Brigetio, as Group 63. All variants are dated from the last third of the 4th century to the first decades of the 5th century AD.

Similarity extends only to the decoration, while differences can be observed in vessel shape. Such beakers in Bohemia are generally taller, conical, and have thickened, sealed rims, similar to those with arc bundles from Fürst and Brigetio. However, vessels in Barkóczi's Group 62, i.e., the beakers from Zeiselmauer and Linz, have bowl-shaped, straight-cut, unworked outsplayed rims; this variant has been assigned to the same horizon as Gellep-type beakers, indented bowls, and hemispherical undecorated beakers, including those with blue prunts.[93]

Kempston-type cone beakers

Two complete specimens and body fragments with the characteristic thread decoration (Fig. 4) have been found in graves at three sites in Bohemia. A complete beaker was recovered from Grave IV and a fragment from the upper part of the body of another from Grave I in Praha-Kobylisy (Fig. 4.6/14, 15). A complete beaker from Praha-Veleslavín was destroyed and is known only from a published photograph (Fig. 4.8/18). Bedřich Svoboda mentions finds of pottery fragments, dating

92 Barkóczi 1988, 93, Taf. 12.134,135.

93 Tejral 2011, 274, Abb. 208 with further literature.

to this period, from an uncertain settlement context in Čertova ruka hillfort near Mašov, but only Vera Evison included these fragments in her catalogue of Kempston-type beakers.[94] A reassessment of the find concluded that only one fragment could belong to such a beaker (Fig. 4.1/1), while the remaining four fragments probably originate from a bowl-shaped vessel (Fig. 7.1/2a–c). The complete beaker from Praha-Kobylisy and probably another specimen from Praha-Veleslavín belong to the tall, slender variant with a height-to-mouth diameter ratio of 3:1 (26.8:9.5 cm).[95] These elegantly shaped beakers, named after the eponymous site in eastern England, are characterised by a tall conical body with a slightly outsplayed rim and a base without a foot. They are usually made of thin-walled, mostly light green glass, but some, such as the fragment from Praha-Kobylisy Grave I, were made of brownish glass. The upper part below the rim is densely wound with fine threads, and the body has a tall wavy pattern. The beaker from Grave IV in Praha-Kobylisy features a bundle of 26–27 horizontal threads and 14 wavy lines, as well as remnants of a distinct adhesive residue and evidence of a blowpipe on its base. Altogether, 53 complete vessels of this type have been found in graves: 23 in England, 20 in Germany, two in the Netherlands, and four in France. Save for a single specimen in Denmark, there are none in Scandinavia. Two examples in Belgium were later joined by another five.[96] The list of countries where these vessels have been found indicates a distinctly West European type, presumably manufactured somewhere in what is now northern France and Belgium. Such beakers in England occur in contexts dating from the mid-5th to the mid-6th century AD and later; however, they were likely not manufactured there until after AD 525.[97] Ursula Koch assigns such vessels from German regions to the inventory dating from the second half of the 5th to the beginning of the 6th century AD.[98] Finds from Bohemia were generally dated to the same period (the end of the 5th or the beginning of the 6th century AD).[99]

Snartemo-type cone beakers

Kempston-type cone beakers found in Bohemia mark the eastern boundary of their occurrence, and the number of known specimens has not changed over the last century. However, the group of visually similar cone beakers, representing the Snartemo type (Fig. 4),[100] has grown significantly. The fundamental difference between the two types lies in their base forms. The first Snartemo-type beaker in Bohemia was found in an inhumation grave from Vinařice phase in Tišice, in 1912 (Fig. 4.13/25). The shape, unusual among the glass vessels known in Bohemia at the time, earned Bedřich Svoboda's special attention.[101] In 1987, it was still the only specimen from Bohemia and one of the ten such beakers known altogether: four were known from Germany, three from present-day Poland, and one each from France and Belgium[102] (although later, the number of specimens in Belgium grew to three).[103] However, most examples came from Scandinavia.[104] In Western Europe, this variant was clearly less common than the Kempston type.

94 Evison 1972, 63, no. 53.
95 Evison 1972, 48.
96 Whitehouse 2001, 149–151, Cat. 667.
97 Evison 1972, 62.
98 Koch 2008, 158–159, Abb. 22.3.
99 Svoboda 1965, 111.
100 Rademacher 1942.
101 Svoboda 1965, 110.
102 Koch 1987, 113, 114, Abb. 45.
103 Alenus-Lecerf 1995, 58, 71, Fig. 1.5.
104 Hunter – Sanderson 1982, 25.

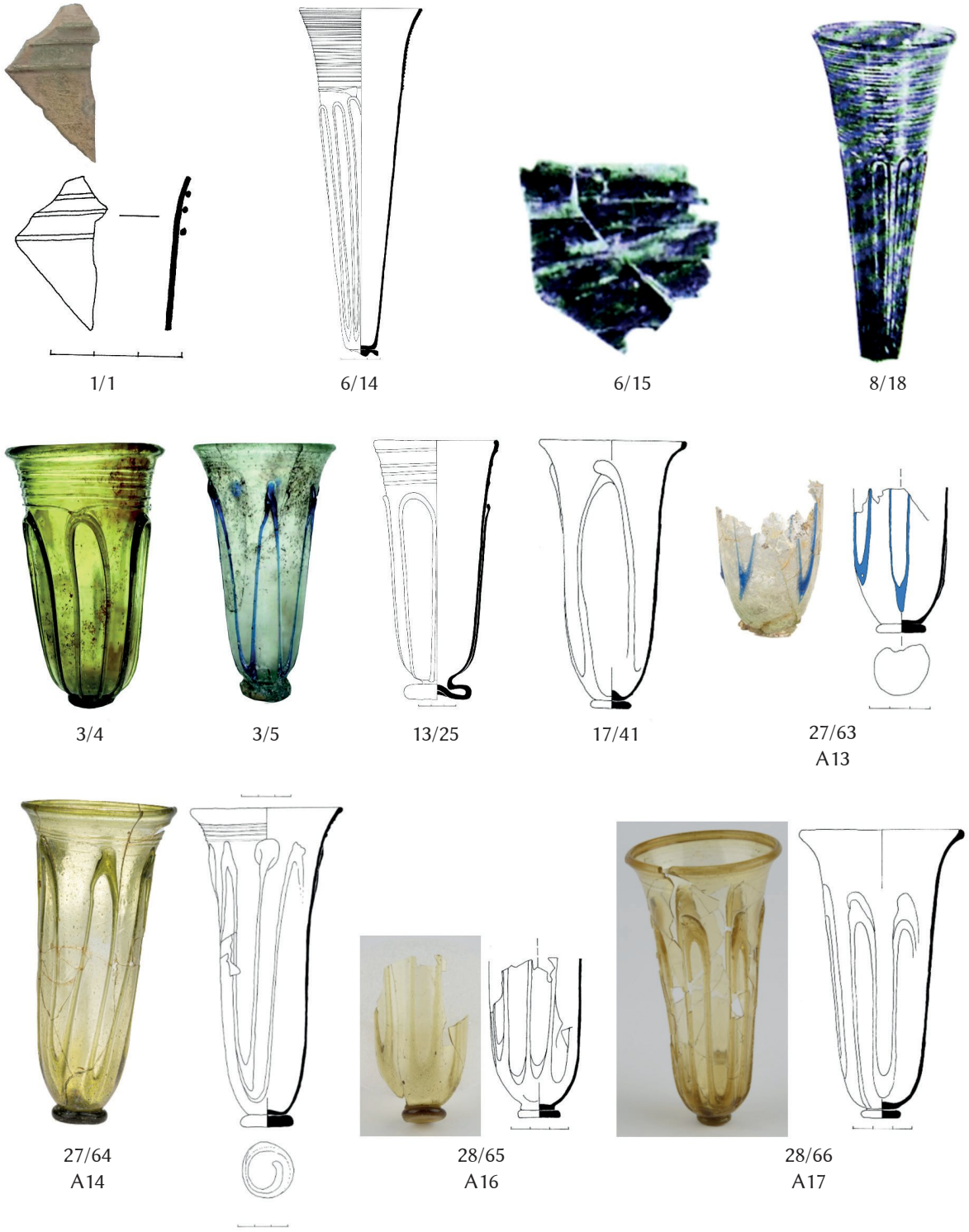


Fig. 4. Kempston and Snartemo cone beakers. 1/1 – Čertova ruka hillfort (photo: J. Prostředník, M. Turnov), 6/14 – Praha-Kobylisy, Grave IV, 6/15 – Praha-Kobylisy, Grave I, not found (after Svoboda 1965, 111, Tab. 28.3), 8/18 – Praha-Veleslavín, destroyed (after Svoboda 1965, Tab. 28.11), 3/4 and 3/5 – Kozel near Beroun, 13/25 – Tišice near Mělník, 17/41 – Praha-Zličín, Grave 87 (after Jiřík 2019, Tab. 17.3), 27/63 – Vrchoslavice, Grave 7 (unpublished), 27/64 – Vrchoslavice, Grave 9 (unpublished), 28/65 – Všetuly, Grave 500/800 (unpublished), 28/66 – Všetuly, Grave 507/807 (unpublished) (drawings by Hedvika Sedláčková, technical design by Jan Musil, Anne-Marie Rohanová, and Karolína Pánová, 1/1 photo: Jan Prostředník, 27/65 photo: Marek Gerhard, 28/ photo Andrea Šindlerová).

The beaker from Tišice allegedly lay under the head or across the neck of the deceased.[105] Almost a hundred years later, another specimen was found in Bohemia in a niche above the head in Grave 87 in Praha-Zličín (Fig. 4.17/41); it was identified as a chalice-shaped beaker of the Barshalder/Prša/Kapušany type.[106] Currently, vessels from Vrchoslavice and Všetuly in Moravia can also be assigned to this group. Further study of the subject should seek to explain the occurrence of identical vessels at sites thousands of kilometres apart: in Barshalder in Gotland,[107] Praha-Zličín, Moravia, Slovakia, and Romania. In 2022(?), two beakers were found in a 'treasure trove' at the Kozel hillfort (Fig. 4.3/4, 5).

Currently, four specimens from two burial sites are known from Moravia. Two vessels come from a small inhumation burial site in Vrchoslavice (Fig. 4.27/63 – A13, 27/64 – A14): A fragmentary and a complete beaker were found in niches above the head in two graves at Všetuly. (Fig. 4.28/65 – A16, 28/66 – A17). New finds expanded the distribution area of the type towards the east and south-east. Based on finds in Slovakia, Romania, and Moravia, it was classified as the Kapušany–Prša–Ghenci–Vrchoslavice type, considered to be the product of a late Roman glassmaking centre in the area.[108] Vessels from Praha-Zličín and Všetuly may now also be assigned to this type. The differences between the beaker from Tišice and the others listed below fully justify the separation of a special group and corroborate the hypothesis of a different production centre.

Altogether, eight specimens from Bohemia and Moravia must be compared. All have a slightly conical body that gradually widens into an outspread rim and a narrow disc base. They are significantly shorter than the slender Kempston-type beakers, which have a height-to-rim diameter ratio of 3:1. In contrast, the ratio of height to rim diameter of the vessels from Tišice, Vrchoslavice, and Všetuly is approximately 2:1.[109] Most beakers feature several rows of threads beneath the outsplayed rim, partially sealed into the body. Apparently, only the beaker from Zličín lacks such threads.

The fundamental difference between the beaker from Tišice and the others is evident at first glance: production technique. The beaker from Tišice was made from a single piece. The broken bottom shows that the base was formed from the lower part of the body: it was pinched, stretched, folded, and slightly pressed inwards to create a base which appears to be a solid disc vase from the outside but is actually hollow inside. Such folded feet are known from goblets.[110] Beakers from Vieuxville,[111] likely from Spontin/Belgium, and Lilla Bjägers/Gotland,[112] and probably the single-colour beaker that resembles the one from Tišice at the Kozel hillfort (Fig. 4.3/4) were also made using this technique. The finds from a glass workshop at Macquenoise, Belgium, show that it also produced Snartemo-type beakers, which, based on illustrations, were apparently made from two parts.[113]

All other vessels in our collection consist of two parts: the body, to which a thick spiral thread was attached and then pressed to form a base. Traces of the twisted thread are clearly visible on the beaker from Grave 9 in Vrchoslavice (Fig. 4.27/64 – A14). On the beaker from Tišice, the threads on the body form a wavy line bundle of six and run regularly towards the bottom without any trace of connection. The complete beaker from Vrchoslavice features seven wavy lines, whereas the beaker

105 Svoboda 1965, 275.

106 Jiřík 2019, 146, Tab. 17.3.

107 Chambon – Arbmann 1952, 226–227, Fig. 10.2.

108 Adamíková 2020, 61; Tejral 2011, 45.

109 Beaker from Tišice is 21.2 cm tall, with a rim diameter of 10.2 cm; the beaker from Vrchoslavice, Grave 9, is 19.5 cm tall and has a rim diameter of 9.2 cm, and the one from Všetuly is 15.5 cm tall with a rim diameter of 8.5 cm.

110 Stern 2001, 30.

111 Alenus-Lecerf 1995, 71, Fig. 1.5.

112 Chambon – Arbmann 1952, 266–267, Figs 9 and 10 left.

113 Chambon – Arbmann 1952, 214, Fig. 4.15, 221, Fig. 6.

from Praha-Zličín has only four. Each thread on the upper parts of the beakers from Vrchoslavice and Všetuly, and on the specimen from Praha-Zličín, is attached to the top of an arc with a distinct drop of glass; they were pulled downwards vertically and curved back upwards above the base.[114]

The beaker from Tišice is made of light green glass; its shape and colour most closely resemble those of a beaker from the Kozel hillfort (Fig. 4.3/4). The beaker from Grave 9 in Vrchoslavice, both beakers from Všetuly, and the beaker from Grave 87 in Praha-Zličín were made of yellowish/honey-coloured glass.

However, two beakers—one from the Kozel hillfort and the one from Grave 7 in Vrchoslavice—were made of colourless glass and with blue wavy lines (Fig. 4.3/5, 27/63 – A13). Such a contrast—a colourless body and tall blue waves—is only known from a lamp/beaker with a rounded bottom from Trebur.[115]

The Czech and Moravian finds belong essentially to the same period. The grave in Tišice was assigned to the Vinařice phase,[116] the grave in Vrchoslavice to the mid-5th century AD,[117] and the specimen from Všetuly roughly to the 5th century AD.[118]

The material of five specimens from this group was analysed. However, Jaroslav Jiřík has not yet published the results of the Kempston-type beaker from Čertova ruka; therefore, it cannot be compared with the four Moravian specimens of the Snartemo-type beakers from Všetuly (A16, A17) and Vrchoslavice in Moravia (A13, A14) to build on the work of John Hunter and David Sanderson.[119]

Lamps

A simple conical vessel from Vinařice has straight walls, a small flat base without a disc, a slightly bowl-shaped mouth, and a straight-cut, unworked rim; it is 13.6 cm tall and has a rim diameter of 8.1 cm (Fig. 5.15/27). It was made of clear olive-green glass[120] (Fig. 5). A sharp remnant of an incomplete break is preserved in one area of the upper part of the rim.

Such vessels served primarily as lamps (Isings 106a), as evidenced by decorated specimens from the Eastern Mediterranean[121] and Pantikapaion in Crimea.[122] Their origin is generally traced to the Syrian-Palestinian region or to Egypt in the 4th or possibly the 5th century AD. L. Barkóczi classified undecorated specimens from Pannonia as Group 47c, cone beakers with a small base (either flat or concave). Examples are known from cemeteries at Ságvár, Kisárpár, Intercisa, Aquincum, Lepsény, and Majs, dating from the second half of the 4th to the first decades of the 5th century AD.[123] Two lamps with blue prunts, dating from the second half of the 4th century AD, are also known from Pannonia (from Intercisa and Ságvár, respectively).[124] They are exceptional in Europe, especially the

114 Jiřík *et al.* 2015, 205, centre.

115 Maul 2002, Vol. II, 478, Taf. 74.6.

116 Svoboda 1965, 110 and 299, no. 55.

117 Berkovec 2006, 5.

118 Popelka 2024, 3.

119 Hunter – Sanderson 1982.

120 Jiřík *et al.* 2015, 184, above.

121 Stern 2001, 294–295, Cat. 158, with further examples. The commentary highlights the slightly concave, arched mouth with a straight-cut (unworked) rim.

122 Kunina 1997, 339, Cat. 424.

123 Barkóczi 1988, 82–84, Taf. 9.100–103.

124 Barkóczi 1972, 74–76.

lamp from Ságvár, due to its engraved Greek inscription and grape motifs.[125] Decorated examples of the same type include a lamp probably from Brigetio with arcs made of white opaque glass.[126]

Lamps/Beakers

The possibility that the vessels with a tall, almost cylindrical body, an outsplayed mouth, and a sealed rim served as lamps (Fig. 5) was already suggested in connection with the vessel with a protrusion at the bottom (a pointed base) from Grave 93 at Praha-Zličín (Fig. 5.17/45).[127] Later, another find corroborated this hypothesis: a vessel from Grave H3 in Slatiňany, the burial of a warrior interred with a sword. That vessel has a rounded bottom with an olive-green pontil mark (Fig. 5.12/23 – A1).

Other vessels of the type from Bohemia and Moravia have been discussed in detail in connection with this specimen,[128] thus they are only mentioned briefly here. Currently, eight examples are known, seven from Bohemia and one from Moravia. They belong to a broad type group of cone beakers or lamps, appearing from the late 4th century onwards; Clasina Isings classified them as Group 106 with Variants a–d. Our specimens belong to the true conical variant (Isings 106d), with either a rounded bottom or a pointed base, and are shaped differently in the eastern and western parts of the empire. During the 5th century AD, this shape became typical of Frankish glass and remained in production in the 6th century AD.[129]

Both variants have been found in Bohemia: those with pointed bases were found in graves in Radonice nad Ohří (Fig. 5.9/19), Grave 188 in Vlíněves (Fig. 5.16/30 – A4), Grave 93 in Praha-Zličín (Fig. 5.17/45), and one in the 'treasure' discovered in the Kozel hillfort (Fig. 5.3/6). Such a beaker in Moravia is known only from Vrchoslavice (Fig. 5.27/62 – A15). Examples of the rounded-bottom variant have been recovered from Graves 10 and 49 in Praha-Zličín (Fig. 5.17/33, 17/37) and from Slatiňany (Fig. 5.12/23 – A1).

Brigitte Maul studied the type in detail and described it as *Breite Längliche glockenförmige Becher mit Bodenspitze und Rundboden.*[130] She collected 79 specimens from Western Europe, including a vessel from Radonice,[131] and listed several sub-variants that are sometimes difficult to distinguish. The body of the vast majority of such vessels is covered by simple or multiple arcs made of white opaque glass, combined with spiral threads around the lower part of the body and the rim. A vessel from Radonice—which, at the time of discovery, was an isolated find on the eastern periphery of the distribution area of the type—counts as a less common specimen with a decoration made of the same glass as the body. The type is dated approximately to the 5th to 6th centuries AD. Based on the co-occurrence of such vessels and much more numerous and younger bell beakers and palm cups—which are absent from the study area—B. Maul identified 27 micro-regions mainly in the area along the border between France and Belgium, and classified the Radonice specimen as a local variant. Only with the number of finds in Bohemia and Moravia increasing recently to eight could the area be described as a separate micro-region, no. 28 (Fig. 1). Most specimens (38) were found in France and only five in Belgium; discoveries concentrate in the area of the border of the two countries (Micro-regions 17, 19, 20, and 21), where the only documented glass workshop to produce such beakers/lamps is also located. Only 21 specimens are known from sites in Germany, a few from the

125 Barkóczi 1972, 74, Fig. 4.1,2.

126 Barkóczi 1988, 94, Taf. 13.137.

127 Jiřík *et al.* 2015, 18 below; Jiřík 2019, 147, Tab. 18.1.

128 Jílek *et al.* 2025, 312–315.

129 Isings 1957, 126–131.

130 Maul 2002, Vols I–II.

131 Maul 2002, Vol. II, Taf. 72.4, Liste 9.5.

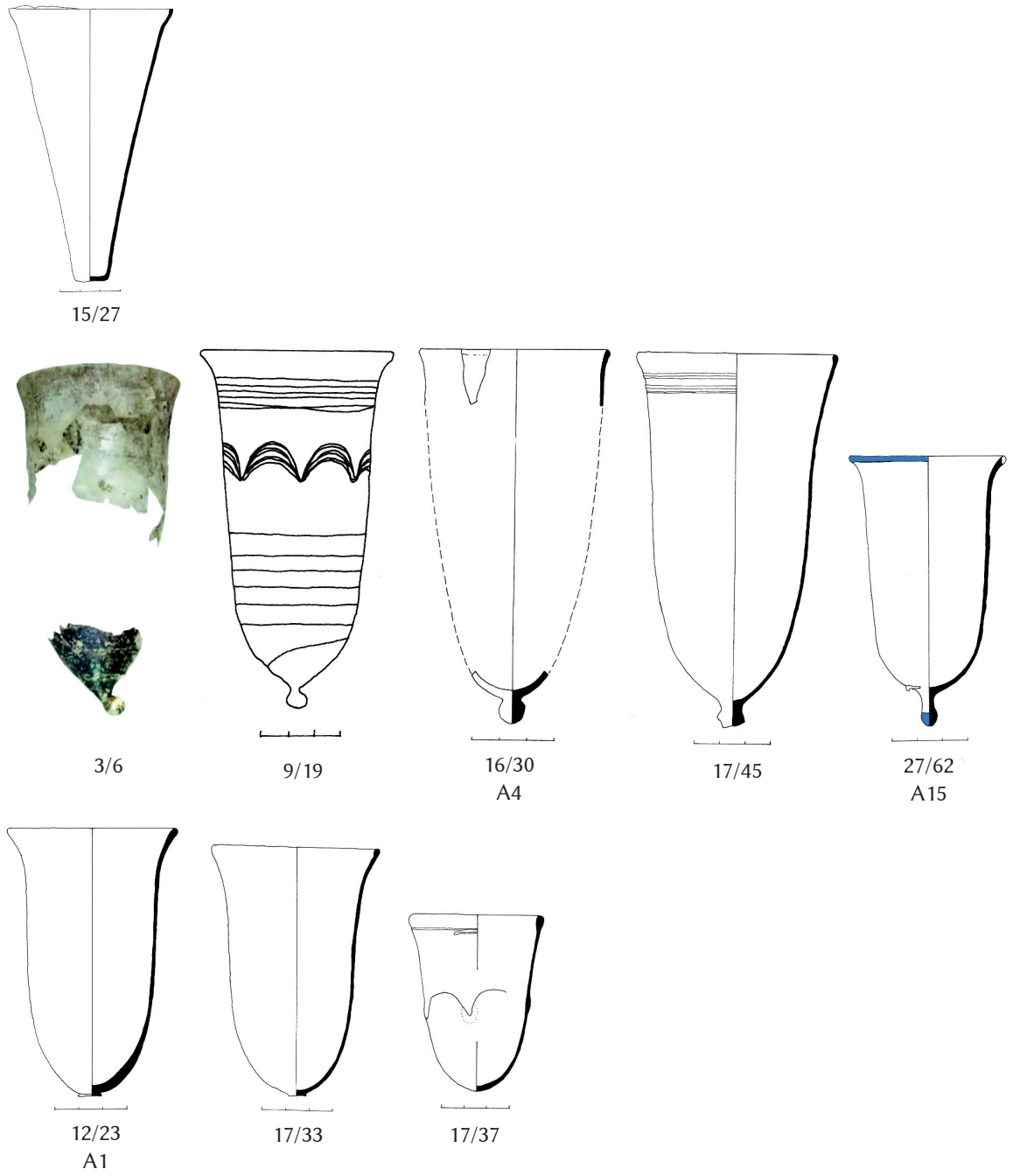


Fig. 5. Lamps and lamps/beakers. 15/27 – Vinařice, 3/6 – hillfort Kozel near Hostim Beroun District, 9/19 – Radonice nad Ohří (after Maul 2002, Vol. II, Taf. 72.4), 16/30 – Vlíněves near Mělník, Grave 188 (after Limburský *et al.* 2010), 17/45 – Praha-Zličín, Grave 93 (after Jiřík 2019, Tab. 18.1), 27/62 – Vrchoslavice, Grave 6, 12/23 – Slatiňany, Grave H3 (after Jiřík *et al.* 2015, 29, Fig 14.6), 17/33 – Praha-Zličín, Grave 10 (after Jiřík 2019, Tab. 3.3), 17/37 – Praha-Zličín, Grave 49 (after Jiřík 2019, Tab. 11.5) (drawings by Hedvika Sedláčková, technical design by Anne-Marie Rohanová and Karolína Pánová).

Netherlands and Switzerland, and one each from Italy and Great Britain.[132] Importantly, only occasional finds or none at all are known from regions adjacent to or near the Czech Basin: Micro-region 11, corresponding to Thuringia, which has close ties to the material culture of Vinařice,[133] is generally

132 Maul 2002, Vol. II, 474–478.

133 Tejral 2016, 117, Abb. 5.C,D.

poor in glass vessels and, so far, completely devoid of the type in question; only a few examples are known from Micro-regions 9 and 10, i.e., Alemannia and Bavaria. The beaker/lamp from Grave 38 in Hemmingen bears a simple blue thread,[134] resembling the vessel from Grave 93 in Prague-Zličín with a thread made of the same glass as the body (Fig. 5.17/45). Vessels from the studied region generally lack white opaque glass decoration and, except for the specimen from Radonice, also arcs, while blue glass threads appear only in the beaker/lamp from Vrchoslavice (Fig. 5.27/62 – A15).

Brigitte Maul consistently refers to these vessels as beakers, and other Western European researchers, such as Danielle Foy, tend to describe both variants as goblets and date them to AD 450–530/540 and 560.[135] In southern Europe, however, vessels of this shape are considered lamps. Cylindrical vessels with small knobs from Thessaloniki are dated to the early 5th and 6th centuries AD; their numerous parallels provide evidence of their use in early Christian churches.[136] Vessels with pointed bases were among the most common shapes in Serbia and Kosovo in the second half of the 5th and in the 6th century AD;[137] they were also used as lamps in early Christian churches in Italy.[138] Incidentally, vessels of the same shape were still produced and used as lamps in Venice around 1500.[139] The wide distribution area and long life of the type suggest production by multiple workshops; one of them, operating during the Migration Period, was probably the glass workshop in Macquenoise, Belgium.[140]

The original purpose of these conical vessels was a subject of prolonged scholarly debate. Conclusive analogies in southern European countries point to their use as lamps in church candelabra (i.e. oil vessels). Furthermore, as described above, these vessels were placed in niches above the deceased's heads in graves. Remains of both vegetal and animal oils were identified on the inner surface of the vessel from Slatiňany.[141]

Goblets

In Roman times, stemmed goblets made of a single glass bulb (Fig. 6) were a distinctly Mediterranean type. The stem and foot were created by pinching and shaping the lower part of the half-finished cup. Clasina Isings classified them as Form 111, noting that slightly different goblets with partially hollow stems were found in Cyprus.[142] The shape survived into the early Middle Ages, although the cup form and the stemmed foot were applied separately.[143] The method of making folded stemmed feet is thought to have originated in Syria or Palestine in the mid-5th century AD and to have spread in Late Antiquity, particularly with goblets, throughout the Mediterranean and eastern Byzantine territory.[144] In Europe, at least two variants of these goblets were found in large numbers in Greece, Bulgaria, present-day Italy, and southern France between the 5th and early 7th centuries AD.[145] Numerous finds also come from museum collections, where they are listed as products from

134 Maul 2002, Vol. I, 111, 115; Maul 2002, Vol. II, Liste 9.12, Taf. 73.2.

135 Foy 1989, 130–131, Group V.4.422,423.

136 Antonaras 2017, 74–75, Type 33, Cat. 123–129, Pl. 5.5, Note 648.

137 Križanac 2016, 100–103.

138 Uboldi 1995, 119–120, Typ III.2.

139 E.g., Barovier Mentasti 2006, 48, Fig. 17, Murano 1500–1520, Fig. 18; Jesus in the Temple by Vittorio Carpaccio, 1510.

140 Chambon – Arbmann 1952, 212, Fig. 3.4.

141 Jílek *et al.* 2025, 319.

142 Isings 1957, Forme 111, 139–140; Vessberg 1952, Pl. 4.17a,18, 124.

143 Isings 1957, Forme 111, 140.

144 Stern 2001, 30.

145 Antonaras 2017, 82–87; Sternini 2001.



19/54
A23



28/68
A18

Fig. 6. Goblets. 19/54 – Brno-Černá Pole (restoration by Tereza Malínková, photo by Vít Klouček), 28/68 – Všetuly, Grave 510/810 (photo by Andrea Šindlerová, drawings by Hedvika Sedláčková, technical design by Anne-Marie Rohanová and Karolína Pánová).

the eastern Mediterranean from between the 4th and 6th[146] or the 5th and early 7th centuries AD,[147] or dated to the 6th to early 7th centuries AD.[148]

North of the Alps, this shape was very rare. For a long time, only six specimens were known from there (including the find from Brno-Černá Pole; see Fig. 6.19/54 – A23).[149] Later, another specimen

146 Whitehouse 2001, 117–118, Cat. 616–617.

147 Antonaras 2012, 139–140, Cat. 192–194.

148 Stern 2001, 309–311, Cat. 172–174.

149 Harden 1975, 23, no. 3; Whitehouse 1997, 103–104, no. 154.

was published from a Migration Period burial ground in Čataj, Slovakia,[150] a disc-shaped foot fragment[151] was found in the grave of a woman from the same period in Bratislava–Podunajské Biskupice, and recently another vessel has been reported from Všetuly (Fig. 6.28/68 – A18).

The goblets from Brno-Černá Pole and Všetuly are exceptional in their own way. The goblet from Brno-Černá Pole was made from a single glass bulb. It has an egg-shaped body with an outspread mouth and a sealed rim, and the body sits directly on the inwardly pressed foot disc. It was made of colourless glass with a blue-green hue; its wall is extremely thin. It features several rows of white, opaque glass threads around the rim, neck, and body, some of which were preserved only as imprints. It is 9.3 cm tall and has a rim 5.6 cm in diameter. It is the second vessel of this type of glass to be found in the study area; the first, a bowl from Praha-Bubny, is missing. The goblet was found in the grave of a child with a deformed skull, dated to the second half of the 5th century AD.[152]

The goblet from Všetuly is striking primarily for the hue of the glass and the combination of purple and dark cobalt blue. Purple glass was particularly popular in Syria from the end of the 3rd to the mid-4th century AD, used for luxury tableware.[153] It was very rare in Europe: for example, Birgit Maul notes that 'red' glass of varying intensity (including purple, apparently) is the second least common colour in the early medieval glass record (after deep blue).[154]

As for the applied technology, the goblet was assembled from two parts: a folded, hollow stem with a disc-shaped foot was attached to the smooth cylindrical body with a slightly outsplayed rim and a sealed edge. When viewed from the side or from below, the rounded, smooth bottom of the goblet is visible within the hollow stem. However, the exact production process remains unclear. The goblet is 10.6 cm tall, with a rim diameter of 7.2/7.5 cm. The grave is dated to around the 5th century AD.

This goblet looks similar to one from Grave 21 in Čataj, Slovakia, dated to the second third or second half of the 5th century AD. That vessel has thin ribs on its body and a spherical protrusion on the stem; however, based on the published drawing, it is not possible to determine whether it was made in one or two parts.[155]

Bowls

Only three or four bowls are known from Bohemia (Fig. 7). One has been preserved only in a detailed description by Bedřich Svoboda: it was made of green glass, had a wide-open mouth, and a hemispherical body covered with bundles of asymmetrical waves with protruding diagonal spikes (arcades) made of white opaque glass. It came from a grave in Praha-Bubny, probably from the end of the 5th or beginning of the 6th century AD and it only 'exists' in Svoboda´s publication.[156] Wide bowls were an important type of tableware in the 5th century AD; they were decorated using a variety of techniques. The bowl from Bubny belongs to a group decorated with attached white opaque threads. The popularity of this decoration on bowls increased in the second half of the 5th century AD, particularly popular in the Meuse region.[157]

150 Zábojník 2009, Fig. 3.5.
151 Adamíková 2020, Cat. 4.
152 Hochmanová 1952.
153 Stern 2001, 146.
154 Maul 2002, Vol. I, 97–100.
155 Zábojník 2009, 190, Fig. 2.6.
156 Svoboda 1965, 111.
157 Koch 2008, 158–159, Abb. 21.6.

Some fragments from the Čertova ruka hillfort, originally considered to be part of a Kempston-type beaker, likely also belong to such a bowl. A repeated investigation of the finds has revealed that the largest fragment comes from the outsplayed, inward-cut, and sealed rim of a vessel with a bundle of four diagonal threads and arcs below them—the top of one arc is visible on the rim fragment, while other parts appear on the body fragment (Fig. 7.1/2a–c; the respective analysis will be published in a forthcoming study by J. Jiřík's team).

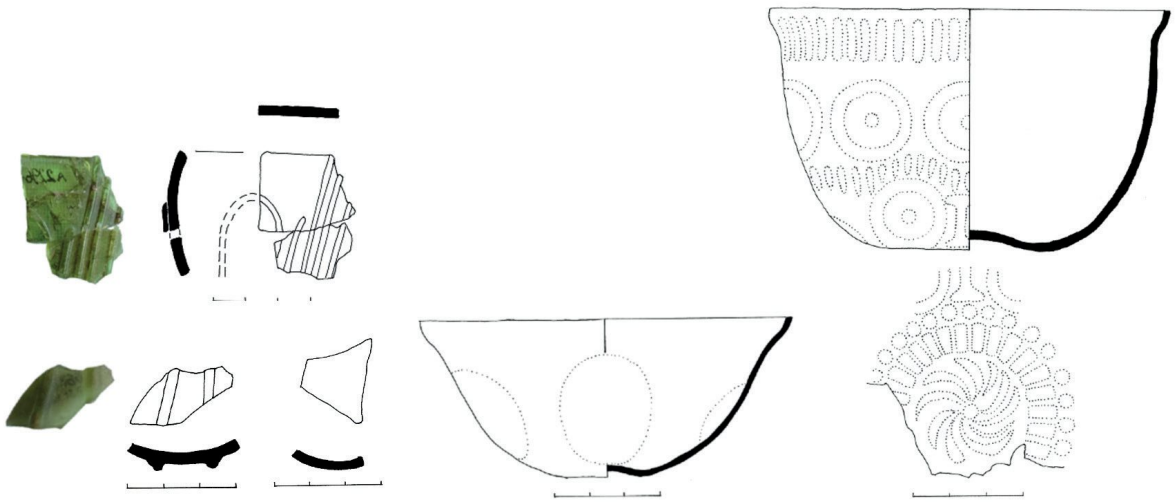


Fig. 7. Bowls. 1/2a–c – Čertova ruka hillfort (M. Trutnov), 14/26 – Úherce near Louny, 15/29 – Vinařice (drawings by Hedvika Sedláčková, photo by Jan Prostředník, technical design by Karolína Pánová).

A small indented conical bowl from a Vinařice-phase grave at Úherce near Louny was made of olive-green glass and bears traces of corrosion process. It has six indentations on its body, a concave bottom, a slightly outsplayed rim, and a cut edge. It is 4.5 cm tall and has a rim of 10.7 cm in diameter (Fig. 7.14/26). Indented conical bowls (Isings Form 117) are a late Roman period glassware type used especially in Western Europe. They appeared sporadically as early as the end of the 3rd century, but most of the numerous known specimens date to the 4th century AD.[158] Several variants were distinguished[159] based on slight differences in the shape of the body. The bowl from Úherce was identified, together with 25 other specimens, as '*kalottenförmig*' ('dome-shaped'); its closest parallel is known from Carnuntum.[160] Dated finds of this variant from the Rhine region and Emona, the seat of the bishop at that time, come from the second quarter to the second half of the 4th century AD; however, finds from Augst have been dated to ca. AD 350–450,[161] the upper limit corresponding to the dating of the bowl from Úherce.

Of the last bowl, from Vinařice, only a few larger and smaller fragments have survived. It was made of glass with a rich green hue, dense bubbles, and grains of sand. It has a hemispherical body with a slightly concave bottom, an outsplayed rim, and a straight-cut edge. It was made in a mould and features relief decoration of two concentric circles separated by rows of short vertical lines. The bottom features a dashed medallion, circular dots, and a rosette with eleven spirally twisted sections in the centre. It is 6.7 cm tall and has a rim of 11 cm in diameter (Fig. 7.15/29; the related analysis will be published in a forthcoming study by J. Jiřík's team).

158 Isings 1957, 147–148.

159 Koch 1987, 185, Abb. 79.

160 Koch 1987, 187–188, no. 13.

161 Fünfschilling 2015, see *Text und Formenkatalog*, 328–329, Abb. 411, AR 59.2.

The bowl from Vinařice belongs to the group of so-called '*Wabenbecher*' ('honeycomb bowls'), made by blowing the glass bulb into a mould with a relief pattern. Most vessels of this type were produced in the Eastern Mediterranean in the late 4th and first half of the 5th century AD.[162] The concentric circles, combined with short vertical lines adorning the Vinařice bowl, also occur on various types of glass vessels.[163] Such bowls on the continent were found mainly in France and Belgium, and occasionally in Germany; however, Vinařice is missing from Koch's list of 24 sites with such finds.[164] The oldest examples date back to the last third of the 4th century AD, the popularity of the type peaked in the second half of the 5th century AD and gradually faded away in the 6th century AD.[165] These bowls, including the example from Vinařice, often feature so-called Christograms with a multi-petal rosette on the base.[166]

The graves from Úherce and Vinařice were assigned to the Vinařice phase.[167] Unlike the bowl from Praha-Bubny, the two bowls found there have concave bases and straight-cut (unworked) rims; only their decoration differs.

Bottles

Nine vessels, bottles of several types, form a distinct group within the presented glass record (Fig. 8). Bottles with a spherical body and a tall, slender neck were discussed in detail in connection with the find of a ribbed bottle from Slatiňany, found behind the head of the deceased, a woman, in Grave H2.[168] The 12.1 cm tall bottle was made of light green glass; it was pre-blown in a patterned mould with 23 ribs. It has a smooth neck, a funnel-shaped mouth, an inward-folded rim, and a distinct base with no use-wear marks (Fig. 8.12/24 – A2). With a distinctly pressed body, it resembles a small bottle from a grave in Xanten.[169] Usually, bottles have spherical bodies, and only rarely ribs; the bottle from the Juliska part of Praha-Podbaba is one of the few exceptions (Fig. 8.7/16). Other finds from Bohemia, including a small bottle from Grave 70 in Praha-Zličín (Fig. 8.17/38), one from the Kozel hillfort (Fig. 8.3/7), a bottle from Blučina (Fig. 8.18/53), and probably another one from Šaratice in Moravia, which has not been preserved (Fig. 1.25), are undecorated. They all belong to the group of bulbous flasks (Isings 101) appearing in the 3rd century and used throughout the 4th century AD.[170]

Small bottles, both decorated and ribbed, were produced and used for a long time. Their origin is generally sought in the Eastern Mediterranean, and the mapping of older and more recent finds has revealed a gradual spread from the Peloponnese through the Balkans to present-day Hungary, southern Slovakia, Lower Austria, Bohemia, and Germany, and also towards Crimea and France. Examples dating from the late 4th to early 5th century AD are found only in present-day Hungary, while they appear in Lower Austria, Germany, and Bohemia in 5th-century AD contexts.[171]

Anastasios Antonaras noted that a significant proportion of the grave finds in a collection of 59 small bottles from Thessaloniki were imperfect products, and that none of their bases showed signs of use, leading him to believe that these cheap goods were produced solely for burial rather than for use as tableware.[172] This seems to hold for the bottles from Slatiňany, Praha-Podbaba, and Blučina.

162 Stern 2001, 31.
163 Stern 2001, 31.
164 Koch 1987, 193–194, Abb. 81.
165 Koch 1987, 192.
166 Koch 1987, 191.
167 Svoboda 1965, 299 nos 57 and 59.
168 Jílek *et al.* 2025, 310–312, 6.9.1 Flask.
169 Wieczorek *et al.* 1996, 27, Abb. 19.
170 Isings 1957, 119–120.
171 Jílek *et al.* 2025, 312, Fig. 13.
172 Antonaras 2017, 99.

Two bottles from Graves 90 and 143 in Praha-Zličín are decorated with arcs made of fine threads. The shape of the first is identical to the undecorated specimens: it has a spherical body with a concave base and a tall, slightly everted neck with a funnel-shaped mouth and an inward-folded rim (Fig. 8.17/43 – A8). Only a part of the unusual, sack-shaped body of the second vessel has been preserved; it smoothly transitions into an open mouth with a straight-cut (unworked) rim. The 'neck' below the rim is adorned with several rows of threads (Fig. 8.17/48 – A9). Both vessels were made of colourless glass and have developed a brown corrosion layer. Analogies to these small bottles have yet to be found; however, identical glass composition suggests that they were made in the same workshop as three beakers from Graves 31, 78, and 94 in the same cemetery (Fig. 2.17/35 – A5 and Fig. 3.17/46 – A7).



Fig. 8. Bottles. 3/7 – hillfort Kozel near Hostim, 7/16 – Praha-Podbaba, 12/24 – Slatiňany, Grave H2 (after Jiřík *et al.* 2015, 297, Fig.7.1), 17/38 – Praha-Zličín, Grave 70 (after Jiřík 2019, Tab. 14.18), 17/43 – Praha-Zličín, Grave 90 (after Jiřík 2019, Tab. 17.12), 17/48 – Praha-Zličín, Grave 143 (after Jiřík 2019, Tab. 28.30), 17/49 – Praha-Zličín, Grave 144 (after Jiřík 2019, Tab. 29.1), 18/53 – Blučina, 25/60 – Šaratice (not found), 28/67 – Všetuly, Grave 508/808 (M. Kroměříž) (drawings by Hedvika Sedláčková, photo by Jaroslav Šafer, technical preparation by Anne-Marie Rohanová and Karolína Pánová).

The bottle from Grave 508/808 in Všetuly, Moravia, has part of its body and neck decorated with 21–22 rows of fine thread (Fig. 8.28/67 – A19). It is made of yellowish glass and is 18 cm tall, with a maximum diameter of 8.1 cm. Proportionately, its neck is much longer than that of ribbed bottles; its rim is inward-folded, and its base is concave without a rim. It is difficult to find analogies to this bottle among coeval glass finds. Spiral thread-winding of vessels, especially small bottles with a shape similar to the one presented, was popular mainly in the 1st century AD, both in the East and in the West. Occasionally, the technique was still used in Western Europe in the late 2nd and 3rd centuries AD, and became popular again throughout the region in the late 4th and 5th centuries AD, when such threads were applied only to the necks of vessels.[173] Examples of older products with the

173 Stern 2001, 29.

entire body wound with thread include a jug made in Gaul or the Rhineland,[174] a beaker probably from Cyprus,[175] and a popular cosmetic bottle of Syrian origin.[176] A close analogy to the bottle from Všetuly, however, remains to be found.

Blučina and Žuráň

So far, the discussion has focused on vessels from row cemeteries, even though some of them contained richly equipped graves. The finds from the Cézavy site near Blučina and Žuráň (Figs 9–10) were obtained from burials of a completely different category, referred to as princely or royal. The glass vessels from both graves have already been discussed in detail.[177] Therefore, they are only briefly mentioned here.

Three glass vessels were placed next to the man's right foot in a grave at Cézavy near Blučina, dated to the second half of the 5th century AD. In addition to the usual spherical bottle (Fig. 8.18/53), the small set included two highly unusual, tall, slightly conical, flute-shaped, bottle-like, bottle-green glass vessels with cut rims. The completely preserved vessel was 34.5 cm tall, with



18/51
A10

18/52
A11

Fig. 9. Blučina. 18/51 – Blučina (after Sedláčková 2016, 106, Abb. 1, right), 18/52 – Blučina (after Sedláčková 2016, 106, Abb. 1, left), (drawings and restoration works by Jitka Seifertová, photo by Lenka Kosová, technical preparation by Karolína Pánová).

174 Stern 2001, 190, Cat. 82.

175 Whitehouse 2001, 145–146, Cat. 658.

176 Whitehouse 2001, 190, Cat. 738.

177 Sedláčková 2016, 105–107.

a base diameter of 3.8 cm and a rim diameter of 1.5 cm. Only the upper part of the second, identical vessel was preserved; it was 28.5 cm long, with a rim of 1.6 cm, and a body at the break of 3.5 cm in diameter (Fig. 9.18/51 – A10, 18/52 – A11).

No identical analogy has so far been found to these vessels. The closest forms—similarly tall, slender and similar in dimensions but cylindrical—can be found among Sassanian glassware from the 3rd to 7th centuries AD; they are believed to have been containers for writing implements,[178] but their use as *balsamaria* cannot be ruled out either.

Chamber II, located in a prehistoric burial mound at Žuráň near Slavkov, was robbed shortly after the funeral in the first half of the 6th century AD. The burial of a woman aged around 38 contained a body fragment and fragments of four vessels: two made of blue glass, one made of yellowish and blue glass, and one made of yellowish glass. A large part of the body was successfully reconstructed from fragments of a blue hemispherical glass bowl made using the '*keramikähnliche Form*' technique, i.e. pressed into a mould together with a ring base. Its shape resembles that of Dragendorff 37 *terra sigillata* bowls. Based on the production technique and shape, it may be dated from the 1st to the 3rd century AD. Subsequently, likely during the 4th century AD, the bowl was decorated with a cut pattern, probably depicting a circus scene including three torso figures and at least two buildings with columns in the foreground. A partial inscription, *HT*, was preserved on the front of one of the buildings. When seen from inside, it reads *TH*, perhaps the beginning of the name Theodosius, the last emperor of the undivided Roman Empire (AD 379–394). Crossed lines are also among the decorative elements used during the 4th century AD. Part of an eight-pointed star, perhaps a Christogram, has also been preserved on the outside of the base. The bowl's life did not end even after it was broken; a repair hole at the edge of the largest fragment attests to the fact that the fragments were probably joined together with gold wire (Fig. 10.29/69–1–5 – A22).[179]

Only two fragments remain from the second blue glass bowl, a conical shape with cut decoration. The largest fragment depicts a multi-storey half-timbered building, possibly a tower, of which the two middle floors have been preserved. A letter *H* appears next to the bottom floor. The smaller fragment with an indeterminate motif bears the letters *V*(?) and *H*.[180] The depiction of the building/tower corresponds in detail to the four-storey building on a cone beaker from Cologne-Wöringen (Fig. 10.29/70).[181]

Eleven fragments with Greek letters and one with a relief strip with diagonal notches have been preserved from the recycled glass vessel. From the original drinking inscription *ΠΙΣ ΖΩΣ ΚΑΛΩΣ* or *ΠΙΣ ΖΗCΗΣ ΚΑΛΩΣ ΑΕΙ*, only the letters: *A* (alpha(?)), *Λ* or *Π* (lambda), pi; *Σ* or *E* (sigma, eta), and, outside the inscription, *Δ* (delta) could be identified, while the letters on the other fragments could not be identified. The fragments probably come from a Straume VIII-type vessel with a single row of large oval medallions on the body and a relief strip below the inscription, considered to be produced by a workshop in the Near East between the second half of the 4th and the first half of the 5th century AD[182] (Fig. 10.29/71–1–4 selected fragments; light green glass: A21a, blue glass: A21b). Given that no body fragments without letters have been preserved, it cannot be ruled out that only attractive and exotic two-coloured objects, which could have been used as decoration in combination with other materials, were placed in the grave.

178 Whitehouse 2005, Cat. 66–67.

179 Sedláčková 2016, 111–112, Abb. 4.

180 Sedláčková 2016, 112–113, Abb. 5.

181 Fremersdorf 1967, 176.

182 Sedláčková 2016, 107–111, Abb. 3.

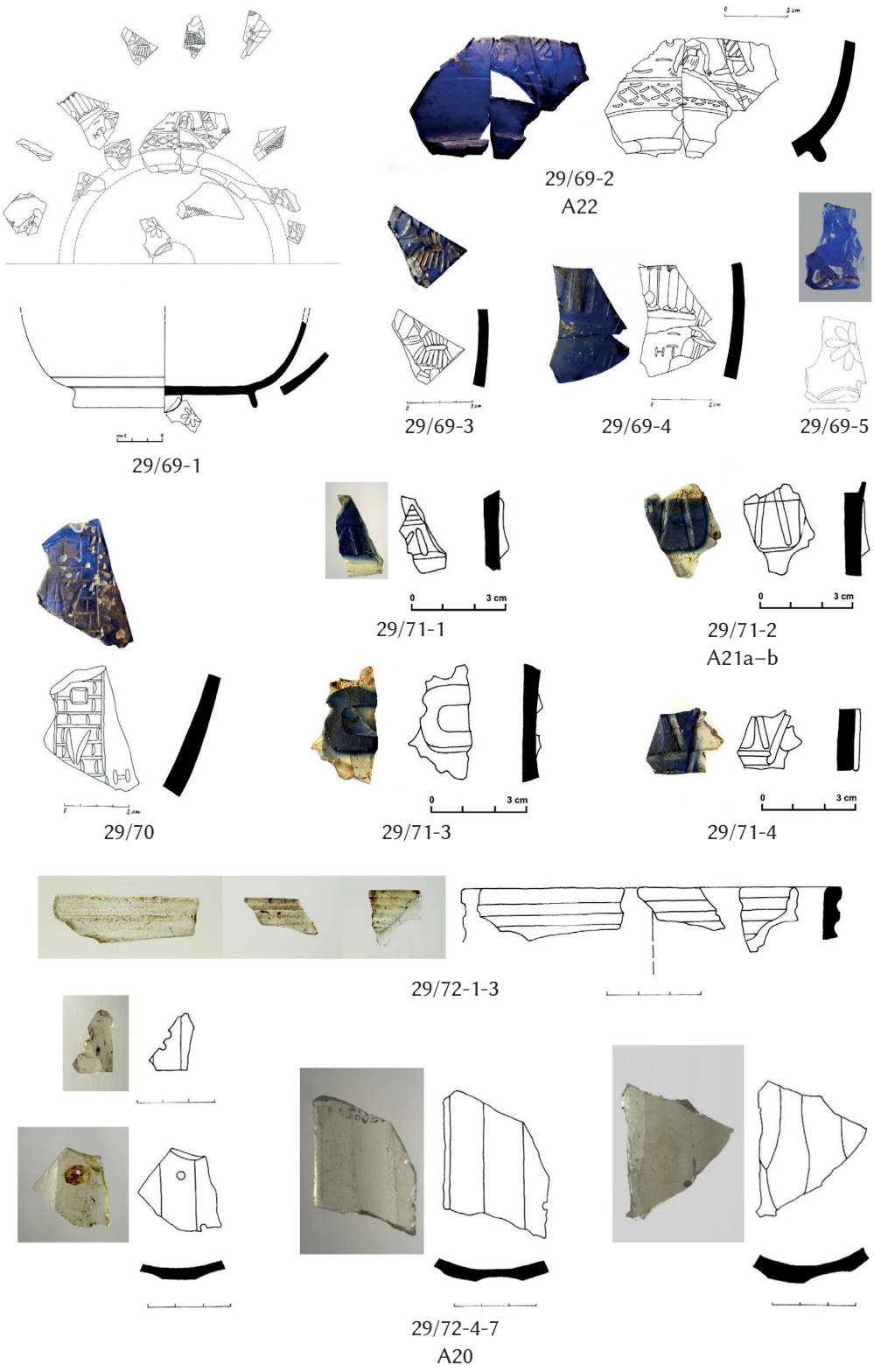


Fig. 10. Žuráň. 29/69 – hemispherical bowl made of blue glass. 1 – reconstruction of the shape, 2 – part of two figures, 3 – part of the figure of a charioteer, 4 – part of building with letter *TH*, 5 – the bottom with an eight-pointed star (after Sedláčková 2016, 110, Abb. 4, assortment), 29/70 – fragment of a conical vessel with a building scene (after Sedláčková 2016, 112, Abb. 5.1), 29/71 – fragment of vessel with Greek inscription. 1 – Alpha(?), 2 – Lambda or Pi(?), 3 – Sigma, 4 – delta (after Sedláčková 2016, 112, Abb. 5.1), 29/72 – fragments of a vessel with facets. 1–3 – fragments of the edge, 4–5 – fragment of vessel with drilled holes, 6–7 – fragment of vessel with facets (after Sedláčková 2016, 108, Abb. 2, assortment) (drawings by Hedvika Sedláčková, technical preparation by Anne-Marie Rohanová and Karolína Pánová).

Nineteen fragments of yellowish glass remain from a Dybeck-type faceted vessel belonging to the Straume Group IV. Based on three fragments, its rim was 12 cm in diameter. Nine of the sixteen body fragments had repair holes drilled in them; six featured one each, and three had two holes each. The fragments cannot be joined together, and none of them comes from the base or bottom of the vessel. Most vessels of this type—fifteen specimens—come from Scandinavia, and two from Germany and Poland, from contexts dated to the end of the 4th to the beginning of the 5th century AD. The vessel from Žuráň is so far the only one known outside this area[183] (Fig. 10.29/72–1–7 – A20, selected fragments).

The vessels from Blučina are notable primarily for their unusual shapes. Based on the green to blue-green colour of their glass and production method, they belong to the category of utility glass.

By contrast, the vessels from Žuráň are luxury goods. They are connected primarily by the difference between their estimated time of production and burial in the grave. In the case of the blue bowl, this difference may be several centuries, and at least one century in the case of the other vessels. Although the grave was disturbed several times, robbed shortly after the funeral and dug up by amateur researchers in the 19th century, it is striking that only a few fragments of the vessels have been preserved. No more than two fragments have survived from the conical vessel with the depiction of a building, and only fragments with letters remain from the two-colour vessel with a Greek inscription, raising the possibility that only these attractive fragments were placed in the grave as antiques, souvenirs, or amulets, rather than whole vessels. The noble lady buried there was probably Silinga, daughter of the Herulian king Rodolf, third wife of the Lombard king Wacho, and the mother of his son, Walthari. The woman died as a result of injuries inflicted by a Merovingian spear called *ango*, used mainly in the first half of the 6th century AD, at a time when the Lombards were settling Moravia. The son disappeared without a trace from history. The manner of burial corresponds to the customs of the East Germanic population or the inhabitants of Scandinavia.[184]

Claw beaker—a surprise at the end

Surprisingly, even a distinctly Frankish type of glassware, the claw beaker, can be found in Central Europe. Fragments of such a beaker were discovered at a burial site in Zohor near Bratislava, Slovakia, at the beginning of the second half of the 20th century; it could be dated roughly to the mid-5th century AD.[185] Several types of these peculiar vessels were widespread in Western Europe from the 5th to the mid-6th century AD. They differed in body shape, the number of spouts, and the extent and placement of additional decoration, mainly spirally wound threads.[186] Specific shape and dating are irrelevant in the case of the find from Držovice because Grave 13/24, dated to the first decades of the 6th century AD, did not contain a whole vessel (either complete or in fragments) but only a single fragment with a carefully worked break from the upper part of a spout. The fragment, measuring 2.47 × 2.25 cm, was made of colourless glass and features groups of small teeth created by pinching with a metal tool (Fig. 11.21/56 – A12); originally, it was covered with a dark grey corrosion layer that could be peeled off. Based on that and its relative position within the grave, it was reused as a clothing accessory, probably applied to the garment somewhere on the left shoulder, likely set in a base made of organic material. Fragments modified to serve purposes other than

183 Sedláčková 2016, 107, Fig. 2.

184 Tejral 2009, 138–139; Sedláčková 2016, 113–114.

185 Adamíková 2020, 29, Cat. 100.

186 See Koch 1987, 165–167, for more details.

the original are not too rare: the possibility also arose with context to some vessel fragments from Žuráň from the first half of the 6th century AD, and a Great Moravian grave in Mikulčice contained a base fragment of an ancient vessel that was definitely modified into a pendant/amulet.[187] One will probably never determine whether the modification occurred locally or whether the already repurposed object was obtained elsewhere. In any case, the modification could have been carried out by a skilled craftsman, i.e. a jeweller equipped with the necessary tools.

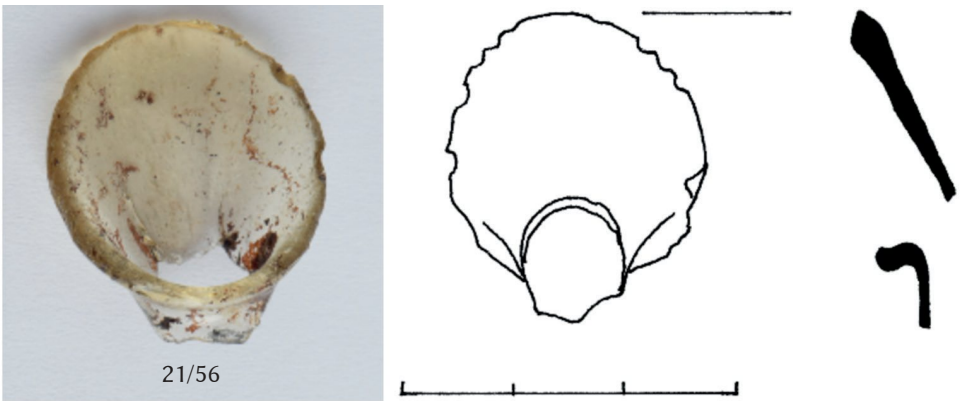


Fig. 11. Claw beaker. 21/56, A12 – Držovice, Grave 13/24 (drawings by Hedvika Sedláčková, photo by Andrea Šindlerová).

Chemical composition and possible origin of glasses

All 26 analysed vessels were made of sodium–calcium glass (Na_2O–CaO–SiO_2), commonly referred to as natron glass. This type of glass was produced in Egypt, the Middle East, and southern Europe (within the Roman Empire) for at least two millennia; its production gradually ceased in the second half of the 9th century AD.[188] The analysed glasses date to the Roman Imperial/Late Antique period (1st–6th century AD), with an overlap into the Early Byzantine period (4th–7th century AD).[189]

The source of silica (SiO_2) was coastal sand, which, in addition to SiO_2, contained calcareous remains of marine shells (calcite/aragonite, $CaCO_3$) and small amounts of feldspar (sodium or potassium feldspar, $KAlSi_3O_8$). Besides SiO_2 and Al_2O_3, feldspar also contains minor alkalis (e.g., K_2O). The natural mineral natron, a mixture of sodium salts (Na_2CO_3, $NaHCO_3$, sodium carbonate hydrates, and also NaCl or Na_2SO_4),[190] was used as a flux. The proportions of individual sodium salts in natron vary considerably depending on the deposit.

Natron glass is characterised by a very low content of K_2O and MgO (both oxides are usually below 1.5 wt%). Phosphorus pentoxide (P_2O_5) occurs in natron glass only as a contaminant (up to about 0.5 wt%) and likely originates from plant material used as fuel.

Owing to the good availability of raw materials, from the 2nd century AD, glass was often melted centrally (primary production) and distributed as ingots for remelting and shaping into final products (secondary production). After the mid-9th century, production of natron glass ceased completely, likely due to political and economic factors.[191] Natron was gradually replaced by ash from

187 Sedláčková – Rohanová 2020, 358–359.

188 Phelps et al. 2016.

189 Gliozzo *et al.* 2017.

190 It was mined in Egypt (Wadi Natrun) and in the Middle East (Haifa). In Egypt, it was used to dry bodies before embalming.

191 Phelps *et al.* 2016.

desert and semi-desert plants, which had a high sodium ion content. Plant ash also supplied calcium, potassium, and magnesium.

Classification of glasses according to chemical composition

The chemical composition of the analysed glasses from grave finds in Bohemia and Moravia (Tab. 1), together with their colouration, indicates that they fall into three groups of natron glass:

- Colourless glasses with low Fe content (up to 0.7 wt% FeO) and decolourising Mn content (up to 0.9 wt% MnO);
- Green glasses with elevated Fe content (0.8–4 wt% FeO) and low (natural) Mn content (0–0.4 wt% MnO) (HI);
- Yellow-green to olive-green glasses, the so-called High Iron–Manganese and Titania (HIMT) glasses, with Fe and Mn intentionally added as colouring agents.
  HIMT glasses can be further subdivided according to Mn and Fe content (after Rosenow and Rehren[192]):
  - a. Weak HIMT: 0.5–1.1 wt% FeO; 0.5–2 wt% MnO; and 0.1–0.2 wt% TiO_2;
  - b. Strong HIMT: 1.5–2.5 wt% FeO; 1–3 wt% MnO; and 0.3–0.8 wt% TiO_2.

Colourless glasses

The bell-shaped and cone beakers (A5 – Fig. 2.17/35, A6 – Fig. 3.17/40, A7 – Fig. 3.17/46) and two bottles (A8 – Fig. 8.17/43, A9 – Fig. 8.17/48) from Praha-Zličín[193] are characterised by a high Na_2O content (22.3–23.7 wt%) (Figs 12–14, orange points). The FeO content ranges from 0.3 to 0.5 wt% and the MnO content from 0.7 to 0.9 wt%, indicating that the glass was intentionally decolourised with mineral pyrolusite (MnO_2). High Na_2O content is not entirely common in Roman glasses, but similar compositions have been documented,[194] for example, in the Karanis area (Group V, 89, Sample 309), in the Cosa area (V.F, 95, Sample 5271), and the closest compositions are those of group V.X: Carthage, 130, Samples 5284, 5288, 131, and 5292.

During this period, Levantine I-type glasses were produced in the Roman Empire. The colourless (almost yellowish) cup with blue trails of the Snartemo type from Vrchoslavice (A13 – Fig. 4.27/63) also belongs to this type (see Figs 12–14, green point). Given the almost identical chemical composition of the colourless vessels, they were certainly produced at the same workshop.

Glasses with high Fe content and low or absent Mn content (HI)

The yellowish vessels from Všetuly, which have high Fe content (1.9–4 wt% FeO) and, conversely, low to absent Mn content (0–0.4 wt% MnO), are shown in Fig. 14 (brown points). The composition of both Snartemo-type beakers (A16 – Fig. 4.28/65, A17 – Fig. 4.28/66) and the bottle from Všetuly (A19 – Fig. 8.28/67) are highly similar. The Snartemo-type beaker and the bottle have lower CaO contents (4.4 and 3.1 wt%, respectively), and the SiO_2 content logically decreases with increasing FeO content: the higher the FeO content of the glass, the lower the SiO_2 content. These glasses were made in Egypt or the Near East, as their composition matches that of Egypt I-type glasses. All glasses contain a relatively high amount of Al_2O_3 (3–4.1 wt%), perhaps due to the addition of iron-rich raw materials.

192 Rosenow – Rehren 2014.

193 Jiřík *et al.* 2015, 200.

194 Brill 1999.

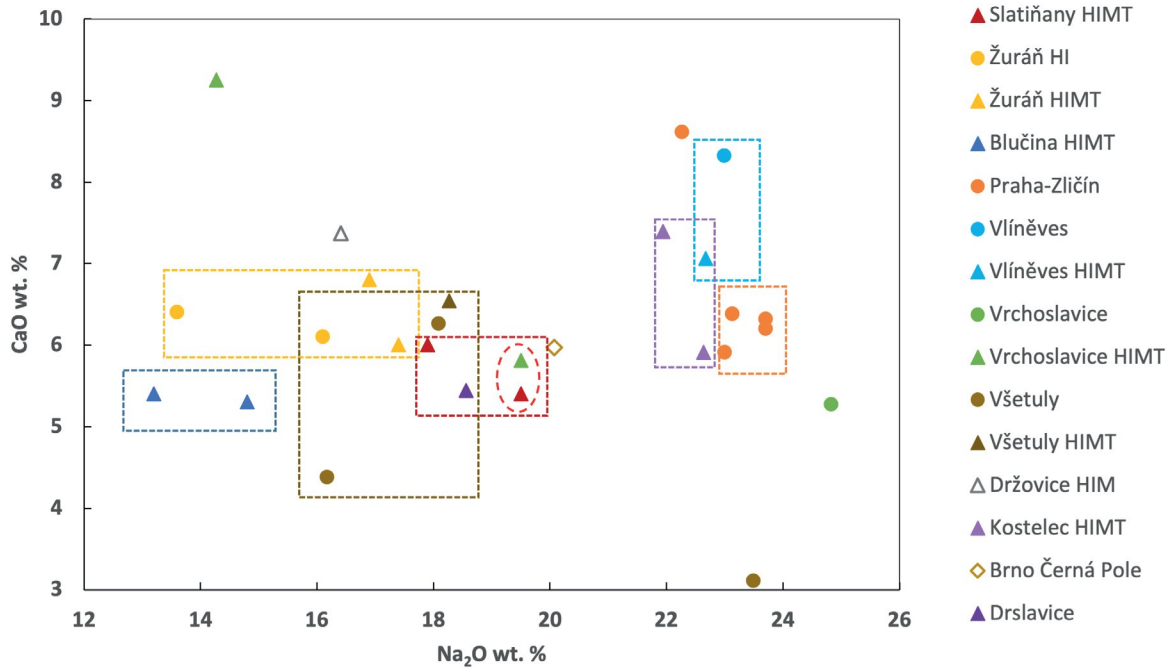


Fig 12. Na_2O concentration in the glasses ranges relatively widely, from 13 to 25 wt%, while the CaO content is usually between 5 and 8 wt%. Since CaO is assumed to originate from the sand, its amount shows no linear correlation to the Na_2O content. The glasses from Praha-Zličín and Vlíněves have the highest Na_2O levels, and the tall flute-shaped bottles from Blučina have the lowest.

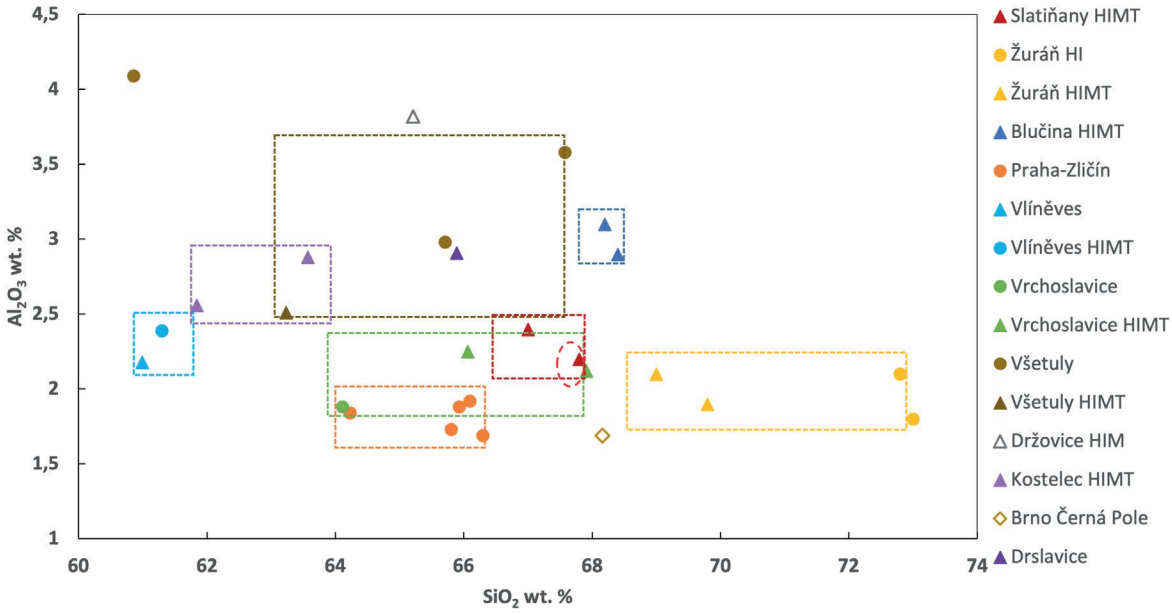


Fig. 13. Sand-derived oxides clearly demonstrate the different origins of the glasses and, thus, the sand deposits. Glasses from Žuráň have the highest SiO_2 content, which in most samples ranges from 63 to 69 wt%.

The deep blue glass fragment from Žuráň (A22 – Fig. 10.29/69) contains only Fe, and copper (0.2 wt% CuO) was added for colouring (Figs 12–14, yellow points), similar to the blue lettering on the light green fragment (A21b – Fig. 10.29/71). The analyses of both blue glasses found at Žuráň are very similar, suggesting a single production workshop. However, it is clear from Fig.13 that the glass from Žuráň belongs to a different production area than Všetuly, because it has a much lower Al_2O_3

content (1.8 wt%). Glass with a higher Fe content and without added Mn was also found in Bulgaria (Dichin),[195] and the authors referred to it as High Iron and Titania (HIT). However, our glasses do not have such a high TiO_2 content (up to around 0.7 wt%).

HIMT glasses

Based on their chemical composition (Tab. 1) and a comparison with published data,[196] some of the analysed glasses belong to the so-called High Iron–Manganese and Titania (HIMT) natron glasses.[197] HIMT-type glasses are characterised by high FeO and MnO contents and relatively high TiO_2 content. Iron and manganese were intentionally added to the glass as colouring agents. Two different materials may have been used as colourants, as they do not have a uniform ratio within the glass.[198] Titanium (Ti) and aluminium (Al) in the glass are impurities originating from the raw material and the colouring agents.

Mirti and her colleagues[199] divide HIMT glasses into two subgroups, HIMT1 and HIMT2, while Ceglia et al.[200] and Freestone et al.[201] use the designations HIMTa and HIMTb. Conversely, Rosenow and Rehren[202] classified the glasses from the Tell Basta/Bubastis site, located at the eastern mouth of the Nile Delta, as Weak HIMT and Strong HIMT. HIMT-type natron glasses were produced in the same period as Levantine I and II glasses, from the 4th to the 7th century AD. Levantine glasses have a lower Na_2O content (14–15 wt%), whereas most HIMT glasses in our analyses (except for the bottles from Blučina) are characterised by a relatively high Na_2O content (17–23 wt%), similar to Egyptian HIMT.

Indicators of decolourisation and provenance

In the 4th–7th centuries AD, glass decolourisation using manganese (Mn) prevailed; this technology was associated with the Levantine coast. Antimony (Sb) as a decolourising agent was not detected in the analysed glasses from Bohemia and Moravia. Glasses from the Egyptian Delta typically contain about 6 wt% CaO and 1.1–3.2 wt% Al_2O_3, indicating the use of less pure sand.[203]

Foster and Jackson[204] dated the production of those HIMT1 glasses to the mid-4th century AD. They note that these glasses were used for making conical vessels, and their composition matches, for example, Romano-British (Anglo-Saxon Period I) finds from the mid-4th to early 5th century AD.[205] Other authors[206] assume an Egyptian origin, but Foster and Jackson[207] place their origin to the Eastern Mediterranean coast (the Levant, i.e present-day Israel, Palestine, and Syria). This area

195 Rehren – Cholakova 2010, 85, Tab. 1, Samples G01–G03.

196 Foster – Jackson 2009, 192, Tab. 4.

197 Rehren – Freestone 2014; Ceglia *et al.* 2015; Freestone *et al.* 2018.

198 Sedláčková *et al.* 2014. In northern Italy, brown to purple glass was produced in the 12th–13th centuries AD. It was coloured with natural raw materials such as umber, in which the MnO/Fe_2O_3 ratio is stable around 1:3).

199 Mirti *et al.* 1993.

200 Ceglia *et al.* 2015.

201 Freestone *et al.* 2018.

202 Rosenow – Rehren 2014.

203 Gliozzo 2017.

204 Foster – Jackson 2009, Appendix B.

205 Freestone *et al.* 2008.

206 Freestone *et al.* 2005; Foy *et al.* 2003; Freestone *et al.* 2018.

207 Foster – Jackson 2009, Appendix B.

experienced significant development in the 4th century AD, and its products (wine and olive oil) were exported throughout the Roman Empire.

Wedepohl et al.[208] argued for a Western European origin and suggested production in the Hambach Forest (Germany). This hypothesis was later refuted by Rehren et al.,[209] who analysed samples using ICP-MS and concluded that the glasses' composition is very similar to that of HIMT glasses found throughout the Roman Empire. Conclusively, the workshop at Hambach likely relied on secondary production (remelting of imported glass ingots). Moreover, similar glasses are documented across a wide part of the Roman Empire, from northern Britain through France, Italy, North Africa, and the Balkans, where glass with such a chemical composition predominates around the mid-4th century AD, corresponding precisely to the time of operation of the glass furnaces in the Hambach Forest.

A comparison of vessels of the same type might also bring interesting results. For example, the conical Kempston-type beaker from England (Spong Hill site) was made of HIMT1 glass,[210] but the conical Snartemo-type vessel, found in Helgö, Sweden was made of another type of natron glass with a relatively high Al_2O_3 content and containing K_2O, i.e., from coastal sand with a high proportion of feldspar.[211] The composition of these vessels does not correspond to the analysed finds from Bohemia and Moravia.

In evaluating the present findings, we rely on the study by Rosenow and Rehren,[212] who published data on glasses from the Bubastis (Tell Basta) site. The chemical composition of HIMT-type glasses from Bohemia and Moravia is similar to that of these finds. Obviously, not all artefacts found in Moravia and Bohemia were produced and processed in the eastern Mediterranean coastal area, but one must reckon with secondary processing of ingots in Western Europe.

Weak HIMT subgroup

Specimens with 0.5–1.1 wt% FeO, 0.5–2 wt% MnO, and 0.1–0.2 wt% TiO_2 content were included in this subgroup of natron glasses. Some finds from Bohemia belong to the weak HIMT subgroup: for example, a Kempston-type beaker (Fig. 4.1/1) and a light green bowl (Fig. 7.1/2) from Čertova Ruka, Semily District.[213] Based on its 0.2 wt% TiO_2 content, the greenish-yellow lamp (A1 – Fig. 5.12/23) found in Grave H3 in Slatiňany, eastern Bohemia, may also be classified here. The light-green goblet from Brno-Černá Pole (A23 – Fig. 6.19/54) can also be assigned to this group (Figs 12–14, open beige diamond). In a previous publication,[214] it was included in Foster and Jackson's HIMT1 group.[215]

Vessels from Vlíněves, a cone beaker (A3 – Fig. 3.16/31) and a lamp (A4 – Fig. 5.16/30), also belong here.[216] They have elevated Na_2O content, surprisingly low SiO_2 content (around 60 wt%), and contain P_2O_5 (a contaminant from plant-based fuel), as well as a small amount of SnO_2. The material of the beaker contained 0.1 wt% CuO, added to achieve the desired dark olive-green shade.

Among the Moravian finds, a colourless lamp from Vrchoslavice (A15 – Fig. 5.27/62), two fragmentary finds from Žuráň (a faceted fragment, A20 – Fig. 10.29/72, and a fragment with letters, A21a –

208 Wedepohl *et al.* 2001, 1.

209 Rehren – Brüggler 2020.

210 Hunter – Sanderson 1982, Tab. 3.A12460.

211 Hunter – Sanderson 1982, Tab. 3.A2526.

212 Rosenow – Rehren 2014.

213 The study will be published later by Jaroslav Jiřík and his colleagues.

214 Jílek *et al.* 2025.

215 Foster – Jackson 2009.

216 Berkovec 2006, 375–376, Table of chemical analyses (provided by V. Hulínský).

Fig. 10.29/71)[217] were made of weak HIMT glass. Moreover, two vessels from graves dated to the late 4th century AD at Kostelec na Hané were analysed for comparison (A25 and A26).[218]

Strong HIMT subgroup

This subgroup includes glasses that meet the oxide-content criteria of 1.5–2.5 wt% FeO, 1–3 wt% MnO, and 0.3–0.8 wt% TiO_2.

The finds from Vinařice, including a semi-ovoid cup (Fig. 2.15/28) and a bowl with relief decoration (Fig. 7.15/29) are typical representatives of strong HIMT glass in Bohemia.[219] A green bottle from Slatiňany (A2 – Fig. 8.12/24) and a cone beaker from Drslavice (A24 – Fig. 2.20/55) were also assigned to this group. Although its FeO and MnO contents of the latter fall within the ranges of both weak and strong HIMT (see Fig. 14), the higher TiO_2 content (0.4 wt%) places it in the strong HIMT group.

In Moravia, two tall flute flasks/bottles were discovered in Blučina at the right foot of a man buried in a princely grave (A10 – Fig. 9.18/51, A11 – Fig. 9.18/52). Both bottles, exceptional in shape, were made of dark green and blue-green glass.[220] Their sodium oxide content is the lowest among the analysed samples (around 14 wt% Na_2O), similar to Levantine-type glass. The MnO and FeO levels are relatively high (2.4 and 3.4 wt% MnO, and 3.2 and 3.5 wt% FeO, respectively). The bulbous flask from the same grave was not analysed.

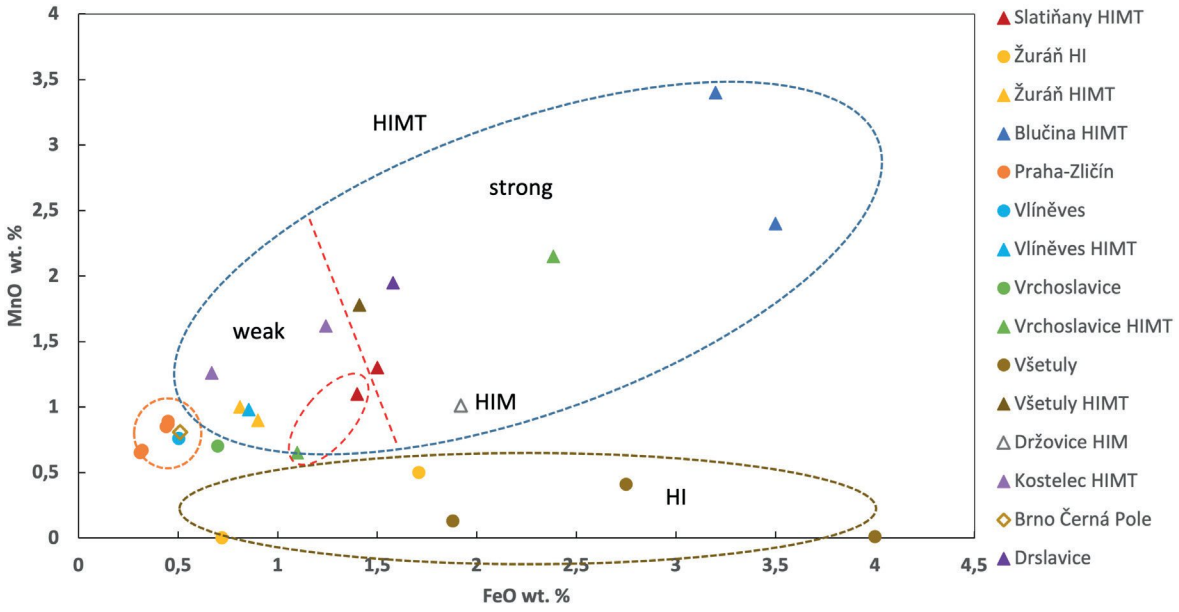


Fig. 14. The analysed samples clearly cluster in three distinct groups. HIMT glasses are further subdivided into strong and weak subgroups. Orange dots in the bottom left represent colourless glass vessels from Praha-Zličín; dark green dot marks one from Vrchoslavice; light blue dot marks one from Vlíněves. Brown dots to the right mark a group of glasses with high Fe content and no Mn from Všetuly (HI). This group also includes two samples from Žuráň (yellow dots).

217 Sedláčková 2016, 114, Table of chemical analyses (provided by Z. Cílová, 2011).

218 The study will be published later by Jaroslav Jiřík and his colleagues.

219 The study will be published later by Jaroslav Jiřík and his colleagues.

220 Observers may perceive the colour of the vessels differently as it depends on lighting, glass thickness, and angle of view. A similar phenomenon was observed while studying Gothic glass from the 14th–15th centuries AD. This is not dichromism but rather selective light absorption caused by polyvalent Fe and Mn ions. A comparable effect was observed in the analysis of medieval glass finds from Wenceslas Square in Prague. This phenomenon will be discussed in more detail in a separate, forthcoming publication.

Tab. 1. Chemical analyses of natron glasses, Migration Period, 4th–5th centuries AD [wt.%].

Analysis	Locality	Inv. no.	Vessel type	Fig. no.	SiO_2	Al_2O_3	CaO	K_2O	Na_2O	MgO	MnO	FeO	TiO_2	P_2O_5	SnO_2	CuO	SO_3	Cl	Glass type/ colour	Method	Notice
A1	Slatiňany[1]	H3-A1	Lamp	Fig. 5.12/23	67	2.4	5.4	0.5	19.8	0.9	1.1	1.4	0.2	n.d.	n.d.	n.d.	0.5	0.7	w HIMT	SEM/EDS	
A2		H2-A2	Bottle	Fig. 8.12/24	67.8	2.2	6	0.6	17.9	0.9	1.3	1.5	0.4	n.d.	n.d.	n.d.	0.4	0.7	s HIMT	SEM/EDS	
A3	Vliněves[2]	H 195	Cone beaker	Fig. 3.16/31	61.3	2.39	7.06	0.4	22.67	0.69	0.98	0.95*	0.4	0.21	0.34	0.09	0.28	1.25	w HIMT	SEM/EDS	
A4		H 188	Lamp	Fig. 5.16/30	60.99	2.18	8.32	0.35	22.99	0.55	0.76	0.56*	0.35	0.14	0.25	n.d.	0.19	1.4	w HIMT	SEM/EDS	
A5	Praha-Zličín[3]	541/31	Bell-shaped	Fig. 2.17/35	65.81	1.73	6.32	0.31	23.7	0.68	0.65	0.31	0.07	n.d.	n.d.	n.d.	n.d.	n.d.	colorless	microXRF	
A6		547/37	Cone beaker	Fig. 3.17/40	64.23	1.84	8.61	0.32	22.27	0.87	0.85	0.44	0.09	n.d.	n.d.	n.d.	n.d.	n.d.	colorless	microXRF	
A7		780/94	Cone beaker	Fig. 3.17/46	66.3	1.69	6.38	0.29	23.13	0.71	0.67	0.32	0.07	n.d.	n.d.	n.d.	n.d.	n.d.	colorless	microXRF	
A8		729/90	Bottle	Fig. 8.17/43	65.93	1.88	6.2	0.32	23.7	0.95	0.87	0.45	0.09	n.d.	n.d.	n.d.	n.d.	n.d.	colorless	microXRF	
A9		1556/143	Bottle	Fig. 8.17/48	66.1	1.92	5.91	0.31	23	0.91	0.89	0.45	0.09	n.d.	n.d.	n.d.	n.d.	n.d.	colorless	microXRF	
A10	Blučina[4]	157/560	Bottle	Fig. 9.18/51	68.2	3.1	5.4	0.8	13.2	1.2	3.4	3.2*	0.8	n.d.	n.d.	n.d.	n.d.	0.8	s HIMT	SEM/EDS	
A11		157/561	Bottle	Fig. 9.18/52	68.4	2.9	5.3	0.7	14.8	0.8	2.4	3.5*	0.3	n.d.	n.d.	n.d.	n.d.	0.9	s HIMT	SEM/EDS	
A12	Držovice[5]	343.701	Claw beaker	Fig. 11.21/56	65.21	3.82	7.37	0.75	16.41	1.37	1.01	1.92	0.02	0.26	n.d.	n.d.	0.91	0.92	HIM	SEM/EDS	
A13	Vrchoslavice[6]	H7-446	Snartemo	Fig. 4.27/63	64.11	1.88	5.27	0.33	24.83	0.23	0.7	0.7*	0.05	n.d.	n.d.	n.d.	n.d.	1.22	colorless	SEM/EDS	
A14		H9-447	Snartemo	Fig. 4.27/64	66.06	2.25	9.25	0.5	14.27	0.93	2.15	2.65*	0.45	n.d.	n.d.	0.5	n.d.	1.1	s HIMT	SEM/EDS	
A15		H6-452	Lamp	Fig. 5.27/62	67.91	2.12	5.81	0.39	19.5	0.54	0.65	1.22*	0.22	0.1	n.d.	n.d.	0.2	0.92	w HIMT	SEM/EDS	
A16	Všetuly[7]	500/800	Snartemo	Fig. 4.28/65	67.58	3.58	4.38	0.54	16.17	1.54	0.41	2.75	0.02	0.45	n.d.	n.d.	1.4	1.16	HI	SEM/EDS	
A17		507/807	Snartemo	Fig. 4.28/66	65.71	2.98	6.26	0.7	18.09	1.59	0.13	1.88	0.22	0.28	n.d.	n.d.	0.97	1.17	HI	SEM/EDS	
A18		510/810	Goblet	Fig. 6.28/68	63.23	2.51	6.54	0.66	18.27	1.02	1.78	1.41	0.2	0.29	n.d.	n.d.	1.07	1.42	s HIMT	SEM/EDS	1.57 NiO
A19		508/808	Bottle	Fig. 8.28/67	60.86	4.09	3.11	0.05	23.49	1.96	0.01	4	0.02	0.48	n.d.	n.d.	1.09	0.82	HI	SEM/EDS	
A20	Žuráň[8]	812/3-51/54	with facets	Fig. 10.29/72	69.75	1.88	6.01	0.47	17.38	0.88	0.92	0.96*	0.4	n.d.	n.d.	n.d.	n.d.	1.4	w HIMT	SEM/EDS	
A21a		812/3-60/54	Vessel green	Fig. 10.29/71	69	2.13	6.75	0.65	16.89	0.95	0.99	0.9*	0.28	n.d.	n.d.	n.d.	n.d.	1.5	w HIMT	SEM/EDS	
A21b			Blue letter	Fig. 10.29/71	72.78	2.13	6.35	0.78	13.59	1.05	0.45	1.9*	0.1	n.d.	n.d.	0.12	n.d.	0.87	HI blue/ Cu	SEM/EDS	
A22		812/3-58/54	Blue Bowl	Fig. 10.29/69	73.04	1.75	6.07	0.57	16.11	0.37	0.05	0.81*	0.09	n.d.	n.d.	0.21	n.d.	1	blue/ Cu	SEM/EDS	
A23	Brno-Černá Pole	107 296	Goblet	Fig. 6.19/54	68.16	1.69	5.97	0.45	20.07	0.6	0.8	0.5	0.18	n.d.	n.d.	n.d.	0.4	0.7	w HIMT	SEM/EDS	
A24	Drslavice	68 417	Beaker	Fig. 2.20/55	65.89	2.91	5.44	0.5	18.56	1.27	1.95	1.58	0.59	n.d.	n.d.	n.d.	0.33	0.61	s HIMT	SEM/EDS	
A25	Kostelec na Hané[9]	grave 135	Vessel	none	63.57	2.88	5.91	0.43	22.64	0.85	1.26	0.74*	0.14	0.04	n.d.	n.d.	0.22	1.21	w HIMT	XRF	
A26		grave 250	Vessel	none	61.87	2.56	7.39	0.6	21.94	0.81	1.62	1.38*	0.14	0.08	n.d.	0.05	0.31	1.07	w HIMT	XRF	

* Fe_2O_3; n.d. not detected; [1] Jílek et al. 2025, 318, Tab.1; [2] Limburský et al. 2010, 111–168, Tab. 9; [3] Jiřík et al. 2015, 200, Table, data provided by S. Greiff; [4] Seifertová 2012; [5] see Note 60; [6] Berkovec 2006, 375–376, Tab, analyses provided by V. Hulínský; [7] see Note 60; [8] Sedláčková 2016, 114, Tab.1, analyses provided by Z. Cílová; [9] To be published.

A Snartemo-type beaker from Vrchoslavice (A14 – Fig. 4.27/64) also belongs to the strong HIMT group, just as the goblet from Všetuly (A18 – Fig. 6.28/68). The body of this goblet has a light purple hue, which is unusual in the period. The colour results from high MnO content (1.78 wt%) and the oxidation–reduction conditions during melting. In this case, the melt was exposed to an oxygen-rich atmosphere, leading to the purple form of manganese (Mn^{3+}) prevailing. The blue rim of the goblet and its solid base were probably coloured with cobalt (Co). The claw beaker fragment from Držovice (A12 – Fig. 11.21/56) could also be included in this group, with some reservations. However, it contains almost no TiO_2 (only 0.02 wt.%). The sample was designated HIM.

Conclusions

This study presents a comprehensive analysis of 72 vessels from Bohemia and Moravia, focusing solely on shape, technical and manufacturing characteristics, and supplemented by a material composition analysis of 26 samples. The intent was not to provide an overview or information on all aspects related to these predominantly grave finds; therefore, it does not include descriptions of the grave pits, burial rites and anomalies, grave goods, and their dating. Hopefully, the presented results provide a basis for future work, raise ideas and questions to be addressed by younger generations of researchers.

Several aspects of the vessels were studied. In addition to typological classification, technical and manufacturing traces were assessed. The shaping of the rim is an important chronological marker: many analysed vessels have a bowl-shaped mouth and an outsplayed, unworked rim, more common in the late Roman period.[221] All semi-ovoid bowls have such rims, as do the lamp and *Wabenbecher* from Vinařice, and the bottle with arc decoration from Grave 143 in Praha-Zličín. The tall bottle-shaped vessels from Blučina also feature unworked rims, while bulbous flasks have everted rims. The sharp stub of the imperfectly broken upper part of a bulb was observed on the rim of a lamp from Vinařice. Other beakers and a bottle with ribs from Grave 144 in Praha-Zličín have thickened, sealed, or everted rims.

Marks of pipe blowing were found on a cone beaker from Kolín, a bottle and a lamp from Slatiňany, a Kempston-type beaker from Praha-Kobylisy, and the bases of a lamp from Vrchoslavice and a bottle from Praha-Podbaba, respectively. The body above the widest part of the belly of the latter is pinched, indicating that the vessel was held with tweezers during further work.

Some graves were clearly furnished with unused vessels, the bases of which bear no signs of prolonged use. The bottles from Slatiňany, Praha-Podbaba, and Blučina, and both Snartemo-type beakers and goblets from Moravia, have certainly never been used, but that could not be proven in other cases.

Most vessels, including various types of beakers, have no separate bases and were shaped from a single piece of glass. Such are the Snartemo-type beakers from Tišice and the goblet from Brno-Černá Pole, which incorporate a rare and complex technical solution in the form of a folded foot or folded stemmed foot, giving the impression of having been made from two parts. Although this production method, known primarily from goblets, is believed to have originated in the Eastern Mediterranean in the 5th century AD, it was clearly also applied to other forms in Europe. However, the exact manufacturing process of the goblet from Všetuly remains unclear; the bowl from Vinařice was clearly made using a relief mould.

Other Snartemo-type beakers have an attached base, i.e. were made of two parts. Complete examples from Vrchoslavice and Všetuly show that they were created by attaching a twisted thick thread

221 Lazar 2003, 19–20, Fig. 6.6, 'curved rim'.

to the base and then pressing and smoothing it to form a base. This indicates that even identical forms—especially Snartemo-type beakers—may have been produced using different techniques, probably in different workshops or production circles. The specimen from Tišice and, probably, the single-colour vessel from the Kozel hillfort are likely imports from Scandinavia (?) or Western Europe (?), while slightly different variants may also have been produced in the study area.

The important issue of Snartemo deserves a separate, detailed study. The discovery of the 'treasure' of seven vessels at the Kozel hillfort was significant for improving understanding of the glass trade in the 5th century AD. Although a detailed evaluation of the find is still in preparation, it can already be said that the merchant transporting these items to Bohemia carried diverse types of vessels—whether the products of a single workshop will only be revealed by analysis of their composition. However, a unique Snartemo-type beaker with blue threads in this 'treasure' and another at a distant site in Moravia may expand the known distribution area of this rare commodity. The location of the find near the south-western border of today's Czech Republic (Fig. 1.3) indicates a route to Micro-regions 9 and 10, Alamannia and Bavaria.[222]

The provenance of lamps/beakers with pointed or rounded bases raises interesting questions. The shape, which clearly originated in the Eastern Mediterranean, was adopted into the Western European repertoire, as evidenced by finds from the only glass workshop examined so far in Macquenoise, Belgium. Although represented only by a few dozen examples, such lamps/beakers were most common in the area of present-day France and the adjacent part of Belgium, followed by Bohemia; the reasons behind this distribution remain to be revealed.

Based on provenance, the vessels are connected to several main areas: Kempston-type beakers are undoubtedly from Western Europe, and most probably also Snartemo-type beakers and two bowls (an indented bowl and a lost bowl with white arcs) originate in Western Europe. Moreover, the secondarily modified claw beaker fragment from Držovice certainly originates there.

Both goblets, a bowl with relief decoration, and, probably, a hemispherical bowl with blue prunts are highly likely to have arrived from the Eastern Mediterranean. However, it cannot be ruled out that some of them were made in a European glass workshop from glass ingots imported from the Eastern Mediterranean or from Egypt.

All analysed samples proved to be natron glass, meaning that the glass batch consisted only of two weight parts sand (containing calcium residues from marine molluscs) and one part mineral natron. The production of coloured glass became widespread in the Eastern Mediterranean and the Nile Delta between the 4th and 7th centuries AD. Due to their high Mn, Fe and Ti contents, these glasses are referred to as High Iron, Manganese and Titanium (HIMT).

The colouring agents added in high quantities coloured the glass from yellow to olive green. A comparison of the graphical representation of the chemical composition in Figs 12–14 shows that

- each site contained glass from a single source;
- the analysed products were made of natron (sodium-calcium) glass, including colourless glass from Praha-Zličín, glass with a high Fe content and no Mn (HI), and glass with high Fe, Mn and Ti contents (HIMT);
- HIMT glass can be further divided into weak HIMT and strong HIMT glass (see Fig. 14);
- Bottle 1556/143 from Praha-Zličín (Fig. 8.17/49 – A9) and the Snartemo beaker (Fig. 4.27/63 – A13) from Vrchoslavice are very similar in chemical composition.

As this valuable material clearly holds potential for further research, the authors particularly appreciate additional information on analogies to lesser-known or previously unknown vessel forms.

222 Jílek *et al.* 2025, 316, Fig. 15.

Funding

The research was supported by the Ministry of Culture of the Czech Republic as part of institutional funding for the long-term conceptual development of the research organisation Museum of Decorative Arts in Prague (MK000023442). This work was supported by Research Infrastructure NanoEnviCz, supported by the Ministry of Education, Youth and Sports of the Czech Republic under Project no. LM2023066.

Literature

Adamíková, B. 2020: *Sklenené nádoby v hroboch z 5. storočia v strednom Podunajsku.* Thesis, University of Trnava, Trnava. https://ezp.truni.sk/opac?fn=*recview&uid=193849&pageId=resultform&full=0

Alenus-Lecerf, J. 1995: Contribution à l'étude des verres provenant des tombes mérovingiennes de Belgique. In: Foy, D. (ed.): *Le Verre de l'Antiquité tardive et du haut Moyen Age. Typologie – Chronologie – Diffusion. Association Française pour l'archéologie du Verre, Guiry-en-Vexin 18–19 Novembre 1993.* Guiry-en-Vexin, 57–83.

Antonaras, A. 2012: *Fire and sand. Ancient glass in the Princeton University Art Museum.* New Haven, CT–London.

Antonaras, A. 2017: *Glassware and glassworking in Thessaloniki: 1st century BC – 6th century AD.* Archaeopress Roman Archaeology 27. Oxford. https://doi.org/10.2307/j.ctv170x4f0

Barkóczi, L. 1972: Spätrömische Glasbecher mit aufgelegten Nuppen aus Pannonien. *Folia Archaeologica* 23, 69–93.

Barkóczi, L. 1988: *Pannonische Glasfunde in Ungarn.* Studia Archaeologica 9. Budapest.

Barovier Mentasti, R. (ed.) 2006: *Transparenze e riflessi. Il vetro italiano nella pittura.* Verona.

Berkovec, T. 2006: *Nálezová zpráva ze záchranného archeologického výzkumu Část I. Vrchoslavice 2 „Panský lán". Dálnice D1, úsek 0134.1/I, kilometráž 49,15–49,40 km, ISPROFIN č. 3272821062.* Olomouc.

Brill, R. H. 1999: *Chemical analyses of early glasses 2: Tables of analyses.* Corning–New York.

Ceglia, A. – Cosyns, P. – Nys, K. – Terryn, H. – Thienpont, H. – Meulebroeck, W. 2015: Late antique glass distribution and consumption in Cyprus: A chemical study. *Journal of Archaeological Science* 61, 213–222. https://doi.org/10.1016/j.jas.2015.06.009

Chambon, R. – Arbman, H. 1952: Deux fours à verre d'époque mérovingienne à Macquenoise (Belgique). In: Arbmann, H. (ed.): *Meddelanden från Lunds universitets Historiska museum.* Bulletin de la Societe Royale des Lettres de Lund 1951–1952 7. Lund, 199–232.

Droberjar, E. 2008: 5. Doba stěhování národů. In: Salač, V. (ed.): *Archeologie pravěkých Čech / 8. Doba římská a stěhování národů.* Praha, 156–194.

Evison, V. I. 1972: Glass cone beakers 'Kempston' Type. *Journal of Glass Studies* 14, 48–66.

Feyeux, J.-Y. 1995: La typologie de la verrerie mérovingienne du nord de la France. In: Foy, D. (ed.): *Le Verre de l'Antiquité tardive et du haut Moyen Age. Typologie – Chronologie – Diffusion. Association Française pour l'archéologie du Verre, Guiry-en-Vexin 18–19 Novembre 1993.* Guiry-en-Vexin, 109–137.

Filip, J. 1947: *Dějinné počátky českého ráje – The historical beginnings of the Bohemian Paradise.* Státní archeologický ústav. Praha.

Foster, H. E. – Jackson, C. M. 2009: The composition of 'naturally coloured' late Roman vessel glass from Britain and the implications for models of glass production and supply. *Journal of Archaeological Science* 36, 189–204. https://doi.org/10.1016/j.jas.2008.08.008

Foy, D. 1989: *À travers le verre du moyen* âge *à la renaissance.* Rouen.

Foy, D. 1995: Le verre de la fin du IVe–Ve siecle en France méditerranéenne, premier essai de typo-chronologie. In: Foy, D. (ed.): *Le Verre de l'Antiquité tardive et du haut Moyen Age. Typologie – Chronologie – Diffusion. Association Française pour l'archéologie du Verre, Guiry-en-Vexin 18–19 Novembre 1993.* Guiry-en-Vexin, 187–242.

Foy, D. – Picon, M. – Vichy, M. – Thirion-Merle, V. 2003: Caractérisation des verres de la fin de l'Antiquité en Méditerranée occidentale: l'émergence de nouveaux courants commerciaux. In: Foy, D. – Nenna, M.-D. (eds): *Échanges et commerce du verre dans le monde antique.* Montagnac, 41–85.

Freestone, I. C. – Wolf, S. – Thirlwall, M. 2005: The production of HIMT glass: Elemental and isotopic evidence. *Annales du 16e AIHV*, 153–157.

Freestone, I. C. – Hughes, M. J. – Stapleton, C. P. 2008: The composition and production of Anglo-Saxon glass. In: Price, J. (ed.): *Glass in Britain and Ireland ad 350–1100.* British Museum – Occasional paper 127. London, 29–46.

Freestone, I. C. – Degryse, P. – Lankton, J. – Gratuze, B. – Schneider, J. 2018: HIMT, glass composition and commodity branding in the primary glass industry. In: Rosenow, D. – Phelps, M. – Meek, A. – Freestone, I. C. (eds): *Things that Travelled: Mediterranean Glass in the First Millennium AD.* London, 159–190. https://doi.org/10.2307/j.ctt21c4tb3.14 Fremersdorf, F. 1967: *Die römischen Gläser mit Schliff, Bemalung und Goldauflagen aus Köln.* Die Denkmäler des römischen Kölns 8. Köln.

Fünfschilling, S. 2015: *Die römischen Gläser aus Augst und Kaiseraugst. Kommentierter Formenkatalog und ausgewählte Neufunde 1981–2010 aus Augusta Raurica.* Forschungen in Augst 51. Augst.

Galuška, L. – Macháček, J. – Pieta, K. – Sedláčková, H. 2012: The glass of Great Moravia: Vessel and window glass, and small objects. *Journal of Glass Studies* 54, 61–92.

Gliozzo, E. 2017: The composition of colourless glass: A review. *Archaeological and Anthropological Sciences* 9, 455–483. https://doi.org/10.1007/s12520-016-0388-y

Harden, D. B. 1975: Some Lombard glasses of the 6th and 7th Centuries. In: Čubrilović, V. (ed.): *Verre médiéval aux Balkans (Ve–XVe s.).* Belgrade, 11–32.

Hochmanová, V. 1952: Skleněný pohárek z doby stěhování národů z Brna – Černých polí. *Časopisu Moravského zemského musea v Brně*, 335 – 345.

Hunter, J. – Sanderson, D. 1982: The Snartemo/Kempston problem. *Fornvännen* 77, 22–29.

Isings, C. 1957: *Roman Glass from Dated Finds.* Groningen–Djakarta.

Jiřík, J. 2019: *Pohřebiště doby stěhování národů v Praze-Zličíně. Fragment populace doby stěhování národů z pohledu typologie, chronologie a prostorových vztahů na pohřebišti.* Habilitation thesis. Charles University, Prague. http://hdl.handle.net/20.500.11956/150829

Jiřík, J. – Vávra, J. – Šmolíková, M. – Kuchařík, M. 2015: *Hroby barbarů v Praze Zličíně Svět živých a mrtvých doby stěhování národů.* Praha.

Jílek, J. – Musil, J. – Zavoral, T. – Sedláčková, H. – Hošek, J. – Rohanová, D. – Horáková, M. – Hofmanová, Z. – Zlámalová, D. – Schmidtová, D. – Fernandes, R. – Klontza Jaklová, V. – Smíšek, M. – Březinová, H. – Ingrová, P. – Jiřík, J. – Pinar Gil, J. – Garbaras, A. – Vyskočilová, G. – Kučera, L. – Kučerová, P. – Maniotis, E. 2025: Two Migration Period graves from Slatiňany, Chrudim District. *Památky archeologické* 116, 287–352. https://doi.org/10.35686/PA2025.5

Koch, U. 1987: *Der Runde Berg bei Urach VI. Die Glas- und Edelsteinfunde aus den Plangrabungen 1967–1983.* Schriften der Heidelberger Akademie der Wissenschaften, Kommission für Alamannische Altertumskunde 12. Sigmaringen.

Koch, U. 2008: *Funde aus Glass und Edelstein aus den Plangrabungen 1967–1983. Der Runde Berg bei Urach VI. Teil I, Text.* Heidelberg.

Križanac, M. 2016: Early Byzantine glass in the territory of Serbia and Kosovo. *Journal of Glass Studies* 58, 87–103.

Kunina, N. 1997: *Ancient glass in the Hermitage Collection: The art treasures of Russia.* St. Petersburg.

Lazar, I. 2003: *Rimsko steklo Slovenije – The Roman glass of Slovenia.* Opera Instituti Archaeologici Sloveniae 7. Ljubljana. https://doi.org/10.3986/9789610503156

Limburský, P. – Likovský, J. – Velemínský, P. – Fleková, K. 2010: Kostrové pohřebiště vinařické skupiny ve Vliněvsi, okr. Mělník. Stěhování národů, populační skupina, vykrádání hrobů. *Památky archeologické* 101, 111–168.

Loskotová, Z. 2012: An early-5th-century skeleton grave with gold neck-ring from Charváty (Moravia). In: Ivanišević, V. – Kazanski, M. (eds): *The Pontic – Danubian realm in the period of the Great Migration.*

Association des amis du Centre d'histoire et civilisation de Byzance, Monographies 36. Paris–Beograd, 189–205.

Maul, B. 2002: *Frühmittelalterliche Gläser des 5.-7/8. Jahrhunderts n. Chr. Sturzbecher, glockenförmige Becher, Tummler und Glockentummler, Band I–II.* Universitätsforschungen zur prähistorischen Archäologie 84. Bonn.

Mirti, P. – Casoli, A. – Appolonia, L. 1993: Scientific analysis of Roman glass from Augusta Praetoria. *Archaeometry* 35, 225–240. https://doi.org/10.1111/j.1475-4754.1993.tb01037.x

Phelps, M. – Freestone, I. C. – Gorin-Rosen, Y. – Gratuze, B. 2016: Natron glass production and supply in the late antique and early medieval Near East: The effect of the Byzantine–Islamic transition. *Journal of Archaeological Science* 75, 57–71. https://doi.org/10.1016/j.jas.2016.08.006

Popelka, M. 2024: *Nálezová zpráva o terénním archeologickém výzkumu Holešov – Rozšíření parkoviště Nestlé – závod SFINX Holešov. Katastrální území Všetuly.* Ústav archeologické památkové péče v.v.i. číslo projektu AMČR M-202402168, číslo akce ÚAPP 363/24.

Poulík, J. 1995: Žuráň in der Geschichte Mitteleuropas (Žuráň v dějinách střední Evropy). *Slovenská archeológia* 43/1, 27–109.

Rademacher, F. 1942: Fränkische Gläser aus dem Rheinland. *Bonner Jahrbücher* 147, 285–344.

Rehren, Th. – Brüggler, M. 2020: The Late Antique glass furnaces in the Hambach Forest were working glass – not making it. *Journal of Archaeological Science: Reports* 29, 102072. https://doi.org/10.1016/j.jasrep.2019.102072

Rehren, Th. – Cholakova, A. 2010: The Early Byzantine HIMT glass from Dichin, Northern Bulgaria. *Interdisciplinary Studies* 22–23, 81–96.

Rehren, Th. – Freestone, I. C. 2014: Pattern in glass use in the Roman and Byzantine worlds: A report on current research at the Institute of Archaeology and UCL Qatar. *Archaeology International* 17, 74–78. https://doi.org/10.5334/ai.1718

Rohanová, D. – Sedláčková, H. – Staněk, P. – Siemianowska, S. – Pankiewicz, A. 2024: *Regional glass production and imports in Central Europe in the 13th–18th centuries. Part I: Brno and Wroclaw.* Prague.

Rosenow, D. – Rehren, Th. 2014: Herding cats – Roman to late Antique glass groups from Bubastis, northern Egypt. *Journal of Archaeological Science*, 49, 170–184. https://doi.org/10.1016/j.jas.2014.04.025

Sedláčková, H. 2006: Ninth- to mid-16th-century glass finds in Moravia. *Journal of Glass Studies* 48, 191–224.

Sedláčková, H. 2016: Blučina und Žuráň. Beiträge zur Kenntnis der Glasgefäßfunde aus Elitengräbern der Völkerwanderungszeit in Mähren. In: Geisler, H. (ed.): *Wandel durch Migration? 26. internationales Symposium „Grundprobleme der frühgeschichtlichen Entwicklung im mittleren Donauraum" Straubing 2014.* Büchenbach, 105–116.

Sedláčková, H. (ed.) 2018: *Glass in Brno and Moravia ca. 1200–1550, Vol. I. Assessment of finds.* Prague.

Sedláčková, H. 2019: *Glass in Brno and Moravia ca. 1200–1550, Vol. II. Catalogue of glass (with supplement by a CD with a catalogue of features listing over 300 sites which yielded glass).* Prague.

Sedláčková, H. (ed.) 2024: *Ancient glass from the Collections of the Museum of Decorative Arts in Prague.* Prague.

Sedláčková, H. – Rohanová, D. 2020: 3.9. Vessels, window panes and small glass artefacts in the material culture of the Mikulčice elites. In: Poláček, L. *et al.* (eds): *Great Moravian elites from Mikulčice.* Brno, 351–370.

Sedláčková, H. – Rohanová, D. 2024: Exkurs 2: Römische Glasgefäße aus Třebusice. In: Droberjar, E.: *Třebusice. Ein Brandgräberfeld aus der Römischen Kaiserzeit in Mittelböhmen, Teil II. Analysen und Interpretationen.* Brno, 305–321. https://doi.org/10.47382/arub2024-04

Sedláčková, H. – Rohanová, D. – Lesák, B. – Šimončičová Koóšová, P. 2014: Medieval glass from Bratislava (ca 1250–1450) in the context of contemporaneous glass production and trade contacts. *Památky archeologické* 105, 215–264.

Sedláčková, H. – Rohanová, D. — Lesák, B. — Šimončičová Koóšová, P. 2016: Late Gothic and Early Renaissance glass from Bratislava, ca. 1450–1550. *Památky archeologické* 107, 353–394.

Seifertová, J., 2012: *Restaurování dvou skleněných nádob z královského hrobu v Blučině z poloviny pátého století A.D.* Seminary work IV., Department of Glass and Ceramics, University of Chemistry and Technology, Prague.

Stern, E. M. 2001: *Roman, Byzantine and Early Medieval glass, 10 BCE–700 CE: Ernesto Wolf Collection.* New York.

Sternini, M. 2001: Reperti in vetro da un deposito tardoantico sul colle Palatino. *Journal of Glass Studies* 43, 21–76.

Šmerda, J. 2017: Předběžné poznámky k počátku a konci pohřbívání na nekropoli z mladší fáze doby stěhování národů v Kyjově. In: Sedláčková, H. (ed.): *Na hranicích impéria Extra Fines Imperii Jaroslavu Tejralovi k 80. Narozeninám.* Brno, 381–396.

Svoboda, B. 1965: *Čechy v době stěhování národů.* Praha.

Tejral, J. 1982: *Morava na sklonku antiky.* Praha.

Tejral, J. 2009: Langobardische Fürstengräber nördlich der mittleren Donau. In: von Freeden, U. – Friesinger, H. – Wamers, E. (eds): *Glaube, Kult und Herrschaft: Phänomene des Religiösen im 1. Jahrtausend n. Chr. in Mittel- und Nordeuropa. Akten des 59. Internationalen Sachsensymposions und der Grundprobleme der frühgeschichtlichen Entwicklung in Mitteldonauraum.* Kolloquien zur Vor- und Frühgeschichte 12. Bonn, 123–162.

Tejral, J. 2011: *Einheimische und Fremde. Das norddanubische Gebiet zur Zeit der Völkerwanderung.* Spisy Archeologického ústavu AV ČR v Brně 33. Brno.

Tejral, J. 2013: The Connections between the region north to the Danube and Northern Europe. Some aspects of ethnic and social identity of the fifth century elites. In: Khrapunov, I. – Stylegar, F.-A. (eds): *Inter Ambro Maria: Northern Barbarians from Scandinavia towards the Black Sea.* Simferopol, 383–408.

Tejral, J. 2016: Spätantik – merowingisch – frühmittelalterlich: Strittige Übergänge im mittleren Donauraum aus der Sicht der Archäologie. In: Bugarski, I. et al. (eds): *Grenz Übergänge: Spätrömisch, frühchristlich, frühbyzantinisch als Kategorien der historisch-archäologischen Forschung an der mittleren Donau — Late Roman, Early Christian, Early Byzantine as categories in historical-archaeological research on the Middle Danube. Akten des 27. Internationalen Symposiums der Grundprobleme der frühgeschichtlichen Entwicklung im mittleren Donauraum, Ruma, 4.-7. 11. 2015.* Forschungen zu Spätantike und Mittelalter 4. Remshalden, 103–119.

Tihelka, K. 1963: Knížecí hrob z období stěhování národů u Blučiny, okr. Brno-venkov. *Památky archeologické* 54, 467–498.

Uboldi, M. 1995: Diffusione delle lampade vitree in età tardoantica e altomedievale e spunti per una tipologia. *Archeologia Medievale* 22, 93–145. https://doi.org/10.1400/245432

Vessberg, O. 1952: Roman Glass in Cyprus. *Opuscula Archaeologica* 7, 109–165.

Vymazalová, B. 2025: Glass vessels in graves from the 5th century in the Middle Danube region. *Přehled výzkumů* 66/1, 169–194. https://doi.org/10.47382/pv0661-01

Wedepohl, K. H. – Gaitzsch, W. – Follmann-Schulz, A. B. 2001: Glassmaking and glassworking in six Roman factories in the Hambach Forest. In: AIHV (ed.): *AIHV Annales du 15e Congrès, New York – Corning, 2001.* Nottingham, 56–61.

Whitehouse, D. 1997: *Roman glass in The Corning Museum of Glass, Vol. 1.* New York.

Whitehouse, D. 2001: *Roman glass in The Corning Museum of Glass, Vol. 2.* Corning–New York.

Whitehouse, D. 2005: *Sasanian and Post-Sasanian glass in The Corning Museum of Glass* (with a contribution by Brill, R. H.). Corning–New York.

Wieczorek, A. – Périn, P. – von Welck, K. – Menghin, W. (eds) 1996: *Die Franken: Wegbereiter Europas (5. bis 8. Jahrhundert n. Ch.) 1 — Les Francs: précurseurs de l'Europe (Ve au VIIIe siècle) 1.* Mainz.

Zábojník, J. 2009: Sklený pohár z obdobia sťahovania národov v Čataji. *Študijné zvesti Archeologického ústavu* 45, 189–191.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 525–535. 10.17204/dissarch.suppl.5.2026.525

The iconography of the Seasons in Poetovio stone reliefs and its connections to other artistic centres

Katarina Šmid ✉
University of Primorska, Faculty of Humanities, Koper, Slovenia
katarina.smid@fhs.upr.si

Received 13 October 2025 | Accepted 7 April 2026 | Published 18 November 2026

Abstract: This study examines the iconography of the Seasons from the Roman town of Poetovio (Ptuj, Slovenia) as represented in funerary monuments, with a particular focus on busts depicted on ash-chest lids acroteria. These personifications, most commonly rendered in the form of the Horae, appear with unexpected frequency in Poetovio, despite being rare elsewhere in Pannonia and virtually absent in Noricum. The reliefs of modest provincial craftsmanship, reveal clear iconographic affinities with northern Italian sarcophagi-workshops, particularly those of Ravenna, where the motif of seasons-busts was prevalent in the acroteria of the sarcophagi-lids. This paper argues that such imagery in Poetovio was influenced by artistic models from Ravenna, either directly or through the intermediary role of Aquileia, with which Poetovio maintained strong commercial and cultural connections.
In addition to busts, sporadic representations of the Seasons as youthful *genii*, which are common in neighbouring Noricum, or Erotes are also attested, though far less frequently. The iconographic diversity in Poetovio attests to its role as a culturally receptive provincial centre, shaped by transregional artistic currents. The placement and form of these busts in Poetovio underscore a localised adoption of a motif with origins in Ravenna-sarcophagi workshops, adapted to fit much smaller ash-chest lids.

Keywords: Poetovio, Seasons, Noricum, Ravenna, sarcophagi-acroteria

Introduction

The Roman town of Poetovio (Ptuj, Slovenia), one of the most important urban centres of the province of Pannonia, has yielded a substantial corpus of funerary monuments, among which stone sarcophagi and ash chests occupy a prominent place. Within this material, representations of the Seasons constitute a distinct group that has so far received only limited and unsystematic scholarly attention. The present study therefore brings together and re-examines the known examples, with the aim of reassessing their iconography, chronology, and broader cultural context.

The surviving material is fragmentary and often poorly preserved, comprising roughly a dozen monuments or fragments, primarily ash-chest lids and sarcophagus elements. The identification of the Seasons on the monuments discussed here is frequently complicated by their schematic execution and the erosion of attributes, which in many cases renders distinctions between individual personifications—or even their gender—uncertain. Despite these limitations, the recurring placement of busts within the acroteria of lids points to a coherent iconographic scheme that invites closer analysis.

✉ Corresponding author

Busts of the Seasons in Poetovio

Poetovio, a notably cosmopolitan urban centre during the Roman period, exhibits a wide array of artistic motifs and representational patterns, several of which extend beyond the city's urban boundaries. Among these, depictions of the Seasons appear with notable frequency.

In few examples they appear in the guise of Erotes, as the youths,[1] but are most frequently represented as busts, typically in the form of the Horae.[2] Such representations are rare in other parts of Pannonia[3] and entirely absent in neighbouring Noricum.[4] Nevertheless, in Poetovio, this iconography appears on a number of monuments, including one stele,[5] hypothetically one marble relief block,[6] and several ash-chest lids. In all instances, the busts are crudely executed, often making it difficult to distinguish their attributes or even their gender.

By far the largest number of the Seasons' busts in Poetovio has been preserved on the acroteria of the ash-chest lids, presumably only on the front side.[7] Two such examples feature the busts beneath shell-shaped "canopies" with draped curtains. On the better-preserved lid (Fig. 1),[8] the Hora bust of Spring is placed in the left acroterion, while the right figure is too deteriorated for a secure identification. Another lid, bearing similar compositional features and depicting a couple with a child,[9] likely included seasonal busts as well, though erosion has rendered them mostly indistinguishable, except for a female figure in the right acroterion resembling the previously mentioned Hora of Spring.

1 Particularly distinctive are the personifications depicted as youthful figures performing a characteristic 'scissor-like' dance step—a motif found in Noricum and, to a significantly lesser extent, in Upper Pannonia (see Šmid 2020, 63–69 with the cited older literature).

2 See Šmid 2024, 43–47.

3 Two examples can be found in Pannonia Inferior. The first is a sarcophagus from the military camp Alisca, dated to approximately 180–230 AD (Budapest, Hungarian National Museum, Inv. no. 23.1849.1; Koch – Sichtermann 1982, 327; Nagy 2012, 79–80, no. 81; https://lupa.at/824, last access: 21 March 2026). The second is a sarcophagus from Mursa (present-day Osijek, Croatia, Osijek Archaeological Museum, Inv. no. 6152; Dautova-Ruševljan 1983, 27, no. 173 citing different Inv. no. 670; Pochmarski 2019, 257–259, no. 11; https://lupa.at/5261, last access: 21 March 2026).

4 A fragment of an acroterion from a sarcophagus, currently preserved in the Universalmuseum Joanneum in Graz, depicts a bust of a Hora adorned with floral motifs. As the fragment originates from Slovenia (https://lupa.at/16580, last access: 21 March 2026), it is, in my assessment, highly likely that its provenance can be attributed to Ptuj.

5 Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 97; Schober 1923, 133, no. 292; Hoffiler – Saria 1938, 191–192, no. 431; Jevremov 1988, 75, no. 58; Ragolič 2023, 176–177, no. 182; Šmid 2024, 44; https://lupa.at/3780, last access: 21 March 2026. It measures 1.00 × 0.46 × 0.30 m.

6 Ptuj, Regional Museum Ptuj-Ormož, Inv. no. 821; Maver 2008, 630; Ragolič 2023, 194, no. 219; Šmid 2024, 46; Lupa 9438 (https://lupa.at/9438, last access: 21 March 2026). The block originally constituted probably the corner section of the central frieze of an *aedicula* tomb (Maver 2008, 630).

7 Unfortunately, the majority of Roman stone monuments from Ptuj are currently inaccessible, having been placed in storage following the closure of the lapidarium in 2012. Scholarly descriptions of these pieces remain limited, and the available photographic documentation typically captures only the front sides of the ash-chest lids. No rear depictions are noted in the existing literature, so it can be reasonably inferred that the reverse sides were left undecorated and that the busts were intended only to the front.

8 Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 123; Abramić 1925, 51, no. 16; Jevremov 1988, 67, no. 42; Djurić 2001a, 122, no. 23; Mander 2013, 288, no. 611; Pochmarski 2015, 217; Ragolič 2023, 171–172, no. 172; Djurić 2024, 108–109, no. 96; Šmid 2024, 44–45; https://lupa.at/4254, last access: 21 March 2026. It measures 1.25 × 0.40 × 0.35 m.

9 Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 871; Abramić 1925, 51, no. 16; Jevremov 1988, 70, no. 48; Djurić 2001a, 123, no. 48; Mander 2013, 286–287, no. 610; Pochmarski 2015, 217; Ragolič 2023, 170, no. 169; Djurić 2024, 111, no. 100; Šmid 2024, 45; https://lupa.at/9410, last access: 21 March 2026. It measures 0.36 × 1.32 × 1.04 m (Mander 2013, 286, no. 610).



Fig. 1. Ash-chest lid. Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 123 (photo: B. Farič).

Clearer representations are preserved on two limestone fragments that once belonged to the lid of the same sarcophagus (Figs 2–3).[10] On the right acroterion, there is a female bust dressed in a *chiton* (Fig. 2). Beside her is a *kantharos* filled with fruit, a characteristic attribute of Autumn. Opposite her is a male bust with a basket of wheat ears beside him (Fig. 3), an attribute associated with Summer.



Fig. 2. Personification of Autumn. Right acroterion of the ash-chest lid. Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 1016 (photo: N. Mertik).



Fig. 3. Personification of Summer. Left acroterion of the ash-chest lid. Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 1016 (photo: N. Mertik).

Additionally, a marble bust, representing a season, is embedded in the northern wall of the parish church of St. Nicholas in Miklavž na Dravskem polju.[11] Beside the figure is a basket of fruit, suggesting that it most likely represents the personification of Autumn.[12] The fragment, which is rounded on its right edge and measures 0.31 × 0.23 m,[13] may originally have formed part of a sarcophagus acroterion. More eroded, the acroterion fragment possibly representing the bust of a Hora,[14] offers a comparable example, although its iconographic attributes are no longer discernible.

10 Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 1016; Tušek 1993, 204–205; Djurić 2001b, 53, no. 23; Ragolič 2023, 162–163, no. 153; Djurić 2024, 83, no. 30; Šmid 2024, 45; https://lupa.at/9441, last access: 21 March 2026.

11 Pahič 1974, 134, no. 8; Pahič 1977, 51, no. 6; Djurić 2001b, 53, no. 27; Ragolič 2023, 275, no. 348; Djurić 2024, 84, no. 33; Šmid 2024, 46; https://lupa.at/5888, last access: 21 March 2026.

12 See Abad Casal 1990, 537.

13 Djurić 2024, 84, no. 33.

14 Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 449; Djurić 2024, 84–85, no. 34.

A comparable example is a marble bust embedded in the Church of St. Stephen in Spodnja Polskava, which has previously been tentatively identified as Luna-Nemesis. However, it could plausibly be reinterpreted as a representation of one of the Horae.[15] The head adornment, resembling a floral wreath, is akin to those occasionally associated with Summer, while the draped garment—exposing the right breast—corresponds to the conventional iconography of the Horae. With preserved dimensions of 0.25 × 0.34 m, the bust may have originally functioned as an acroterion from a sarcophagus or an ash-chest lid.



Fig. 4. Bust of the personification of Seasons (?). Right acroterion of the ash-chest lid. Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 839 (photo: B. Farič).

The acroteria of two ash-chest lids—one from Ptuj (Fig. 4)[16] and the other from Draženci[17]—are so heavily eroded that the features of the busts are no longer discernible. Nevertheless, by analogy with the previously examined examples, it is reasonable to assume that these too originally featured busts representing the Seasons.

Origins and influences of Seasonal iconography in Poetovio

All the above-mentioned examples from Poetovio are characterised by relatively modest craftsmanship, which indicates provincial production. In 1988, Blagoje Jevremov proposed that the inclusion of masks and busts of the deceased in the corner acroteria of lids was a hallmark of Poetovio's stone-carving workshops during the mid-2nd century.[18] However, both the iconography and, more significantly, the positioning of these elements suggest the influence of North Italian sarcophagus workshops—particularly a specific group of pagan sarcophagi from Ravenna which frequently feature busts of the Seasons in the corner acroteria of gabled lids. Occasionally, these busts are replaced by symbolic attributes—such as fruits, flowers and other natural products—intended to evoke funerary offerings.[19] This substitution is also observable on three ash-chest lids from the region, two in Ptuj and one embedded in the Church of St. Michael in Črešnjevec (Fig. 5).[20]



Fig. 5. Ash-chest lid. Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 748 (photo: B. Farič).

15 Pahič 1977, 55; Djurić 2001b, 53, no. 26; Ragolič 2023, 252, no. 308; Šmid 2024, 47; https://lupa.at/5308, last access: 21 March 2026.

16 Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 839; Jevremov 1988, 125, no. 151; Djurić 2001a, 123, no. 60; Ragolič 2023, 131, no. 93; Djurić 2024, 117, no. 119.

17 Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 733; Pahič 1977, 47; Jevremov 1988, 87; Ragolič 2023, 301, no. 397; Djurić 2024, 119, no. 126.

18 Jevremov 1988, 67.

19 Gabelmann 1973, 139.

20 Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 748 and RMPO unnumbered; Jevremov 1988, 70, no. 47; Djurić 2001a, 122, no. 22; Pochmarski 2015, 217; Ragolič 2023, 174, no. 177; Djurić 2024, 107–108, no. 95; ▸

Both the form of the lids and the figural decoration of the acroteria on these sarcophagi likely originated from the sarcophagus workshops of Asia Minor and subsequently spread to northern Italy.[21] Local production in this region is believed to have commenced during the mid-Antonine period (ca. 160–180 AD), a development likely stimulated by the increased importation of sarcophagi from Asia Minor into Cisalpine Gaul,[22] although, only a small number of fragments from Northern Italy can be securely attributed to sarcophagi originating from Asia Minor.[23]

In addition to finds from Regio VIII, several locally produced acroteria featuring male and female portrait busts have been discovered also in Aquileia. However, unlike the examples from Ravenna, these are typically found in secondary contexts—separated from their original lids and lacking precise archaeological context.[24] Importantly, it has to be stressed that in Aquileia (according to the finds) apparently only the busts of the deceased and not the busts of the Seasons[25] were placed in the acroteria.[26]

As observed by Hanns Gabelmann, early productions from the Ravenna sarcophagus workshops commonly featured busts of all four Seasons positioned in the acroteria.[27] This iconographic scheme is exemplified by the sarcophagus discovered in 1947 in Piazza Matteotti in Modena (LMM 8035, Figs 6–7),[28] dated to around 170 AD,[29] as well as by the sarcophagus of Gaius Atecius Valerius in Ivrea (Cathedral),[30] which is dated broadly to the Antonine period[31] to the transitional phase between the late Antonine and early Severan eras.[32]



Fig. 6. Front side of the sarcophagus from Piazza Matteoti. Modena, Museo Lapidario Estense, Inv. no. 8035 (by permission of Ministry of Culture – Photographic Archive of Estense Galleries, photo: C. Vannini).

▸ https://lupa.at/4255, last access: 21 March 2026), an unnumbered example from the same museum (Djurić 2024, 112, no. 102) and one embedded in the Church of St. Michael in Črešnjevec (Ragolič 2023, 244, no. 290; https://lupa.at/4692, last access: 21 March 2026).

21 Rebecchi 1977, 30–131; Rebecchi 1978, 217–218, 238. It is important to emphasise that, based on current archaeological evidence, the acroteria of Asia Minor sarcophagi were not decorated with busts of the Seasons, as no such examples have been documented to date (Gabelmann 1973, 123–124).

22 Rebecchi 1977, 129; Kranz 1984, 151.

23 See Ciliberto 2003, 183–186, no. S 25; Ciliberto 2024, 279–281.

24 Rebecchi 1978, 253–254, Note 172.

25 Hypothetically, only the bust, interpreted as Bacchant (Scrinari 1972, 169, no. 522), could instead also be explained as the personification of the Autumn.

26 See Scrinari 1972, 169–173, nos 523–541.

27 Gabelmann 1973, 123–124, 139.

28 Estense Lapidary Museum in Modena, Inv. no. 8035 (Gabelmann 1973, 214, no. 57; Rebecchi 1977, 114–119; Koch – Sichtermann 1982, 287; Kranz 1984, 281, no. 562; Giordani – Paolozzo Strozzi 2005, 501).

29 The sarcophagus has been subject to a wide range of proposed dates, spanning from the mid-2nd to the 4th century; nevertheless, lately it is dated to the third quarter of the 2nd century (cp. Kranz 1984, 281, no. 562; Giordani – Paolozzo Strozzi 2005, 501).

30 Gabelmann 1973, 124–128, 139, 215, no. 61; Rebecchi 1977, 117–119; Kranz 1984, 281, no. 561.

31 Rebecchi 1977, 119. According to Peter Kranz it could also be produced a bit later (Kranz 1984, 281, no. 561).

32 Gabelmann 1973, 120–121, 126.

It should be emphasised that the sarcophagus from Piazza Matteotti displays a distinctive feature: the chest was carved separately from the base. This remarkable characteristic points directly to connections with one of the principal artistic centres of Asia Minor, Aphrodisias (Geyre, Turkey), as it also appears in a small group of garland sarcophagi produced there.[33] When considered alongside fragments from Aquileia—whether imported or clearly inspired by Asia Minor production, and specifically by the workshops of Aphrodisias—this evidence strongly attests to the well-established artistic links between northern Italy and Asia Minor.[34]



Fig. 7. Rear side of the sarcophagus from Piazza Matteoti. Modena, Museo Lapidario Estense, Inv. no. 8035 (by permission of Ministry of Culture – Photographic Archive of Estense Galleries, photo: C. Vannini).

In later examples, such as the sarcophagus of Publius Vettius Sabinus (Figs 8–9),[35] dated either to the Severan period or possibly as late as the 260s AD,[36] the number of Seasons busts is reduced to two (Fig. 9) or in some cases to even one figure, typically placed on the rear side. The remaining acroteria, particularly on the front side, are occupied by portraits of the deceased (Fig. 8).[37] This replacement of the busts of the Seasons with the busts of the deceased is traceable into Severan era.[38]



Fig. 8. Front side of the sarcophagus of Publius Vettius Sabinus. Modena, Museo Lapidario Estense, Inv. no. 7085 by permission of Ministry of Culture – Photographic Archive of Estense Galleries, photo: C. Vannini).



Fig. 9. Rear side of the sarcophagus of Publius Vettius Sabinus. Modena, Museo Lapidario Estense, Inv. no. 7085 (by permission of Ministry of Culture – Photographic Archive of Estense Galleries, photo: C. Vannini).

33 Ciliberto 2024, 282. For the group of sarcophagi from Aphrodisias, see Işık 2007, 15, 106–108, 110–111, nos 8, 13, 17, 34–35, 37.

34 Ciliberto 2024, 278–282.

35 Estense Lapidary Museum in Modena, Inv. no. 7085; Gabelmann 1973, 138–144, 219, no. 80; Rebecchi 1977, 122–123; 157; Rebecchi 1978, 212; Koch – Sichtermann 1982, 287, Note 64; Kranz 1984, 281, no. 563; Abad Casal 1990, 525, no. 130; Spalthoff 2010, 192, no. 79.

36 Gabelmann 1973, 143; Spalthoff 2010, 192, no. 79.

37 Gabelmann 1973, 131; Kranz 1984, 151.

38 Godoli 1998, 28–29.



Fig. 10. Personification of Autumn, Ptuj, Povodnov muzej (photo: K. Šmid).



Fig. 11. Personification of Winter, part of a funerary *aedicula* tomb. Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 105 (photo: B. Farič).

Sarcophagi featuring busts of the Seasons or the deceased within the acroteria are generally dated to a broad chronological span, from approximately 170 AD to the 260s AD. The funerary monuments from Poetovio that exhibit similar motifs are typically assigned a date ranging from the mid-2nd to the early 3rd century. However, in light of the chronology of northern Italian sarcophagus production, the late 2nd or early 3rd century of this proposed timeframe appears more convincing.

Representations of the Seasons as youthful *genii* exhibiting a distinctive 'scissor-like' stride that occur in the neighbouring province of Noricum are in Poetovio relatively uncommon. These figures generally demonstrate a clear iconographic affinity with satyrs, as reflected in their youthful physiognomy, animated posture, the manner in which they hold the shepherd's staff, and other shared attributes.[39] To my knowledge, this iconographic type appears in Poetovio on only one relief—part of a tomb depicting Autumn—now secondarily embedded in the Church of St. Stephen in Spodnja Polskava.[40] It is also conceivable that Autumn, portrayed as a youth (albeit lacking the 'scissor-like' stride), may be represented on a part of the tomb from Starše (Fig. 10).[41]

39 Kranz 1984, 119. The intertwining of satyr and Season iconography first emerges on late Antonine sarcophagi of Roman production (Kranz 1984, 173; Kranz 1986, 209; Pochmarski-Nagele 1992, 170). For all representations of the Seasons and satyrs in youthful form and characterised by the distinctive 'scissor-like' stride—attested in the province of Noricum and, by extension, in neighbouring Pannonia—a *terminus post quem* in the first quarter of the 3rd century has been proposed (Pochmarski-Nagele 1992, 171).

40 Pahič 1977, 267–268; Kastelic 1998, 397–398; Ragolič 2023, 252, no. 309; https://lupa.at/4154, last access: 21 March 2026.

41 Ptuj, Povoden Museum; Abramić 1925, 144, no. 162; Pahič 1977, 57; Ragolič 2023, 293, no. 378; https://lupa.at/4663, last access: 21 March 2026.

Representations of the Seasons in the guise of Erotes are—based on the extant material—quite rare in this Pannonian town and appear only sporadically in Noricum as well.[42] The iconographic type of the Seasons as Erotes emerged early in Roman art, already by the beginning of the 2nd century, with the earliest example from the 1st half of the 1st century AD, and became widespread on metropolitan sarcophagi.[43] A depiction of Winter, identifiable by the veiled head and the attribute of a captured hare, appears on a relief that originally formed part of a funerary *aedicula* tomb (Fig. 11).[44] Another example, an acroterion from an ash-chest lid now embedded in the Church of St. Bartholomew in Slovenska Bistrica in Slovenia (Fig. 12), shows an Eros holding a basket; likely symbolising one of the Seasons.[45] Furthermore, a fragmentary relief from a funerary monument, depicting a partially preserved Eros holding an elongated staff-like object, may also represent a Season, possibly Spring (Fig. 13).[46]



Fig. 12. Acroterion of an ash-chest lid, Church of St. Bartholomew in Slovenska Bistrica (photo: S. Kostanjšek Brglez).



Fig. 13. Personification of Spring (?). Part of a funerary monument. Ptuj, Regional Museum Ptuj–Ormož, Inv. no. RL 463 (photo: B. Farič).

Conclusions

In conclusion, representations of the Seasons depicted as busts—following a pattern reminiscent of the lids of the Ravenna sarcophagi—appear to have been relatively widespread in Poetovio. In contrast, other iconographic types of the Seasons, portrayed as youthful figures or Erotes, are attested in this autonomous town only in a limited number of examples.

It is not unexpected that Roman Poetovio, as a thriving provincial centre, was receptive to a range of artistic influences originating from diverse geographical regions. The reciprocal artistic and cultural exchange between Noricum and Pannonia has long been acknowledged, as reflected in the adoption of the term 'Norico-Pannonian art'

42 See https://lupa.at/331, https://lupa.at/1008, https://lupa.at/1058, https://lupa.at/1060, https://lupa.at/1063, https://lupa.at/1115, https://lupa.at/4634, https://lupa.at/4637, last access: 21 March 2026.

43 Kranz 1984, 164–165; Boschung 2013, 180–181. The earliest known example is a round altar from Horti Sallustiani in Rome, dated to 20–50 AD (Martin von Wagner Museum of the University of Würzburg, Inv. no. H 5056; Boschung 2013, 181–182, Note 11 with the cited literature).

44 Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 105; Jevremov 1988, 80, no. 65; Ragolič 2023, 193, no. 217; https://lupa.at/8810, last access: 21 March 2026.

45 Pahič 1977, 54; Ragolič 2023, 227, no. 264; Djurić 2024, 117–118, no. 122; https://lupa.at/5384, last access: 21 March 2026.

46 Ptuj, Regional Museum Ptuj-Ormož, Inv. no. RL 463; Jevremov 1988, 124, no. 150; Djurić 2001b, 48; Ragolič 2023, 16, no. 160; Djurić 2024, 77, no. 11; https://lupa.at/4220, last access: 21 March 2026.

to characterise the artistic output of both provinces.[47] Nevertheless, it is important to note that depictions of the Seasons (or satyrs) in striding poses—frequent in Noricum—are only sporadically attested in Poetovio or, more widely, in Pannonia. In contrast, representations of the Seasons or busts employed as acroterial figures on the lids of ash chests are entirely absent from the artistic record of Noricum.

It has frequently been noted that certain artistic influences—including types and forms of funerary monuments—originated in *Regio X*, with Aquileia serving as a key intermediary. Nonetheless, Poetovio was clearly well integrated into this cultural sphere through the transalpine road network.[48] However, the presence of depictions of the Horae and other busts in the acroteria of certain ash chests from Poetovio, which closely parallel those found on sarcophagi produced in Ravenna, indicates that Ravenna should also be regarded as a significant source of artistic influence—either exerting its impact directly or through the mediation of Aquileia.[49] It should be noted, however, that in Aquileia's own sarcophagus production, busts of the Seasons are absent, having already been replaced by portraits of the deceased. As the second most prominent centre in northern Italy, Ravenna maintained its importance well into the Middle Ages, largely due to its riverine and maritime ports,[50] that served both military and commercial functions.[51] In a comparable manner, Poetovio maintained strong connections with other key regional settlements throughout Late Antiquity via its access to the Drava River.[52]

References

Abad Casal, L. 1990: Horae. In: *Lexicon Iconographicum Mythologiae Classicae*, Vol. 5.1. Zürich–München–Düsseldorf, 510–538.

Abramić, M. 1925: *Poetovio: Führer durch die Denkmäler der römischen Stadt*. Wien.

Boschung, D. 2013: *Tempora Anni*: Personifikationen der Jahreszeiten in der römischen Antike. In: Greub, T. (ed.): *Das Bild der Jahreszeiten im Wandel der Kulturen und Zeiten*. Morphomata 7. München, 179–200.

Brizzi, G. 1978: Il sistema portuale altoadriatico e i commerci di Aquileia e Ravenna. *Antichità Altoadriatiche* 13, 81–105.

Ciliberto, F. 2003: Sarcofagi di importazione ed imitazioni locali. In: Verzár-Bass, M. (ed.): *Trieste: Raccolte dei Civici Musei di Storia ed Arte e rilievi del propileo*. Corpus Signorum Imperii Romani: Italia. Regio X, Friuli-Venezia Giulia II.1: Studi e ricerche sulla Gallia Cisalpina 16. Roma, 149–186.

Ciliberto, F. 2024: Dall'Asia Minore ad Aquileia: I sarcofagi importati e il loro influsso sulla produzione locale. In: Noguera Celdrán, J. M. – Rodà de Llanza, I. – Conesa Navarro, P. D. (eds): Οἰκουμένη*: studi di archeologia classica in omaggio a Margherita Bonanno – Estudios de arqueología clásica en honor de Margherita Bonanno* – Μελέτες κλασικής αρχαιολογίας προς τιμήν της *Margherita Bonanno*. Murcia–Roma, 277–286.

Dautova-Ruševljan, V. 1983: *Rimska kamena plastika u jugoslovenskom delu provincije Donje Panonije*. Novi Sad–Beograd.

47 For the brief, although partially outdated, synthesis of 'Norico-Pannonian art' and its main characteristics, see: Diez 2006, 29–52; Harl 1994, 22–48.

48 See Diez 2006, 30–32; Verzár-Bass 1996, 246, 257–265. For the road connections between Aquileia and Poetovio, see: Šašel 1975, 74–88.

49 Ravenna was likewise engaged in trade with Aquileia, and the two Italian cities maintained strong connections throughout Antiquity (see Brizzi 1978, 95; Uggeri 1978, 78–79).

50 For the road and water routes associated with Ravenna, see: Uggeri 1978, 53–78.

51 See Šašel 1978, 138.

52 Šašel 1978, 139–145; Horvat *et al.* 2003, 180–181; Šašel Kos 2020, 225–226.

Diez, E. 2006: Studien zum provinzialrömischen Kunstschaffen. In: Koiner, G. – Lehner, M. – Lorenz, T. – Schwarz, G. (eds): *Kunstprovinzen im römischen Imperium: Ausgewählte Schriften Erna Diez.* Veröffentlichungen des Instituts für Archäologie der Karl-Franzens-Universität Graz 7. Wien, 29–52.

Djurić, B. 2001a: Ossuaria Poetovionensia: Iconography and structure. In: Panhuysen, T. (ed.): *Die Maastrichter Akten des 5. Internationalen Kolloquiums über das provinzialrömische Kunstschaffen - im Rahmen des CSIR: Typologie, Ikonographie und soziale Hintergründe der provinzialen Grabdenkmäler und Wege der ikonographischen Einwirkung.* Maastricht, 117–129.

Djurić, B. 2001b: Production of marble sarcophagi in Poetovio. *Budapest Régiségei* 34, 47–62.

Djurić, B. 2024: *Poetovio: Sarkofagi in pepelnice.* Corpus signorum imperii Romani I.1. Ljubljana. https://www.dlib.si/details/URN:NBN:SI:DOC-CTYFCOSU (last access: 21 March 2026).

Gabelmann, H. 1973: *Die Werkstattgruppen der oberitalischen Sarkophage.* Bonn.

Giordani, N. – Paolozzi Strozzi, G. 2005: *Il Museo lapidario Estense: Catalogo generale.* Venezia.

Godoli, G. 1998. Due coperchi di sarcofagi ravennati scomparsi. *Ravenna: Studi e Ricerche* 5:2, 25–33.

Harl, O. 1994: Norico-pannonica, arte. In: *Enciclopedia dell'arte antica classica e orientale: Supplement.* Roma, 44–48.

Hoffiler, V. – Saria, B. 1938: *Antike Inschriften aus Jugoslawien: Noricum und Pannonia superior.* Zagreb.

Horvat, J. – Lovenjak, M. – Dolenc Vičič, A. – Lubšina-Tušek, M. – Tomanič-Jevremov, M. – Šubic, Z. 2003: Poetovio: Development and topography. In: Šašel Kos, M. – Scherrer, P. (eds): *The autonomous towns of Noricum and Pannonia: Pannonia I.* Situla 41. Ljubljana, 153–189.

Işik, F. 2007: *Girlanden-Sarkophage aus Aphrodisias.* Sarkophag-Studien 5. Mainz.

Jevremov, B. 1988: *Vodnik po lapidariju* 1. Ptuj.

Kastelic, J. 1998: *Simbolika mitov na rimskih nagrobnih spomenikih: Šempeter v Savinjski dolini.* Ljubljana.

Koch, G. – Sichtermann, H. 1982: *Römische Sarkophage.* Handbuch der Archäologie. München.

Kranz, P. 1984: *Jahreszeiten-Sarkophage: Entwicklung und Ikonographie des Motivs der vier Jahreszeiten auf kaiserzeitlichen Sarkophagen und Sarkophagdeckeln.* Die antiken Sarkophagreliefs 5.4. Berlin 1984.

Kranz, P. 1986: Die Grabmonumente von Šempeter: Beobachtungen zur Entwicklung der Bildhauerkunst in Noricum während der mittleren und späten römischen Kaiserzeit. *Bonner Jahrbücher* 186, 193–239. https://doi.org/10.11588/bjb.1986.0.63824

Mander, J. 2013: *Portraits of children on Roman funerary monuments.* Cambridge.

Maver, A. 2008: Funerary Aediculae in Poetovio and her Ager. In: Franek, C. – Lamm, S. – Neuhauser, T. – Porod, B. – Zöhrer, K. (eds): *Thiasos: Festschrift für Erwin Pochmarski zum 65. Geburtstag.* Wien, 627–638.

Nagy, M. 2012: *Lapidarium. Guide to the archaeological exhibitions in the Hungarian National Museum: Roman stones.* Budapest.

Pahič, S. 1974: Miklavž na Dravskem polju. *Varstvo spomenikov* 17–19:1, 134.

Pahič, S. 1977: Seznam rimskih kamnov v Podravju in Pomurju. *Arheološki vestnik* 28, 13–73.

Pochmarski, E. 2015: Aschenkisten und Sarkophage aus Poetovio. In: Porod, B. – Koiner, G. (eds): *Römische Sarkophage: Akten des internationalen Werkstattgesprächs 11.-13. Oktober 2012 (Graz).* Schild von Steier: Beiheft 5. Veröffentlichungen des Instituts für Klassische Archäologie der Karl-Franzens-Universität Graz 12. Graz, 212–225.

Pochmarski, E. 2019: Beobachtungen zu den Sarkophagen aus Mursa und Cibalae. In: Bužančić, R. (ed.): *Cambijev zbornik I.* Split, 247–260.

Pochmarski-Nagele, M. 1992: *Die dionysischen Reliefs in Noricum und ihre Vorbilder.* Dissertationen der Universität Wien 228. Wien.

Ragolič, A. 2023: *Poetovio: Römische Grabdenkmäler.* Situla 46. Inscriptiones Latinae Sloveniae (ILSL) 2/1. Ljubljana.

Rebecchi, F. 1977: Sarcofagi cispadani di età imperiale romana: Ricerche sulla decorazione figurata, sulla produzione e sul loro commercio. *Mitteilungen des Deutschen Archäologischen Instituts: Römische Abteilung* 84, 107–158.

Rebecchi, F. 1978: I sarcofagi romani dell'Arco Adriatico. *Antichità Altoadriatiche* 13, 201–258.

Schober, A. 1923: *Die römischen Grabsteine von Noricum und Pannonien.* Sonderschriften Österreichisches Archäologisches Institut Wien 10. Wien.

Scrinari, V. S. M. 1972: *Catalogo delle sculture romane.* Museo archeologico de Aquileia. Cataloghi dei musei e gallerie d'Italia. Roma 1972.

Spalthoff, B. H. 2010: *Repräsäntationsformen des römischen Ritterstandes.* Tübinger Archäologische Forschungen 7. Tübingen.

Šašel, J. 1975: Rimske ceste v Sloveniji. In: Bolta, L. – Gabrovec, S. (eds): *Arheološka najdišča Slovenije.* Ljubljana, 74–99.

Šašel, J. 1978: Aquileia, Ravenna e Poetovio: Contatti e rapporti. *Antichità Altoadriatiche* 13, 135–145.

Šašel Kos, M. 2020: *V srcu rimskega imperija: Zgodovina slovenskega prostora v antiki do vlade Maksimina Tračana.* Zbirka Zgodovinskega časopisa 51. Ljubljana.

Šmid, K. 2020: Upodobitve letnih časov na nagrobnih spomenikih Norika in Zgornje Panonije in njihovo prepletanje z dionizičnim svetom. *Keria: Studia Latina et Graeca* 22:1, 63–75. https://doi.org/10.4312/keria.22.1.63-75

Šmid, K. 2024: Buste Hor na akroterijih pokrovov petovionskih pepelnic in njihova povezava s severnoitalskimi delavnicami sarkofagov. In: Vidmar, P. – Lazarini, F. (eds): *Studio et labore, arte et humanitate: Jubilejni zbornik za Marjeto Ciglenečki.* Ljubljana, 43–54.

Tušek, I. 1993: Novi oltarni in reliefni kamni iz Petovione. *Arheološki vestnik* 44, 203–208.

Uggeri, G. 1978: Vie di terra e vie d'acqua tra Aquileia e Ravenna in età romana. *Antichità Altoadriatiche* 13, 45–79.

Verzár-Bass, M. 1996: Arte funeraria lungo la via dell'ambra. In: Buora, M. (ed.): *Lungo la via dell'ambra: Apporti altoadriatici alla romanizzazione dei territori del Medio Danubio (I sec. a.C.–I sec. d.C.). Atti del Convegno di Studio (Udine-Aquileia 16–17 settembre 1994).* Udine, 245–271.

© 2026 The Author(s).

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 537–558. 10.17204/dissarch.suppl.5.2026.537

Selected Roman bronze vessels from the Early Roman Period cemetery in Vinár-Cseralja, northern Pannonia

Eszter Soós ✉
Institute of Archaeology, ELTE Research Centre for the Humanities, Budapest, Hungary
eszter.soos@htk.elte.hu

Jan Jílek
Department of Archaeology and Museology, Department of Classical Archaeology, Masaryk University, Brno, Czech Republic
mitridates@post.cz

Klara De Decker
University of Münster, Münster, Germany
klaradedecker@gmail.com

Viktória Mozgai
Institute for Geological and Geochemical Research, HUN-REN Research Centre for Astronomy and Earth Sciences, Budapest, Hungary; HUN-REN Research Centre for Astronomy and Earth Sciences (CSFK), MTA Centre of Excellence, Budapest, Hungary
mozgai.viktoria@csfk.org

Bernadett Bajnóczi
Institute for Geological and Geochemical Research, HUN-REN Research Centre for Astronomy and Earth Sciences, Budapest, Hungary; HUN-REN Research Centre for Astronomy and Earth Sciences (CSFK), MTA Centre of Excellence, Budapest, Hungary
bajnoczi.bernadett@csfk.org

Received 9 November 2025 | Accepted 7 May 2026 | Published 18 November 2026

Abstract: In the graves dated to the first third of the 2nd century AD in Vinár-Cseralja, the deceased were buried with weapons (sword, spear, shield) and dress accessories typical of the Central European Barbaricum, alongside Roman bronze and glass vessels. They can likely be interpreted as the remnants of an armed Germanic group that may have arrived in the territory of the province in connection with the military events of the Domitian Wars. The large number of Roman bronze vessel fragments recovered from the Vinár graves indicates the presence of a specific set. Buckets, together with dippers and strainers were typical grave goods, occasionally supplemented by a casserole or a bowl. The bronze vessels were often deposited only in part, following the *pars pro toto* practice. A particularly noteworthy early find is the Tassinari E 5000-type bronze water jug *(Blechkanne)* produced in Capua, southern Italy, representing one of the most north-eastern occurrences of this object type. The handled dish *(Griffschale)* reflects Mediterranean traditions of ritual handwashing. The Eggers 97-type bowl, dated to the 1st century AD, is rare both in Pannonia and the broader Barbaricum. The predominance of weapons, the types and placement of bronze vessels, and the persistence of traditional barbarian burial practices together indicate that the community maintained its identity despite the presence of provincial artefacts.

Keywords: Pannonia province, cremation burials, Roman bronze vessels, Central European Barbaricum

✉ Corresponding author

Introduction

In the archaeological record of the province of Pannonia between the time of the Roman conquest and the Marcomannic Wars, objects and assemblages of a barbarian Germanic character represent a special category (Fig. 1). Finds discovered around Scarbantia (Sopron/Ödenburg) and the Lake Neusiedl have been known in the literature since the early 20th century. In addition to stray finds and uncertain grave remains (Eisenstadt/Kismarton),[1] we now also know of cemeteries with a larger number of graves, such as the newly excavated site at Kópháza-Széles földek.[2] Research has linked 1st-century AD finds from the area of Lake Neusiedl to the legacy of the Quadic leader Vannius' entourage, settled in Roman territory.[3]

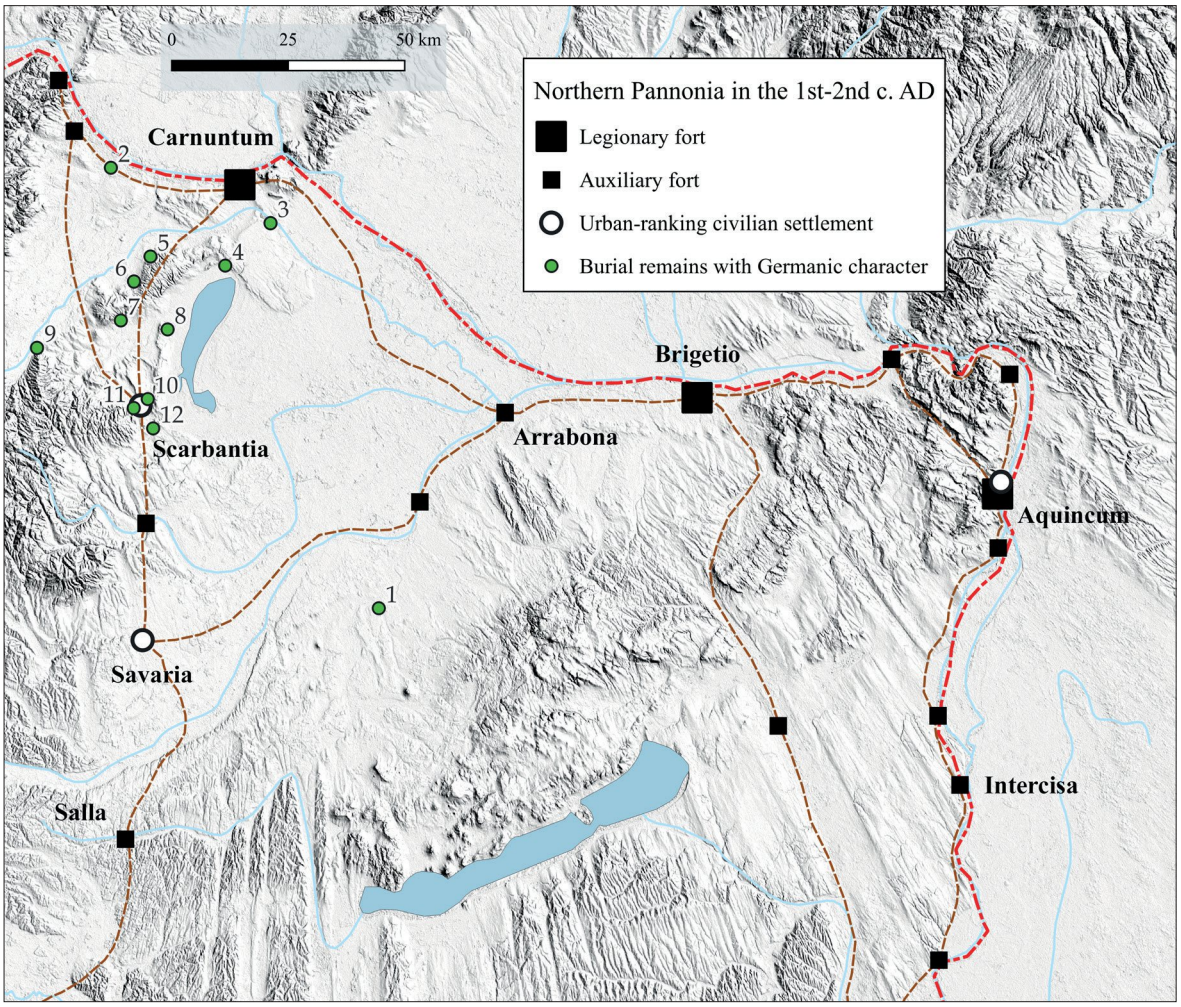


Fig. 1. Pannonia in the Early Roman Period and sites of Germanic character. 1 – Vinár-Cseralja, 2 – Schwechat, 3 – Potzneusiedl, 4 – Neusiedl, 5 – Mannersdorf, 6 – Au, 7 – Eisenstadt, 8 – Oggau, 9 – Katzelsdorf, 10 – Scarbantia, 11 – Sopron-Bánfalvi út (settlement finds), 12 – Kópháza-Széles földek (by E. Soós).

Vinár-Cseralja, a site in Veszprém County where at least 17 cremation burials were documented between 1965 and 1967, stands out among the assemblages of barbarian character in present-day Hungary. The deceased were buried there according to the cremation rite and were provided with accessories commonly found in Germanic cemeteries north of the Danube: bronze and glass ves-

1 Bóna 1963, 255–263.

2 Ujvári 2019.

3 Bóna 1963, 255–263; Adler 1980; Urban 1984; Gassner *et al.* 2002; Ployer 2023, 308.

sels, belt fittings, brooches, iron shears, knives, and weapons. The urn cremation graves contain Roman provincial products, including glass and bronze vessels, while the clothing elements and tools are purely barbarian types. While precious metal finds are sparse, significantly, almost all burials are weapon graves, each containing a sword, a spear, and spurs.[4]

The grave remains from the Vinár site are dated to the first third of the 2nd century AD, corresponding to the B2a phase in the relative chronological framework of the Central European Barbaricum.[5] The cemetery can be interpreted as the legacy of a Germanic group settled in connection with the military events of the Domitian Wars.[6]

The cemetery was excavated by Sándor Mithay, a specialist in prehistoric archaeology, who intended to analyse and publish the finds in collaboration with Ágnes Salamon (Hungarian Academy of Sciences, Institute of Archaeology), a leading researcher into the Germanic Barbaricum in Hungary at that time. However, the joint project was ultimately left incomplete due to Ágnes Salamon's death. S. Mithay published a description of the objects and graves in Hungarian in the late 1980s, accompanied by a brief analysis that primarily referenced Ágnes Salamon's earlier observations.[7] In the published work, the descriptions of the finds and their typo-chronological classifications are often missing or inaccurate, and the analysis refers only to a limited number of archaeological studies published up to the 1980s. In later Hungarian and international literature, references to the Vinár site have relied almost exclusively on drawings from Mithay's publication, which vary in quality.

Norbert Zieling included the shield handle from Vinár into his catalogue in a monographic collection of finds from barbarian regions.[8] Piotr Kaczanowski also mentions the site only briefly in his work on barbarian armed groups within Roman territory.[9] More recently, Jaroslav Tejral analysed the burials in greater detail, linking them—based on the presence of Almgren 77-type brooches—to the horizon of a military elite in Germanic territories during the B2 period.[10]

Due to the high number of weapons recovered from Vinár, the site was also mentioned in Roman provincial archaeological literature on weapon burials from the Early Imperial period. In his work, András Márton included barbarian burials, such as those at Vinár, in a separate group within his summary of armed groups.[11] However, despite the significant number of weapons, he did not analyse them in detail. Other studies on Early Roman weapon graves in northern Pannonia have similarly neglected the specifics of the Vinár cemetery.[12]

A current project aims, among other objectives, to publish and evaluate the Vinár-Cseralja site in detail. In addition to examining the barbarian connections of the finds, its aims include exploring the role that a Germanic community, not particularly wealthy and distinguishing itself through weapons, could have played at a considerable distance from the *limes*. Under what political circumstances could a Germanic group have made its way into the interior of the province, and what conditions allowed them to preserve their mortuary customs and material culture? How do Roman objects appear in the burials, and to what extent does their role differ from contemporaneous

4 Mithay 1989.

5 For relative chronology, see Droberjar 2024, 207, Tab. 1 with further literature.

6 Mithay 1989, 73; Tejral 2001, 227, 239, Abb. 26.

7 Mithay 1989.

8 Zieling 1989, 996.

9 Kaczanowski 1994, 137.

10 Tejral 2001, 227, 239, Abb. 26.

11 Márton 2002, 134–135, cat. nos 32–38.

12 Mráv 2013.

assemblages in areas outside the *limes*? In addition to questions concerning the social history of the province, it is essential to explore the connections between the Vinár site and the Central European Barbaricum. How do individual find types and assemblages relate to the contemporaneous archaeological horizon of the Elbe Germanic circle, the Quadic–Marcomannic region, and the Przeworsk culture?

In our study, we examine some selected bronze vessels from the Vinár-Cseralja site that are outstanding or unique in this context within the Roman provincial or barbarian environment.

Archaeometric analysis was conducted on selected objects to determine their chemical composition using handheld X-ray fluorescence spectrometry (hXRF).[13]

The Vinár-Cseralja site

Vinár is a village within the Pápa District in Veszprém County. The settlement lies on a low hill bordered by the Marcal River and the Hajagos Stream, which flows into the Marcal from the south. The cemetery is situated slightly north of the highest point of the hill, on the western bank of the stream, at an elevation of approximately 132–133 m above sea level. Its known extent is approximately 70 × 100–120 m (Fig. 2).

In the autumn of 1965, the collective farm of Nemesszalók opened a gravel pit south of the railway tracks, discovering Roman Period finds during the works. Sándor Mithay, an archaeologist from the museum of Pápa, conducted rescue excavations in May 1966, and again in the spring and autumn of 1967. Further investigations began on 8 May 1967, when test trenches were laid out perpendicular to the railway tracks in a north-west to south-east direction. Despite covering an area of approximately 250 m², only two pits and traces of minor holes were identified, and most of the few scattered Roman Period finds could not be reliably linked to any archaeological feature (Fig. 3.b).



Fig. 2. Vinár-Cseralja, the site in the map of the First Military Survey.

The exact locations of the first six graves and the association of their finds remain uncertain. Detailed archaeological investigation—including drawings and photographic documentation—was only carried out in the case of Graves 7, 8, 9, 12, 14, and 15. The remaining graves appear to have been disturbed, and the artefacts recovered from their vicinity cannot be securely assigned to specific burials. Assemblage 1 likely includes objects from multiple burials. Based on the preserved material, Assemblages 2, 5, and 6 correspond approximately to individual burial contexts. In the case of Graves 10 and 11, only the urns containing the cremated remains could be examined. According to the documentation, finds from Graves 16 and 17 represent the remains of burials that had already been destroyed prior to the start of mining operations (Fig. 3.a).

13 SPECTRO xSORT Combi type handheld X-ray fluorescence spectrometer (hXRF). Analytical parameters: 15–50 kV, 30–120 μA, Rh anode, Peltier-cooling SDD detector, built-in calibration suitable for analysing metals and alloys ('Alloy Plus including Light Elements'), measurement area 3 mm in diameter, 60 sec acquisition time. The results are normalised to 100%. The measured area was cleaned from corrosion products prior to measurement.

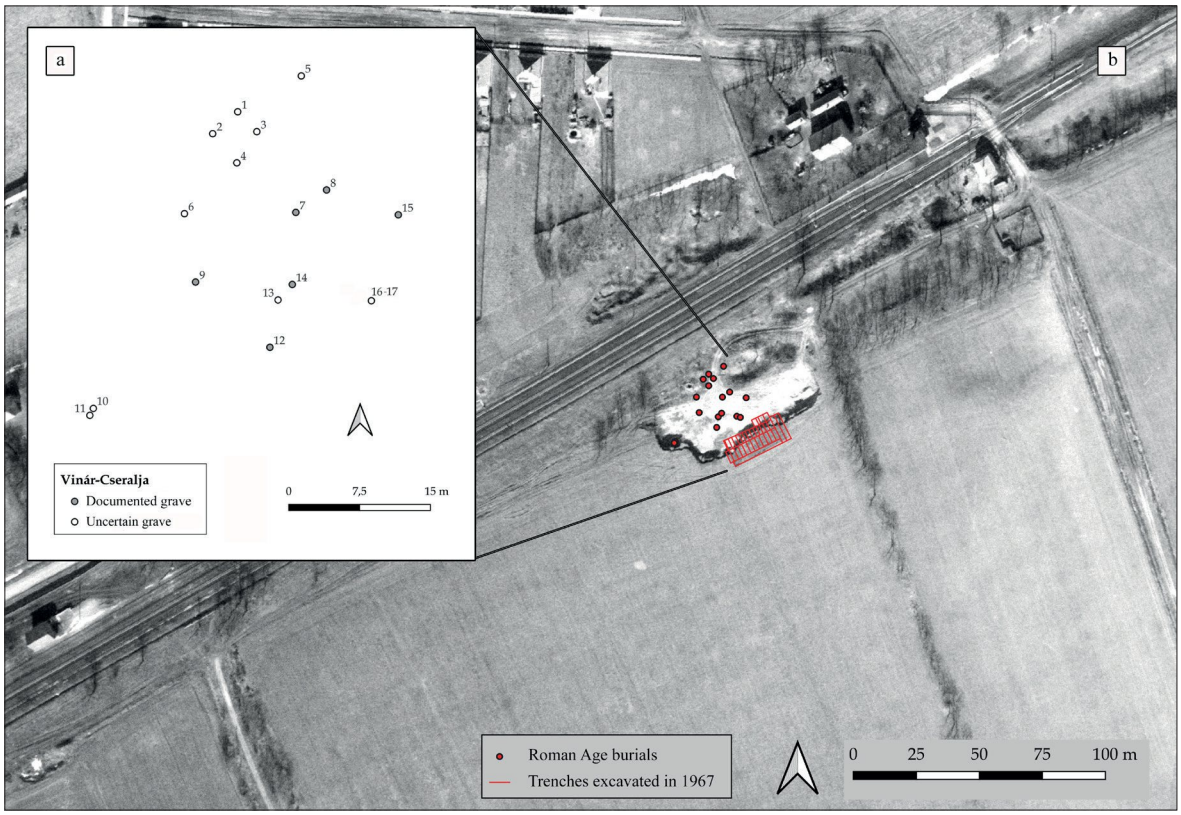


Fig. 3. Vinár-Cseralja. Probable location of the area excavated in 1965–1967 (b) and the Roman Period burials (a) (by E. Soós; base photo: fentrol.hu).

The exact locations of most graves—especially those known only from written accounts—are not precisely known. Furthermore, no clear pattern or regularity can be observed in the arrangement of the documented graves.

Burial customs at Vinár-Cseralja

The graves were dug into the topsoil layer to a depth of approximately 20 cm. In the documented cases, the grave pits were narrow, and the grave goods were placed close to the urn. There is no reliable evidence of the presence of burial mounds above the graves;[14] therefore, the burials at Vinár can be characterised as simple, flat inhumations placed in small grave pits.

In all documented cases, the cremated remains were deposited in ceramic urns. Contrary to some previously published data, there is no evidence to support the practice of scattered cremation at the site.[15] In each case, the ashes were placed in the urn after having been cleaned from pyre debris. The anthropological material from the Vinár cemetery has been lost, so the sex of the deceased was inferred based on the associated grave goods. Based on this typological analysis, only Grave 15 and possibly the disturbed Grave 10 can be interpreted as burials of females; all the other documented graves are considered weapon burials of men.

Cremation in the Vinár cemetery clearly took place in an *ustrinum*, a shared cremation area, as indicated by the absence of traces of burning within the grave pits and the fact that the cremains had been separated from the rest of the pyre before deposition.

14 Mithay 1989, 69.

15 Mithay 1989, 1. kép.

No precious metal artefacts were recovered from the site. Despite that, the burials were relatively well-equipped, containing typically 6–8, richer ones 10–11, objects.

Dress accessories include brooches, belt buckles, belt fittings, and strap ends, which did not make complete sets; typically, only 1–3 items of various types were placed in the graves.

The predominant category of grave goods in the cemetery is weapons. Swords were found in seven burials, with spears accompanying them in four of those. Grave 9, while lacking a sword, contained two spears. The uncertain Assemblage 1 comprises fragments of a complete shield, including the umbo, grip, and the rim fittings.

Spurs were found in every grave that contained spears, typically one per grave. Iron tools—usually including an iron strike-a-light, a pair of shears, and a knife—were present in the graves of every men.

Pottery fragments with traces of secondary burning were identified only in Grave 12; these may be interpreted as grave goods. Burnt fragments of glass vessels were found in five graves, all but Grave 6 weapon burials. Heavily burnt fragments of Roman bronze vessels were found in all documented graves (Fig. 4).

The central element of each grave was the urn containing the cleaned cremated human remains. Grave goods were found outside the urn in every case. Apart from the ashes, the vessels contained only traces of resin, typically above the bone layer or at the bottom of the vessel.

The role of Roman bronze vessels in the burials in Vinár-Cseralja

Heavily burnt fragments of Roman bronze vessels were recovered from all documented burials at the Vinár-Cseralja cemetery. Intact or complete vessels—such as a cylindrical bucket in Assemblage 1, a plate bottle in Assemblage 2, and a strainer in Grave 15[16]—were rare finds on the site.

Based on the quantity of fragments collected, it appears that in most cases, especially with bowls and pans, only a part of the bronze vessel was added, in fragments, to the grave. This phenomenon is widely observed across the Central European Barbaricum, where fragments of Roman bronze vessels are believed to have symbolised the complete vessel through a *pars pro toto* practice.[17]

At the Vinár cemetery, the standard set of bronze vessels typically consisted of a bucket, dippers, and strainers. Fragments of two buckets were identified in Grave 7, while Assemblage 1 and Grave 6 likely also contain similar sets. This basic vessel set was supplemented by a bronze casserole in six cases (Graves 1, 2, 6, 8, 12, and 14). In an additional four graves (Graves 1, 5, 8, and 12), fragments of bronze bowls were also found (Tab. 1).

Graves 8 and 12 contained a complete bronze vessel set, including a bucket, casserole, and bowl, dippers, and strainers. A deviation from this pattern was observed only in Assemblage 2, which contained a plate bottle, although notably, a bucket was absent from this assemblage.

The exact position of the bronze vessels on the pyre cannot be definitively reconstructed. In no case were the large, deformed bucket fragments found burned together with remains of other bronze vessel types, suggesting that the buckets were likely placed separately on the pyre. The dippers and strainers were consistently found nested inside one another.

16 Mithay 1989, 12. kép 15.2, 15. kép 1.1, 17–18. kép, 23. kép.

17 To ensure accurate documentation of this phenomenon, during the analysis of the site, fragments associated with a high certainty with individual bronze vessels were recorded both by count and by weight.



Fig. 4. Vinár-Cseralja, Grave 8. 1.a–d – bronze casserole, 2 – bronze casserole, 3.a–d – bronze bowl, 4.a–d – bronze bucket, 5.a–b – iron spearhead, 6 – bronze buckle, 7.a–b – iron sword, 8 – iron strike-a-light (by E. Soós, drawing by Zs. Varga, photos by R. Szederkényi, P. Hámori).

Tab. 1. Vinár-Cseralja. Minimum number of Roman bronze vessels per type in the graves (grey: documented graves).

Grave no.	Bronze vessels						Total
	Bucket	Casserole	Bowl	Dipper	Strainer	Jug	
1	2	2	1	1	1		?
2		1		1	1	1	4
5	1		3	1	1?		6?
6	2	1		1	1		5
7	2			1?	1		4?
8	1	2	1	1?			5?
9	1			1	1		3
10							?
11							?
12	1	1?	1	1	1		5?
13				1?	1?		?
14	1	1		1	1		4
15	1			1	1		3

Based on the condition and position of the burnt fragments, the dipper and strainer set in Grave 5 appears to have been placed within a large, flat-bottomed bowl, while in Grave 2, likely in a casserole. In the remaining burials, the original positions of the vessels cannot be determined due to the fragmentary and heavily burnt state of the find material.

Specific vessels from Vinár-Cseralja

Handle fragment of a bowl (Assemblage 1)

Type: Eggers 97/Tassinari S 3110. Fragment of a wide, hemispherical bronze bowl. Solid, slightly angular cross-section, curved. Burnt, fragmentary. 1 pc. Weight: 16.5 g. H.: length: 6 cm, diam.: 0.7 × 0.9 cm (Fig. 5).[18] The bowl handle fragment was manufactured from leaded gunmetal (79.8 wt% Cu; 4.1 wt% Zn; 6.3 wt% Sn and 9.2 wt% Pb). A yellowish surface layer with elevated lead content (78.2 wt% Cu; 3.2 wt% Zn; 5.8 wt% Sn and 12.3 wt% Pb) was observed during cleaning (Fig. 8).

Fragment of a handled dish (Griffschale) (Assemblage 1)

Type: Eggers 154–155. Thick, massive, hollow handle. One end terminates in a heavily deformed animal-head finial, in front of which the ring-shaped elements encircling the handle are still visible. The object is strongly burnt and distorted; a fragment of a thicker bronze vessel has fused with the animal head terminal due to intense heat. 1 pc. Weight: 111.6 g, length: 10.5 cm, diameter: 1.7 cm (Fig. 6).[19] Based on the chemical analyses, each fragment was manufactured from leaded bronze with a different composition (bronze vessel: 61.1 wt% Cu; 0.56 wt% Zn; 13.1 wt% Sn and 24.0 wt% Pb; bowl handle fragment: 79.6 wt% Cu; 0.62 wt% Zn; 10.7 wt% Sn and 8.7 wt% Pb) (Fig. 8).

18 Inv. no. 68.37.80. Mithay 1989, 15. kép 1.3.

19 Inv. no. 68.37.86. Mithay 1989, 15. Kép 1.8.

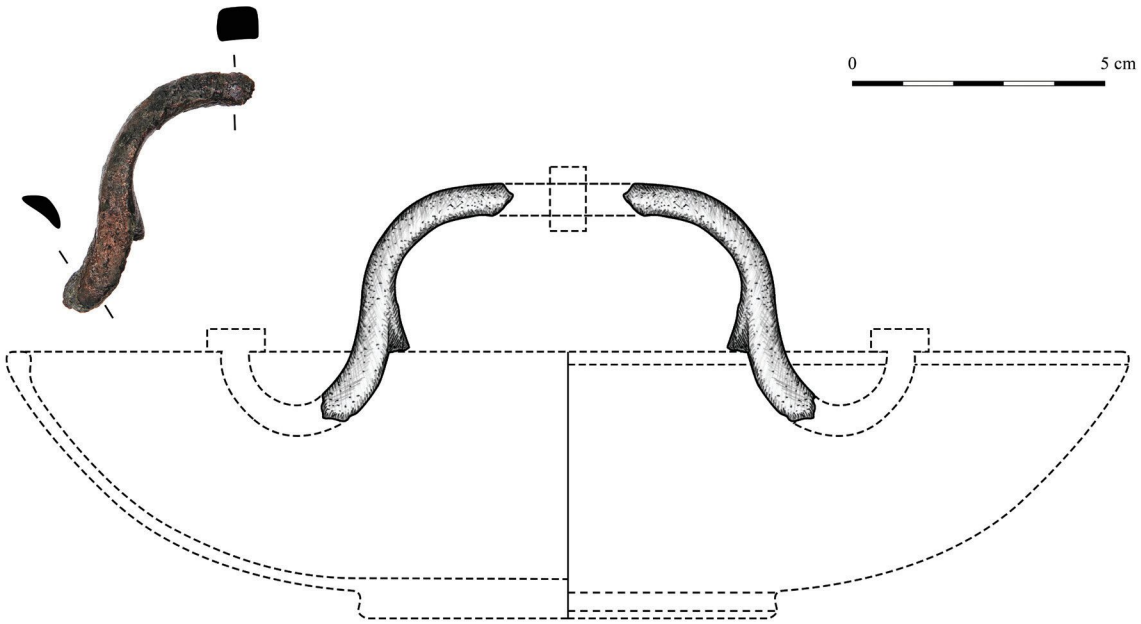


Fig. 5. Vinár-Cseralja, Assemblage 1. Handle fragment of an Eggers 97 type bowl (photo by P. Hámori, drawing by Zs. Varga).

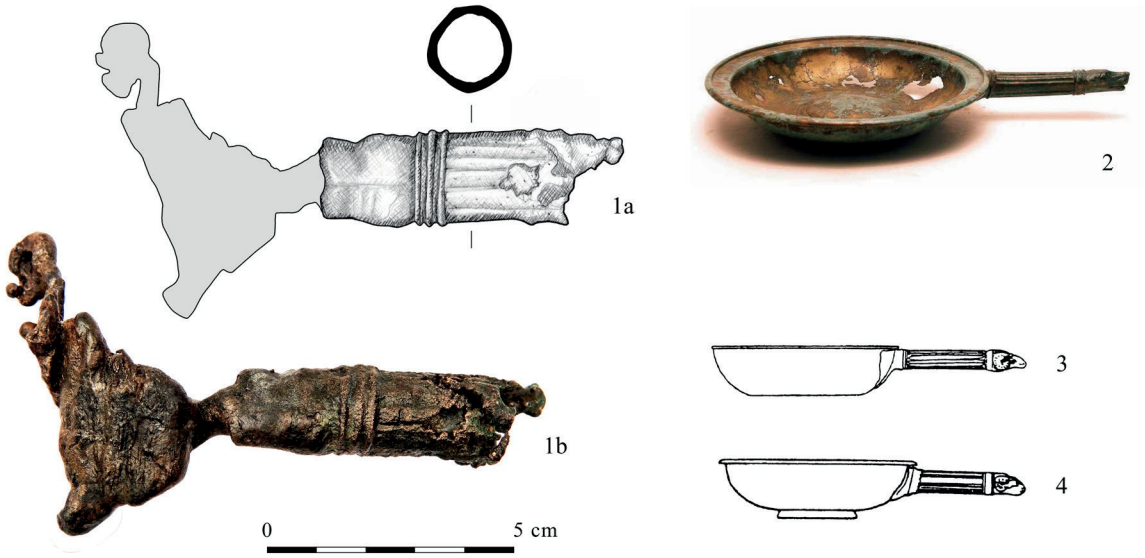


Fig. 6. 1.a–b – Vinár-Cseralja, handle fragment of an Eggers 154–155-type *Griffschale* from Assemblage 1, 2 – the *Griffschale* from Zohor, Grave 5 (after https://www1.leiza.de/transformation/slovakia/zohor/artefakts/zohor_abb6_en.htm), 3 – prototype of Eggers 154, 4 – prototype of Eggers 155 (after Eggers 1951) (by E. Soós, photo by P. Hámori, drawing by Zs. Varga).

Water jug of bronze sheet (Blechkanne) (Assemblage 2)

Type: Tassinari Type E 5000 in general, possibilities E 5120, 5220, 5311 or 5321,[20] Bienert Type 13–14.[21] Water jug made of very thin sheet bronze *(Blechkanne)*, with a long, narrow neck and a narrow, slightly curved rim. The rim has become deformed in prolonged use. The body is wide, oblate spher-

20 See Tassinari 1993, Vol. 2, Pls 79–86; the finds are stored in Parco Archeologico di Pompei under inventory numbers 2655, 2729, 8344, 11170, and 13104.

21 Bienert 2007, 31–33.

ical, made of thin sheet bronze. Narrow, circular, turned lines are visible on the neck, the shoulders, and the lower part of the belly. Only the tubular neck and the body are preserved, while the bottom and the handle are missing. This jug is completely worn, moderately burnt, bent, and fragmentary. 3 pcs. Weight: 203.6 g; height: min. 18 cm, rim diameter: approx. 4.8–5 cm, belly diameter: 18 cm (Fig. 7).[22]

The water jug was manufactured from unalloyed copper with a small amount of tin (2.4 wt%). The lead and zinc content are below detection limit (Fig. 9).



Fig. 7. Vinár-Cseralja, Assemblage 2. Water jug made of sheet bronze *(Blechkanne)* (drawing by Zs. Varga, photo by R. Szederkényi).

Discussion

Bronze vessels in Roman provincial graves in Pannonia

The 1st–2nd century AD graves excavated in Pannonia reflect a diversity of burial customs. The practice of placing bronze vessels or sets of bronze vessels in graves is not uniform. Typically, only a few bronze vessels are found in the Norico-Pannonian tumulus graves, particularly at sites located along the northern and eastern borders of the distribution area of tumuli. A fragment of a disc-handled casselore was discovered at Balf, although the tumulus character of this grave cannot be definitively established.[23] The assemblages placed on the pyres of Kemenesszentpéter-Pagony I and Inota Tumulus 2—including, in addition to bronze vessels, *terra sigillata* and glass vessels—are considered rare in Pannonia for this period.[24]

In eastern Pannonia, burial mounds of the indigenous aristocracy contained not only chariots, horses, and vessels used during the funeral feast, but also luxury items, including sets of bronze

22 Inv. no. 68.37.96. Mithay 1989, 68, 15. kép 2.1, 22. kép.

23 Radnóti 1938, 44, 21. tábla 5; Alföldy 1960, 4.

24 Palágyi – Nagy 2002, 76.

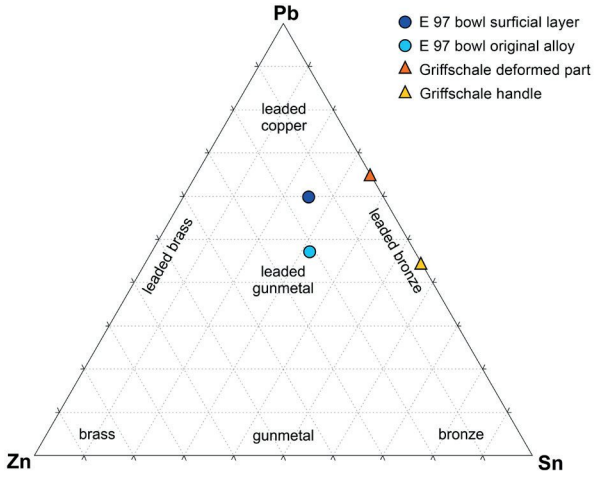


Fig. 8. Chemical composition of the analysed objects from Vinár-Cseralja, plotted on a Sn–Pb–Zn ternary diagram (by V. Mozgai, after Bayley 1989).

vessels. These sets, typically comprising narrow-necked jugs and a handled dish with ram- or dog-headed handles associated with ritual handwashing are attested throughout the Roman Empire from the early Roman period to the 3rd century AD. The earliest known set, of Millingen type, was found in Pannonia at Nagylók and dates to the Early Roman period.[25] Canterbury sets, consisting of handled dishes of Radnóti Type 30 and jugs of Radnóti Type 69 or 71, are known from Somodorpuszta and Aquincum.[26] Based on associated burials at Környe, the practice of adding handwashing sets to graves can be observed until the first half of the 3rd century AD.[27] The majority of the jugs and pitchers discovered in the largely incompletely documented graves were also likely deposited as sets. In Tumulus 2 at Inota, K. Szabó identified one and a half Alikaria sets.[28] The vessels from Grave 1 in Káloz, the burials at Nagytétény and Szomor-Somodorpuszta,[29] and the paired vessels from the inhumation grave at Szőlősgyörök can likewise be interpreted as belonging to such sets (Fig. 10).[30]

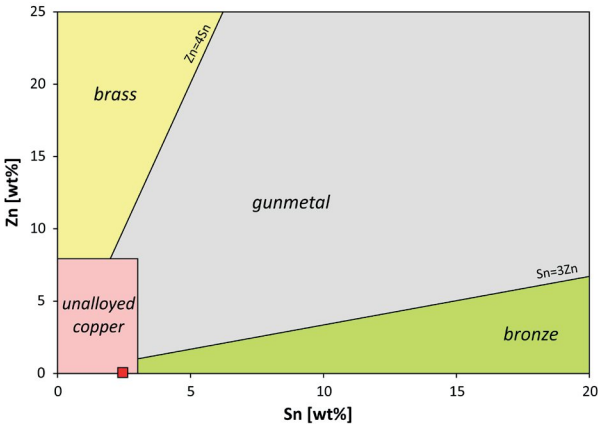


Fig. 9. Chemical composition of the water jug *(Blechkanne)* from Vinár-Cseralja, plotted on a Sn–Zn binary plot used for copper-based alloys with less than 4 wt% lead content (by V. Mozgai, after Bayley 1989).

Dipper-and-strainer sets and buckets, both typical in Vinár graves, are less frequently found in provincial burials. Fragments of dippers and/or strainers, serving as accessories to drinking sets, have been identified only in Tumulus 2 at Inota, Grave 1 at Halimba, Tumulus 1 at Mezőszilas, Rábakovácsi, Szőlősgyörök, and tentatively in some graves at Kemenesszentpéter-Pagony I.[31] Fragments of buckets occur in graves at Halimba, Nagylók, Somor-Somodorpuszta, and Kemenesszentpéter-Pagony I, dating up to the mid-2nd century AD.[32]

Burials in eastern Pannonia usually contain the remains of two to four bronze vessels.

25 Radnóti 1938, 72, Type 29, 71, 123–124; Szabó 1990, 144.

26 Palágyi – Nagy 2002, 76–77.

27 Radnóti 1938, 118–119, 143–144; Bónis 1982.

28 Szabó 1990.

29 Bónis 1978; Bónis 1981, 112–118, Abb. 10–12, Abb. 14, 3; Szabó 1999. It remains a question whether the vessels found at Mezőszilas, Vajta, and Zsámbék, respectively, can be considered sets (Palágyi – Nagy 2002, 77).

30 Horváth 1981, 77–78, 7. kép 1.a–b, 2, 14. kép, 15. kép.

31 Bónis 1960, 93, Fig. 24.2, Pl. 18.8; Horváth 1981, 70, 76, 5. kép 1–2, 10. kép; Palágyi – Nagy 2002, 82.

32 Bónis 1960, 93, Taf. 18.8, Abb. 24.9; Palágyi – Nagy 2002, 82. An intact specimen was found in a grave at Szőlősgyörök (Horváth 1981, 77, 16. kép).

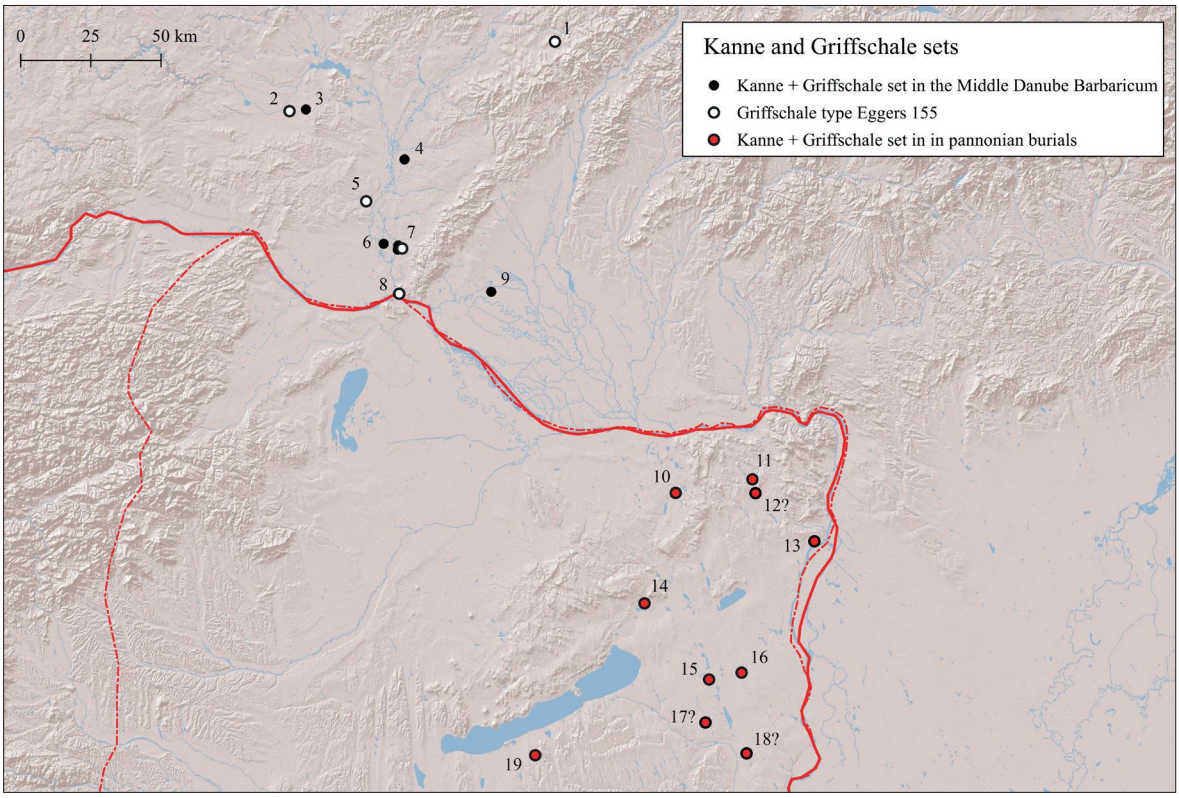


Fig. 10. Spatial distribution of *Kanne* and *Griffschale* sets and separate *Griffschale* finds in the Middle Danube Region in Barbaricum and Pannonia. 1 – Bánov, 2 – Rothenseehof, 3 – Neuruppersdorf, 4 – Sekule, 5 – Waidendorf, 6 – Vysoká pri Morave, 7 – Zohor, 8 – Devín, 9 – Kostolná pri Dunaji, 10 – Környe, 11 – Somodorpuszta, 12 – Zsámbék, 13 – Nagytétény, 14 – Inota, 15 – Káloz, 16 – Nagylók, 17 – Mezőszilas, 18 – Vajta, 19 – Szőlősgyörök (by E. Soós).

A larger number of bronze vessels, between six and ten, have been recorded only in graves at Szőlősgyörök, Káloz, Inota Tumulus 2, and Kemenesszentpéter-Pagony I. The latter burials reflect a closer connection with the Vinár site, as indicated by the presence of weapons. However, the cremation burial rite at Vinár clearly differs from that observed in graves at Inota and Kemenesszentpéter, where the burnt bronze vessels had been placed on the pyre before it was lit, while afterwards, their remains were mixed with the hot remains of the pyre and shovelled in the grave pit together, as well as incorporated into the body of the grave mound.[33]

The spectrum of Roman metal vessels in the Middle Danube Barbaricum and their significance in a funerary context[34]

Most known vessels come from cremation graves and have been damaged by the heat of the pyre. They were probably intact when placed on the pyre, as there is no evidence of prior breaking. After cremation, the mourners could put parts of these vessels into the grave in accordance with a *pars pro toto* ritual. Barrel-shaped buckets are often crumpled or broken into pieces. Important evidence of the accumulation of deformed vessels and fragments thereof at a burial ground is a hoard from the cemetery at Zohor;[35] this assemblage raises the possibility that the fragments were collected

33 Palágyi 1981, 8, 17–18, Abb. 2, Abb. 8.b; Palágyi 1989, 44–45.

34 This part of the article was written by J. Jílek within the frame of a research scholarship at the Römisch-Germanische Kommission (RGK), DAI: project title – *Roman imports in East Bohemia (eastern Elbe region)*.

35 Elschek 2002; Jílek 2016.

to be used as raw material. Inhumation graves usually contain whole bronze vessels (e.g., Zohor Graves 5, 6/2010, etc.), but this rule applies less to silver ones (see, e.g., the royal tomb of Mušov).[36]

In the Middle Danube Barbaricum during the Early Roman Period, a deliberate selection of bronze vessels is observed in funerary assemblages. This selection results in limited sets comprising forms otherwise common in the Roman provinces and Italy, where such vessel sets are more diverse. The reason behind could root in burial customs and the character of funerary feasts. Popular forms in these sets include buckets (especially barrel-shaped/Östland-type variants), sets of dippers and strainers of various types, and diverse pans. Some graves, especially richly furnished ones, held different types of bowls. More rarely, sets were composed of a jug and a handled dish *(Kanne und Griffschale)*; of these sets, sometimes only one vessel of the pair is found in the grave reflecting, again, the *pars pro toto* concept.

In order to complete the picture of the spectrum of metal vessels in the Barbaricum *(Germania Magna)*, it must be mentioned that the number of dippers and strainers known from there significantly exceeds that of similar vessels from Roman civilian and military contexts in the 1st to the mid-2nd century AD.[37] The contrast is less sharp in the case of buckets because those, especially simple barrel-shaped specimens, were particularly popular in the Barbaricum as well as Roman military and civilian contexts; saucepans enjoyed a similar popularity amongst the inhabitants of both the Barbaricum and Roman military and civilian sites. Some pans and buckets also served as part of Roman military equipment,[38] suggesting a connection between the Roman military environment and the Middle Danube Barbaricum. Such a connection could be hypothetically explained by trade contacts where the military environment may have been an intermediary element. The inhabitants of the Barbaricum gained access to markets in military settlements near camps and *castellum* forts. A hypothesis by T. Kolník[39] about the trade activity of the retired centurion and interpreter Quintus Atilius Primus can be mentioned here, who operated in the Middle Danube region after the mid-1st century AD[40]. In this context, there is an important remark in the *Germania* by Tacit[41] about Germans who settled down near the Rhine River and could thus buy wine.[42] Its significance lies in indicating the trade contacts outlined above.

At this point, it should be strictly emphasized that in a barbarian context one cannot talk about a direct adoption of Roman drinkware and dinnerware sets, as it is sometimes suggested inaccurately, but rather an adaptation and the creation of own, specific sets often supplemented with vessels of barbarian provenance (e.g., drinking horns and small bowl-shaped forms in pottery): the so-called 'barbarian drinkware set'.[43] These sets could then play an important role in funerary feasts and the expression of status.

Grave assemblages in the Barbaricum rarely include artefacts of types frequent in elite graves in the territory of the Roman provinces. Examples include the royal tomb of Mušov (bronze lamp, iron objects: kitchen equipment),[44] disturbed, rich cremation graves at Schwechat (parts of a Roman

36 Peška – Tejral 2002.

37 For more details, see Gorecki 2016, 204, Abb. 14–15; Kotzur 2021, Abb. 7–9.

38 Gorecki 2016, 203–208, Abb. 13–18 (Radnóti was on the same opinion).

39 Kolník 2016, 900, Abb. 8.9.

40 Wells 2001, 228; Jílek 2020, 161; Jílek 2022.

41 Tac. *Germ.*, 23.

42 Ingemark 2014, 217.

43 For details, see Kunow 1983, 79–80, 167, Karte 22.

44 Peška – Tejral 2002.

candelabrum),[45] Čáčov (an iron kitchen grate),[46] and Přerov nad Labem (an iron hanger/cauldron suspension chain).[47] They can thus reflect some provincial Roman customs (lamps) or the survival of older, Iron Age traditions (kitchen utensils).

Water jug *(Blechkanne)*

The water jug *(Blechkanne)* is the oldest piece of bronze vessel in Vinár-Cseralja (Fig. 7). It was produced in Capua, south Italy, in the second half of the 1st century AD. Imports from South Italy were rare in Pannonia. At Vinár, only the water jug and some dipper-and-strainer sets originated possibly from there; however, concluding evidence of their provenance has not been found.

The characteristic traits of this jug type include a wide body, a trefoil mouth, and a long cylindrical neck. The bulging belly is covered by double concentric lines, the surface is lathed. The bottom is narrow. Such jugs feature a cast handle and a lid. The upper part of the handle features two short arms, but no spout; its central part is smooth, and the lower end is escutcheon-shaped, resembling an elongated leaf, and decorated with incisions. The two sides of the handle were fastened to the rim of the vessel with wires.

Such vessels are generally 14.2–22.4 cm high without the lid, which is rarely preserved (see, for example, PAP Inv. nos. 3227, 18782, and 18786).[48] Approximately a hundred specimens of the type are known from different sites.[49]

According to a material composition analysis conducted by J. Gorecki's research group, the material of these jugs contains usually about 5% tin.[50]

Analogies from Pannonia include a badly damaged handle fragment (l.: 15.5 cm) with short arms and no spout from a utilitarian feature in the Roman *vicus* at Páty[51] (in this context as antique); a handle with a lid thumb rest from Annamatia/Baracs, Fejér County;[52] a handle from Poetovio/Ptuj, Slovenia;[53] another handle with a thumb rest from the same site;[54] and lid fragments from the same site.[55]

Handled dish *(Griffschale)*

The types of this dish *(Griffschale)* and of the horizontal handle fragment from Assemblage 1 cannot be specified due to the extensive damage caused by the heat of the pyre. In Mediterranean tradition and, later, the Roman world, these vessels were paired with jugs to form handwashing sets used during feasts and for hygiene in general; in a Roman context, they perhaps also played a role in

45 Künzl 1997; the assemblage found within a Roman province is interpreted as the remains of an elite Barbarian funerary equipment.

46 Ondrouch 1957; Pieta 2002, 348, Abb. 2.9; recently, Dragonidesová 2024.

47 Šnajdr 1906.

48 Tassinari 1993, Vol. 2, Pl. 79, 87–88; Tassinari 1993, Vol. 1, Pl. 162.3.

49 Tassinari 1993, Vol. 1, 47.

50 Gorecki *et al.* 2017, 241, Pl. 4, Typs E 5220, E 5311, E 5000; Boesterd 1956 and Boesterd – Hoekstra 1965 for comparison.

51 Szentendre, Ferenczy Museum, Inv. no. 85.2.551 (Ottományi – Gabler 1985, 240–241, Pl. 30.2).

52 Dunaújváros, Intercisa Museum, Inv. no. 74.27.80 (Szabó 1980, 723–724, Fig. 47.5.2). Fragmentary, without a spout.

53 Ptuj, Pokrajinski Museum, Inv. no. 10005 (Breščak 1982, 58, Pl. 15.151).

54 Ptuj, Pokrajinski Museum, Inv. no. 7926 (Breščak 1982, 58, Pl. 15.152).

55 Ptuj, Pokrajinski Museum, Inv. nos 1777, 1781, 8190, 11228, and 11229 (Breščak 1982, 58, Pl. 14.129–139).

religious acts.[56] The tradition of these sets can be traced back to ancient Greece, especially Hellenistic Macedonia, and southern Italy, where they were part of funerary equipment.[57]

Bronze jugs and E 154–155-type handled dishes appear in richly furnished barbarian inhumation and cremation graves as early as the first third of the 1st century AD. Eloquent early examples in Bohemia are known from the horizon of the Empire of Maroboduus (Phase B1a) and the subsequent horizon of Bohemian eye brooches (Phase B1b),[58] while Grave 1841/42 A in Mecklenburg-Vorpommern is somewhat younger.[59] Examples have also been found in the Middle Danube region in Phase B1b to B2b contexts (Fig. 10).[60]

Handled dish *(Griffschale)* and jug sets are also known from the eastern parts of Europe, which have never been occupied by the Romans for long, such as the Crimea, the Kuban Region[61] and Eastern Europe.[62] Graves in the European Barbaricum (Germania and Sarmatia) contain complete sets, as well as single jugs and dishes with a fixed horizontal handle, reflecting perhaps the *pars pro toto* concept or specific regional burial customs.[63]

These complete and partial sets implies that the barbarian population was familiar with the role of such sets and vessels in a funerary context since the beginning of the 1st century AD. The occurrence of jugs and handled dishes in graves in south-western Slovakia may thus prove the survival of burial rituals practiced already at the time of King Maroboduus in Bohemia. However, burial customs from a southern provincial environment may also have played a significant role. These sets probably imply great feasts and the imitation of certain Mediterranean customs in the Barbaricum.

The key finding is the association of jugs and handled dishes with graves containing a more extensive or even a very rich funerary assemblage. The question is the direction of the spread of the custom of adding such vessels to graves—which certainly comes from the Mediterranean and Roman world. Very early examples of this practice, dated to the Augustan period, are known from Gaul,[64] an area distant from Central Europe. The position of the elites in the empire of Maroboduus, who maintained contacts with the Roman elite, could also have played an important role in the spread of the custom and the associated items. Eventually, the custom in focus could have spread on from Bohemia to other regions of *Germania Magna*.

S 3110/Eggers 97-type bowls

Only a handle fragment of a bowl survived in Assemblage 1, yet it allows for a precise typological classification of the object. It should be noted that hemispherical or spherical-segment-shaped bowls of various sizes had been used for purposes of personal hygiene (such as washing the hair,

56 Nuber 1972, 117–120, 125; Nenova-Merdjanova 2002, 202; Nenova-Merdjanova 2011, 115–116, Fig. 1; Hrnčiarik 2013, 50; Gorecki 2023, 278.

57 Nuber 1972; Gorecki 2006, 385; Gorecki 2023, 278.

58 Schulz 1885; Droberjar 1999, 133, 136; Droberjar 2014, 414.

59 Voss 2006, 25, 44, Abb. 5.

60 Slovakia: Devín, Grave B (Kolník 1991, 83); Zohor, Graves 5/1957, 6/2010, disturbed cremation graves (Elschek 2013); Vysoká pri Morave (Ondrouch 1957); Kostolná pri Dunaji, Grave 10 (Kolník 1980; Hrnčiarik 2013); Sekule, Grave G/2008 (Iván *et al.* 2019). Lower Austria, north of the Danube: Neuruppersdorf, Rothenseehof, Waidendorf (Jílek 2012; Preisl *et al.* 2014; Stuppner 2016; Jílek 2016). Moravia: Bánov (Zeman 2017).

61 Loboda *et al.* 2002; Simonenko *et al.* 2008; jug: Pls 77 and 109, handled dish: Pl. 61, but never both.

62 Popa 2015, 130–131, Abb. 14.92–94; most recent and comprehensive publication: Treister 2022, 23–60, with mention of a relatively frequent occurrence of a separate *Griffschalen* in graves.

63 As a contribution to the discussion on the topic, see Blankenfeldt – Schuster 2024, 192.

64 Most recently, Sueur 2018; Barbau 2019.

bathing, or washing the feet) for centuries, even during the Hellenistic period.[65] The distinctive feature of this vessel type is the handle, which is attached to the rim at four points: the two outer points lie beneath the decorated buttons, while the two inner ones are positioned beneath the thick leaves curving forward and backward.

A total of 144 examples of diverse sizes of this type have been found in Pompeii.[66] Based on associated finds from domestic contexts, these bowls could be dated between AD 25/30–35/40 and 70–79.[67] Over time, the leaf and button decoration of the handles disappeared, simplified into a smoother version that nevertheless retained the same appliqué structure.

Early finds from well-dated contexts from the Augustan period, including those from Magdalensberg, Vindonissa, and Kempten, present a particular problem.[68] It may be assumed that the migration of craftsmen during this period led to the establishment of new production centres north of the Alps,[69] which subsequently operated in Roman provinces (e.g., Cambodunum/Kempten and Aventicum).[70] A clear tendency toward simplification can be observed in these workshops, too.

Apart from the bowl handle from Vinár, only one handle fragment of this type and with relief decoration was found in Pannonia, in the military camp at Ács-Vaspuszta. Based on stratigraphic evidence, it could be dated to around AD 150, that is, approximately 170–180 years after the Augustan period.[71]

Important information can be inferred from the analytical results (see the investigations conducted by J. Gorecki's team).[72] The analyses confirm that a different alloy was used for the richly decorated handles—requiring subsequent finishing—than for the sides or the base of the bowl. The lead content exceeds 10 %, indicating that the material is not *aes campanum*.

Such finds are very rare in the Barbaricum. H. J. Eggers[73] mentions only two examples from Hoby in Denmark and Giebułtów in Poland.[74] The richly furnished grave from Hoby was dated recently to Phase B1b, more specifically the Claudian period (Fig. 11.1),[75] while the double cremation grave from Giebułtów (Fig. 11.2–3) falls within the range of Phases B1c and B2a in the Polish chronology.[76]

The focus of current discussion is the classification a bronze bowl handle from Grave II, a cremation burial, in Dobřichov-Pičhora:[77] E. Droberjar proposed the designation E 99–100 type, but

65 Pernice 1925, 10–11, Figs 10–12 as *Knopfhenkelschale*; Riz 1990, 38–39, Pl. 6.4.

66 Tassinari 1993, Vol. 1, 90–97 and Tassinari 1993, Vol. 2, Pls 212–218, Types S 3110, S 3120, S 3200.

67 Particularly PAP Inv. nos 3165 and 7146 in comparison to Petrovszky 1993, 143, 151, 196, 255, dated to AD 25/30–35/40 C. 34.02. beginning, A.16.01, dated to AD 70/75–90.

68 Simonett 1941, 94–95, Grave 33, Fig. 79, Pl. 14.13, dated to AD 15–30; Deimel 1987, 89, 136, no. 65, Pl. 19.3, from the Augustan period, Pl. 19.6–7; Flügel 1993, 73–74, nos 57–60, 62, Pl. 28, dated to the 1st century AD; Kapeller 2003, 88–89, 95, 135–136, nos 63–68, dated to AD 30/40–mid-1st century AD.

69 Borda 1984, 713.

70 Flügel 1993, no. 57–60; Kapeller 2003, no. 66–68; Bienert 2007, 165–167, *Schale Typ* 57; Gorecki 2023, 319–320, no. 341. See distribution map in Sedlmayer 1999, 60, Fig. 8.

71 Gabler 1989; Szabó 1989, 177, 427–428, no. 13, Fig. 73.

72 Type Pompeian S 3110 at Gorecki *et al.* 2017, 273–274: PAP Inv. nos 10728, 13358, 13956; Type S 3120: PAP Inv. no. 12428; general Type S 3200: PAP Inv. no. 12676.

73 Eggers 1951, 169.

74 The handles of two bronze bowls are missing, which makes it difficult to classify them with certainty as Type E 97.

75 Blankenfeldt – Schuster 2024, 195.

76 CRFB – PL 2, 50–52, 28.1.4–5, Taf. 23.1.a–b, Taf. 24.1.a–b.

77 Droberjar 1999, 133, 215, Taf. 5.II.6.

J. Gorecki did not rule out the possibility that it belongs to an E 97-type vessel.[78] In our opinion, the Dobřichov-Pičhora specimen is a handle fragment consistent with bowls of the E 99–100 type; the ornamental design corroborates such a classification. E 97-type bowls have also been found in 1st-century AD burial contexts in Eastern Europe, including early examples with parallels from Pompeii.[79]

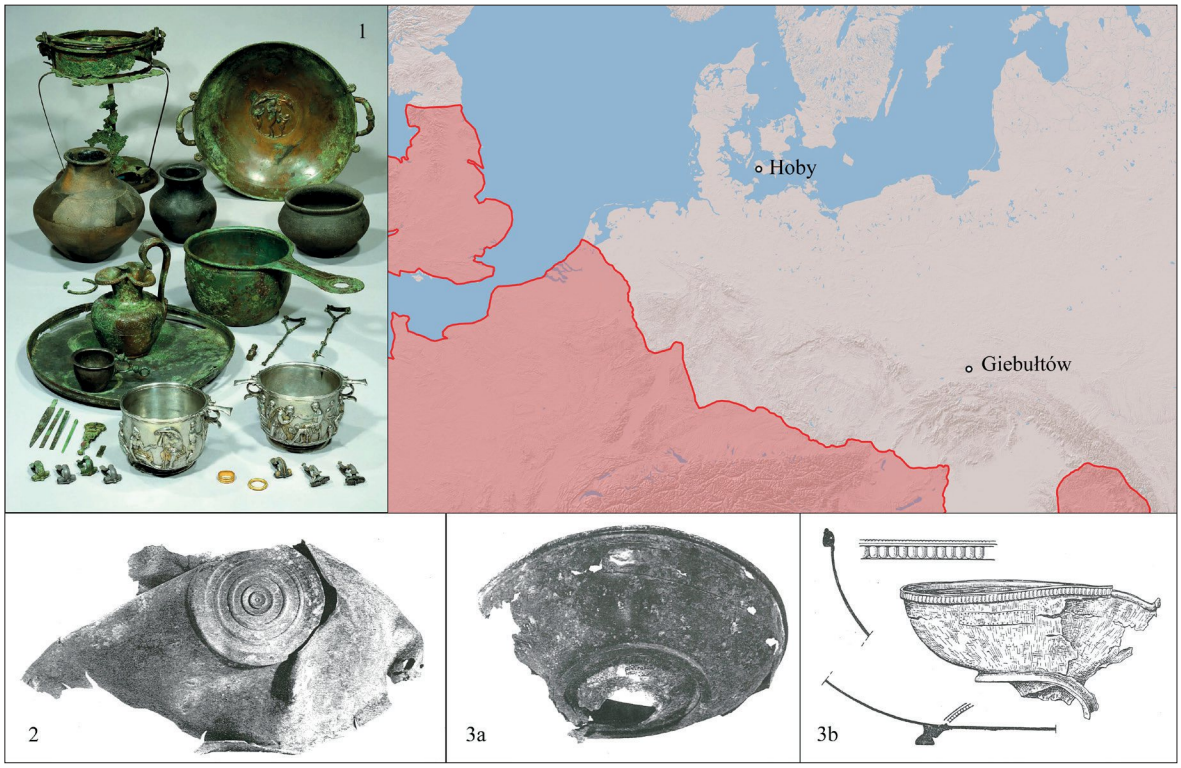


Fig. 11. Eggers 97-type bowls from the Barbaricum. 1 – Hoby, from a richly furnished grave (after Blankenfeldt – Schuster 2024), 2–3.a–b — Giebułtów, fragments of Eggers 97-type bowls (after CRFB – PL 2).

Eggers 97-type bowls were used throughout the Empire mainly for washing feet;[80] however, their role in the Barbaricum remains to be clarified. The insufficient number of finds from primary contexts poses further obstacles to resolving this question. J. Schuster and R. Blankenfeldt[81] discussed it in their study on the chronology of the grave from Hoby, emphasising that the deliberate selection of metal vessels does not suggest the unaltered adoption of significantly more complex Roman customs. In the case of the E 97-type bowl from Hoby, it cannot be ruled out that, together with the E 126-type jug and the E 24-type bucket, they were remnants of a Roman washing set (lacking, for example, a handled dish/*Griffschale*). However, we must critically admit that we do not know whether the remnant of this set was indeed used for personal hygiene. On the contrary, it is better to argue for the status significance of Roman luxury items in a funerary context—especially in the case of silver *skyphoi*, which can be considered antiques already at the time of burial.

Whether the E 97-type bowl the handle fragment of which was found at Vinár served the same function as similar vessels in Italy also complicated to determine. However, it was found in a barbarian cemetery with graves whose composition resembles more closely barbarian than provincial

78 Gorecki 2011, 163, Abb. 55.

79 Tassinari 1993, Vol. 1, 94–97, Pl. 27–29; Gorecki *et al.* 2017, 273–274; Treister 2024, 201–202, 204, 206, 212, Figs 8–10.

80 Gorecki 2023, 319, Cat. no. 341.

81 Blankenfeldt – Schuster 2024, 191–192.

patterns. Based on that, it can be ruled out that the members of the community burying their dead at Vinár used this vessel in the same way as Romans did.

Conclusion

Vinár-Cseralja differs from the provincial burial sites in northern Pannonia due not only burial customs and the predominance of weapons, but also the presence of diverse Roman bronze vessels in the burials and the manner in which they were placed within the graves. In provincial burials of the Early Roman Period in Pannonia, buckets, dippers and strainers, pans, and bowls also occur, although jug-handled dish sets predominate. However, the arrangement of the bronze vessels in the urn graves at Vinár clearly deviates from the prevailing burial customs across the province.

The composition of the set of bronze vessels in the graves (Tab. 1) shows significant similarities with the patterns observed in the territory of the Middle Danube Barbaricum in the Early Roman Period. The high proportion of dippers and strainers, together with buckets and pans, illustrates these tendencies well.[82]

This fact is important for the evaluation of funerary practices. The presence of bronze vessels suggests that the community behind the cemetery followed conservative mortuary traditions, while the provincial environment also facilitated the acquisition of a relatively large number of Roman objects. They retained their customs even after moving to Roman territory, perhaps to preserve their foreign identity.

Funding

The research was supported by a grant from the National Research, Development and Innovation Office (PD 147993), and the research scholarship at the Römisch-Germanische Kommission (RGK), DAI: project title – *Roman imports in East Bohemia (eastern Elbe region).*

Sources

CRFB – PL 2: Kaczanowski, P. (ed.): *Corpus der römischen Funde im europäischen Barbaricum. Poland Bd. 2. Kleinpolen.* Kraków, 2017.

Tac. *Germ.*: Tacitus *Germania (De origine et situ Germanorum).*

References

Adler, H. 1980: Die frühgeschichtliche Zeit in Mannersdorf am Leithagebirge und Umgebung. In: Kultur- und Museumsverein Mannersdorf am Leithagebirge (eds): *Museum Mannersdorf am Leithagebirge und Umgebung, Katalog. Teil 1: Ur- und Frühgeschichte.* Mannersdorf am Leithagebirge, 37–54.

Alföldy, G. 1960: Bronze vessels in the burial rites of the native population in North Pannonia. *Archaeologia* 11, 1–12.

Barbau, C. 2019: *Romanisation et vie quotidienne: l'instrumentation de type italique en Gaule interne (Ier siècle avant J. C. – Ier siècle après J. C.).* Monographies Instrumentum 58. Drémil-Lafage.

Bayley, J. 1989: A suggested nomenclature for copper alloys. *Ancient Monuments Laboratory Report* 80/89, 12.

Bienert, B. 2007: *Die römischen Bronzegefäße im Rheinischen Landesmuseum Trier.* Trierer Zeitschrift Beiheft 31. Trier. https://doi.org/10.29091/9783954907816

Blankenfeldt, R. – Schuster, J. 2024: Hoby revisited – 100 Jahre beißende Tierköpfe von Lolland. *Praehistorische Zeitschrift* 99.1, 153–199. https://doi.org/10.1515/pz-2023-2027

82 Gorecki 2016; Jílek 2020.

Boesterd, M. H. P. 1956: *The bronze vessels in the Rijksmuseum G. M. Kam at Nijmegen.* Description of the collection in the Rijksmuseum G. M. Kam at Nijmegen 5. Nijmegen.

Boesterd, M. H. P. – Hoekstra, E. 1965: Spectrochemical analysis of Roman bronze vessels. *Oudheidkundige Mededelingen* 46, 100–127.

Bóna, I. 1963: Beiträge zur Archäologie und Geschichte der Quaden. *Acta Archaeologica Academiae Scientiarum Hungaricae* 15, 239–307.

Bónis, É. 1960: Römerzeitliche Gräber in Halimba (Komitat Veszprém). *Folia Archaeologica* 12, 90–110.

Bónis, É. 1978: Parallelitäten und Verschiedenheiten in den Bestattungsriten der west- und ostpannonischen Hügelgräber. *Forschungsberichte zur Ur- und Frühgeschichte* 10, 94–96.

Bónis, É. 1981: Das kaiserzeitliche „Wagengrab" 1 von Káloz. *Folia Archaeologica* 32, 95–144.

Bónis, É. 1982: Das kaiserzeitliche „Wagengrab" Nr. 3 von Környe. *Folia Archaeologica* 33, 117–161.

Borda, M. 1984: Problemi della toreutica bronzea Tarantina dell'età ellenistica in Alessandria e il mondo ellenistico-romano. In: Bonacasa, N. – Di Vita, A. (eds): *Studi in onore di Achille Adriani.* Studi e materiali, Istituto di archeologia, Università di Palermo. Roma, 711–720.

Breščak, D. 1982: *Antično bronasto posodje Slovenije.* Situla 22.1. Ljubljana.

Deimel, M. 1987: *Die Bronzekleinfunde aus Magdalensberg.* Kärntner Museumsschriften 71. Klagenfurt.

Dragonidesová, P. 2024: *Sociálna štruktúra germánskej spoločnosti doby rímskej na základe analýz pohrebísk v dolnom Pomoraví, Vols 1–2.* Unpublished PhD Dissertation, Faculty of Arts, Comenius University, Bratislava–Nitra.

Droberjar, E. 1999: *Dobřichov-Pičhora. Ein Brandgräberfeld der älteren römischen Kaiserzeit in Böhmen (Ein Beitrag zur Kenntnis des Marbod-Reichs).* Fontes Archaeologici Pragenses 23. Praha.

Droberjar, E. 2014: Bohatý labsko-germánský kostrový hrob lübsowského typu z Prahy-Bubenče (hrob III). Nové poznatky k interpretaci nálezu z roku 1948. *Archaeologica Pragensia* 22, 397–443.

Droberjar, E. 2024: *Třebusice. Ein Brandgräberfeld aus der römischen Kaiserzeit in Mittelböhmen. Teil II. Analysen und Interpretationen.* Spisy Archeologického ústavu AV ČR Brno 81. Brno. https://doi.org/10.47382/arub2024-04

Eggers, H. J. 1951: *Der römische Import im freien Germanien.* Hamburg.

Elschek, K. 2002: Ein Hortfund von römischen Bronzegefäßbruchstücken: neue Grab- und Siedlungsfunde aus Zohor. In: Kuzmová, K. – Rajtár, J. – Pieta, K. (eds): *Zwischen Rom und dem Barbaricum. Festschrift für Titus Kolník zum 70. Geburtstag.* Nitra, 245–261.

Elschek, K. 2013: Zohor – Ein neues Fürstengrab der „Lübsow-Gruppe" und Brandgräber mit Edelmetallbeigaben aus Zohor (Westslowakei). In: Hardt, M. – Tamáska, O. H. (eds): *Macht des Goldes, Gold der Macht. Herrschafts- und Jenseitsrepräsentation zwischen Antike und Frühmittelalter im mittleren Donauraum.* Forschungen zu Spätantike und Mittelalter 2. Weinstadt, 91–123.

Flügel, Ch. 1993: *Die römischen Bronzegefässe von Cambodunum – Kempten.* Cambodunumforschungen 5. Kallmünz/Opf.

Gabler, D. (ed.) 1989: *The Roman fort at Ács-Vaspuszta (Hungary) on the Danubian limes.* British Archaeological Reports – International Series 531.1–2. Oxford. https://doi.org/10.30861/9780860546764

Gassner, V. – Jilek, S. – Ladstätter, S. 2002: *Am Rande des Reiches. Die Römer in Österreich.* Wien.

Gorecki, J. 2006: Frühformen von Kanne und Griffschale in nordgriechischen Gräbern des ausgehenden 4. Jahrhunderts v. Chr. In: Seitz, G. (ed.): *Im Dienste Roms: Festschrift für Hans Ulrich Nuber.* Remshalden, 377–390.

Gorecki, J. 2011: Die römischen Metallgefäße. *In: Mączyńska, M.: Der frühvölkerwanderungszeitliche Hortfund aus Łubiana, Kreis Kościerzyna (Pommern).* Bericht der Römisch-Germanischen Kommission 90. Mainz am Rhein, 154–194.

Gorecki, J. 2016: Römische Metallgefäßspektren aus ausgewählten militärischen Fundkomplexen diesseits und jenseits von Rhein und Donau von der Zeit der späten Republik bis zum Beginn des 2. Jahrhunderts n. Ch. In: Voss, H. U. – Scheessel, N. M. (eds): *Archäologie zwischen Römern und Barbaren. Zur Datierung und Verbreitung römischer Metallarbeiten des 2. und 3. Jahrhunderts n. Chr. im Reich und im Barbaricum.*

Ausgewählte Beispiele (Gefäße, Fibeln, Bestandteile militärischer Ausrüstung, Kleingerät, Münzen). Teil I. Kolloquien zur Vor- und Frühgeschichte 22.1. Frankfurt am Main–Bonn, 177–214.

Gorecki, J. 2023: *Die römischen Metallgefäße aus Mainz und Rheinhessen. Inklusive der Bestände des Landesmuseums Mainz ohne Provenienzangaben. Katalog und Tafeln.* Mainzer Archäologische Schriften 18. Mainz/Wiesbaden. https://doi.org/10.29091/9783752002379

Gorecki, J. – Klein, S. – Bollenberg, H. – Brey, G. – Pearson, G. 2017: Metallkundliche und analytische Untersuchungen an den im Deposito Archeologico der Soprintendenza Archeologica di Pompei aufbewahrten Metallgefäßen. Bericht der Römisch-Germanischen Kommission 95. Mainz am Rhein, 161–336. https://doi.org/10.11588/berrgk.2017.0

Horváth, L. 1981: A szőlősgyöröki római kori sír. *Communicationes Archaeologicae Hungariae*, 59–81. https://doi.org/10.54640/CAH.1981.59

Hrnčiarik, E. 2013: *Römisches Kulturgut in der Slowakei. Herstellung, Funktion und Export römischer Manufakturerzeugnisse aus den Provinzen in der Slowakei.* Universitätsforschungen zur prähistorischen Archäologie 222. Bonn.

Ingemark, D. 2014: *Glass, alcohol and power in Roman Iron Age Scotland.* Edinburgh.

Iván, R. – Kovácsová, L. – Rajtár, J. 2019: Das germanische Brandgräberfeld in Sekule und seine Bindungen zur Przeworsk-Kultur. In: Kot-Legieć, K. – Michałowski, A. – Olędzki, M. – Piotrowska, M. (eds): *Kultura przeworska, procesy przemian i kontakty zewnętrzne.* Łódź, 291–396.

Jílek, J. 2012: *Bronzové nádoby z doby římské z Moravy a naddunajské části Dolního Rakouska.* Pardubice.

Jílek, J. 2016: Roman metal vessels in the Milieu of Germanic Elites in the Middle Danube region. *Studia Hercynia* 19.1–2, 169–188.

Jílek, J. 2020: Comparative research on Roman imports to Moravia before, during and after the Marcomannic Wars, based on published finds (state of research until 2010). In: Erdrich, M. – Komoróczy, B. – Madej-ski, P. – Vlach, M. (eds): *Marcomannic Wars and Antonine Plague: Selected essays on two disasters that shook the Roman world.* Spisy Archeologického ústavu AV ČR Brno 61. Brno, 159–171.

Jílek, J. 2022: Antické kovové nádoby v prostředí germánské elity ve středním Podunají. In: Turčan, V. (ed.): *Germánske elity v dobe rímskej na Slovensku.* Museion 6. Bratislava, 251–284.

Kaczanowski, P. 1994: Einige Bemerkungen über die „barbarischen" Waffenfunde von römischen Boden. *Specimina Nova* 9.1, 131–156.

Kapeller, A. 2003: La vaisselle en bronze d'Avenches/Aventicum. *Bulletin de l'Association Pro Aventico* 45, 83–146.

Kolník, T. 1980: *Römerzeitliche Gräberfelder in der Slowakei.* Archaeologica Slovaca Fontes 14. Bratislava.

Kolník, T. 1991: Zu den ersten Römern und Germanen an der mittleren Donau im Zusammenhang mit den geplanten römischen Angriffen gegen Marbod 6 n. Chr. In: Trier, B. (ed.): *Die römische Okkupation nördlich der Alpen zur Zeit des Augustus. Kolloquium Bergkamen 1989.* Bodenaltertümer Westfalens 26. Münster, 71–84.

Kolník, T. 2016: Skyphoi und Kantharoi – norditalische glasierte Reliefkeramik in Gräbern des regnum Vannianum? In: Voss, H. U. – Scheessel, N. M. (eds): *Archäologie zwischen Römern und Barbaren. Zur Datierung und Verbreitung römischer Metallarbeiten des 2. und 3. Jahrhunderts n. Ch. im Reich und im Barbaricum. Ausgewählte Beispiele (Gefäße, Fibeln, Bestandteile militärischer Ausrüstung, Kleingerät, Münzen). Teil II.* Kolloquien zur Vor- und Frühgeschichte 22.2. Frankfurt am Main–Bonn, 887–909.

Kotzur, F. 2021: Metallgefäße im provinzialrömischen Sepulkralkontext zwischen Nordsee und Alpen. In: Agricola, C. – Deschler-Erb, E. (eds): *Memento Mori, Aktuelle Forschungen zu Bestattungssitten im Rheinland, Beiträge und Zusammenfassungen des Kolloquiums: Tod im Rheinland. Aktuelle Forschungen vom 29.11.–30.11.2019 Universität zu Köln Archäologisches Institut, Archäologie der Römischen Provinzen.* Kölner Studien zur Archäologie der Römischen Provinzen – digital 1. Köln, 152–172.

Kunow, J. 1983: *Der römische Import in der Germania Libera bis zu den Markomannenkriegen.* Studien zu Bronze- und Glasgefäßen. Göttinger Schriften zur Vor- und Frühgeschichte 21. Neumünster.

Künzl, S. 1997: Schwechat (Niederösterreich): ein germanisches Grab der Stufe Eggers B1. *Archäologisches Korrespondenzblatt* 27, 145–158.

Loboda, I. I. – Puzdrovskij, A. E. – Zajcev, J. P. 2002: Prunkbestattungen des 1. Jh. n. Chr. in der Nekropole Usť-Alʹma auf der Krim. *Eurasia Antiqua* 8, 295–345.

Márton, A. 2002: Roman burial with a weapon from the Bécsi Road cemetery (Aquincum-Budapest). *Communicationes Archaeologicae Hungariae*, 117–152. https://doi.org/10.54640/CAH.2002.117

Mithay, S. 1989: A Vinár-Cseraljai korarómai temető (Frührömischer Friedhof in Vinár-Cseralja). *Pápai Múzeumi Értesítő* 2, 49–76.

Mráv, Zs. 2013: Graves of auxiliary soldiers and veterans in northern part of province Pannonia in the 1st century AD. In: Sanader, M. – Rendić-Miočević, A. – Tončinić, D. – Radman-Livaja, I. (eds): *Proceedings of the XVIIth Roman military equipment conference: Weapons and military equipment in a funerary context (XVII Roman military equipment conference, Zagreb, 24th–27th May 2010).* Zagreb, 87–116.

Nenova-Merdjanova, R. 2002: Bronze vessels and the toilette in Roman times. In: Mattusch, C. C. – Brauer, A. – Knudsen, S. E. (eds): *From the parts to the whole 2. Acta of the 13th international bronze congress held at Cambridge, Massachusetts, May 28 – June 1, 1996.* Journal of Roman Archaeology Supplement 39. Portsmouth, 200–204.

Nenova-Merdjanova, R. 2011: Production and consumption of bronzework in Roman Thrace. In: Haynes, I. P. (ed.): *Early Roman Thrace: New evidence from Bulgaria.* Journal of Roman Archaeology – Supplementary Series 82. Cambridge, 115–134.

Nuber, H. U. 1972: Kanne und Griffschale. Ihr Gebrauch im täglichen Leben und die Beigabe in Gräbern der römischen Kaiserzeit. *Bericht der Römisch-Germanischen Kommission* 53, 1–232.

Ondrouch, V. 1957: *Bohaté hroby z doby rímskej na Slovensku.* Bratislava.

Ottományi, K. – Gabler, D. 1985: Római telepek Herceghalom és Páty határában (A pátyi *terra sigillata*) (Römische Siedlungen in der Gemarkung von Herceghalom und Páty [Die Sigillata aus Páty]). *Studia Comitatensia* 17, 185–241.

Palágyi, S. 1981: Die römischen Hügelgräber von Inota. *Alba Regia* 19, 7–94.

Palágyi, S. 1989: A kemenesszentpéteri római kori halomsír (Über das römische Hügelgrab aus Kemenesszentpéter). *Veszprémi Történelmi Tár* 1, 44–59.

Palágyi, S. – Nagy, L. 2002: *Römerzeitliche Hügelgräber in Transdanubien (Ungarn).* Budapest.

Pernice, E. 1925: *Gefässe und Geräte aus Bronze.* Die hellenistische Kunst in Pompeji 4. Berlin–Leipzig.

Peška, J. – Tejral, J. (eds) 2002: *Das Königsgrab aus der älteren römischen Kaiserzeit von Mušov, Mähren (Tschechische Republik).* Monographien Römisch-Germanisches Zentralmuseums Mainz 55. Mainz.

Petrovszky, R. 1993: *Studien zu römischen Bronzegefässen mit Meisterstempeln.* Kölner Studien zur Archäologie Römischen Provinzen 1. Buch am Erlbach.

Pieta, K. 2002: Anmerkungen zum Grab aus Čáčov. In: Kuzmová, K. – Pieta, K. – Rajtár, J. (eds): *Zwischen Rom und dem Barbaricum. Festschrift für Titus Kolník zum 70. Geburtstag.* Nitra, 343–354.

Ployer, R. 2023: *Das römerzeitliche Gräberfeld von Mannersdorf am Leithagebirge, Niederösterreich. Ein Beitrag zum Bestattungswesen und zur Demografie der Bevölkerung im Hinterland von Carnuntum während der Römischen Kaiserzeit.* Der Römische Limes in Österreich 51. Wien. https://doi.org/10.1553/978OEAW90110

Popa, A. 2015: Untersuchungen zu den römisch-barbarischen Kontakten östlich der römischen Provinz Dacia. *Antiquitas* 3.47. Bonn.

Preisl, H. – Ployer, R. – Schmitsberger, O. 2014: KG Waidendorf, MG Dürnkrut. *Fundberichte aus Österreich* 52, 280–283.

Radnóti, A. 1938: *Die römischen Bronzegefässe von Pannonien.* Dissertationes Pannonicae II.6. Budapest.

Riz, A. E. 1990: *Bronzegefässe in der römisch-pompejanischen Wandmalerei.* Mainz.

Schulz, V. 1885: Hrob u Zlivi. *Památky archeologické* 13, 65–80.

Sedlmayer, H. 1999: *Die römischen Bronzegefäße in Noricum.* Monographies Instrumentum 10. Montagnac.

Simonenko, A. – Marčenko, I. I. – Limberis, N. 2008: *Römische Importe in sarmatischen und maiotischen Gräbern zwischen Unterer Donau und Kuban.* Archäologie in Eurasien 25. Mainz.

Simonett, Ch. 1941: *Tessiner Gräberfeld – Ausgrabungen des Archäologischen Arbeitsdienstes in Solduno, Locarno-Muralto, Minusio und Stabio 1936 und 1937.* Basel.

Stuppner, A. 2016: Fundspektren römischer Metallsachgüter in kaiserzeitlichen Siedlungen und Gräberfeldern Niederösterreichs. In: Voss, H. U. – Scheessel, N. M. (eds): *Archäologie zwischen Römern und Barbaren. Zur Datierung und Verbreitung römischer Metallarbeiten des 2. und 3. Jahrhunderts n. Ch. im Reich und im Barbaricum. Ausgewählte Beispiele (Gefäße, Fibeln, Bestandteile militärischer Ausrüstung, Kleingerät, Münzen). Teil II.* Kolloquien zur Vor- und Frühgeschichte 22.2. Frankfurt am Main–Bonn, 855–885.

Sueur, Q. 2018: *La vaisselle métallique de Gaule septentrionale à la veille de la Conquête: typologie, fonction et diffusion.* Monographies Instrumentum 55. Drémil-Lafage.

Šnajdr, L. 1906: Nálezy u Přerova n. Labem. *Památky archeologické* 21, 139–144.

Szabó, K. 1980: Vaisselle de bronze sur la frontière pannonienne (entre Vetus Salina et Lussonium). In: Hanson, W. S. – Keppie, L. J. F. (eds): *Roman frontier studies 1979. Papers presented to the 12th international congress of Roman frontier studies.* British Archaeological Reports – International Series 71. Oxford, 715–728.

Szabó, K. 1989: Bronze objects. In: Gabler, D. (ed.): *The Roman fort at Ács-Vaspuszta (Hungary) on the Danubian limes.* British Archaeological Reports – International Series 531.1–2. Oxford, 176–196, 427–441.

Szabó, K. 1990: Bronzedények Pannonia halomsírjaiban. In: Palágyi, S. (ed.): *Noricum-pannoniai halomsírok – Norisch-pannonische Hügelgräber.* Veszprém, 163–166.

Szabó, K. 1999: Die Phialen mit Griff des Handwaschservices des sog. Alikaria-Typs. *Antaeus* 24, 462–491.

Tassinari, S. 1993: *Il vasellame bronzeo di Pompei I–II.* Rome.

Tejral, J. 2001: Die germanische Silberfibel von Mušov und ihr archäologisch-historisches Umfeld. *Slovenská archeológia* 49:1, 203–248.

Treister, M. 2022: Roman Bronze Pateras of Eggers 154–155 Types in Sarmatia. *Problemy istorii, filologii, kultury* 1, 23–60.

Treister, M. 2024: On some Roman bronze basins from the burials of the nomads of Asian Sarmatia. In: Gaidukov, P. G. – Malyshev, A. A. (eds): *Vostochnaia Evropa v I tysiacheletii n.e. po dannym arkheologii i numizmatiki: sbornik statei.* Moskva, 189–212.

Ujvári, F. 2019: Kópháza-Széles földek, or from prehistory to the Second World War. *Hungarian Archaeology* 8.3, 20–27. https://doi.org/10.36338/ha.2019.3.5

Urban, O.-H. 1984: Das frühkaiserzeitliche Hügelgräberfeld von Katzelsdorf, Niederösterreich. *Archaeologia Austriaca* 68, 73–110.

Voss, H. U. 2006: Hagenow in Mecklenburg – ein frühkaiserzeitlicher Bestattungsplatz und Aspekte der römisch-germanischen Beziehungen. *Bericht der Römisch-Germanischen Kommission* 86, 19–59.

Wells, P. 2001: *The Barbarians speak. How The conquered peoples shaped Roman Europe.* Princeton, NJ.

Zeman, T. 2017: *Střední Pomoraví v době římské. Svědectví povrchové prospekce.* Archaeologica Olomucensia 2. Olomouc.

Zieling, N. 1989: *Studien zu germanischen Schilden der Spätlatène- und der römischen Kaiserzeit im freien Germanien.* British Archaeological Reports – International Series 505. Oxford.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 559–596. 10.17204/dissarch.suppl.5.2026.559

New results from the Tihany-Óvár *oppidum*, Hungary

Finds from the so-called 'cellar'

F. Zsófia Sörös

Hungarian National Museum Public Collection Centre, National Institute of Archaeology, Budapest, Hungary; HUN-REN–ELTE Research Group for Interdisciplinary Archaeology, Hungarian Research Network – Eötvös Loránd University; Institute of Archaeological Sciences, Eötvös Loránd University Doctoral School, Budapest, Hungary
soros.zsofia@mnm.hu; zsofia.soros@gmail.com

Received 30 November 2025 | Accepted 29 June 2026 | Published 18 November 2026

Abstract: The multi-period site of Tihany-Óvár, registered as an *oppidum*, has been known in archaeological research since the late 19th century. Located on the Tihany Peninsula in Central Europe's largest lake, this fortified settlement, with its excellent strategic position, gained international attention thanks to Éva Petres's study, published in 1976, and has been included on *oppidum* distribution maps ever since. Despite the distinguished attention and rich research history, we only had limited information about the internal structure of the settlement and the rampart. The analysis of the excavations carried out in Felsőóvár during 1999–2000, led by Judit Regenye, aims to change this situation. During her work, an area of ~1,200 m^2 was excavated, making the site one of the best explored late La Tène fortified settlements in Hungarian research. This study focuses on the archaeological features and finds of the so-called 'cellar' (Trial trench 1 and Trench 1, in total: 54 m^2), which also partially included the remains of the rampart.

Keywords: *oppidum*, late La Tène period, rampart, ceramics

Introduction

Archaeological research has identified at least eleven *oppida* and six smaller fortified settlements in Hungary (Fig. 1), located along the main communication routes such as the Danube, the Kapos Valley, and the Amber Road.[1] The list of sites has changed in recent decades, with some settlements being removed (e.g., Somló, Sághegy, Dunaszekcső) and others being added to maps dealing with the late La Tène period (e.g., Pomáz-Nagycsikóvár).[2] This can be explained on the one hand by the intensification of research and on the other hand by the nature of the data (chance finds, donations, field walks, small-scale excavations, rampart cuts). A late La Tène fortified settlement is usually classified as an *oppidum* when—in an urbanlike environment with e.g., residential and craft districts, public spaces—the evidence of industrial and commercial activities (e.g., the presence of coins, prestige objects) are present on the site, and its extended size (more than 10 ha) indicates high importance in the settlement network.[3] If these characteristics are not possible to determine due to the level of research, the possible functional separation of the two types of sites—*oppida* and smaller fortified settlements—can be merely done on the basis of their sizes and in some cases, only

1 Czajlik 2018.

2 B. Bónis 1971, Abb. 1; F. Petres 1976; Gabler 1982, Fig. 2; F. Petres 1990, Fig. 2; Czajlik 2018, 93.

3 Szabó 2015, 62, 66; Czajlik 2018; Sörös 2025, 281–283. The exact definition of the term *'oppidum'* is still under debate. See more detailed in Moore 2017.

✉ Corresponding author

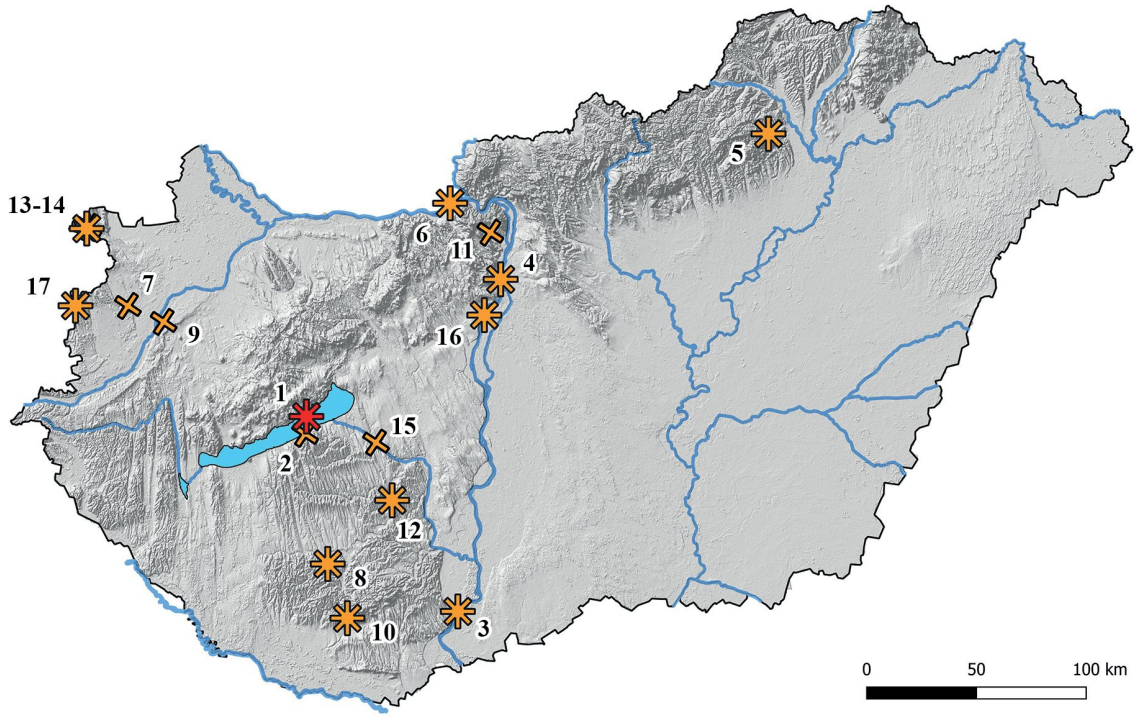


Fig. 1. Late La Tène fortified settlements in Hungary. Red star: Tihany-Óvár, star: *oppidum*, cross: smaller fortified settlement. 1 – Tihany-Óvár, 2 – Balatonföldvár-Földvár, 3 – Báta-Öreghegy, 4 – Budapest-Gellérthegy, 5 – Bükkszentlászló-Nagysánc, 6 – Esztergom-Várhegy, 7 – Gór-Kápolna-halom, 8 – Nagyberki-Szalacska, 9 – Nagysimonyi (Ostffyasszonyfa)-Földvár-major, 10 – Pécs-Jakabhegy, 11 – Pomáz-Nagy-Csikóvár, 12 – Regöly-Sánc, 13 – Sopron-Burgstall/Várhely, 14 – Sopron-Sánchegy, 15 – Szabadhídvég-Pusztavár, 16 – Százhalombatta-Sánc-hegy, 17 – Velem-Szent Vid-hegy (after Czajlik 2018 with addition, map: F. Zsófia Sörös).

spare finds, as little is known about their internal structure.[4] When interpreting a fortified settlement, it is particularly important to clarify the dating of the surrounding ramparts, especially in the case of sites that were generally used in multiple periods. This has always been a prominent aim of the research since the beginning.[5] Thanks to the recent results, the picture based on the previously widespread view of the Celts preferring to use the previously established fortifications, occasionally reinforcing them, or founding new ones too, became more nuanced.[6] The analysis of fortified settlements is further complicated by the fact that only a few finds from contexts have been published.[7] The research on the late La Tène period has yielded further important new data from studies of land use and settlement history, which began in recent decades.[8] The use, function, and role of

4 Budapest-Gellérthegy/Tabán: B. Bónis 1969; Bükkszentlászló-Nagysánc: B. Hellebrandt 1992, 37–49, 2. ábra; Nagyberki-Szalacska: Darnay 1906; Regöly-Sánc: Jerem 1971; Jerem 1972, 254; Százhalombatta-Sánc: Kovács 1969, 161; Poroszlai 1991; Tihany-Óvár: Regenye 2002; Regenye 2004; Marton – Regenye 2005; Velem-Szentvid: Barral *et al.* 1996; Guillaumet *et al.* 1999.

5 *Oppida*: Budapest-Gellérthegy: Barral 1998; Regöly-Sánc: Jerem 1971; Sopron-Sánchegy: Patek 1982, 5; Pécs-Jakabhegy: Török 1950, 4–5; Velem-Szentvid: Guillaumet *et al.* 1999. Smaller fortified settlements: Balatonföldvár-Földvár: Nováki 1961, 82–86; Sörös 2025; Gór-Kápolnadomb: Ilon 1998, 228–230; Nagysimonyi (Ostffyasszonyfa)-Földvár-major: Károlyi 1985, 395–402; Nováki 2006.

6 Jerem 1975, 270–272, Footnote 23; F. Petres 1976, 69, 76; F. Petres 1990, 7.

7 B. Bónis 1969; B. Hellebrandt 1992, 35–63, 68–74; Barral 1998, 361–378; Guillaumet *et al.* 1999; Sörös 2025.

8 Examples from Hungarian research: Jerem 1975; Horváth *et al.* 1979, 78–231; Horváth 1987; Kiss 2000; Maráz 2005; Maráz 2011.

oppida and smaller fortified settlements can be better understood through the system of the nearby settlements, placing the sites in the landscape inhabited by the communities.

The research is in a particularly fortunate position in terms of examining the hilltop fortified settlement of Tihany-Óvár, as thanks to the excavations led by Judit Regenye in 1999–2000, it is one of the best explored late La Tène fortified sites regarding the excavated territory (~1,200 m²), and its analysis is well complemented by the dense network of contemporary settlements on the northern and especially southern shores of Lake Balaton.[9] Similar more intensive habitat area can be observed in the vicinity of Budapest-Gellérthegy and Esztergom-Várhegy.[10] The Tihany Peninsula also serves as a good starting point for mapping the immediate surroundings of Óvár within a more closed geographical unit, which, apart from the site under investigation, does not abound in Late Iron Age remains.[11] Another interesting aspect of the eastern side of Lake Balaton is that, in addition to Tihany on the northern shore, another fortified settlement was built on the southern shore during the late La Tène period, at Balatonföldvár-Földvár. The presence of several fortifications within a few kilometres of each other has been confirmed around Sopron, Bratislava and the Váh river valley.[12]

Site in the landscape

Located in the northeastern part of the Tihany Peninsula, the mainly built-in Óvár plateau offers an excellent panorama of Central Europe's largest lake, Lake Balaton, the interior territories of the peninsula and the neighbouring areas, dominating the landscape due to its location (Fig. 2). In clear weather, both the western and eastern basins of the lake are largely visible from the site, except for those parts that are obscured by the higher ridges on the western and southwestern sides of the Peninsula (Fig. 4). These include the aforementioned smaller fortified settlement at Balatonföldvár,[13] located about 8 kilometres from the site as the crow flies, as well as the crossing point of the lake. The latter, which is still in operation today, is the easternmost crossroad of the lake, which is not surprising considering that it is the narrowest part of Lake Balaton. As can be seen from the above, the peninsula may have held special importance in certain periods due to its natural defensive features, excellent strategic position (as evidenced by the crossing point), and excellent visibility. This was also likely the case during the late La Tène period, as confirmed by the denser settlement network observed in the region and the presence of two fortified settlements from that period.



Fig. 2. Bird's eye view of Tihany from the northeast with the outer and inner ramparts, as well as the crossing point of the lake (photo: Zoltán Czajlik, 8 February 2010).

9 Sörös 2025, Fig. 1.

10 Horváth *et al.* 1979, 78–231; H. Kelemen 1987; Ottományi 2009, Fig. 14; Maráz 2011.

11 Éri 1969, 192–199.

12 Czajlik 2018, 94, 100; Čambal 2004, 10, Obr. 1; Kovár *et al.* 2023.

13 Sörös 2025.

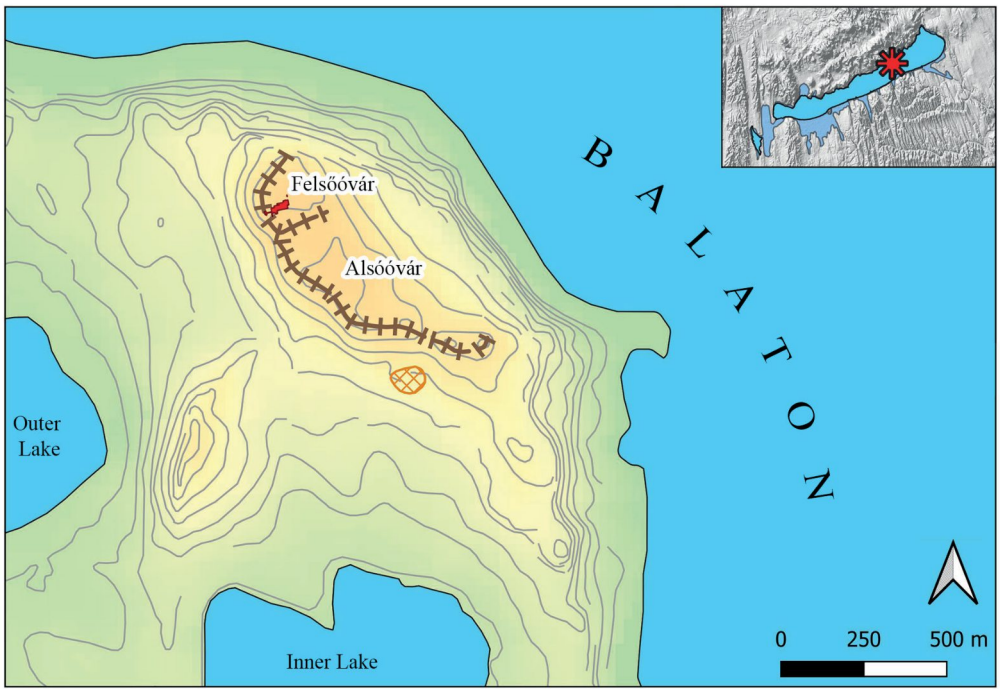


Fig. 3. Location of the site on the northeastern side of the Tihany Peninsula. Brown line: rampart, red marked area: the area of the excavations led by Judit Regenye in 1999–2000, orange net marked area: Early Iron Age *tumuli* graves (Kuzsinszky 1920, 204. ábra; based on Nováki – Uzsoki 2002, map: F. Zsófia Sörös).

The Óvár plateau, which is about 800 meters long and 500 meters wide, is naturally protected as on its northern and eastern sides, the terrain slopes steeply toward the lake, bordered in places by a 20–30-meter-high basalt tuff wall (Fig. 6). Traces of artificial fortifications can only be observed on the western and southern sides, stretching until the Kálvária Hill on the southern part of the hill. The outer fortification is best preserved on the northern side, known as the Felsőóvár ('Upper Old Castle'), where a hiking trail runs partly alongside it. It is also important to note that the rampart was not constructed directly on the edge of the plateau but is bordered on its outer side by a smaller, now-eroded terrace (Fig. 4). South of this, the fortification becomes increasingly difficult to discern, and in the central part of the Alsóóvár ('Lower Old Castle'), it has been nearly completely eroded away. There may have once been a gate in the southeastern part of the plateau—where the modern road crosses the rampart—, a hypothesis that seems to be reinforced by the terrain conditions, as well as by the fact that not far from here, at the foot of the plateau, at least five Early Iron Age *tumuli* rose.[14] Due to their strong visibility and location, these may have played a role not only in the life of contemporary but also in the life of Late Iron Age communities. At its southeastern end, the rampart rises steeply up the natural hill located there. Following the landscaping of Kálvária Hill in the 1920s, an about 25 m long part of the rampart was de-



Fig. 4. View from the western side of the excavation towards the inner part of the Peninsula and Lake Balaton; on the left, the line of the rampart, with the terrace in front of it (photo: F. Zsófia Sörös, 2 February 2025).

14 Soós 2017.

stroyed. After a bend to the east, the remaining part of the feature starts towards the steep part facing Lake Balaton, then disappears, probably due to later construction works. The site is divided into two parts—as already mentioned, the Felsőóvár, also known as the 'Acropolis' and the Alsóóvár—by an additional southwest–northeast-oriented rampart, the middle or inner rampart, separating the approximately northwestern third of the plateau (Fig. 3). The wide ditch running south of it, which was still clearly visible in 1971, has now been partially filled in and built over. According to some theories, the later reinforced—Árpádian Age?—outer rampart ran along the side of the plateau, and the 70-80-meter-long gap on its western side was created by later earthworks.[15] However, based on the available archaeological data, it is currently impossible to determine with complete certainty the chronological relationship between the outer and inner fortifications. The total territory of the artificially defended and naturally protected area is 24.29 hectares, of which 2.98 hectares form part of the Felsőóvár.[16] It has not yet been determined whether the terraced slopes to the west of the Óvár are natural phenomena or man-made (Fig. 5).



Fig. 5. The terraced(?) slope on the western side of Óvár (photo: F. Zsófia Sörös, 2 February 2025).



Fig. 6. Basalt tuff bordering the northeastern side of the site (photo: Péter Balabás, 2 February 2025).

Research history[17]

Flóris Rómer collected archaeological finds at the multi-period site of Tihany-Óvár as early as the 1870s.[18] The first rampart cut—its exact location is unknown—is attributed to Viktor Récsey, who found spindle whorls, ceramic discs, hand-formed vessels, carved antler bones, and perforated tusks "at a depth of two metres, between layers of burnt earth and charcoal".[19] He also carried out excavations during vineyard planting in 1890, and in 1891, he donated his finds to the Hungarian National Museum.[20] During his research beginning in 1895, Bálint Kuzsinszky cut through the southwestern corner of the Felsőóvár rampart for a length of 10 meters and a depth of 1.5 meters (width?[21]), during which he observed larger pieces of tufa and limestone in the lower layers and smaller ones above them. Pieces of carbonized wood remains were found in the upper part, and ceramic fragments in the uppermost layer. He also opened further smaller trenches in the inner part of the Óvár,

15 Regenye 2004, 190.

16 In summary: Nováki – Uzsoki 2002, 66–67.

17 Given the rich history of research, the following chapters focus mainly on the late La Tène features and finds.

18 Éri 1969, 197: Rómer 1878, 87, 102.

19 Récsey 1895, 10–11.

20 Hampel 1891, 448; Éri 1969, 197.

21 Nováki – Uzsoki 2002, 64–65.

but these did not yield any results. He was also the first to publish a map of the ramparts of Óvár without source references, which was probably created by Jenő Cholnoky and Récsey.[22] It is interesting from the research history that this and the contour maps depicting the fortified settlement of Balatonföldvár were the first to be published about the prehistoric earthworks of Hungary.[23]

A rampart cut was also made on Kálvária Hill, known before as Attila Hill, located in the southern part of the site: in 1958, in connection with the laying of water pipes, the outer and inner sides of the fortification were dug into. Gyula Nováki carried out a rescue excavation in the area at that time, and based on his results, the fortification "was built from horizontally spread 20–30 cm thick, alternating layers of local soil and rocky subsoil",[24] and "black soil and white stone rubble were spread in thin horizontal layers on the former humus layer. The upper part of the rampart consisted of ashy soil 2 m thick, with many burnt daub".[25] The excavation did not cover the entire rampart; the highest 5-meter-wide part was left out, so we do not know the complete profile. He also sketched the incomplete cross-section of the fortification.[26] The trench was reopened in 1971, and in connection with the works, András Uzsoki discovered a buried, 6–8 meters wide and 1.5 meters deep ditch, which lay from 15 and 21 meters from the edge of the top of the fortification.[27] In 1965, based on field surveys and literature reviews related to the compilation of the Archaeological Topography of the Veszprém District, Early Bronze Age (Zóki culture), middle Bronze Age (Encrusted Pottery culture), Late Bronze Age (Tumulus and Urnfield culture), Early Iron Age (Hallstatt culture), late La Tène and late Avar period remains were described from Óvár.[28] Topographical information of the earthwork are known from different years of study: aerial photography taken for cartographic purposes in 1969, geodetic survey in 1971, and another fortification survey in 1999 with the collaboration of Nováki.[29] Based on these results, it appears that the fortification—although it is in a damaged state in several places and is constantly being further modified by cut-offs, constructions, and other earthworks—has hardly changed in size since the end of the 19th century.[30]

In addition to late La Tène finds, Late Bronze Age and Early Iron Age remains are observable at the site as well. The communities living during these periods also left their mark on the landscape. Located at the southwestern foot of the Óvár, an Early Iron Age *tumuli* field is still partly visible today. Some of the mounds were excavated by Récsey, Kuzsinszky, and then Uzsoki during rescue excavations carried out between 1970 and 1972.[31] Based on Bence Soós's latest research, the mounds known from the excavations can be dated to the Ha C1–D1 phases, without ruling out the possibility of an earlier flat cemetery dating back to the HaB3 period near the mounds.[32] In archaeological literature it arose as a possibility that the road leading to the earthwork, which is still in use today, may have had run from the south-southeast in the Iron Age (Fig. 3).[33]

The rich research history clearly shows that Tihany-Óvár was primarily known from scattered finds, donations, field survey, rampart cuts with often incomplete documentation, and small-scale

22 Récsey 1895, 12; Kuzsinszky 1920, 164, 204. kép; Nováki – Uzsoki 2002, 63.
23 Nováki 1963, 64.
24 Nováki 1959, 12.
25 Nováki – Uzsoki 2002, 65.
26 Éri 1969, 197, 42. kép.
27 Uzsoki 1971, 22; Nováki – Uzsoki 2002, 65, 3. kép.
28 Éri 1969, 197–198.
29 Nováki – Uzsoki 2002, 63–64, 1–2. kép; Regenye 2004, 2. kép.
30 Nováki – Uzsoki 2002, 66.
31 Récsey 1895, 12; Kuzsinszky 1920, 167; Uzsoki 1986; Nováki – Uzsoki 2002, 65–66.
32 Soós 2017, 172.
33 Nováki – Uzsoki 2002, 66.

excavations. Récsey dated the site to the "barbarian period", Kuzsinszky to the Neolithic or to the Bronze Age based on the finds. Nováki initially dated the construction of the earthwork to the Early Iron Age, later, together with Uzsoki, interpreted the southern outer rampart as Late Bronze Age–Early Iron Age, the northern and inner ramparts conditionally as Late Iron Age, and again elsewhere, the latter as Árpádian Age.[34] Éva F. Petres also dated the construction of the rampart to the Late Bronze Age–Early Iron Age periods, which was later reused for defence by the Celts.[35] For this reason, the excavation by Judit Regenye in 1999–2000, which covered a nearly contiguous area of ~1200 m² in the western part of Felsőóvár, including the debris of the outer rampart on its eastern side (Fig. 3), represents a turning point in terms of understanding the complexity of the site and in its more precise dating. Until now, we only knew about the finds and features at the site from preliminary reports.[36]

Excavations of 1999–2000

The first part of the excavations took place between August 30 and September 3, 1999, under the direction of Judit Regenye, during which four trial trenches were opened on the property of Ferenc Glück (05/67), who was planning to build a cellar and plant a vineyard on the site.[37] Based on the results and the quantity of finds, Regenye decided to continue the excavation, which was carried out between September 27 and October 29, 1999. During the work, a total of 14 trial trenches were opened, some of which were connected later to each other. Between May and June 2000, research continued on the site by excavating a total area of approximately 1,200 m², counting with the previous trenches.[38] Trial trench 1 and Trench 1, the area of the later cellar, form a spatially separate part of the excavation on the western side of the area (Fig. 8). In the following, we will present the features and finds excavated here.

The 'cellar'

The first trial trench of the excavation was marked out on the western part of the site, approximately 2 metres from the inner side of the rampart, at the location of the planned cellar (Fig. 8).[39] During the excavation of the 1 × 10 m trench running northwest–southeast, dark grey, crumbly soil with small stones appeared (SE 1, Fig. 7.2), which can be described as a cover layer containing a general, mixed-age find material. Below this, on the northern side, at a depth of 1 meter, there was a not sharply separated, dark, also crumbly layer mixed with bigger and smaller stones that did not form a regular system (SE 2). At the southern end of the trench, the larger stones were missing, and at a depth of 130 cm, the bedrock appeared.

By the time of the second phase of the excavations, which continued nearly a month later, the location of the planned cellar had shifted slightly to the northwest, so Trial trench 1 did not cover the entire length of the middle of 5 × 10 m Trench 1 that was opened at that time: it partially protrudes

34 Récsey 1895, 10; Kuzsinszky 1920, 166–167; Nováki 1959; Nováki 1963, 59; Nováki – Uzsoki 2002, 67; Regenye 2004, 190.

35 F. Petres 1990, 7.

36 Regenye 2002; Regenye 2004; Marton – Regenye 2005.

37 The excavations were financed by the Ministry of National Cultural Heritage, and the finds are kept in the Laczkó Dezső Museum (Veszprém), Inv. no. 2026.4.1.1–102.

38 The increase in the previously known area of 1,000 m² to 1,200 m² can be explained by the fact that—with a few exceptions—the trenches opened in 1999 were not included in the total area in the preliminary reports based on the published maps (Regenye 2004, 188, 3. kép; Marton – Regenye 2005, 48, Fig. 2).

39 No unique identification numbers were assigned during the excavation. For easier processing, this was replaced retrospectively based on the documentation (SE numbers).

from it in a southeasterly direction (Fig. 8). In the northwest corner, at a depth of 40–50 cm, larger stones also appeared in a light grey layer (SE 3), under which there was the already mentioned layer mixed with larger grey stones (SE 2). It is important to note that the SE 2 and SE 3 layers were not separated during digging, but only during documentation. The two layers can be identified as remains of the outer rampart (Fig. 7.3–4). Large fragments of a *dolium* were found in SE 2 (Fig. 14.2).

On the eastern side of Trench 1, bedrock appeared in some places at a depth of 120 cm beneath the dark grey layer mixed with smaller stones (SE 1). In the northeastern part, at a depth of 145 cm, there was a beehive-shaped storage pit, a so-called silo, which was 2 meters deep from the rock level (SE 4, Fig. 7.5). A yellow plastered walking surface (SE 5) could be observed at the edge of the pit, which extended approximately until the middle of the section, connecting to the bedrock with a straight, west-east line. In the middle of the section, a smaller round pit or larger post hole (SE 6, Fig. 7.3–4) was found dug into the grey soil. In the southwestern quarter, under the stony layer, there was a round pit filled with grey, crumbly soil mixed with stones (SE 7, Fig. 7.6), and with a dark-filled, square-shaped depression (SE 8) on the northeastern edge of the latter. The few carbonized wood remains originating from this feature were examined by András Grynaeus, who identified them as willow and oak.[40] During the cleaning of SE 8, two additional pits were revealed (SE 9–10), whose chronological relation is questionable (Fig. 7.6). After removing the stony layer in the northern part, another round, deeper silo was found, surrounded by at least three post holes. At the southern junction of Trial trench 1 and Trench 1, the bottom (?) of a shallow, round, 15 cm deep pit was found (SE 13, Fig. 7.4). During the cleaning of the walking level, several post holes of varying depths (SE 14–27: 15–50 cm, Fig. 8) were found between and next to the pits. Their distribution shows only partial regularity: based on the available data, it is difficult to determine if they (or at least some of them) were part of the rampart or were rather connected to the pits.[41] Due to the size of the excavated area (54 m²), most of the features did not fall entirely within the trenches, which is particularly important to mention in connection with the processing of the finds.

It is also worth mentioning that the site bears trace of maar-type basalt volcanism. During the excavation, the geological features of the area were clearly observable, as, except for the 'cellar', a layer of rock, approximately two meters thick, appeared beneath the soil layer covering it, at a depth of approximately 20–40 cm. This was followed by a clay-like rock layer that appeared to be of basalt tuff origin. In connection with the latter, it is worth noting that even the deeper features have been dug out until the soil boundary so far.[42] In the western part of the site, on the inner side of the rampart, the combination of deposited and accumulated layers was approximately 150 cm thick above the bedrock (Fig. 8).

The interpretation of the archaeological features

The features uncovered during the excavation clearly show that in the 'cellar' area, under the rampart debris and to the east of it, there were pits, silos, and post holes of indeterminate function, which deepened into the yellow plastered walking surface and bedrock to the south of it.

Rampart. As we have already seen above, the outer rampart stretching along the western side of the Óvár has been partially cut through several times in connection with excavations and the laying of water pipes. We either do not know the documentation of these, or the trenches did not affect the entire width of the rampart to the bottom. The layers of irregularly stacked stones and earth

40 Regenye 2004, 190.

41 Karl 1996, Abb. 23.

42 Regenye 2004, 188: The geological survey of the area was carried out by József Knauer, see his results in more detail also here.



Fig. 7. Photos taken during the excavation of the 'cellar': 1 – larger stones protruding from the rampart in the vicinity of the hiking trail running on the outside of the fortification, 2 – the stone-mixed layer found in Trial trench 1 (SE 2/3), which ends at the southern end of the excavated area, 3 – the line of the rampart on the western side of Trench 1 (SE 2/3), SE 4 silo in the northeastern corner, SE 6 pit in the middle, and the regular line of the bedrock in the foreground, 4 – the line of the rampart on the eastern side of Trench 1 (SE 2/3), in the southern part, the bedrock with postholes, SE 13 shallow pit, and the southern extension of Trial trench 1, 5 – the excavated SE 4 silo in the northeastern corner, 6 – a group of pits (SE 7, SE 9–10) and a square-shaped feature (SE 8) discovered under the rampart on the western side of Trench 1 (photos: Judit Regenye, 1999).

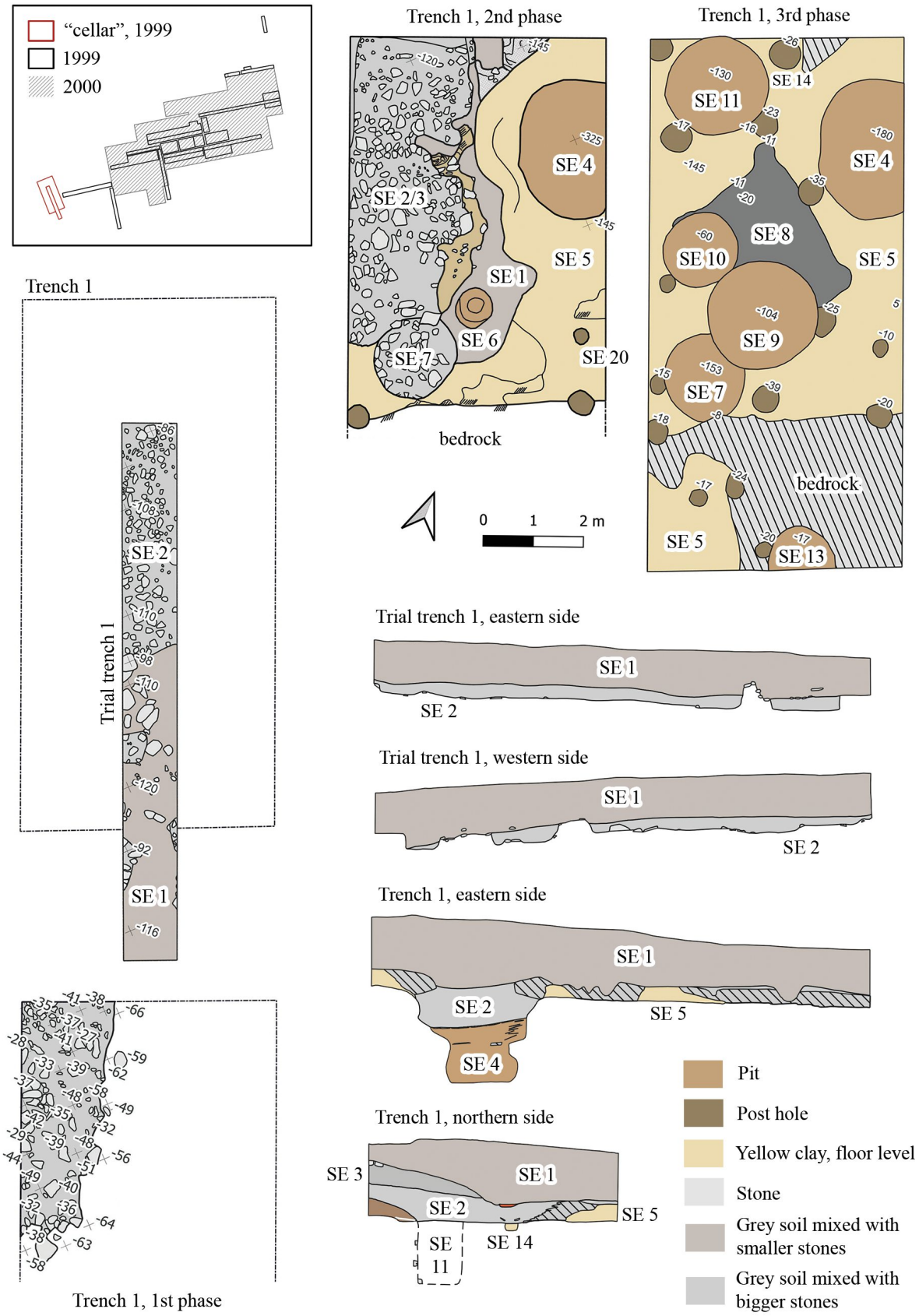


Fig. 8. Location of Test trench 1 and Trench 1 ('cellar'), surface and cross-section drawings (based on Regenye's excavation documentation: F. Zsófia Sörös).

(SE 2–3, Fig. 7.3–4), which can be interpreted as the remains of the outer rampart section excavated in 1999, only represent the eastern edge of the fortification. An important new result of the analysis is that the outer rampart was built in the late La Tène period based on the periodization of the finds (Fig. 9.3). Predicated on the precise finding conditions of the fragments that can be dated to the late Migration Period and/or the Árpádian Age, their presence may be attributed to the collapse of the rampart or to the disturbance of the find material.[43] On the basis of the available data, it appears from the excavation reports that the rampart was partly constructed of stone and earth. Récsey and Nováki write about charcoal layers and burnt or ash-covered earth, while Kuzsinszky also mentions carbonized wood remains—beam?—fragments.[44] The data is too scarce to decide if these remains certainly indicate a beam-structured fortification or not, and the absence of a complete cross-section does not help to decide the question either. Based on the fragmentary data, we cannot rule out a *Pfostenschlitzmauer*-type rampart at the site.[45] This hypothesis seems to be supported by the height of the feature (~3–6 m),[46] the trace of a beam "in the water tank pit dug next to the cellar",[47] and the presence of larger, transported stones on the outer edge of the fortification observed in the late 1990s (Fig. 7.1). These probably formed the outer wall of the rampart and, in addition to its defensive function, they also had an ostentatious function.[48] The hypothesis of Zoltán Czajlik, who expects a Fécamp-type rampart in the Óvár, can be rejected in the light of the above data, as there is no trace of an 8–10-meter-high fortification or a monumental ditch deepened in the outer section.[49]

Silos and pits. In the trenches, three pits can be interpreted as silos[50] (SE 4, SE 7, SE 11, Fig. 7.3,5). Of these, only SE 7 fell into the explored area, and only about half of the other two features were excavated. Based on the cross-section drawings (Fig. 8), SE 11 was a beehive-shaped storage pit, while SE 4 had vertical side walls (?). According to the photo documentation of SE 7, it may also have had similar features to the latter. Their depths (-130 cm, -153 cm, -180 cm) varied. In terms of proportions of the finds—excluding the remains of the rampart (SE 2–3) and the cover layer (SE 1)—the most pottery fragments were recovered from silos SE 7 and SE 11, while SE 4 contained much fewer, and they were recovered from the lower part of the pit (Fig. 9.1,3). Depositing in pits—the use of the negative features as garbage pits, so to speak—can be considered as secondary use, since even the construction of a simpler silo is a work process that takes several days. Regarding the act of filling, it is not necessarily clear whether the activity was connected to the construction or preparation of the rampart or not. The function of the other pits in the excavated area is less clear due to their forms. The interpretation of the SE 8 square-like feature is also questionable, although during the excavation, it was suggested that it might be related to the rampart construction.[51]

43 The small amount of fragments dated to the late Migration Period/early Árpádian Age were recovered from the northern part, from the excavation of the rocky surface (there is no data on which part), the further fragments of the Árpádian Age were found in the southern part of Trial trench 1, from a depth of -130 cm, where SE 1 dips deeper than the layers of the rampart (SE 2–3) on the northern side (Regenye 2006).

44 Récsey 1895, 10–11; Kuzsinszky 1920, 164; Nováki – Uzsoki 2002, 63.

45 Fichtl 2000, 44–46.

46 Kuzsinszky 1920, 166.

47 Regenye 2004, 190.

48 Fichtl 2000, 68–71.

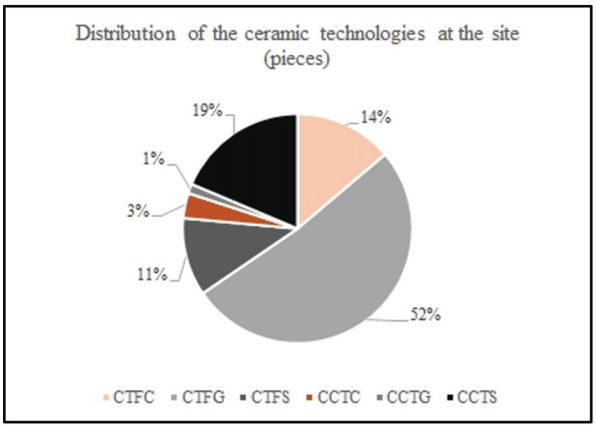
49 Fichtl 2010, 317–318; Czajlik 2018, 96; Krausz 2018, 171–174.

50 The basic criteria for silos include a storage capacity of at least 0.5 m³ and a mouth diameter of no more than 1.2 m. The above values are essential for creating an anaerobic environment and safe storage (grain in contact with the side of the pit will be destroyed) (Villes 1982, 1313). The larger mouth diameter of the silos excavated in Tihany-Óvár can be explained by the amortization of the pits.

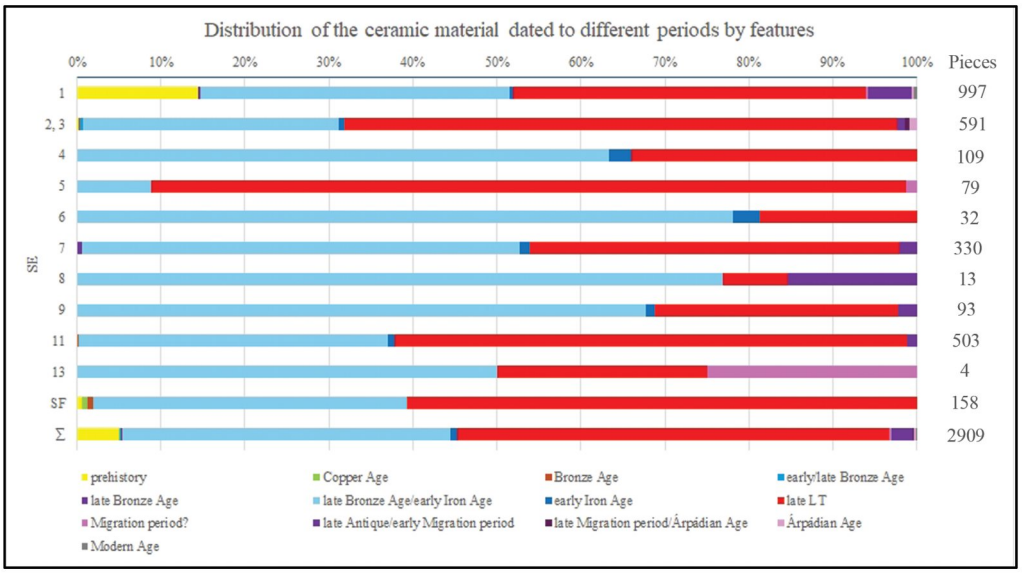
51 Regenye 2006.

OBJ						*Situlae*	Pots/ Smaller pots/ Jars				*Dolia*	Lids	Non-identifiable	Σ
	II.1.2K	II.1.2	II.1.5	II.1R	II.1	II.2	II.3	II.3/II.5	II.5/II.8	II.3/II.5 /II.8	II.4	II.9		
1	1	7	30			2	2			9	2	2	9	64
2, 3		4	21	1						9	1	1	4	41
4	1	1	2				1	1					4	10
5			4		3	1	1	2			1		3	15
6													2	2
7	2	3	11			1		2	5				3	27
8			1											1
9		1	1		1	1				2			3	9
11	2	3	18			2	1			5	2		14	47
13											1			1
Σ	6	19	88	1	4	7	5	5	5	25	9	3	42	219
	118					7	40				9	3	42	
%	2.74	8.68	40.18	0.46	1.83	3.20	2.28	2.28	2.28	11.42	4.11	1.37	19.18	100.00

1



2



3

Fig. 9. 1 – distribution of vessel types according to MNI in the excavation material, 2 – distribution of ceramic technology based on the number of fragments, 3 – proportion of ceramic fragments from different periods in the individual features (tables: F. Zsófia Sörös).

In the northern part of the trench, beneath the remains of the rampart, a layer of yellow plastered clay was observed, which the excavation leader interpreted as a walking surface (Fig. 7.4). To the south of this, the bedrock with a straight, nearly west–east orientated boundary on its northern side could also be identified as a walking surface. Above this, there were no larger stones typical of the rampart, the explanation for which (a conscious decision? a later disturbance?) is unclear. A paved walking surface was also documented in Velem-Szentvid,[52] with the difference that at our site, this layer was naturally present[53] and required only minor repairs in terms of levelling.

Find material

Most of the finds are of pottery sherds. Fragments from the late La Tène period account for almost half (51.51%) of the nearly 2,900 pieces. In terms of proportion, this is followed by pieces dating to the Late Bronze Age/Early Iron Age (39.23%), which, due to their fragmentation, are difficult to link unequivocally to either of the two periods. It is important to note, however, that the majority of the few clearly datable fragments can be attributed to the Early Iron Age. A further ~150 prehistoric fragments without a more precise definition were also found, in addition to a piece dated to the Copper Age. In addition to the prehistoric and protohistoric periods, fragments from the Late Antiquity/early Migration Period (5th–6th centuries), late Migration Period/Avar/early Árpádian Age, Árpádian Age, and modern times were also present in the 'cellar' material. These are known primarily from the eastern and southern sides of the trench (SE 1), as well as from the stone mixed layer in the southern half of Trial trench 1 and its bottom (SE 2). The Migration Period finds from the latter, as well as from SE 8, SE 9, and SE 11, are so few compared to the other pottery fragments (total: ~2%) that their presence can be explained by later mixing or the collapse of the rampart. Considering the distribution of the finds, the rampart, the pits and silos, and (part of) the post holes can be dated to the late La Tène period. Only pit SE 13 is likely to be an exception, as the youngest of the four pottery fragments found here also dates to the Migration Period (early Migration Period/Avar?). The younger date is supported by the fact that its spot was already visible during the excavation of Trial trench 1, which means that its surface was higher than that of the other features. The stony layer of the rampart did not extend this far (Fig. 9.3).

During the processing of the pottery fragments, we used the ceramic technology and typology developed in the open settlement at Sajópetri-Hosszú-dűlő, based on the system used at the *oppidum* of Bibracte, which, when used at other sites, allows us to observe the differences and changes between certain regions and Late Iron Age phases.[54] The following proportions can be outlined in relation to ceramic technology at the site under investigation (%/potsherds): light brown-beige, well-levigated, wheel-thrown fragments (CTFC) 14%, grey, well-levigated, wheel-thrown fragments (CTFG) 52%, dark brown-black, well-levigated, wheel-thrown fragments (CTFS) 11%, dark-coloured, coarse wheel-thrown fragments (CCTS) 19%, and grey-coloured, coarse wheel-thrown, graphite-tempered fragments (CCTG) 1% of the ceramic fragments (Fig. 9.2).[55] In general, fine ceramics include bowls, pots, cups, and bottles of various designs, while coarser vessels include pots and *dolia*, as well as *situlae* with or without graphite tempering. During the processing, the minimum number of vessels (MNI)[56] was also determined, which, by quantifying the individual ceramic forms, allows the map-

52 Guillaumet *et al.* 1999, 385–386, Fig. 10.

53 Regenye 2004.

54 Szabó *et al.* 2007; Szöllősi 2009.

55 Szabó *et al.* 2007, 234–235.

56 Paunier *et al.* 1994; Voss – Allen 2010. The values are slightly influenced by the fact that in three cases it was not possible to link the finds to a layer without any doubt (SE 1/SE 2/SE 3): 1) southwestern quarter, -50 cm; 2) from the part between SE 7 and SE 11; 3) bottom of the southwestern quarter. These fragments were registered as scattered.

ping of functional and cultural differences between the cooking, consumption, and storage habits of a given site. The nearly 1,500 fragments belonged to at least 219 vessels, among which 118 bowls, 40 pots, bottles, jugs, 7 *situlae*, 9 *dolia*, and 3 lids could be distinguished, which together represent almost 80% of the vessels (Fig. 9.1). Mugs and *kantharoi* are missing from the ceramic material.

The identification of late La Tène hand-shaped pottery among the Tihany finds is quite problematic due to the high degree of mixing with earlier periods and the fragmentary nature of the pieces.[57] For this reason, the study focuses on the presentation of wheel-thrown pottery types, but this does not mean that it is not worth counting on hand-formed pottery in the period. In the La Tène B2–C1 period, the ratio of wheel-thrown and hand-formed vessels in Transdanubia is 4:1, in contrast to the areas east of the Danube, where this ratio is almost 1:1.[58] It is likely that—similarly to the Balatonföldvár-Földvár[59] site—hand-formed vessels were used to a small extent in Tihany. A better identification of the hand-formed type is facilitated by the fact that in the case of the latter site located in the zone of the peninsula, the finds found during the excavations were rarely mixed with other periods.

Bowls

Among the vessel types found at the site, bowls (Type Sajópetri II.1) represent the most common functional group. Four subtypes can be distinguished here, of which bowls with inverted rims (Type Sajópetri II.1.5) are by far the most common (40.18%; rim diameter: 12–40 cm; Fig. 10.8–10, Fig. 11.1–9, Fig. 12.1–8,15, Fig. 14.4–5,7–13,15, Fig. 15.1, Fig. 16.3,5,11–13, Fig. 17.12–16,18, Fig. 18.1,3,13, Fig. 19.3,5,7,9–12,17, Fig. 20.1–8, Fig. 23.5). This ratio is also characteristic of other sites excavated in the Balaton region, so this can be interpreted as a local peculiarity.[60] Parallels can be found in varying proportions in the material from other late La Tène sites, also with smaller and larger rim diameters.[61] The form was already popular in the Late Bronze Age, and its use continued unabated in the Early Iron Age, both in the Hallstatt and the Vekerzug cultures.[62] We encounter several examples of its older, hand-formed variants at this site as well. A general trend can be observed in relation to bowls: during the La Tène B1–C1 period, various forms of S-profile bowls (Type Sajópetri II.1.1) were the most popular, but their dominance was slowly taken over by hemispherical bowls with thickened rims (Type Sajópetri II.1.2) in the middle La Tène period.[63] Although the proportion of S-profile bowls increased again in certain regions during the late La Tène phase, only a few examples are known from the Balaton region.[64] Neither S-profile nor Békásmegyer-type bowls were found during the excavation of the 'cellar'. As for hemispherical bowls with thickened rims, they are also present in the late La Tène materials, but in smaller numbers.[65] It cannot yet be determined whether the *Knopfhenkeltellern* or under other name, *Ansatzknopf*-type bowls (Type Sajópetri II.1.2K; rim diameter: 20–23 cm; Fig. 10.1, Fig. 16.6, Fig. 17.10–11, Fig. 19.4,6, Fig. 22.11) can also be classified into the subgroup of hemispherical bowls with thickened rims (Type Sajópetri

57 The earlier presence of the Urnfield and Hallstatt cultures in the *oppida* located in Hungary can be considered a general phenomenon (Patek 1982, 11; F. Petres 1990, Fig. 2).

58 The latter phenomenon can be explained by the presence of different cultural traditions (Hallstatt culture, Vekerzug culture) in the two areas: Szőllősi 2013, 41.

59 Sörös 2025, Pl. 3.8–9.

60 Kiss 2000, 5. kép, 2, 6. kép, 1–2, 10. kép, 3; Tankó 2016, Pl. 4; Sörös 2025.

61 B. Bónis 1969, 176–177; Gabler 1982, 73, Fig. 7.1,3; Čambal 2004, 61, 67: their inner sides were decorated less frequently.

62 Patek 1982, 102, Taf. 6.28–31; Chochorowski 1985, 32–35; Soós 2017, 144–145.

63 Dizdar 2013, 349–350; Almássy 2014, 178; Tankó 2016, Pl. 8–9; Sörös 2024, 87–88, Fig. 23.

64 Sörös 2025, Pl. 8.17.

65 B. Bónis 1969, 178; Gabler 1982, Fig. 7.2,5–6; Kiss 2000, 2. kép 3; Tankó 2016, Pl. 4.7,10–11.

II.1.2; rim diameter: 17–25 cm; Fig. 10.2–7, Fig. 14.6,14, Fig. 15.10, Fig. 16.1, Fig. 17.7–9, Fig. 18.14, Fig. 19.8,18, Fig. 22.8,10,14), if there are neither knobs nor handles on the pieces. Based on their distribution, *Knopfhenkeltellern* were primarily used in the Lake Balaton region, but further parallels are known from southern Transdanubia and the surrounding area of Budapest, too.[66] Only one bowl, with a ring-shaped thickening, slightly convex, nearly vertical shoulder, represents the fourth subgroup, which is a new type (Fig. 15.3). Its closest parallel is known from Budapest-Tabán.[67]

A general characteristic of the vessel type is that deep rather than flat shapes were popular in the Late Iron Age. Typical decorations include smoothed patterns on their inner sides, which, although already appearing in the La Tène B2, became widespread in the late La Tène period.[68] Watched from above, these decorations consist of elongated concentric circles (Fig. 10.6,9, Fig. 11.2–3,5–6,8, Fig. 14.4–5,7–8,10,15, Fig. 15.1, Fig. 16.3,11, Fig. 17.12, Fig. 19.7,10–12, Fig. 20.1,4,7–9, Fig. 21.1, Fig. 22.12–13,15), sometimes arranged in several bundles, wave (Fig. 12.3), garland (Fig. 10.4,20, Fig. 15.17, Fig. 16.4, Fig. 19.4, Fig. 21.10) and zigzag motives (Fig. 17.3), as well as combinations of these (Fig. 10.19, Fig. 16.2, Fig. 17.1,7,16, Fig. 18.14, Fig. 19.5,9,19, Fig. 20.19–20, Fig. 21.2, Fig. 23.3) make the bowls an easily distinguishable vessel type, together with their characteristic rims. In terms of their design, the incised patterns are not always precise works: the lines often intersect (Fig. 17.4), and are not formed in equal proportions (see wavy lines), which leads us to conclude that the craftsmen created these using a rotational movement, turning the vessel on a potter's wheel, paying less attention to their alignment. The outer side of the vessels often shows polished concentric circles or bands when viewed from below (Fig. 10.5,8–9, Fig. 11.2,4–5,8, Fig. 12.2–3, Fig. 14.5,7–8,10,12,15, Fig. 15.1,10, Fig. 16.3,12–13, Fig. 17.7,12,16,18, Fig. 18.13, Fig. 19.9,11, Fig. 20.1,3–4,6,8, Fig. 21.10, Fig. 22.12), but it is not uncommon for the outer side of the bowls to be polished almost completely, even to the inner side of the rim (Fig. 10.5,8–9, Fig. 11.2,8, Fig. 14.7, Fig. 16.3,13, Fig. 17.12,15–16,18, Fig. 18.3,13, Fig. 19.11, Fig. 20.1,3, Fig. 22.12).

Pots, small pots, and bottles

After bowls, various pots (Type Sajópetri II.3), small pots (Type Sajópetri II.5), and bottles (Type Sajópetri II.8) occur most frequently among the finds (18.26%). We will discuss them together below, because due to the fragmentary nature of the vessels, in most cases it is not possible to classify them into one of the functional groups. Pots are more prevalent among them, but the transitional differences between the three types of vessels cannot always be clearly defined (rim diameter: 12–31 cm, bottom diameter: 8–11 cm; Fig. 10.13,17–18, Fig. 12.10,12,16–17, Fig. 13.1–2,4, Fig. 15.5,7,9,11, Fig. 16.7,9, Fig. 17.5, Fig. 18.2,4–5, Fig. 20.10, Fig. 21.5–8,15–16, Fig. 23.7–8). In the case of bottles, the rim and neck diameter, as well as the length, and in the case of small pots, the rim diameter, the height of the vessel and its gracility, just like the belly diameter, help in the determination. The three types are generally characterized by an outcurving rim, a conical neck, a rounded belly formed approximately halfway up the vessel, a slightly convex or conical lower part, and a concave or, more rarely, ring-shaped base. Another common feature is the polished bands and smoothed decorations on the shoulder, such as horizontal lines running around the vessel (Fig. 10.12, Fig. 12.12, Fig. 13.7, Fig. 16.7, Fig. 18.2, Fig. 21.13, Fig. 23.9), a pattern of oblique (Fig. 16.8) or vertical lines (Fig. 16.14), single or multiple wave patterns (Fig. 12.16, Fig. 13.3,5,11,13,16, Fig. 15.4,11,16,18, Fig. 16.16–17, Fig. 17.2, Fig. 18.16–17, Fig. 21.4, Fig. 22.2–3, Fig. 23.10), zigzag lines formed by one or more lines (Fig. 10.15, Fig. 11.11,15, Fig. 12.14, Fig. 13.12, Fig. 15.6,8, Fig. 16.18, Fig. 18.7–9,12, Fig. 21.9,11,14), net pattern (Fig. 11.17, Fig. 17.6, Fig. 21.12, Fig. 22.4, Fig. 23.10), and combinations of these between two smoothed horizontal lines or intersecting them.

66 B. Bónis 1969, 177–178; Horváth 2019, 418–420, Abb. 3.

67 B. Bónis 1969, Abb. 31.4.

68 Szöllősi 2013, 36.

Ribs on the neck and shoulders (Fig. 17.5–6, Fig. 18.5, Fig. 23.7) and grooves in the lower third of the shoulders (Fig. 11.17, Fig. 21.13, Fig. 22.4, Fig. 23.6) are also common. The garland pattern seen inside the bowls is not observed on these types of vessels. The decoration listed above, appearing on pots/small pots/bottles and bowls, is widespread in the late La Tène period.[69]

Situlae

Typical vessels of the Late Iron Age include *situlae* with thickened rim, straight base, usually tempered with graphite, combed on the outside, and of varying size (rim diameter: 21–30 cm, bottom diameter: 12–14 cm). Among the rim designs found at the site are thickly swollen (Fig. 18.10), semicircular (Fig. 13.6, Fig. 23.2), or flatter, rounded, inward-curving pieces (Fig. 12.18). In the late La Tène period, the linear pattern that runs around the rib formed on the shoulder, typical of La Tène B2–C1 (e.g., slanted and zigzag lines, crescent, herringbone pattern), disappears, and the combed side begins almost immediately below the neck. Compared to the previous—mostly only vertical—combing method, the latter is characterized by the appearance of vertical lines with diagonally intersecting bundles of lines in some places, net- and metope-like patterns. In the Tihany material, vertical (Fig. 11.10, Fig. 22.1, Fig. 23.12), intersecting (Fig. 15.2), and net-like combing (Fig. 16.10, Fig. 18.15, Fig. 21.3) are present so far. Even though the vessel type is not difficult to distinguish in the find material based on its characteristic shape, tempering, and decoration, few fragments can be classified here (MNI: 3.2%). It is a general phenomenon that the number of *situlae* in certain regions decreases dramatically in the late La Tène compared to previous periods, which can presumably be explained by the distance from the Danube, the changes of transport routes of the graphite raw material, primarily originating from the Bohemian Massif, or the possible transformation of ceramic traditions.[70]

Dolia

At least nine large storage vessels (Type Sajópetri II.4) have been found in the excavated area, all of which, based on their rims, belong to the subtype with thickened, outcurving rims resembling pots (rim diameter: 38–45 cm, base diameter: 26 cm; Fig. 14.1–2, Fig. 15.12, Fig. 23.1). The 'cellar' material lacks versions with horizontal rims and two or three lobes.[71] Several fragments of a *dolium* were found in one location, in the remains of the rampart (SE 2). However, it is difficult to determine whether this was an *in situ* vessel, as its rim fragments were mixed in with other features' material too (SE 6–7). Due to its size and to achieve a more stable temperature for storage, the vessel type may have been buried in the ground. A good parallel to this is the *in situ dolium* excavated at Bátaszék-Körtvélyes-dűlő and the pit excavated in building no. 9 at Budapest-Gellérthegy, the extent of which corresponded to the vessel found on the floor of the feature.[72] The separation of the *dolia* fragments is aided by the dimensions of the object type, its rougher thinning, and the black tar (?) marks that can be observed on them—mainly on the neck and inner side of the rim, on the edges, but also in the area of the base (Fig. 11.13, Fig. 13.10,14, Fig. 14.1–2, Fig. 15.12, Fig. 23.1). The latter can be explained by the need for hermetic sealing of the vessel or by the intention to repair it, as we find examples of this at other sites.[73] As for the decoration, some fragments show ridges running along the shoulder and a horizontally polished band on the sides (Fig. 11.13, Fig.

69 H. Kelemen 1987; B. Bónis 1969.

70 Tankó 2016, 171; In the *oppidum* of Bratislava, *situlae* are considered one of the most common types of vessels (Čambal 2004, 66).

71 B. Bónis 1969, 191–193; Ottományi 2017, 32.

72 Magyar 2013, 62, 6. kép; B. Bónis 1950, 340.

73 Tankó 2016, 171, Pl. 4.13,17; Sörös 2025, Fig. 6, Pl. 3.5–6. Tar marks were also identified on larger storage vessels excavated at the Hallstatt-period settlement of Milejowice (Rosiak *et al.* 2024).

13.10, Fig. 14.2, Fig. 18.6), while grooves below the neck are common at the site. The low number of *dolia* may be related to the size of this vessel type, and their proportion in the finds may indicate the storage capacity and possible specialization of specific settlements. Since no complete profile of a *dolium* can be reconstructed in Tihany, it is difficult to draw conclusions about the capacity of individual vessels.[74]

Lids

There are a few ceramic pot lids (Type Sajópetri II.9) in Late Iron Age materials in the region, and this is also true of the Tihany site. Only three fragments can be classified as probable pieces. The first is a piece with a sharply protruding shoulder (Fig. 10.14), parallels of which can also be found in the *oppidum* of Bratislava and Budapest.[75] The second fragment may have been a conical lid decorated with a band of polish and an irregular zigzag motif running across it (Fig. 13.17).[76] The third piece is so small that its classification as a lid is based solely on the shape of its rim (Fig. 15.15). The rarity of this find type can be explained by the possibility that the vessels were covered with lids made of organic material (e.g., textile, wood), allowing easier access to the stored goods compared to anaerobic storage methods. The rims of S-shape and hemispherical bowls with thickened rims, thickened and/or out-curving-rimmed pots/small pots/bottles and *situlae*, as well as the neck ridges found on certain vessel types, made it easier to temporarily seal them, for example, by tying pieces of textiles onto them.[77]

Signs of use

The Tihany pottery exhibits both deformations caused by firing and signs of everyday use: wear marks, deformation (Fig. 14.1, Fig. 18.4), discoloration caused by secondary burning (Fig. 12.2–3, Fig. 17.3, Fig. 19.1) as well as blistering showing traces of severe secondary burning (Fig. 13.15, Fig. 23.11).[78] The latter two fragments clearly show that their inner surface were exposed to very high temperatures—around 1200 °C—which can be linked to the presence of a furnace used for metal or glass processing.[79]

Secondary use

Drill holes made for repair purposes are also common among the finds, which is not unusual during the Late Iron Age.[80] It is important to highlight that they are present on more finely crafted vessel types, and on coarser, larger *dolia* (Fig. 10.4, Fig. 13.15, Fig. 15.12, Fig. 16.8, Fig. 19.4) too. It is not yet clear whether the holes were made by the users of the vessels or (also?) by a specialized craftsman, but in any case, there are no further traces of gluing, wiring, or strapping that can be found in the holes. However, the number of holes suggests that the community, for some reason—difficult/seasonal access to new vessels? emotional/ritual reasons?—was adhering to the damaged pieces and tried to repair them.

74 F. Gransar classifies vessels with a capacity of 40–120 litres as storage vessels (with an average capacity of 90/100 litres). Between 5–15% of the total finds can be classified as this type of vessel. The volume of the *dolium* found at the Villeneuve-Saint-Germain-Les Grandes Grèves (02) site is 100 litres. It is currently difficult to outline the similarities and differences between different periods and regions due to a lack of research focusing on this topic (Gransar 2000, 287–288, Fig. 7).

75 Čambal 2004, 63, Tab. 4.7, 57; Maráz 2016, Pl. 2.8. A similarly formed bowl is known from Budapest-Tabán (Maráz 2009, Abb. 10.34).

76 B. Bónis 1969, Abb. 62.9.

77 Repka 2020, 152, Obr. 223.

78 Gucsi 2020.

79 I would like to thank László Gucsi for his help in interpreting these fragments.

80 Sörös 2024, 90. Fig. 25.13, Fig. 28.10, Fig. 31.3,6; Sörös 2025, 291–292, Fig. 6.

Among the interesting pieces of ceramic finds are discs of various sizes, which were formed from the shoulders, bellies, or bottoms of pots.[81] The smallest ones are ~3 cm in diameter, the medium ones are ~4–6 cm, and the largest ones are ~9 cm. Among them, we find specimens made from bowls, pots/jugs/bottles, and *dolia*. They are predominantly circular in shape (Fig. 11.16, Fig. 16.15, Fig. 17.17, Fig. 19.14, Fig. 20.11,15, Fig. 22.9), roughly round (Fig. 15.13, Fig. 19.15, Fig. 20.12,15,17, Fig. 21.11–12) or broken in half (Fig. 15.14). 26 discs are known from the 'cellar' area, which were found in SE 1 cover layer, SE 2/3 rampart debris, SE 5 yellow plastered walking surface, and SE 11 pit. Among the fragments, there may also be damaged pieces that are more difficult to identify, and it is questionable whether the smaller regular triangular and pentagonal ceramic fragments—like the circular ones—are the result of intentional shaping (Fig. 12.11,13, Fig. 18.11). Several hypotheses arise regarding their use: archaeological research generally interprets them as tokens or semi-finished spindle whorls. Their function was determined in each case by their size, and although we find pieces among them that have been started to be drilled (Fig. 20.12) or have been pierced (Fig. 17.17). This trend cannot be considered general, not to mention that drilling certain pieces would not have made sense due to their weight, nor could it have been done without breaking them. Of these, the spindle ring or weight that broke in half (Fig. 11.14) is noteworthy. The latter type of breakage is not unique to contemporary sites excavated in the Balaton region, and its explanation is unclear (damage due to use? deliberate damage?).[82] The presence of ceramic discs of various sizes is also not without parallels in the materials of La Tène settlements, but studies focusing on this type of object are very rare.[83] The preparation of ceramic discs were not only characteristic of the Late Iron Age: a Bronze Age piece also came to light from the 'cellar' area (Fig. 19.13).

Deposition practices

The proportion of ceramic fragments (rims: 14.95%, sides: 78.8%, bases: 6.07%, handles/buttons: 0.2%) shows a negligible number of bases, which can presumably be explained by some secondary use or by some depository habit. Compared to other periods in Tihany, the late La Tène sherds from Óvár were less fragmented, and relatively larger, contiguous pieces were also generally present among them.

Further finds

In addition to the large number of ceramic finds, animal bones, slag, daub, stone material, and a metal object were found in the 'cellar' area. Regarding the animal bones, it is important to note that due to the mixed nature of the finds from several periods in the features, their archaeozoological processing was not carried out. It is also difficult to draw conclusions about the small amount of daub and stone material found here, as their dating is also questionable. Among the stones, a fragment of a lower stone of a rotary quern (Fig. 22.6) is worth highlighting. Its sides are slightly rounded, and the upper and lower parts are almost flat. We have no information about its exact location, but based on the documentation, it may have come from the rampart debris (SE 2/3).[84] Since no drilling is visible in its central part, the question arises whether we are dealing with a half-finished, damaged piece or not. One piece of slag is known from pit SE 11, while a bent back metal rod, which, based on its preservation and design, is of the Modern period, was recovered from SE 1, from a depth of -80 cm.

81 Sörös 2026.

82 Similarly damaged pieces were also found with intact ones in the *oppidum* of Bratislava: Čambal 2004, Tab. 75.

83 B. Bónis 1969, 193–194; Guillot 1972; B. Hellebrandt 1992, 6. tábla 10; Březinová – Chropovský 2020, 75; Roman Age: Chardron-Picault 2004.

84 Regenye 2006.

Summary

Located on the northeastern side of the Balaton peninsula, the fortified settlement of Tihany-Óvár, with its excellent strategic position, has been known to archaeological research since the 19th century (Figs 2–3). Despite the long time that has passed since then, our knowledge of the site was based on scattered finds (donations, field surveys), occasionally difficult-to-identify trenches, and small-scale excavations. This changed with the excavations conducted by Judit Regenye in 1999–2000, when she opened an approximately 1,200 m², almost contiguous surface area in the western part of Felsőóvár (Figs 7–8). This study deals in detail with the Late Iron Age features and finds from the westernmost section of these excavations, the so-called 'cellar' (Trial trench 1 and Trench 1).

A new result of the analysis is that the outer rampart was built in the late La Tène period based on the periodization of the finds. The presence of further possible construction phases could only be determined with the help of a complete rampart-cut. Although this was not carried out in 1999, the excavations affecting the debris of the eastern inner side of the fortification can be well compared with the results of earlier research, according to which the fortification consists of layers of mixed earth and stone, not excluding the existence of a wooden structure in the unexcavated parts.[85] In the case of the larger stones protruding on the outer side, photographed in 1999, it cannot be ruled out that they were part of the rampart's outer side (Fig. 7.1). Regarding the general interpretation of the examined trenches, it is more probable that SE 2 and SE 3 layers are the slipped debris of the rampart which flowed onto the excavated section as no intact traces of the fortification came to light, and no construction was found that would have held the rampart structure together better. If this would not be the case, at least two periods can be distinguished at the site in terms of the Late Iron Age: in phase 1, several large storage pits, or silos, were dug and then used on the western edge of the area; in phase 2, the rampart was built on part of them (Fig. 8). The reasons for and timing of the abandonment of the pits are difficult to reconstruct.

Currently, we have little information about the beginning and abandonment of the late La Tène settlement, as well as the date of the construction—or possible renovation?—of the rampart. We can only rely on the ceramic material. In the late La Tène period, smoothed decoration was common on the inside of bowls and on the outside shoulders of pots, small pots, and bottles, and banded polishing also became frequent.[86] Bowls with inverted rims are a prominent vessel type from Tihany and its surrounding areas, which is beginning to look like a local characteristic.[87] Their parallels at Bratislava are characteristic of the La Tène D1 and La Tène D1/D2 transitional periods, but pieces can also be found in features datable to La Tène D2.[88] As for the *Knopfhenkeltellern*, they are also concentrated in the region under investigation, with a few examples in South Transdanubia and the Budapest region.[89] Their more precise dating in the late La Tène period is still problematic. In addition to the bowls, we also found many fragments of various pots, small pots, and bottles, the use of which is characteristic of the entire period. The material from the open settlement at Balatonőszöd is very similar to the vessels excavated at Tihany in terms of vessel shapes and decorations: there are bowls with inverted rims, hemispherical bowls with thickened rims, *Knopfhenkeltellern*, smoothed decorations drawn from the same set of motifs, and large *dolia* with outcurving rims. Based on the Vinkovci-type, the Beletov vrt-type, the inlaid fibulae and the fibula with loops found

85 Récsey 1895, 12; Kuzsinszky 1920, 164, 204. kép; Nováki – Uzsoki 2002, 63.

86 Szöllősi 2013, 36, Abb. 8; Tankó 2016, 171.

87 Kiss 2000, 5. kép 2, 6. kép 1–2, 10. kép 3; Tankó 2016, Pl. 4; Sörös 2025.

88 Čambal 2004, 67.

89 Horváth 2019, 418–420, Abb. 3.

during the excavation, Károly Tankó dates the settlement to the La Tène C2–D1 periods.[90] According to the material from the Bratislava *oppidum*, the use of outcurving-shouldered, conical lids (e.g., 1.14) can be attributed to the La Tène D1/D2 transitional phase and the La Tène D2 period.

The missing vessel types are also an important clue for dating the finds, thought the list of types might lengthen during the future process. The Békásmegyer-type bowls, which were present in Bratislava, Esztergom, Budapest-Gellérthegy/Tabán and the surrounding settlements, could not be identified among the Tihany fragments. The almost complete absence of hand-formed vessels can also be explained by chronological reasons: the pieces generally associated with the material culture of the Dacians—e.g., robust conical cups with handles or pots with plastic decorations (knobs, finger-pressed bands), pots with vertical rims or short flared rims—which increased in number during La Tène D2, were not found during the 1999 excavation.[91] The group of so-called *'pseudositulae'*[92] was also missing from the 'cellar' material. Their parallels are known from Zamárdi-Kútvölgyi-dűlő II and Balatonőszöd-Temetői-dűlő in the region and similarly levigated but differently designed vessels also appear in the Balatonföldvár-Földvár material.[93] Variants of this form are already present in Gomolava in the La Tène D1 period, while—vessels with similar features known from the vicinity of Bratislava, Lower Austria, Styria, and Lower Carniola are dated to La Tène D2.[94] It is also worth noting that no painted pottery has been found, which is one of the most characteristic types of decoration in the Carpathian Basin in the late La Tène period.[95] Like the above, Roman pottery was not present in the 'cellar' material.

To interpret and date more precisely the site, it is essential to process further sections of the excavation, which will certainly further refine our knowledge of the role, functions, and internal structure of the fortified settlement.

Funding

Project no. ADVANCED 152710 has been implemented with the support provided by the Ministry of Culture and Innovation of Hungary from the National Research, Development and Innovation Fund, financed under the National Research Excellence Programme funding scheme. The research was also funded by the Hungarian National Museum Public Collection Centre within the framework of the project entitled "Topographical research of the Late Iron Age sites of the Tihany Peninsula" (project code: 405509).

Acknowledgements

I would like to express my gratitude to Judit Regenye for her assistance and for allowing me to process the Late Iron Age finds from the site. I am also grateful to Zoltán Czajlik, Ábel Garczik, Lőrinc Timár, and László Gucsi for their useful advice and comments on the finds, as well as to Eszter Fejér, Péter Skriba, Melinda Koller, Nándor Norbert Nagy, Szilvia Fábián, Szabolcs Czifra, Zoltán Fullár,

90 Tankó 2016, 171, Fig. 3, Pl. 4.

91 For other types formed by hand, see: Horváth 1998; Ottományi 2009, 194–197. In southwestern Slovakia, on the other hand, types identified as Dacian appear sporadically at the turn of the 2nd–1st centuries BC (Kovár *et al.* 2018, 53, 55–56).

92 A new vessel type came into existence during the late La Tène period, characterized by an inverted, thickened club rim, a finger-pressed cordon applied intermittently on the shoulder, vertical combing underneath, and a flat base. The vessel's proportions are like those of the *situlae*, hence the name.

93 Tankó 2016, Pl. 4.2–3,5; Sörös 2024, 31–32; Sörös 2025, Pl. 3.9, Pl. 8.1, Pl. 10.2.

94 Čambal *et al.* 2016, 147–155, Fig. 5.

95 Szabó 1991.

and Nikoletta Lukács for their help in dating the finds, and Bianka Nagy, Orsolya Havasy, and Boglárka Kertész for their help in cataloguing the objects. My appreciation also goes to László György for the excellent find photographs, and to Szabolcs Balázs Nagy, Tamás Lipécz, and Orsolya Csirke for their help in borrowing and processing the finds.

References

Almássy, K. 2014: A Felső-Tisza-vidék (a piskolti temető) LTC1-horizontja (The Horizon LT C1 of the Upper Tisa Region (Cemetery from Pişcolt)). *Satu Mare. Studii şi comunicări – Seria arheologie* 30:1, 165–180.

Barral, Ph. 1998: Bilan des recherches franco-hongroises sur l'oppidum de Gellérthegy-Tabán à Budapest (1990–92, 1996). *Acta Archaeologica Academiae Scientiarum Hungaricae* 50, 343–361.

Barral, Ph. – Guillaumet, J.-P. – Paratte, C.-A. – Szabó, M. 1996: Recherches récentes sur les Oppida Celtiques en Pannonie (Fouilles franco-hongroises à Velem-Szentvid et à Budapest-Gellérthegy). In: Jerem, E. – Krenn-Leeb, A. – Neugebauer, J.-W. – Urban, O. H. (eds): *Die Kelten in den Alpen und an der Donau. Akten des Internationalen Symposions St. Pölten, 14.-18. Oktober 1992.* Budapest, 415–431.

B. Bónis, É. 1950: Jelentés a Fővárosi Régészeti Intézet 1946–1947. évi gellérthegyi ásatásairól (Rapport sur les fouilles executées par l'Institut Municipal d'Archéologie au Mont Gerard de Budapest en 1946 et 1947). *Budapest Régiségei* 15, 333–355.

B. Bónis, É. 1969: *Die Spätkeltische Siedlung Gellérthegy-Tabán in Budapest.* Budapest.

B. Bónis, É. 1971: Beiträge zur Rolle der LT-Siedlungen in Pannonien. *Archeologické Rozhledy* 23, 521–528.

Březinová, G. – Chropovský, B. 2020: *Sídliská z doby laténskej v Nitre.* Nitra.

Chardron-Picault, P. 2004: Les rondelles en terre cuite mises au jour dans le quartier artisanal du "Lycée Militaire" à Augustodunum (Autun, Saône-et-Loire). In: Rivet, L. – Saulnier, S. (eds): *Actes du Congrès de Vallauris, 20-23 mai 2004. Les céramiques communes de Marseille à Gênes du IIe siècle avant J.-C. au IIIe siècle après J.-C. Actualité des recherches céramiques.* Marseille, 329–340.

Chochorowski, J. 1985: *Die Vekerzug-Kultur. Charakteristik der Funde.* Warszawa–Kraków.

Čambal, R. 2004: *Bratislavský hradný vrch – Akropola neskorolaténskeho oppida – Der Bratislaver Burghügel – Akropolis von spätlatènezeitlichem oppidum.* Archeológia Supplementum 1. Bratislava.

Čambal, R. – Gregor, M. – Bazovský, I. – Březinová, G. – Kovár, B. – Karwowski, M. 2016: The pottery with thickened club rim at the end of the Late La Tène period in the Middle Danube region (Mineralogical and petrographic characteristics). In: Ramsl, P. C. – Karwowski M. (eds): *Boii – Taurisci: Proceedings of the international seminar, Oberleis-Klement, June 14th-15th, 2012.* Wien, 147–169. https://doi.org/10.26530/oapen_615395

Czajlik, Z. 2018: Aerial archaeological research of Late Iron Age fortified settlements in Western Hungary (Transdanubia). In: Fontes, L. – Cruz, G. – Alves, M. (eds): *Cultural interactions and changing landscapes in Europe (2nd century BC / 2nd century AD) Interações culturais e paisagens em mudança na Europa (séc. 2º a.C. / séc. 2º d.C.).* Braga.

Darnay, K. 1906: Kelta pénzverő és öntő-műhely Szalacskán. *Archaeologiai Értesítő* 26, 421–451.

Dizdar, M. 2013: *Zvonimirovo Veliko polje. Groblje latenske kulture – Zvonimirovo Veliko polje. A Cemetery of the La Tène Culture.* Zagreb.

Éri, I. (ed.) 1969: *Veszprém megye régészeti topográfiája.* Magyarország régészeti topográfiája 2. Budapest.

Fichtl, S. 2000: *La ville celtique. Les oppida de 150 av. J.-C- à 15 ap. J.-C.* Paris.

Fichtl, S. 2010: Réflexions sur les remparts de type Fécamp. In: Fichtl, S. (ed.): *Murus celticus. Architecture et fonctions des remparts de l'âge du Fer. Actes de la table ronde organisée par l'UMR 7044 de Strasbourg, l'UMR 6173-CITERES de Tours et Bibracte à Glux-en-Glenne les 11 et 12 octobre 2006 (Bibracte 19).* Glux-en-Glenne, Bibracte, 315–334.

Gabler, D. 1982: Aspects of the development of Late Iron Age settlements in Transdanubia into the Roman period (Evidence based upon the excavations at Szakály, in southern Hungary). In: Gabler, D. – Patek, E. – Vörös, I.: *Studies in the Iron Age of Hungary.* British Archaeological Reports – International Series 144, 57–127.

Gransar, F. 2000: Le stockage alimentaire sur les établissements ruraux de l'âge du Fer en France septentrionale: complémentarité des structures et tendances évolutives. In: Marion, S. – Blancquaert, G. (eds): *Les installations agricoles de l'âge du fer en France septentrionale.* Paris, 277–297.

Gucsi, L. 2020: Methods of identification for ceramics with traces of secondary burning and their occurrences in mortuary and ritual-related assemblages. In: Csengeri, P. – Kalli, A. – Király, Á. – Koós, J. (eds): *ΜΩΜΟΣ IX. The Archaeology of ritual – Proceedings of the IXth conference of researchers of prehistory.* Dissertationes Archaeologicae – Supplementum 3. Budapest, 215–240. https://doi.org/10.17204/dissarch.suppl3.215

Guillaumet, J.-P. – Szabó, M. – Czajlik, Z. 1999: Bilan des recherches franco-hongroises à Velem-Szentvid (1988–1994). *Savaria* 24:3, 383–408.

Guillot, A. 1972: L'énigme des jetons de céramique gaulois (Fouilles du Petit-Chauvort). *Mémoires de la Société d'Histoire et d'Archéologie de Chalon-sur-Saône* 41, 155–164.

Hampel, J. 1891: A nemzeti múzeum régiségosztály gyarapodása 1891-ben. *Archaeologiai Értesítő* 11, 448–451.

B. Hellebrandt, M. 1992: Miskolc kelta kora (Das keltische Zeitalter von Miskolc). In: Rémiás, T. (ed.): *Miskolc város történetének dokumentumai II. Régészeti tanulmányok Miskolc korai történetéből.* Miskolc, 33–74.

Horváth, F. 1998: Handgeformte spätkeltische und römische Keramik in Esztergom und ihrer Umgebung. *Alba Regia* 27, 65–81.

Horváth, L. 1987: Késővaskori ház- és településtípusok Dél-Zalában (Späteisenzeitliche Haus- und Siedlungstypen auf dem südlichen Teil des Komitates Zala). *Zalai Múzeum* 1, 59–80.

Horváth, I. – H. Kelemen, M. – Torma, I. (eds) 1979: *Komárom megye régészeti topográfiája. Esztergom és Dorogi járás.* Magyarország régészeti topográfiája 5. Budapest.

Horváth, L. 2019: Bemerkungen zur Spätlatènezeitlichen Urnengrab aus Keszthely-Fenékpuszta. In: Bánffy, E. – P. Barna, J. (eds): *'TRANS LACUM PELSONEM' Prähistorische Forschungen in Südwestungarn (5500–500 v. Chr.) – Prehistoric Research in South-Western Hungary (5500–500 BC).* Castellum Pannonicum Pelsonense 7. Budapest–Leipzig–Keszthely–Frankfurt am Main–Rahden/Westf., 417–425.

Ilon, G. 1998: Celtic period fortifications and an experiment to reconstruct the rampart – Gór (Vas County). In: Költő, L. – Bartosiewicz, L. (eds): *Archaeometrical research in Hungary II.* Budapest – Kaposvár – Veszprém, 227–243.

Jerem, E. 1971: Regöly (Kom. Tolna). *Archaeologiai Értesítő* 98, 267.

Jerem, E. 1972: Regöly (Kom. Tolna, Kr. Tamási). *Archaeologiai Értesítő* 99, 254.

Jerem, E. 1975: Vaskori kutatások a Dél-Dunántúlon. *Somogyi Múzeumok Közleményei* 2, 269–274. https://doi.org/10.26080/smkozl.1975.2.269

Karl, R. 1996: *Latènezeitliche Siedlungen in Niederösterreich. Untersuchungen zu Fundtypen, Keramikchronologie, Bautypen, Siedlungstypen und Siedlungsstrukturen im latènezeitlichen Niederösterreich.* Historica Austria 2–3. Wien.

Károlyi, M. 1985: The Late Celtic hillfort at Ostffyasszonyfa-Földvár-major. *Acta Archaeologica Academiae Scientiarum Hungaricae* 37, 391–418.

H. Kelemen, M. 1987: Komárom County I. In: Horváth, L. – Kelemen, M. – Uzsoki, A. (eds): *Corpus of Celtic Finds in Hungary. I. Transdanubia 1.* Budapest, 179–230.

Kiss, T. 2000: A Sió völgy késő kelta és koracsászárkori településtörténetének vázlata (Settlement patterns of the La Tène D and Early Roman population in the Sió Valley. (South Eastern part of Western Hungary)). *A Wosinszky Mór Múzeum Évkönyve* 22, 371–431.

Kovács, T. 1969: A százhalombattai bronzkori telep (The Bronze-Age settlement at Százhalombatta). *Archaeologiai Értesítő* 96, 161–169.

Kovár, B. – Čambal, R. – Budaj, M. 2018: The Late La Tène oppidum in Bratislava. In: Berecki, S. – Rustoiu, A. – Egri, M. (eds): *Iron Age connectivity in the Carpathian Basin. Proceedings of the international colloquium from Târgu Mureş, 13–15 October 2017.* Bibliotheca Musei Marisiensis – Series Archaeologica 16. Cluj-Napoca, 51–64.

Kovár, B. – Pieta, K. – Lieskovský, T. 2023: Preconditions of landscape research around the late La Tène hillfort of Trenčianske Bohuslavice. In: Egri, M. – Rustoiu, A. (eds): *The archaeology of communities*

and landscapes in the Carpathian Basin. Interdisciplinary perspectives. Bibliotheca Musei Apulensis 42. Cluj-Napoca, 95–109.

Krausz, S. 2018: L'art de la fortification celtique: architecture et ingénierie des systèmes défensifs. In: Villard-Le Tiec, A. – Menez, Y. – Maguer, P. (eds): *Architectures de l'âge du Fer en Europe occidentale et centrale. Actes du 40e colloque international de l'Association française pour l'étude de l'âge du Fer (Rennes, 4-7 mai 2016).* Rennes, 243–259.

Kuzsinszky, B. 1920: *A Balaton környékének archeológiája.* Budapest.

Magyar, Zs. 2013: Késő kelta és római kori bennszülött telep Bátaszék-Körtvélyes-dűlőben. *Ókor* 12:4, 61–68.

Maráz, B. 2005: Budapest-Gellérthegy és környékének késő La Tène kori településtörténete I. Budapest-Tabán kelta–eraviszkusz telep topográfiai településtörténeti meghatározásának kérdése (Die spätlatènezeitliche Siedlungsgeschichte von Budapest – Gellértberg und seiner Umgebung I. Die Frage der topographischen und siedlungsgeschichtlichen Definition der keltisch–eraviskischen Siedlung von Budapest–Tabán). *Budapest Régiségei* 39, 39–49.

Maráz, B. 2009: Újabb feltárások a Budapest-Tabán késő La Tène-kori fazekastelep területén (Előzetes jelentés a 2005–2008. évi ásatásokról) (Neue Ausgrabungen im Bereich der Töpfersiedlung von Budapest-Tabán der späten La Tène-zeit (Vorbericht der Ausgrabungen 2005–2008)). *Communicationes Archaeologicae Hungariae*, 101–124. https://doi.org/10.54640/CAH.2009.101

Maráz, B. 2011: Budapest késő La Tène-kori településtörténeti képe. In: Kővári, K. – Miklós, Zs. (eds): *„Fél évszázad terepen". Tanulmánykötet Torma István tiszteletére 70. születésnapja alkalmából.* Budapest, 243–260.

Maráz, B. 2016: The chronology of the Late La Tène period on the tribal territory of Eravisci, on the basis of historical events and painted pottery. In: Berecki, S. (ed.): *Iron Age chronology in the Carpathian Basin Proceedings of the international colloquium from Târgu Mureş 8–10 October 2015.* Bibliotheca Musei Marisiensis 12. Cluj-Napoca, 119–140.

Marton, E. – Regenye, J. 2005: A fortified site from the Late Bronze–Late Iron Age at Lake Balaton in Tihany-Óvár: A rescue excavation in Hungary, May 2000. In: Cahen-Delhaye, A. (ed.): *Sessions générales et posters: (12) General sessions and posters. Actes du 14ème Congrès UISPP, Université de Liège, Belgique, 2-8 septembre 2001. Section 12. Âge du fer en Europe. The Iron Age in Europe.* British Archaeological Reports – International Series 1378. Oxford, 45–52.

Moore, T. 2017: Alternatives to urbanism? Reconsidering *oppida* and the urban question in Late Iron Age Europe. *Journal of World Prehistory* 30:2, 281–300. https://doi.org/10.1007/s10963-017-9109-4

Nováki, Gy. 1959: Tihany-Óvár. *Régészeti Füzetek* 11, 12.

Nováki, Gy. 1961: A balatonföldvári későkelta földvár. *Archaeologiai Értesítő* 88, 81–89.

Nováki, Gy. 1963: *A Magyarországi földvárkutatás története.* Régészeti füzetek II.12. Budapest.

Nováki, Gy. 2006: Nagysimonyi, Földvár. In: Kisfaludi, J. (ed.): *Régészeti kutatások Magyarországon 2005 – Archaeological Investigations in Hungary 2005.* Budapest, 279–280.

Nováki, Gy. – Uzsoki, A. 2002: Tihany, Óvár őskori földvára (Prehistoric earthen fort of Tihany, Óvár). In: Marton, E. – Kisfaludi, J. (eds): *Régészeti Kutatások Magyarországon 1999 – Archaeological Investigations in Hungary 1999.* Budapest, 63–70.

Ottományi, K. 2009: Késő kelta telep a budakalászi Duna-parton (Spätkeltische Siedlung von Budakalász-Duna-part). *Communicationes Archaeologicae Hungariae*, 179–207. https://doi.org/10.54640/cah.2009.179

Ottományi, K. 2017: Késő kelta – kora római településszerkezet Perbálon (Late Celtic – early Roman settlement fragments from Perbál). *Studia Comitatensia* 35, 11–67.

Patek, E. 1982: Recent excavations at the Hallstatt and La Tène hill-fort of Sopron-Várhely (Burgstall) and the predecessors of the Hallstatt culture in Hungary. In: Gabler, D. – Patek, E. – Vörös, I.: *Studies in the Iron Age of Hungary.* British Archaeological Reports – International Series 144. Oxford, 1–56.

Paunier, D. – Barral, P. – Luginbühl, T. – Paratte, C.-A. 1994: *Système de description et de gestion du mobilier céramique du Mont-Beuvray.* Lausanne–Glux-en-Glenne.

F. Petres, É. 1976: The Late Pre-Roman Age in Hungary with special reference to oppida. In: Cunliffe, B. – Rowley, T.: *Oppida: The beginning of urbanisation in Barbarian Europe.* British Archaeological Reports – Supplementary Series 2. Oxford, 51–80. https://doi.org/10.30861/9780904531466

F. Petres, É. 1990: The problem of the Celtic survival in Pannonia. *Alba Regia* 24, 7–15.

Poroszlai, I. 1991: Százhalombatta-Téglagyár. *Régészeti Füzetek* I.42, 14–15.

Regenye, J. 2002: Tihany, Óvár. In: Marton, E. – Kisfaludi, J. (eds): *Régészeti Kutatások Magyarországon 1999 – Archaeological Investigations in Hungary 1999*. Budapest, 255–256.

Regenye, J. 2004: Előzetes jelentés a Tihany-Óvárban folytatott feltárásról (Preliminary report of Tihany-Óvár rescue excavation between 1999–2000). In: Nagy, E. Gy. – Dani, J. – Hajdú, Zs. (eds): *ΜΩΜΟΣ II. Őskoros Kutatók II. Összejövetelének konferenciakötete. Debrecen, 2000. november 6–8.* Debrecen, 187–199.

Regenye, J. 2006: *Ásatási dokumentáció a Tihany, Óvár 2000. ásatásról.* KÖI Database inv. no. 3664-072-367/2001.

Repka, D. 2020: *Laténska keramika ako predmet štúdia.* Nitra.

Récsey, V. 1895: *Balatonvidéki régészeti kutatásaim némi eredményei.* Veszprém.

Römer, F. 1878: *Discours de secretaire générale. Compte-rendus.* Budapest, 7–20.

Rosiak, A. – Józefowska, A. – Sekulska-Nalewajko, J. – Gocławski, J. – Kałużna-Czaplińska, J. 2024: Funerary vs. domestic vessels from the Hallstatt period. A study on ceramic vases from the Milejowice settlement and the Domasław cemetery. *Scientific Reports* 14, 19942. https://doi.org/10.1038/s41598-024-70219-7

Soós, B. 2017: Early Iron Age burials from Tihany, Hungary. *Dissertationes Archaeologicae* 3.5, 113–206. https://doi.org/10.17204/dissarch.2017.113

Sörös, F. Zs. 2024: Traces of a Late Iron Age settlement at Szeged, Kiskundorozsma-Tóth János dombja I (Késő vaskori településnyomok Szeged-Kiskundorozsma-Tóth János dombja I. határában). *Folia Archeaologica* 58, 63–97. https://doi.org/10.62259/okct4809

Sörös, F. Zs. 2025: New results on a Late La Tène fortified settlement Balatonföldvár-Földvár on the southern shore of Lake Balaton (Hungary). *Študijné zvesti* 72:2, 281–310. https://doi.org/10.31577/szausav.2025.72.13

Sörös, F. Zs. 2026: Some thoughts on Late Iron Age ceramic discs. *Hungarian Archaeology* 15:2, 13–21. https://doi.org/10.36338/ha.2026.2.1

Szabó, M. 1991: La céramique peinte latènienne de la cuvette karpatique. In: Robert, N. – Alain, P. (eds): *La céramique peinte celtique dans son contexte européen – Actes du symposium international d'Hautvillers, 9-11 octobre 1987.* Mémoires de la Société Archéologique Champenoise 5. Reims, 273–284.

Szabó, M. 2015: A kelták Magyarországon. In: Szabó, M. – Borhy, L.: *Magyarország története az ókorban: Kelták és rómaiak.* Budapest, 13–81.

Szabó, M. – Tankó, K. – Szabó, D. 2007: Le mobilier céramique. In: Szabó, M. (ed.): *L'habitat de l'époque de La Tène à Sajópetri-Hosszú-dűlő.* Budapest, 229–252.

Szöllősi, Sz. 2009: Kelta település részlete a Kr. e. 3. századból. In: Kvassay, J. (ed.): *Őskori települések és késő római temető Dunaszentgyörgy határában.* VIA Kulturális Örökségvédelmi Kismonográfiák – Monographia Minor in Cultural Heritage 1. Budapest, 123–156.

Szöllősi, Sz. 2013: La Tène kerámiaművesség a Dél-Dunántúlon. A LT B2–C1 jellemző kerámiaegyüttesei település-leletanyagok alapján (La Tène Keramikkunst in Südtransdanubien. Typische Keramikgruppen der Perioden LT B2–C1 Aufgrund von Siedlungsfundstoffen). *Communicationes Archaeologicae Hungariae,* 27–48. https://doi.org/10.54640/cah.2013.27

Tankó, K. 2016: Chronological aspects of ceramic types from recently investigated La Tène settlements in Hungary. In: Berecki, S. (ed.): *Iron Age chronology in the Carpathian Basin. Proceedings of the international colloquium from Târgu Mureş, 8–10 October.* Cluj-Napoca, 165–190.

Török, Gy. 1950: Pécs-Jakabhegyi földvár és tumulusok (1947–48. évi próbaásatások eredményei) (The Earthwork and tumuli of Pécs-Jakabhegy (The results of the trial-excavations in the years 1947/1948.)). *Archaeologiai Értesítő* 77, 4–9.

Uzsoki, A. 1971: Tihany. *Régészeti füzetek* 25, 22.

Uzsoki, A. 1986: Über die Höhensiedlung und Hügelgräber von Tihany. In: Török, L. (ed.): *Hallstatt Kolloquium Veszprém 1984.* Mitteilungen des Archäologischen Instituts der Ungarischen Akademie der Wissenschaften – Beiheft 3. Budapest, 245–250.

Villes, A. 1982: Les silos de l'âge du Fer. *La Recherche* 138, novembre, 1312–1313.

Voss, B. L. – Allen, R. 2010: Guide to Ceramic MNV Calculation Qualitative and Quantitative Analysis. *Technical Briefs in Historical Archaeology* 2010:5, 1–9.

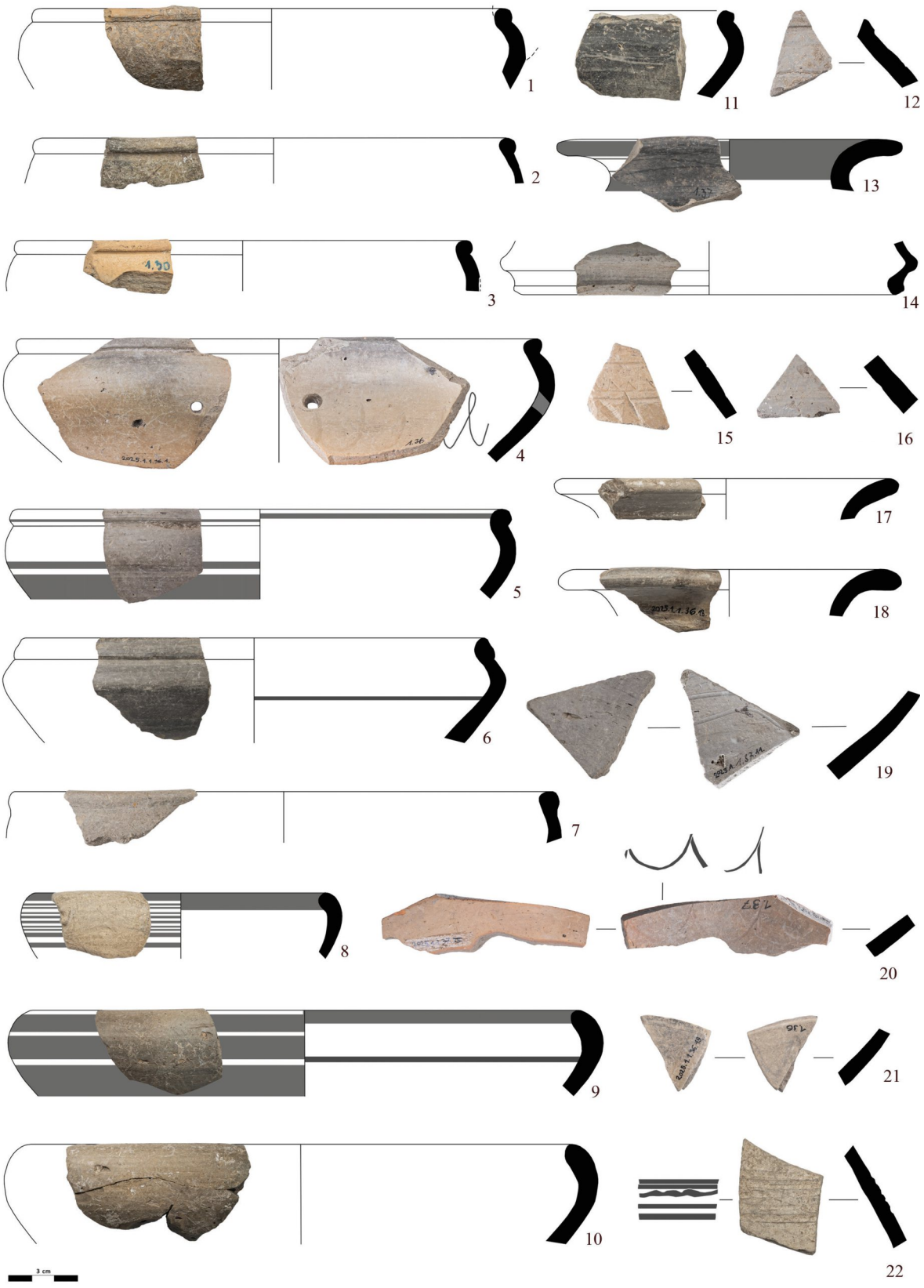


Fig. 10. 1–22 – Tihany-Óvár, SE 1, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).

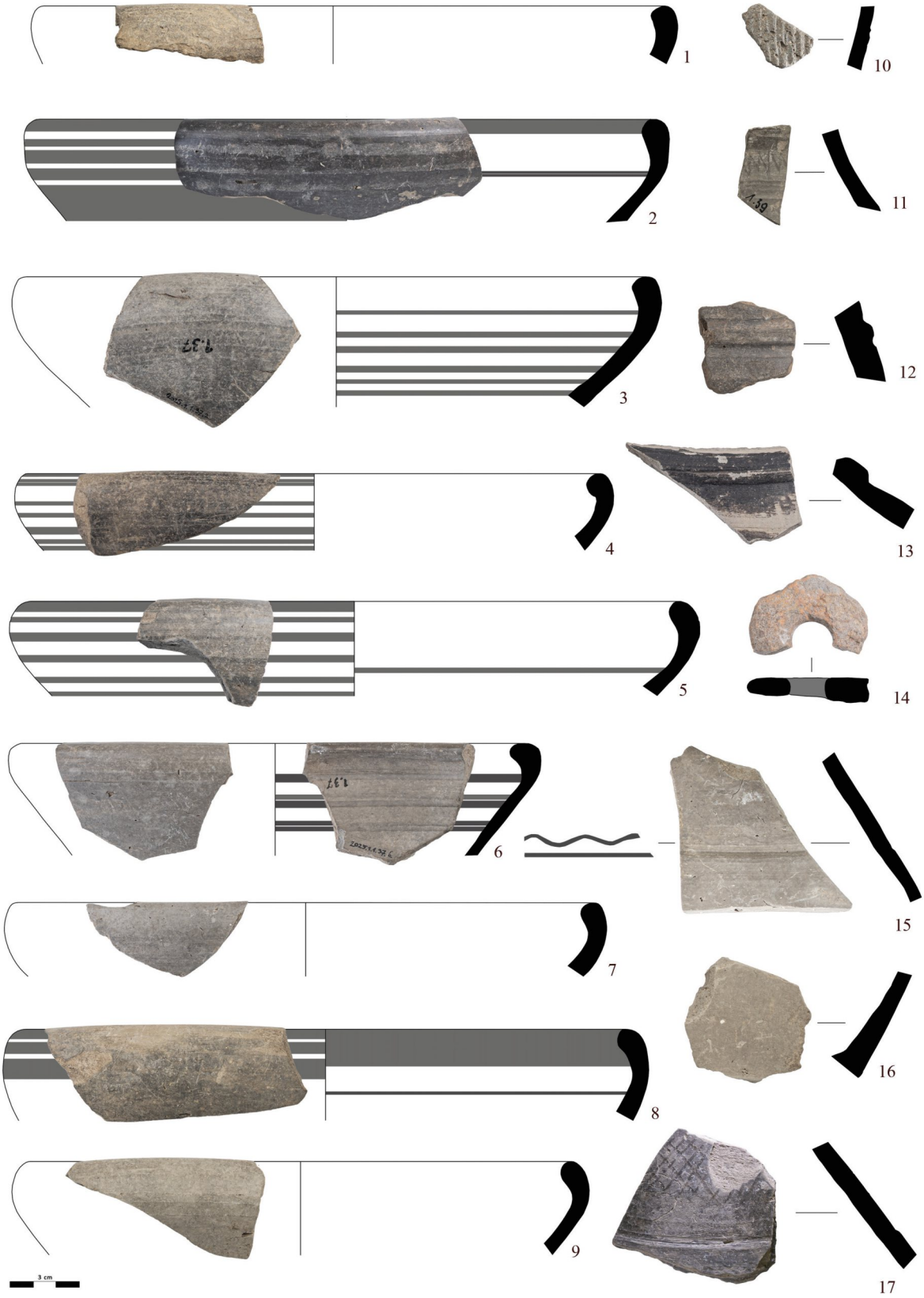


Fig. 11. 1–17 – Tihany-Óvár, SE 1, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).

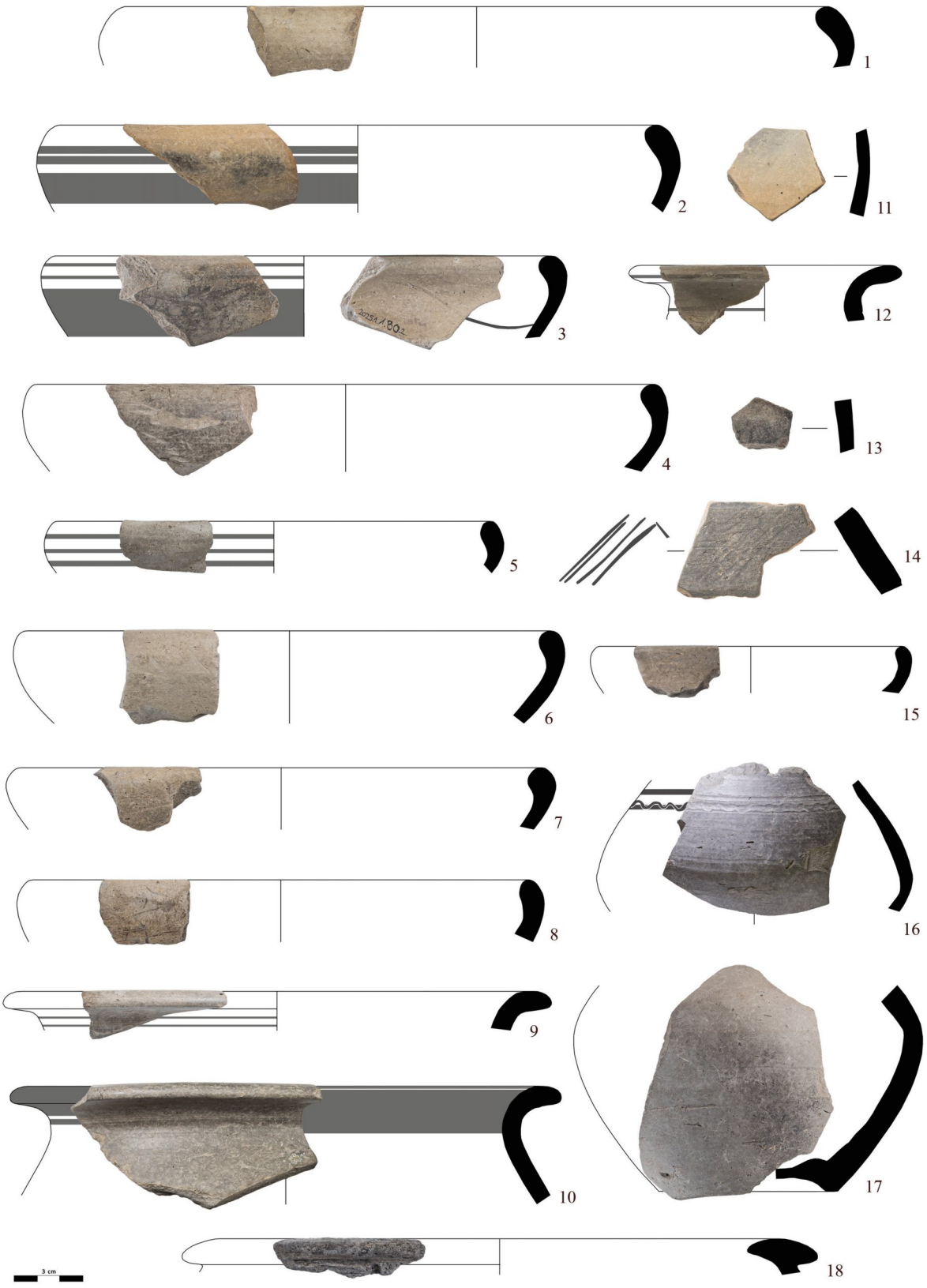


Fig. 12. 1–18 – Tihany-Óvár, SE 1, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).



Fig. 13. 1–22 – Tihany-Óvár, SE 1, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).



Fig. 14. 1 – Tihany-Óvár, SE 1, ceramic fragments, 2–15 – Tihany-Óvár, SE 2–3, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).

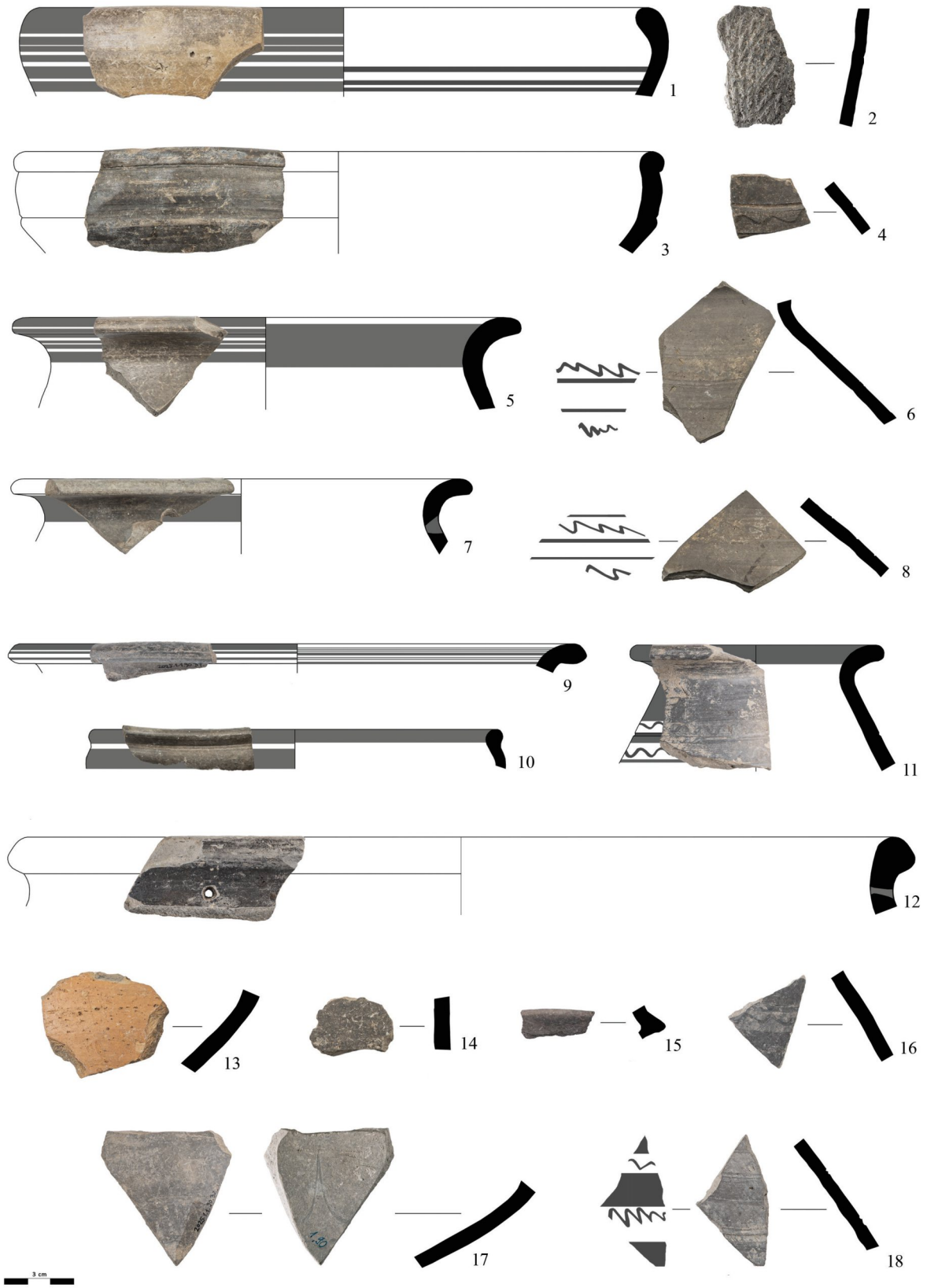


Fig. 15. 1–13, 15–18 – Tihany-Óvár, SE 2–3, ceramic fragments, 14 – Tihany-Óvár, SE 1, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).

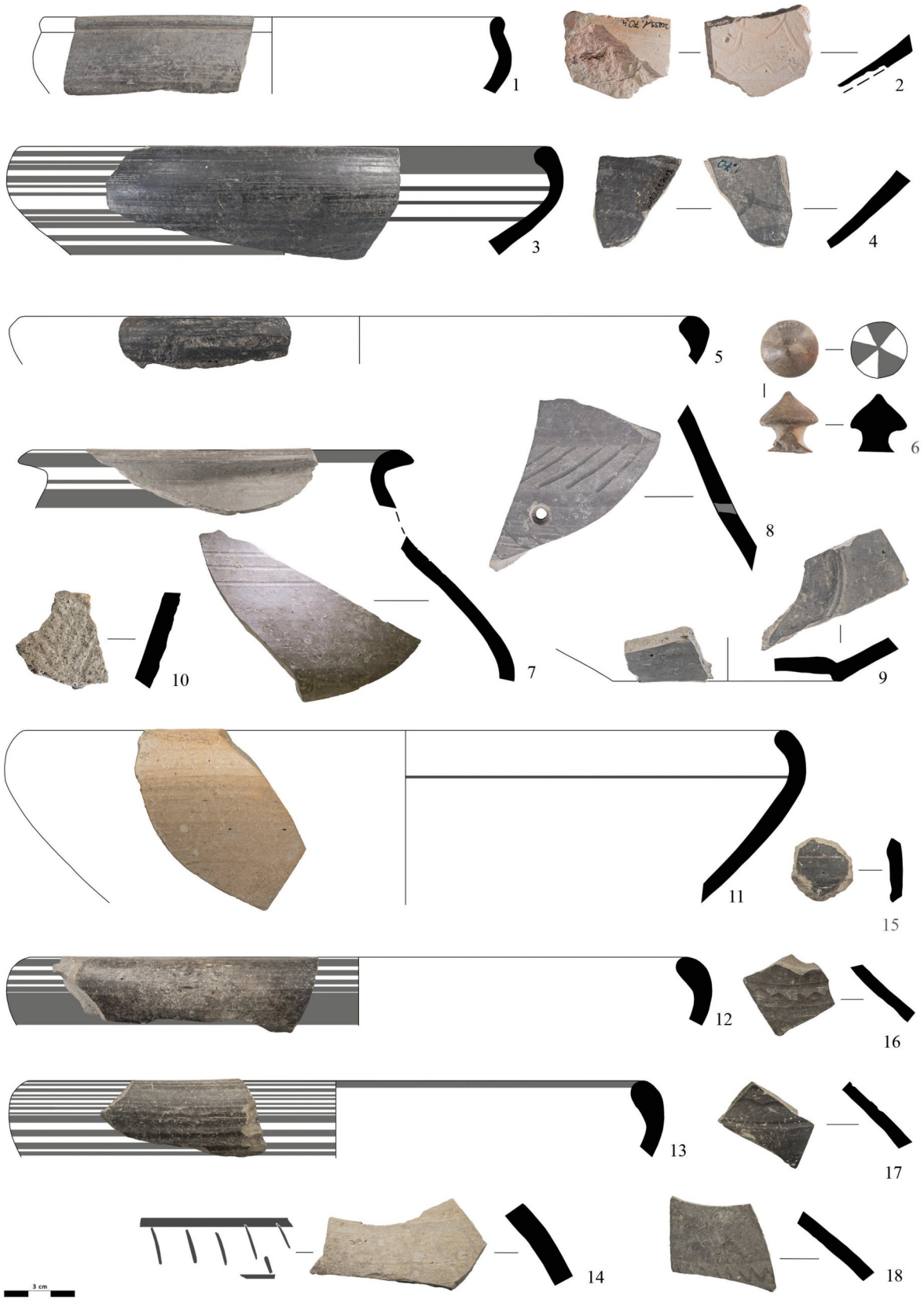


Fig. 16. 1–9 – Tihany-Óvár, SE 4, ceramic fragments, 10–18 – Tihany-Óvár, SE 5, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).



Fig. 17. 1–6 – Tihany-Óvár, SE 5, ceramic fragments, 7–18 – Tihany-Óvár, SE 7, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).



Fig. 18. 1–12, 16 – Tihany-Óvár, SE 7, ceramic fragments, 13–15, 17 – Tihany-Óvár, SE 9, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).

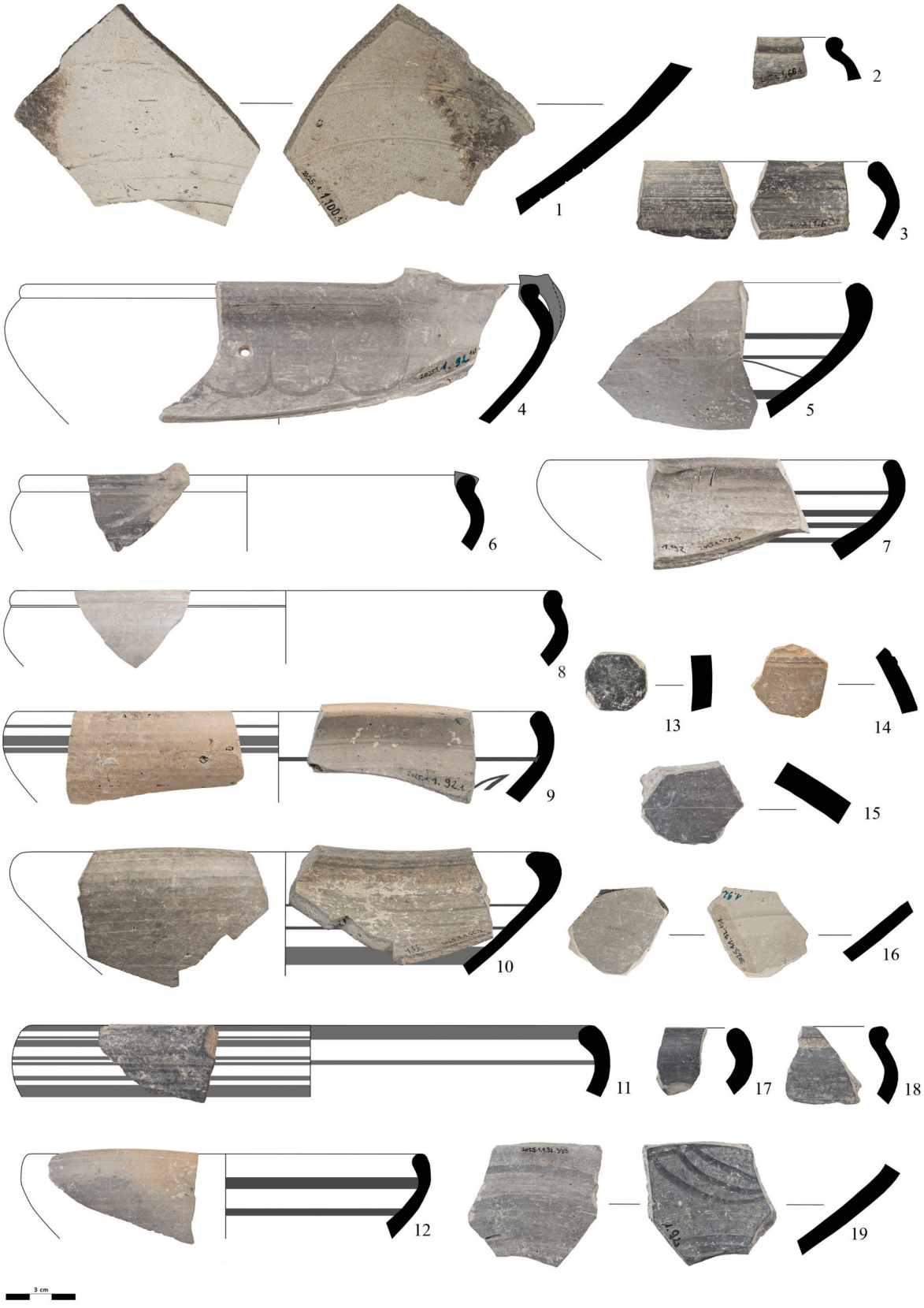


Fig. 19. 1 – Tihany-Óvár, SE 9, ceramic fragments 1, 2–19 – Tihany-Óvár, SE 11, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).

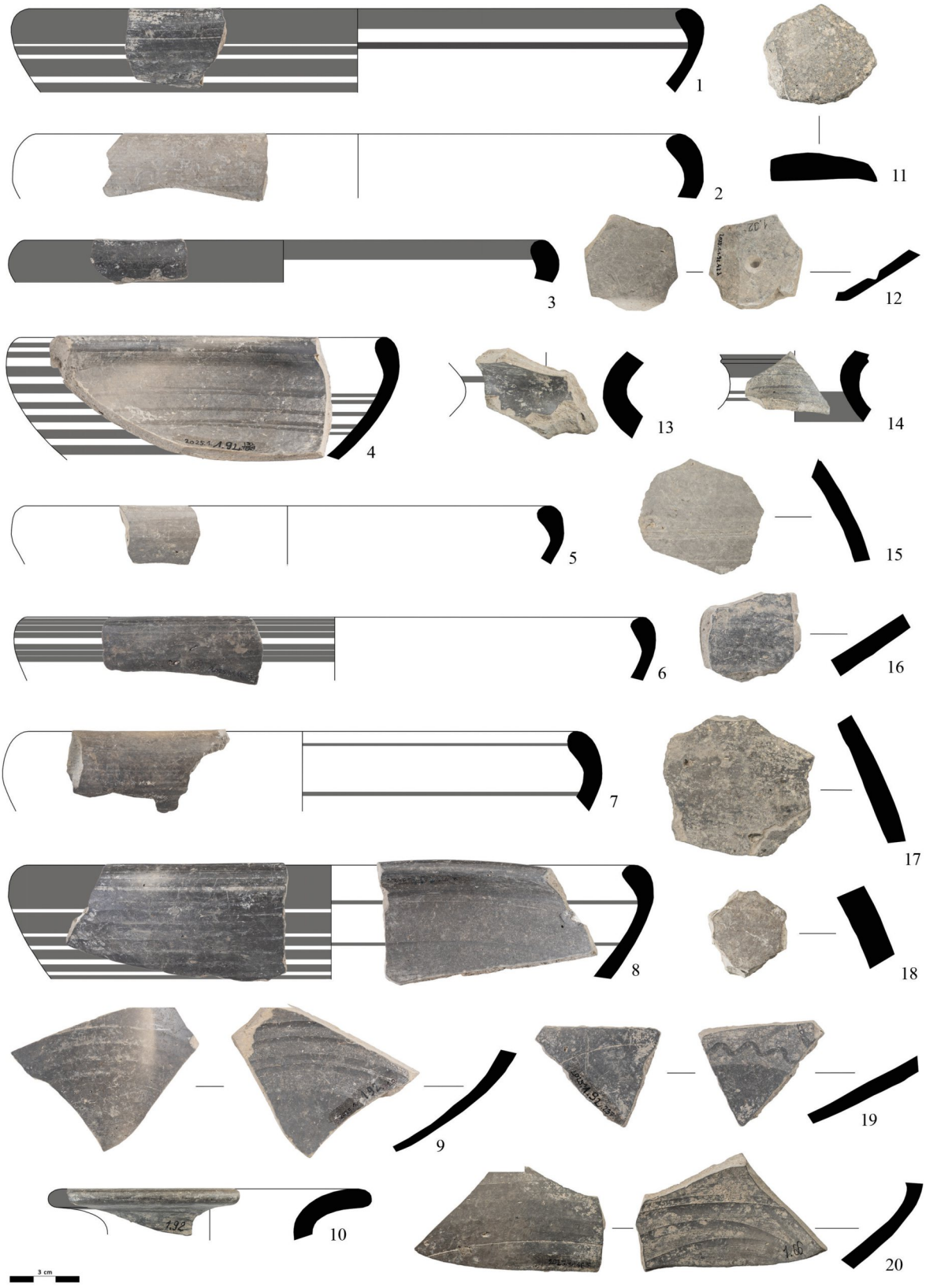


Fig. 20. 1–20 – Tihany-Óvár, SE 11, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).

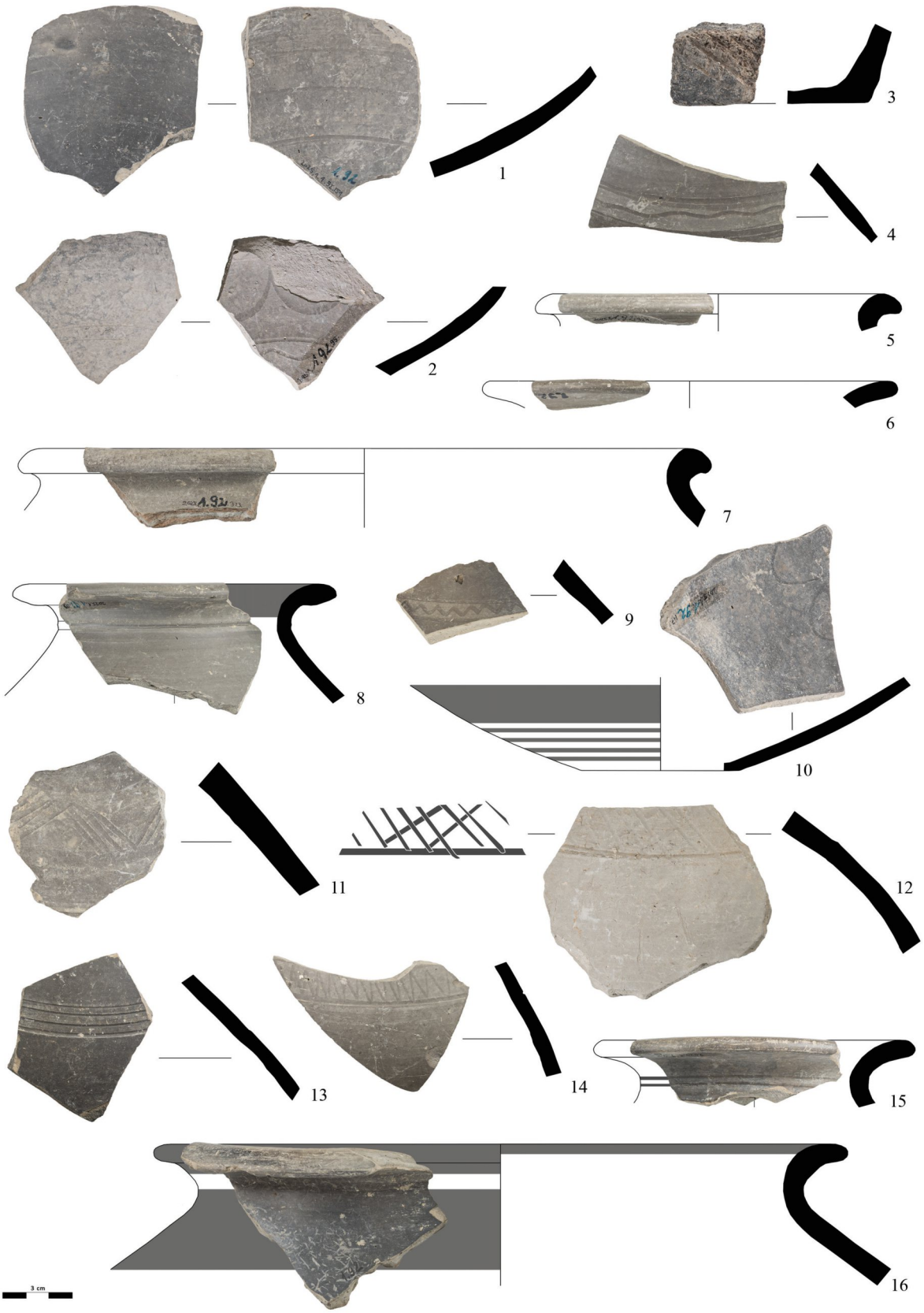


Fig. 21. 1–16 – Tihany-Óvár, SE 11, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).



Fig. 22. 1–3 – Tihany-Óvár, SE 11, chance finds, 5, 14 – Tihany-Óvár, southwestern corner, -50 cm, chance finds, 6 – Tihany-Óvár, SE 3, stone, 4, 7–13, 15 – Tihany-Óvár, between SE 7 and SE 11, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).

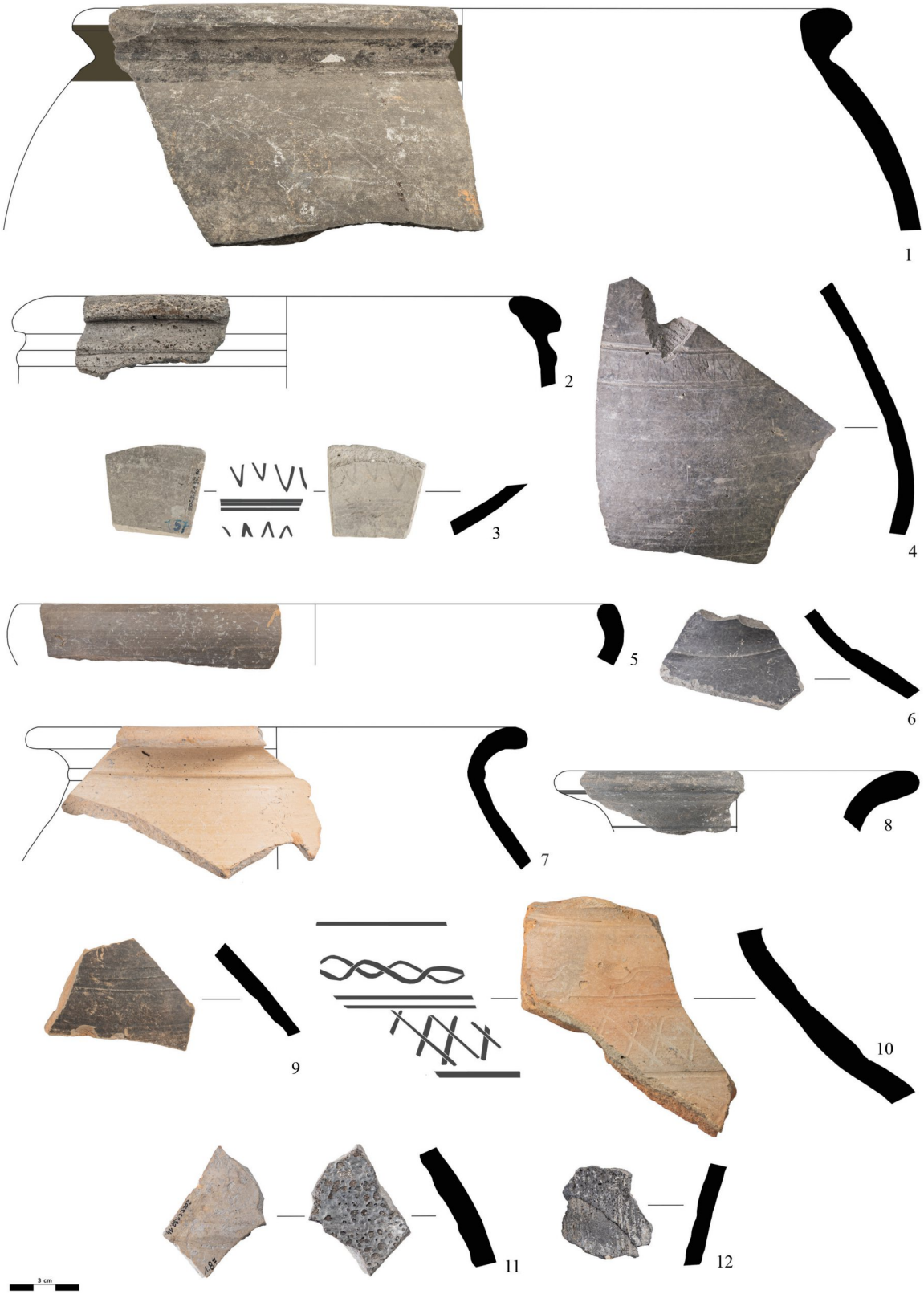


Fig. 23. 1–4, 9–10 – Tihany-Óvár, between SE 7 and SE 11, chance finds, 5–8, 11–12 – Tihany-Óvár, from the bottom of the southwestern corner, ceramic fragments. Illustrated with dark grey – smoothing, medium grey – burnishing, brownish grey – tar(?) (photo: László György, drawing: F. Zsófia Sörös).

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 597–610. 10.17204/dissarch.suppl.5.2026.597

The phenomenon of Pannonian altars named in their inscriptions and an altar with an additional function

Ádám Szabó
LUPS Department of Military History and LUPS Roman State- and Provincial Administration Research Center, Budapest, Hungary; Roman Lapidarium, Department of Archaeology, Hungarian National Museum, Budapest, Hungary
szabo.adam@uni-nke.hu; szabo.adam@hnm.hu

Received 4 December 2025 | Accepted 22 June 2026 | Published 18 November 2026

Abstract: The term altar *(ara)* appears in the inscriptions of a small group of Roman votive altars from Pannonia likely for a specific reason. Some of these altars were found outside cities and do not belong to any sacred precinct (*area sacra* or *templum*). These isolated and relatively large altars may have stood in their own small sacred context as *sacellum*s. According to some auctorial sources, these small rural sanctuaries may also have marked land boundaries. A similar example, erected by a rural community *(vicani)*, is known from the area of Aquincum. In addition to its role as a boundary marker, the text carved on it in two parts at two different times indicates a change in local land ownership *(possessio)*.

Keywords: votive altar, *sacellum*, landowners, boundary marker, Frontinus, Agennius Urbicus, Aquincum

For the "Acculturation, Romanization, Roman Civilization International Conference on the Phenomena and Processes of Integration into the Roman Empire 2025" conference presentation I summarised the topic based on my previous research and highlighted a case study that demonstrates an additional function of a given altar beyond religion. The phenomenon of the designation of the altar in question is peculiar as there must be a specific reason why this otherwise well-recognisable object was named in its text as opposed to the much larger number of other altars which are not specifically identified as such in their texts.

Introduction

One of the typical features of Roman religious practice, both official or public *(sacra publica)* and personal-religious and private *(sacra privata)*,[1] is the existence of altars for sacrifice and vows. These could be of different types and sizes and made from a variety of materials. They appear today in four ways, as archaeological finds (i.e., monuments), on carvings and the backs of the coins, in auctorial sources, and in the texts of inscriptions. The remains of sacrificial and votive altars, excavated and found or preserved, are relics of everyday religious practice. Relief ornaments and medallions on various structures are a record of altars that existed at the time, although this is not always

1 Wissowa 1912 including 380–409, 467–479 and Scheid 2005; for the regional spread of originally Roman religious practices see also Rüpke 2014, 105–112.

✉ Corresponding author

certain in the case of stone carvings.[2] Auctorial sources refer to altars that either once existed or appeared in mythological descriptions.[3] Inscriptions refer either to an altar outside the inscription or to the inscribed altar itself. Only these are discussed below, and only the examples from Pannonia. The general characteristics established also apply to some altars not named in their inscriptions but similar in form and wording. The characteristics provide an indication of the place of provincial altars within the religious administration *(res sacrae)*, whether they are to be understood in the context of *sacra publica* or *sacra privata*, and also help define them more precisely in terms of function, depending on the legal status of the whole and of certain parts of the provincial territory.[4]

Recently, I discussed in detail the group of Pannonian altars *(arae)* named in their inscriptions.[5] This introduction is based on the results summarised in that study. The general characteristics of Pannonian altars named in the inscriptions include the fact that they could be considered separate places of cult *(locus sacer)*, either as an *aedes* or a *temple*, places only for the presentation of sacrifices, i.e. for religious practice. They can be likened to the Aventine sanctuary of Diana within the religious administration,[6] appearing sometimes as an *ara* and sometimes as an *aedes* or *temple* on inscriptions and in the works of auctors.[7] In provincial contexts, the rule concerning them is likewise based on the altar of Diana at Aventine Hill, unless otherwise specified. They are not usually found in urban civic contexts but in rural settlements, private estates, *beneficiarius* stations, camp sanctuaries, or different sacral districts separate from the city; besides, they may also occur in urban settings in a special sanctuary environment, for example as a *sacellum*.[8] Most or all of them may have stood in the open air.

The places of erection differed in that *arae* in sacral districts of camps and in *beneficiarius* stations existed in a different administrative framework than those in the *ager* or *suburbium* and, less frequently, within the city walls. It can be said that the altars in camps and *beneficiarius* stations were in a state (official) setting, while rural altars, i.e. cult places with an altar, were in a private setting, either at the disposal of the population of the related *vicus* or of the owner and his family in the area of a small estate, such as a *villa*. Altars in the sacred areas of a city and within the city walls belonged to the urban community in general, as well as smaller communities within the city, organised on religious, occupational, or ethnic grounds. In essence, however, they are no different: they served the purposes of personal or small-community cult practices, were private places of cult in rural areas, and arose, in all their forms, within the framework of personal religiosity.

2 There are thousands of monuments, artefacts and representations, but no complete collection. Cp. e.g., Cox Bowerman 1913. For a representative compilation, see, e.g., ThesCRA 2006, IV, 14–21, 381–392, and also e.g., Siebert 1999, especially 90–93, 275–319; Busch – Schäfer 2014 and the further literature cited therein. Coin backs can also be studied in, e.g., RIC. For a representative compilation of mainly votive altars, see e.g., the list of results for the search term 'Altar' in the photo collection searchable at Lupa, similarly e.g., https://www.gettyimages.com/photos/roman-altar, etc.

3 See ThLL II, col. 382–389.

4 For the latest on this, see Szabó 2017, 50–71.

5 Szabó 2021, 239–278.

6 See e.g., Platner – Ashby 1929, 149–151.

7 See e.g., CIL XI, 361, Italia: Aemilia / Regio VIII, Ariminum: "*… h(aec) a(edes) … h(abet) ll(eges) q(uas) D(ianae) R(omae) in A(ventino)*". CIL III, 1933 = ILS 4907 (cp. AE 2013, 1186), Dalmatia, Salona, AD 137, "*…ceterae | leges huic arae eaedem sunto quae arae Dianae sunt in Aventino monte dictae…*", etc.

8 See Festus, "*sacella dicuntur loca dis sacrata sine tecto*" (i.e. Verr. Fl. *Verb. Sig.*, 422, 15–17). Varro, *ARD*, *fragmentum* 62.1 *(Liber V de sacellis* Donat. *Ter. Ad.*, 567): "*sacellum . . . sacra cella est*". Aulus Gellius summarised the question; see Gell. *NA*, VII.12.5–6: "*…C. quoque Trebatio eadem concinnitas obrepsit.* 5 *Nam in libro de religionibus secundo: 'sacellum' est," inquit, "locus parvus deo sacratus cum ara." Deinde addit verba haec:" 'Sacellum' ex duobus verbis arbitror compositum 'sacri' et 'cellae', quasi 'sacra cella.' "*6 *Hoc quidem scripsit Trebatius; sed quis ignorat 'sacellum' et simplex verbum esse et non ex 'sacro' et 'cella' copulatum, sed ex 'sacro' deminutum?*"

They were all established on private initiative; those established in collaboration by several persons are no exception. They were created largely for votive reasons and to a lesser extent for any purpose unrelated to votive offerings. Based on the frequency of examples, the votive background associated with them belonged to the *ex voto* type.[9] Accordingly, in these cases, the vow *(votum)* can be considered the primary reason for their erection, while everything else mentioned in the inscription is the reason or purpose of the vow. Their dedication was rarely required for them to become functional; usually the fact that they had been erected was sufficient. In this case—again based on the frequency of the examples—the *posuit* was considered the formal expression, and it was also the section of the text in which the inscribers made their statements. Examined from the latter point of view, the *posuit* and *dedicavit* formulas were definitely mutually exclusive, at least in Pannonia.[10] The same does not apply to the much smaller number of altars with the *dedit* formula. It may be ventured that the recognisable regularity may be extended to all altars not named but corresponding in form to those bearing the *ex voto posuit* formula and were at least dated. The altars in rural settlements and on *villa*s were all in the service of private cult or personal piety, while those in camp sanctuaries and *beneficiarius* stations are connected with the official sphere only because of the medium, but are otherwise no different.

The group of erectors, apart from the commanders carrying out restoration work in the camp sanctuary represents the middle class within the province, with the *duumvir* and knights at the top and the peregrine, rural citizens, or settled veterans at the bottom. The same applies to soldiers, who generally move between the ranks of *tribunus cohortis* and *centurio* and the status of *miles*; the appearance of troop commanders is considered exceptional. The social status of the *beneficiarius* altar erectors can also be characterised within this interval.

In terms of size, the altars were representatively tall, at least 150 cm, but most of them were probably even taller. Based on their shape, sacrifices were not primarily made on them but next to them. There are far fewer altars that had a surface suitable for making smaller sacrifices. The text of some of the known Pannonian examples is fragmentary at the end, so it cannot be determined whether they were dated. There are some that were not dated, but a higher number of examples can be considered formal if at least the year was marked on them. In addition, the day was also given on several occasions, obviously marking the day of transfer. The dates given and the specific offerings cannot be linked to public feasts at either provincial or imperial level.

The status of rural altars within the religious administration cannot be precisely characterised, except that they were private places of cult whether they were connected to an individual or to a small community. No official priest or magistrate was named in connection with them from whom the altar would have been dependent even at the level of its consecration or transfer. Based on the altar discussed below, which can be considered a model example of this type in every aspect, their existence was regular. This is also supported by their mostly consistently applied formulaic vocabulary. On those that include officials, the offices appear in the inscription as elements belonging to the person, not in connection with the office-holder. At the same time, their function beyond religion can also be observed, albeit rarely, as shown in the example detailed below. The named altars *(arae)* are thus to be understood rather in the context of the *sacra privata*[11] regardless of their place of erection, in the sense that they were places of cult (in the province *locus prosacer*, after 212 *locus sacer*)[12] belonging to the regular or authorised religious life of the Roman Empire but not as a state,

9 See Szabó 2016, 109–114.

10 Szabó 2020, 195–238.

11 See de Marchi on the subject (de Marchi 1896); he only partially touches on the issue under discussion here.

12 See Szabó 2017, 50–17 with previous literature.

provincial or municipal interest, but as a private interest, privately maintained. The military camp or *beneficiarius* environment lends an ostensible state character to the altars erected within the sacral district of a given object but this is a misinterpretation of the divine figures named in the texts or the reasons for the erections. In other words there was no official or state context to prevent the development and expression of personal religiosity. The deities appearing on the altars are mainly Iuppiter and his circle, or one of the interpreted forms of the supreme god; the number of altars related to the Liber Pater cult is also remarkable. The other individual cases represent examples of a more conspicuous form of personal religiosity.

A case study from Pannonia: a special altar from ager Aquincensis

The altar erected on 31 October 229 AD in the village-like settlement Vicus Vindonianus located in Békásmegyer (Budapest District III) today, i.e. next to the northern suburb of Aquincum, is one of the most discussed Pannonian inscriptions (Fig. 1.a–d), which I have also dealt with several times.[13] The altar is a model example at the imperial level not only as a rural independent place of cult but also as a place of cult with additional functions beyond religion.



Fig. 1. The altar in the Research Lapidary of the Hungarian National Museum. a – the top of the altar (above), with the current fastening strap visible vertically in the centre, b – front view of the altar (centre), c – right side of the altar in its original position (left), d – left side of the altar in its original position (right) (photos by Á. Szabó).

13 See CIL III, 3626 = CIL III, 10570 = TitAq 926. I have dealt with this issue several times, most recently in Szabó 2025, 185–198. Further selected literature: ILS 7127; AE 1973, 436; Mráv – Ottományi 2005, 102; AE 2016, 1294; AE 2017, 1139; Szabó 2020, 202–203; Szabó 2021, 247, no. 12; EDCS-28600077; HD011381; Lupa 9889, all of his bibliography up to 2010 can be found under TitAq 926, and his subsequent bibliogrphy can be found above. Bence Fehér also commented on the inscription published in TitAq: SEP 8, 2016, 36 (cp. AE 2016, 1294; AE 2017, 1139). From the perspective of legal history and Roman private law, Károly Visky dealt with it as data on the legal status of provincial land, see Visky 1952, 116.

The texts engraved on three sides of the central section, at two different times, are of outstanding importance from the point of view of religious history, settlement history, legal history and social history. It has been established that the carving referred to in the text as an altar *(ara)* served as an independent place of cult or possibly designated an altar standing next to it in a multi-element independent place of cult structure while itself serving as a statue base and documentation for the altar. The date on the sculpture could refer to a formal and official dedication.[14] However, the phrase *posuit/posuerunt* excludes the dedication *(dedicavit/dedicaverunt)* formula[15] so at the time of its erection, the object can be interpreted within the framework of so-called private cult.[16] Private cult here means that it is not a state or city, i.e. official or public *(publicus)* place of cult, either in terms of its location according to the text or in terms of the contributions to its establishment. Instead it was erected at the expense of local farmers and landowners *(possessores)* as private individuals on privately owned land. Despite its private nature, the medium, text, and religious function of the place of cult were in complete accordance with the official, public or state cult.

In terms of form, the place of cult may have been a *sacellum* resembling an altar placed on a wider pedestal, probably with a statue on top, which did not change its classification as an altar. It cannot be determined whether there was a roof above it, but the stronger burn marks visible on it suggest that it stood in a structure that had a combustible part, which could even have been a roof. There are no signs of secondary use on its surface and it is generally in good condition. The exception to this is a straight-axis wider transverse depression visible on the front side at the bottom right, deepening towards the centre with a broken surface below it. This indicates the typical circumstances in which it was often found with the marks of a ploughshare that got stuck in it and cut into the stone. The existence of a roof above it is uncertain, but it was certainly enclosed, leaning against the wall obviously from the inside. The back of the altar is straight from bottom to top with no *crepido* or *corona* divisions which in itself suggests that it could not be walked around but was placed with its back against a wall. The structure was almost certainly destroyed during the construction of the Békásmegyer housing estate at the latest. We have relatively accurate contemporary descriptions of *sacella* and authoritative sources also reveal that, in terms of form, the type was not entirely uniform but differed significantly from other built (*aedificatus*, *constitutus*) sacred structures (e.g., *aedes*). The known descriptions of *sacella* fit the place of cult modelled by the altar under discussion. Aulus Gellius's quoted description is clear: *"sacellum est locus parvus deo sacratus cum ara*", as is probably Festus's (i.e. Verrius Flaccus) definition: "*sacella dicuntur loca dis sacrata sine tecto*", but if it did have some kind of roof, it corresponded to Varro's definition: "*sacellum . . . sacra cella est.*"[17]

The comments made so far have not revealed the practical reason and purpose behind the erection of the altar under discussion, i.e. the creation of a place of cult a large stone structure placed under divine protection could have been, beyond mere religious intentions in the area, i.e. its Roman antecedent where it was found in terms of its place of discovery. The reason for revisiting this topic here is the realisation that the circumstances recorded in the text correspond exactly to a passage from one of the works of Frontinus (AD 30–103/104) written in the second half of the 1st century AD (*De controversiis*) and to a passage from Frontinus' commentary under the name of Agennius Urbicus from the 4th century AD (*Commentum de controversiis*) and his own work (*De controversiis agrorum*) (see below 8. (1–2–3.)). Accordingly, I will deal below only with the connections between the texts and not with other aspects of the altar, which have already been discussed in detail in previous literature.

14 Cp. Szabó 2021, 239–278.

15 Szabó 2020, 195–238.

16 Cp. in general de Marchi 1896.

17 Festus (i.e. *Verrius Flaccus*), 422, 15–17; Varro *ARD*, frg. 62.1 (*Liber V de sacellis,* Donat. *Ter. Ad.,* 567); Gell. *NA,* VII.12.5–6.

The text, carved on three sides of the altar and composed of two parts (see Fig. 1.a–d), and the circumstances surrounding its erection can be established as follows:

> "*[I(ovi) O(ptimo) M(aximo)] | Iunoni [Re]g(inae) Min[e]rvae | [c]eteris Dis Deabus[que] | omnibus possessor|[e]s vic[i] Vindoniani | ex voto posueru|nt q[u]or(um) no[m]in[a] | sunt | Aur(elius) Aep[ic]tetianu(s) sac(erdos) | Aur(elius) Vettianus eq(uo) p(ublico) | Iul(ius) Victorinus de[c(urio)] | Aur(elius) Candidianus de[c(urio)?] | [A]ur(elius) [I]anuarius vet(eranus) | Aur(elius) Trofimus C[..] | Aur(elius) Androtanu[s ..](?) | [A]ur(elius) Maximu[s - - -] | Ant(onius) Quirin[us - - -] | III Id(us) O[ct(obres) Imp(eratore) d(omino) n(ostro) Ale]|xan[dro Severo Aug(usto) III et] | Ca[s]si[o Dione II co(n)s(ulibus)].*
>
> ||
>
> *Item M(arcus) Aur(elius) | Aepictetianus | dec(urio) col(oniae) Aq(uincensium) | sacerdotalis | aram donavi(t) | in (h)onorem vic[an(orum)] | vici [Vindoniani].*
>
> ||
>
> *quae ara con|secrata est | [i]n possessione | Aureli Vetti|ani eq(uitis) R(omani) per|missu eius|dem precario | petentibus | vicanis Vindo|niani.*"

According to this, it was dedicated to Iuppiter Optimus Maximus, Juno Regina, Minerva and other gods and goddesses, probably as a statue-bearing altar in the Aquincum territory: a rural community, the Vicus Vindonianus, located along the northern suburbium, probably along its outer border, erected by its landowners *(possessores)* as a vow *(ex voto)*. The use and interpretation of the term possessor is a matter of academic debate. The content of the altar text especially the two side texts reflects the statement in Gaius's *Inst.*, II.1.13: "Not only can ownership of things be acquired but also possession".[18] In AD 229, that is, during this period, the status of provincial land was different than in the 2nd century AD; it could now be owned, not merely possessed[19] and it was definitely taxable. The passage presented in full below, which looks back to the early Imperial period, also mentions possessors in the case of Italy.[20] The question of land propriety *(proprietas)* is therefore different, and also occurs in Frontinus in an Italian context, but in the same context the questions of land possession *(possessio)* and the problems discussed are of the same nature.[21] The concepts of land propriety and possession seem inseparable in the Aquincum case discussed here if the term was used correctly: that is, whoever owned the land,[22] the *possessores* acted as if they were the owners. The case can also be examined according to the example given in the last paragraph of the text from the early Imperial period, preserved under the name of Agennius Urbicus (quoted below). According to

18 Cp. Gai. *Inst.*, II.1.13. "*Non solum proprietas rerum adquiritor, sed etiam possessio. Nam usucapio possessionis tempore completur.* 14. *Possidere autem videmur non solum si ipsi tenemus, sed etiam si per alium nostrum tenentem possideamus:* […]" – '13. Not only can ownership of things be acquired, but also possession. Adverse possession is fulfilled during the duration of possession. 14. We possess something when we hold it ourselves, but also when someone else holds it on our behalf: […]' See more *Dig.*, frg. 7.1.15: *proprietor* the owner. For stronger protection of possessors compared to protection of owners, see, for example Ulp. *Dig.* 43.17.1 pr. "*Uti possidetis, ita possideatis, dum ne vi nec clam nec precario ab eo possideatis, quo de agitur.*" – "Continue to possess what you now possess, on condition that you do not possess it by force, by deceit, or by favor from the person in question." See also Note 22 below.

19 For more details on this issue, cp. Szabó 2017, 50–71.

20 Agenn. Urb. *Contr.*, 48 vv. 8–9: "*…in Italia autem densitas possessorum multum inprobe facit…*".

21 *De controversiis* 6: *De proprietate controversia est plerumque, <quom> ut in Campania cultorum agrorum silvae absunt in montibus ultra quartum aut quintum forte vicinum. Propterea proprietas ad quos fundos pertinere debeat dis<p>ut[i]atur. Est et pascuorum proprietas pertinens ad fundos, sed in commune; propter quod ea conpascua multis locis in Italia communia appellantur, quibusdam provinciis pro indiviso.*

22 So if it does not belong to them as proprietors, then it most likely belongs to the colony of Aquincum.

this, there are sacred places that are located between private properties but belong to the city and these are often acquired by private individuals due to (administrative) negligence who then take possession of the area in some way.[23] If this was also the case with Vicus Vindonianus in AD 229, then the use of the term 'possessor' in the inscriptions is justified, since the proprietor could have been the *colonia*; however, the owner-like attitude can also be explained.

The text of the altar therefore lists nine original possessors who erected the altar as a *votum* (vow) on the front inscription of the central part of the altar. It cannot be determined exactly how much time passed, but the situation recorded in the text on the front changed. The change affecting the altar and the status of its territory can be determined more by the content than by the form of the texts on the sides. According to the side text, the founder M. Aur. Aepictetianus was a *decurio* and *sacerdotalis* (former priest) in the colony of Aquincum, but at the time when the front inscription was made he was not yet a *decurio*, although he was an active priest *(sacerdos)*; this is indisputable. The other founder, Aur. Vettianus, is *eques Romanus* in the side text and *equo publico* in the front text. This is debatable, as the last letter of the abbreviation *EQ. R.* or *EQ. P., R.* or *P.* is a misspelling or the result of misleading surface deterioration on one of the sides. In any case, in social terms *eques Romanus* sounded more impressive as a rank designation than *equo publico* even if they meant the same thing from a legal point of view. In addition, in the two given but related transactions, both acted as if they were owners: the former donated the altar that had previously been erected by the community, while the latter consecrated it on his property—that is, he made it public at the request of the other inhabitants of the *vicus*. It can be assumed that the change took place shortly after the foundation, as the side inscriptions actually mirror the formal characteristics of the inscription opposite and may even have been carved by the same hand shortly afterwards. This observation is supplemented and supported by another altar from Barbaricum, from Kiskunlacháza (Pest County, Hungary). The altar is dated to AD 233 and one of its erectors was the same Aepictetianus (Epictetianus), then already as *decurio* of Aquincum.[24] He thus became *decurio* between AD 229 and 233, which also dates the side inscriptions of the altar to the first half of the AD 230s, along with the changes in the *vicus*'s ownership and possibly the ownership structure as deduced from the texts in the side inscriptions. The altar was dedicated on 31 October, perhaps at the end of the autumn agricultural season. The inclusion of texts from the 1st century AD in the *Corpus Agrimensorum Romanorum* in the 4th century AD also demonstrates that the contents were valid not only in the first century, but also in the fourth and, consequently, in the intervening period as well.

In the following, I will base my comments on the books with significant publications and commentaries[25] as well as on the summary volume published by Carl Olof Thulin.[26]

Preliminary remarks on the texts: Of the following texts, the chronology of Frontinus' *De controversiis* (1) is known but the second (2) published by the editors under the title Agenn. Urb. *Contr.* is considered to be from the 4th century AD. However, based on the expressions used in it, it is not

23 Agenn. Urb. *Contr.*, "*Sunt et loca sacra, quae re vera privatis finibus rei p. col<(on)>i*^{VIII} *debent. haec plerumque interventu longae oblivionis casu a privatis optinentur, quamquam in tabulariis formae*^{X} *eorum plurimae extent. haec maxime aut in loco urbis aut suburbanis locis a privatis detinentur.*" – See excerpt 8.(2.) below and its translation.

24 CIL III, 10481 = RIU S (TRHR) 219: *- - - - - - | [- - -] M(arcus?) | [Aur(elius)?] Maturus et | [M(arcus) Aur(elius) Epictetianus | [decc(uriones)?] col(oniae) splendidis|[simae] Aq(uincensium) dedicata | [... ? I]un(ias) Maximo | [et Aelia]no co(n)s(ulibus).* With Aepictetianus see Szabó 2006, 33–35, Note 18: The reading given there corresponds to contemporary publications on the Vicus Vindonianus altar and reflects the narrower reading prior to the 2009 publication of TitAq I.

25 Without claiming to be comprehensive, see also: Blume *et al.* 1848–1852; Bubnov 1899; Campbell 2005; Takács 2015.

26 Thulin 1913.

from the 4th century AD but from the early Imperial period. Terms clearly referring to the period include '*legati provinciarum*' and '*coloniarum aut municipiorum*', '*conventus*', and '*res publica*', which is used to refer to the urban community. I am sure that many people have noticed this phenomenon. I do not wish to discuss it further here, other than to make this observation.

Auctor texts from the 1st and 4th centuries AD

1. Iulius Frontinus: *About the disputes* (excerpt), 1st century AD.

"… Numerous disputes arise concerning sacred[I] and burial[II] areas, which are settled according to ordinary law[III], except when they concern the extent of the area[IV]; examples include sacred groves[V] or sanctuaries[V] in the mountains, the boundaries of which are restored according to the founding instrument[VII]; Similarly, burial grounds, whose boundaries are reinstated according to the grant[VIII] …". [27]

[I]*Locus sacer*: any sacrificial area of any size that was legally owned by celestial gods, cf. Gaius *Inst.* II.3–4–5. In this case, *locus* does not accurately express the content when translated as 'place', but *locus sacer* indicates the entire sacred area in question, regardless of size. [II]*Locus religiosus*: cemetery, an area of any size designated by decision or voluntary commitment as the property of the gods of the underworld, cp. Gaius's *Institutiones* II.3–4, 6. In this case, *locus* does not accurately convey the meaning when translated as 'place', but *locus religiosus* indicates the entire cemetery area in question. [III]*Iure ordinario*: in the context of the text the most expressive interpretation seemed to be 'according to ordinary law' including the meaning of the relevant general laws, i.e. *ius ordinarius* means traditional praetorian law in this case.[28] [IV]*Modus*:[29] in this case, it refers to the established extent of the area. [V]*Lucus publicus*: a public grove dedicated to the gods owned by them for religious purposes. [VI]*Aedes*: the house of the deity a sacred building, a 'emple' to which the area belonging to the building is also added. [VII]*Instrumentum*:[30] understood here as the object, a tablet or scroll (document) containing the legal authorisation, the tangible founding law of the place itself (*lex loci*), the existence of which is referred to in Gaius *Inst.* II.5: "But we consider only those things to be *sacrum* which have been consecrated with the consent of the Roman people, for example by the enactment of a relevant law or the creation of a *senatusconsultum*."[31] [VIII]*Cautio*:[32] understood here as the commitment, a declaration by which someone establishes a cemetery on their own responsibility, cf. Gaius *Inst.* II.6: "However, we of our own will make a religious place in which we bury the dead on condition that the funeral rites are performed by us." [33]

27 Thulin 1913, 9: Frontin. *Contr.*, (4–) (La. 21.5–23.8 / vv. 13–18): *De locis sacris[I] et religiosis[II] controversiae plurimae nascuntur, quae iure ordinario[III] finiuntur, nisi si de locorum eorum modo[VI] agitur; ut l<u>corum publicorum[V] in montibus aut aedium[VI], quibus secundum instrumentum[VII] fines restituuntur; similiter locorum religiosorum, quibus secundum cautiones[VIII] modus est restituendus. …".*

28 Cp. Berger 1953, 525–526: *Ius*, 527: *Ius civile*, 528: *Ius dominii*, 531: "*Ius ordinarium:* The normal law applied in regular proceedings. *Iure ordinario*: in the way of normal proceedings (*ordo iudiciorum*) as opposed to the *cognitio extra ordinem*", 612: *Ordinarius.* See more in Jones 1955, 464–488. Cp. e.g., Suet. *Claud.*, 15: "*Cum decurias rerum actu expungeret, eum, qui dissimulata vacatione quam beneficio liberorum habebat responderat, ut cupidum iudicandi dimisit; alium interpellatum ab adversariis de propria lite negantemque cognitionis rem sed ordinari iuris esse, agere causam confestim apud se coegit, proprio negotio documentum daturum, quam aequus iudex in alieno negotio futurus esset.*"

29 Cp. Berger 1953, 585–586: *Modus – Modus usurarum / Modus agri.*

30 Cp. Berger 1953, 505: *Instrumentum – Instrumentum publice confectum.*

31 Gai. *Inst.*, II.5. *Sed sacrum quidem hoc solum existimatur, quod ex auctoritate populi Romani consecratum est, ueluti lege de ea re lata aut senatus consulto facto.*

32 Cp. Berger 1953, 384–385: *Cautio – Cautio vadimonium sisti.*

33 Gai. *Inst.*, II.6. *Religiosum uero nostra uoluntate facimus mortuum inferentes in locum nostrum, si modo eius mortui funus ad nos pertineat.* Cp. II.4. too: 4. *Sacrae sunt, quae diis superis consecratae sunt; religiosae, quae diis Manibus relictae sunt.*

2. Agennius Urbicus: *About land disputes* (excerpt), 4th century AD.

The legal dispute over sacred and burial areas is a fact:[I] although disputes arise over these areas, once they are designated as sacred or burial areas, their status is accepted in accordance with ordinary law. The first question is whether these areas can be occupied in any way through use;[II] the extent to which this is possible is then determined by the size of the area.

However, according to Roman law, sacred places are accorded outstanding religious respect and supervision: even provincial governors[III] are given no more authority than to protect sacred places. This is easier to do in the provinces, but in Italy the density of landowners causes many difficulties, and they occupy sacred groves which are the exclusive right of the Roman people, even if they are within the boundaries of colonies or *municipia*.[IV] This gives rise to numerous legal disputes between cities[V] and private individuals. But even between cities[VI] there are often disputes over which larger area these territories belong to, from which any type of tax can be extracted.

Even sacred buildings located in agricultural areas[VII] give rise to similar legal disputes; only the participants change; as in Africa, where the Hadrumetum and the Tysdritans have been arguing for several years about the sanctuary of Minerva.

There are sacred places that are actually located within the boundaries of private property, but belong to the community of city dwellers.[VIII] These are usually acquired by private individuals through long-forgotten circumstances[IX] although their site plan[X] exists in multiple copies in the archives. These are either in the city or near the city,[XI] retained by private persons.'[XII] [34]

[I]*Iniectui*: in the critical edition it appears as *iniectiui*, which is not comprehensible in this form. [II]*usucapio*: acquisition of property by occupation and then prescription. [III]*Legati provinciarum*: provincial governors: the editors of the text do not link this part of the text to the early imperial period, but the technical term *legatus provinciae* (formally: *legatus Augusti pr. pr.* or *proconsul*) refers to the early Imperial period. [IV]*Coloniarum aut municipiorum*: the specific mention of colonies and municipia also refers the text to the early imperial period, to the era before AD 212, but no later than the middle of the 3rd century AD. [V]*R(es) p(ublica)*: may refer to the Roman state itself, but may also refer to a city, the colonies, or municipia mentioned in the previous sentence, the latter meaning being confirmed by the following sentence. [VI]*Conventus*: a larger administrative district and the local council of the area, occurring frequently but not universally in the Roman Empire. [VII]*Ager*: the economic area within the city's *territorium* between the boundaries of the *territorium* and the city limits: a combination of arable land, forest, pasture, and hayfields. [VIII]*Rei publicae coloni*: due to the probable early imperial origin of the text, it is certain that it does not refer to a Late Roman *colonus*, but generally to the inhabitants of the *colonia* (i.e. the population of each colony, or each city), who

34 Thulin 2013, 47–48: Agenn. Urb. *Contr.*, (La 86,8 = 55,8 – La 87,12 = 56,12 / vv. 23–25 // 1–25): "*... De locis sacris et religiosis controversia est aeque status iniectui[I]: agitur enim de locis, sed cum aut sacra aut religiosa nominentur, statum generalem a iure ordinario accipiunt. primum enim quaeritur, an ea loca ullo modo usu capi[II] possint: deinde, quatenus possint, secundum locum habent mensurae.*
Locorum autem sacrorum secundum legem populi Rom. magna religio et custodia haberi debet: nihil enim magis in mandatis etiam legati provinciarum[III] accipere solent, quam ut haec loca quae sacra sunt custodiantur. hoc facilius in provinciis servatur: in Italia autem densitas possessorum multum inprobe facit, et lucos sacros occupant, quorum solura indubitate p. R. est, etiam si in finibus coloniarum aut municipiorum[IV]. de his solet quaestio non exigua moveri inter r. p.[V] et privatos. Sed et inter res publicas frequenter eius modi contentio agitatur de his locis, in quibus conventus[VI] fiunt maiores et aliquod genus vectigalis exigitur. Nam et de aedibus sacris, quae constitutae sunt in agris[VII], mutata tantum persona similes tamen oriuntur quaestiones; sicut in Africa inter Adrumentinos et Tysdritanos de aede Minervae, de qua iam multis annis litigant.
Sunt et loca sacra, quae re vera privatis finibus rei p. col<(on)>i[VIII] debent. haec plerumque interventu longae oblivionis casu[IX] a privatis optinentur, quamquam in tabulariis formae[X] eorum plurimae extent. haec maxime aut in loco urbis aut suburbanis locis[XI] a privatis detinentur[XII]...".

form the urban community, so it refers to the city itself at that time, but not to a specific city. IX*Interventu longae oblivionis casu*: 'through long oblivion', i.e. someone starts using the abandoned area and if the owner—in this case the *magistratus* on behalf of the city—does not come forward within the time limit set by law i.e., 'forgets' about its property for a long time, then it becomes acquired by adverse possession, even if it is not possible at that time, and then he may dispute it. The case is one of acquisition of ownership through long possession *(praescriptio longi temporis)*, where the possessor enjoys protection after a certain period of time. X*Forma*: understood here as a site plan, i.e. 'land registry map', the 'cadastral' map of urban estates. XI*Aut in loco urbis aut suburbanis locis*: somewhere in the city or in the *suburbium* area close to the city, belonging to the city but outside the walls. XII*A privatis detinentur*: as the text says, they actually requested it from the city archives, took it for themselves, and are not returning it or showing it to anyone.

3. Agennius Urbicus: *Comments on disputes* (excerpt), 4th century AD.

"Many disputes concerning sacred and burial sites are resolved according to ordinary law: when sacred sites were built they were usually located on the border where three or four estates met in accordance with the traditions of the ancestors. And the landowner who donated a certain part of his land for sacred purposes made a written record of the donation so that the people entering the area on the day of the celebration would not be trespassers."[35]

The auctor texts and the text of the altar

The passages preserved under the names of Frontinus and Agennius Urbicus, dating from between the first and fourth centuries—3.(1), (2), (3)—refer repeatedly, in various contexts to the altar of the Vicus Vindonianus in *ager Aquincensis*.

The altar stood in the *ager*, where it was found, and existed as a *sacellum* i.e. a *locus sacer*. The text mentions the possessors as well as the 'writing' mentioned in text (3) with which one of the owners ceded the area of the altar to the community. It is not specified whether this applies only to the feast day of 31 October or throughout the year. Based on the text of (3), by Agennius Urbicus, it can be assumed that where the altar of Vicus Vindonianus stood, there were the original points of contact between several estates,[36] probably as much as in AD 229 based on the number of original founders, which later in the first half of the AD 230s may have changed in favour of two possessors.

According to one of the later inscriptions, one of the possessors, M. Aurelius Aepictetianus, was able to redeem the altar which he then donated to the village community *(aram donavit in honorem vicanorum)*. He could only do this if he had first redeemed the original contribution of those named on the front side. The practice of redeeming sacred buildings is also mentioned in a text from the AD 160s about the redemption of a temple in Poetovio.[37] According to the other part of the side text, engraved in two sections, the other possessor agreed to have his land consecrated *(quae ara consecrata est [i]n possessione Aureli Vettiani)* thus effectively making the piece of land public, i.e.

35 Thulin 2013, 68: Agenn. *Urb.*, *Commentum de controversiis* (51–) [Aggenni (sic!)] (La 22,14–23,28 / vv. 9–17): "*… De locis sacris et religiosis controversiae plurimae iure ordinario finiuntur. Si enim loca sacra aedificabantur, quam maxime apud antiquos in confinio constituebantur, ubi trium vel quattuor possessionum terminatio conveniret. Et unus quis possessor donabat certum modum sacro illi ex agro suo et quantum donasset scripto faciebat, ut per diem sollemnitatis eorum privatorum agri nullam molestiam inculcantis populi sustinerent […].*"

36 Levente Takács reached a similar conclusion after examining Roman period cemeteries and burial grounds; see Takács 2012, 41–48; Takács 2013, 243–254.

37 CIL III 14354,28 = ILS 4246 (EDCS-30100720), Pannonia Superior / Poetovio (Ptuj, SLO): "*Transitu(-i* Dat. vel *-us* Gen.*) | C(aius) Caecina | Calpurnius | temp(lum) redemi(t) | et res{s}titu[i(t)].*" See Berger 1953, 670 for more examples.

making it available, or rather donating it for the purposes of a place of cult that could not be moved due to the *consecratio*.

The two formal procedures are referred to by the expressions *aram donavit* and *quae ara consecrata est*, which indicate that the place of cult initially established on private initiative and within the framework of private cult later became official. The latter developments are also supported by the different functions and ranks of the two donors listed on the two side inscriptions as mentioned above. At the time of the founding of the cult place and the erection of the altar, Aepictetianus was a *sacerdos* but at the time of the donation he was already a *decurio*; Vettianus was *equo publico* when the altar was erected and *eques Romanus* when the altar was consecrated, i.e. when the land was donated (unless there is a letter error or corruption: <P=R v. R=P>). Given that the events took place within a period of no more than five years, it seems less likely that both would have had sons and heirs with the same names appearing in the side texts with different offices and ranks than their fathers, although the possibility cannot be completely ruled out.

The text also documents some changes in land ownership in the AD 230s in the region north of Aquincum, close to the *suburbium*, possibly bordering it but located further away *(ager)*. The specific piece of land on which the altar stood became the property of Vettianus; it may also have been a public space that had previously been owned, and he then had to grant access to the *vicani*. Similarly, the altar standing on the land, which may have become the property of Aepictetianus or, if the public land was somehow appropriated and then had to be returned, the altar standing there had to be purchased from the owner of the public land.

Apart from the *possessor* versus *proprietor* question, two main cases can be modelled in relation to the altar. The first is that, of the nine original owners named in AD 229, perhaps Vettianus and Aepictetianus increased their estates in the first half of the AD 230s and, in this context, the dispute over the altar i.e. *sacellum* was settled in a way that suited everyone. Other people also remained in the *vicus*, presumably as owners, since they wanted to continue the cult activities but after the change, they could only access the cult site donated to them *(in honorem vicanorum)* by entering Vettianus's land. They asked Vettianus for permission and confirmation of this possibility. The permission was granted at the request of the village inhabitants *(vicani)* and was made explicit by the consecration that was performed *(permissu eiusdem precario petentibus vicanis)*. The consecration automatically presupposes communal or public usage as well as the fact that the land containing the consecrated object became divine property, i.e. it became public as a place of cult. This phenomenon corresponds exactly to what was recorded by Agennius Urbicus, see (3) above. The two side texts may also have recorded the compromise resolution of a territorial and/or border dispute as Frontinus put it towards the end of the first century AD: "*Materiae controversiarum sunt duae, finis et locus*." (*De controversiis* v. 1–5). Texts (1) and (2) reveal that regular or general law applied to sacred places but in the case of territorial disputes, the founding document or the statute of the place was brought forward and the disputed issue concerning the territory was resolved accordingly. Secondly, it is also possible to model the case where the public area wedged between private areas was taken over by the *vicani* from the owner's *colonia* (see the last paragraph of text (2) above), i.e. from Aquincum. The magistrate of the *colonia* appeared after AD 229, which led to the enforcement of ownership rights and since the altar was already there, this was expressed through *consecratio* which was financed by the wealthier Vettianus at the request of the villagers *(vicani)*. As the text reveals, he was already the current possessor of the area in question, i.e. in this case rather its acquirer and expropriator. Similarly, the altar itself or rather the cult establishment which according to this, was "built in the wrong place" was replaced by another wealthy person, Aepictetianus, who was already a city councillor *(decurio coloniae)*. He then donated it to the community with the recommendation and pretext of "in honour of the village community" *(in honorem vicanorum)*, thereby gaining support for his political ambitions.

Summary

To summarise the above, at least three main and possible legal cases and their various details can be analysed by comparing the texts of the altar (or altar and base) discussed here and the texts of Frontinus and Agennius Urbicus. All three cases can be outlined in relation to land ownership and land property. Firstly, the ability of the *possessores* to assert their interests as opposed to the ability of the *proprietor* to assert his interests. Secondly, the original land ownership conditions of the *possessores*, which were fixed in relation to the altar and seemed to change within a few years. Thirdly, the expropriation of public land wedged between private areas and the appearance of its owner, as well as the restoration of the owner's rights while leaving the established ownership status unchanged, subject to three conditions: *(redemptio)* or *donatio*, and *consecratio*. In addition to these, one could reflect on the situation of the *ara* i.e. the *sacellum* in the light of the earlier *ius divinum* as well as the *ius publicum* of the period in question. I have deliberately not dealt with this here, since regardless of any land issues, the *locus sacer* clearly fulfilled its religious role in all respects, and in addition, in all three of the outlined cases it also fulfilled a function beyond religion: it inviolably marked the boundaries between estates.

Many of the stand-alone altars *(arae)* found in rural areas *(agri)* of provincial municipalities and mentioned in their texts served and could have served functions beyond religion, as described above, even if this was not emphasised in the texts of the altars themselves.[38] Similarly, there are several surviving inscriptions that, in terms of their form and text, are votive altars erected by communities or individual possessors or proprietors[39] but their status as independent places of cult is not mentioned in their texts, although they were nonetheless suitable for use as boundary markers. Identifiable cases of the latter have not yet been collected from this perspective.

Sources

AE: *L'Année Épigraphique: Revue des publications épigraphiques relatives à l'antiquité romaine.* Paris, 1888–.

Agenn. Urb. *Contr.*: Agennii Urbici *De controversiis agrorum.* In: Thulin, C. O. (ed.): *Corpus agrimensorum Romanorum. Opuscula agrimensorum veterum. Vol. 1:1.* Leipzig, 1913, 20–51.

CIL III: Mommsen, Th. (ed.): *Corpus Inscriptionum Latinarum. Vol. III. Inscriptiones Asiae, provinciarum Europae Graecarum, Illyrici Latinae.* Berlin, 1873.

CIL XI: Bormann, E. (ed.): *Corpus Inscriptionum Latinarum. Inscriptiones Aemiliae, Etruriae, Umbriae.* Berlin, 1888–.

Dig.: *Digesta.* In: *Iustiniani Digesta.* Recognovit Theodorus Mommsen. Retractavit Paulus Krueger, Corpus Iuris Civilis, Vol. 1. Berolini, 1870.

Donat. *Ter. Ad.*: Aelius Donatus *In Terentii Adelphos commentum.*

EDCS: Epigraphische Datenbank Clauss – Slaby, Eichstätt-Ingolstadt (http://www.manfredclauss.de/).

Festus: Sexti Pompei Festi, *De verborum significatu quae supersunt cum Pauli epitome.* In: Thewrewk, E.: *Sexti Pompei Festi De verborum significatu quae supersunt cum Pauli epitome.* Academia Litterarum Hungarica, Budapest, 1899.

Frontin. *Contr.*: Iulius Frontini *De controversiis.* In: Thulin, C. O. (ed.): *Corpus agrimensorum Romanorum. Opuscula agrimensorum veterum. Vol. 1:1.* Leipzig, 1913, 4–10.

Gai. *Inst.*: Gaius *Institutiones.*

Gell. *NA*: Aulus Gellius *Noctes Atticae.*

HD: Alföldy, G. (ed.): *Epigraphische Datenbank Heidelberg.* Heidelberg, 1993–2021 (https://edh.ub.uni-heidelberg.de/)

38 For the cases from Pannonia see the preliminary report of Szabó 2021, 241–280.

39 A good example of this is the altar discussed in the aforementioned article by Mráv – Ottományi 2005, 71–118.

ILS: Dessau, H. (ed.): *Inscriptiones Latinae Selectae*. Berlin, 1892–1916.

Lupa: Harl, F. – Harl, O. (eds): *Ubi Erat Lupa. Bilddatenbank zu antiken Steindenkmälern*. Lupa.at.

RIC: Mattingly, H. – Sydenham, E. A. – Sutherland, C. H. V. – Webb, P. H. – Carson, R. A. G. (eds) 1923: *Roman Imperial Coinage*. London.

RIU S (TRHR): Kovács, P. (ed.): *Tituli romani in Hungaria reperti – Supplementum*. Budapest, 2005.

SEP: *Studia Epigraphica Pannonica*. Budapest, 2008–.

Suet. *Claud.*: Suetonius, *Divus Claudius*.

ThesCRA: Balty, J. Ch. – Sir Boardman, J. – Bruneau, Ph. – Buxton, R. G. A. – Camporeale, G.-A. – Canciani, F. – Graf, F. – Hölscher, T. – Lambrinoudakis, V. – Simon, E. (eds): *Thesaurus Cultus et Rituum Antiquorum*. Los Angeles, 2004–2014.

ThLL: Thesaurusbüro München (ed.): *Thesaurus Linguae Latinae*. München, 1900–.

TitAq: Kovács, P. – Szabó, Á. – Alföldy, G. – Lőrincz, B. – Fehér, B. – Visy, Zs. (eds): *Tituli Aquincenses* I–II, IV–VI. Budapest, 2009–2023.

Ulp. *Dig.*: Ulpianus in *Digesta*.

Varro *ARD*: Marcus Terentius Varro *Antiquitates rerum divinarum*.

Verr. Fl. *Verb. Sig.*: Marcus Verrius Flaccus *De verborum significatione* (Verrii Flacci Fragmenta).

References

Behrends, O. – Clavel-Lévêque, M. – Conso, D. – Gonzales, A. – Guillaumin, J.-Y. – Peyras, J. – Ratti, S. (eds) 2005: *Agennius Urbicus, Controverses sur les terres*. Corpus Agrimensorum Romanorum 6. Luxembourg.

Berger, A. 1953: *Encyclopedic dictionary of Roman law*. Transactions of the American Philosophical Society, Vol. 43, Part 2. Philadelphia. https://doi.org/10.70249/9780871692870

Blume, F. – Lachmann, K. – Rudorff, A. F. (eds) 1848–1852: *Gromatici veteres. Die Schriften der römischen Feldmesser, vols 1–2*. Berlin.

Bubnov, N. 1899: *Gerberti postea Silvestri II papae Opera mathematica (972–1003)*. Berlin.

Busch, A. W. – Schäfer, A. (eds) 2014: *Römische Weihealtäre im Kontext. Internationale Tagung in Köln vom 3. bis zum 5. Dezember 2009 „Weihealtäre in Tempeln und Heiligtümern" veranstaltet durch das Römisch-Germanische Museum der Stadt Köln und die Abteilung Rom des Deutschen Archäologischen Instituts*. Friedberg.

Campbell, B. 2000: *The writings of the Roman land surveyors: Introduction, translation and commentary*. Journal of Roman Studies Monographs 9. London.

Cox Bowerman, H. 1913: *Roman sacrificial altars: An archaeological study of monuments in Rome*. Lancaster.

de Marchi, A. 1896: *Il culto privato di Roma antica 1. La religione nella vita domestica: iscrizioni e offerte votive*. Milano.

Jones, A. H. M. 1955: Imperial and senatorial jurisdiction in the early principate. *Historia* 3.4, 464–488.

Mráv, Zs. – Ottományi, K. 2005: The altar of Terra Mater in Budaörs dedicated to pag(us) Herc(ulius) and his vicus. *Specimina Nova Universitatis Quinqueecclesiensis* 19, 71–118.

Platner, S. B. – Ashby, T. 1929: *A topographical dictionary of Ancient Rome*. London.

Rüpke, J. 2014: *From Jupiter to Christ*. Oxford.

Scheid, J. 2005: *Quand faire, c'est croire. Les rites sacrificiels des Romains*. Paris.

Siebert, A. V. 1999: *Instrumenta Sacra. Untersuchungen zu römischen Opfer-, Kult- und Priestergeräte*. Berlin. https://doi.org/10.1093/acprof:oso/9780198703723.001.0001

Szabó, Á. 2006: *Pannoniciani sacerdotes. A szervezett vallási élet principatuskori vezetői* (Leaders of organized religious life during the Principate). Specimina nova Supplementum 6. Pécs.

Szabó, Á. 2016: The reason and the background of the vota and the different formulae. Preliminary report detailed through the case of Aquincum. *Carnuntum Jahrbuch: Zeitschrift für Archäologie und Kulturgeschichte des Donauraumes*, 109–114. https://doi.org/10.1553/cjb_2016s109

Szabó, Á. 2017: Formális és nem formális kultuszhelyek a Római Birodalom tartományaiban. I. A szakrális terület státusza (Formal and informal places of cult in the provinces of the Roman Empire: I. The status of sacred areas). *Acta Universitatis Debreceniensis Series Historica* 68:24, 50–71.

Szabó, Á. 2020: Dedicatio Pannoniában *(Dedicatio in Pannonia)*. In: Kovács, P. – Szabó, Á. (eds): *Felirattani közlemények és tanulmányok 2019-ből*. Studia Epigraphica Pannonica 11. Budapest, 195–238.

Szabó, Á. 2021: Ara Pannoniában (Ara in Pannonia). In: Kovács, P. – Szabó, Á. (eds): *Felirattani közlemények és tanulmányok 2020-ból*. Studia Epigraphica Pannonica 12. Budapest, 239–278.

Szabó, Á. 2025: Az aquincumi ager békásmegyeri (Bp. III.) ún. Vicus Vindonianus oltárának valláson túli funkciója. In: Kovács, P. – Szabó, Á. – Forisek, P. (eds): *Ókortudományi és felirattani közlemények 2024-ből és 2025-ből*. Studia Epigraphica Pannonica 14–15. Budapest, 185–198.

Takács, L. 2012: Szakrális eredetű térkezelés a római földmérésben. *Történeti Tanulmányok* 20, 41–48.

Takács, L. 2013: Religion and land surveying in Ancient Rome. *Acta Classica Universitatis Debreceniensis* 49, 243–254.

Takács, L. 2015: *Land surveying and law in Ancient Rome*. Debrecen.

Thulin, C. O. (ed.) 1913: *Corpus agrimensorum Romanorum. Opuscula agrimensorum veterum*. Leipzig.

Visky, K. 1952: Római magánjog Aquincum feliratos emlékein (Roman private law on the inscriptions of Aquincum). *Archaeologiai Értesítő* 79:2, 113–131.

Wissowa, G. 1912: *Religion und Cultus der Römer*. München.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 611–655. 10.17204/dissarch.suppl.5.2026.611

The cult of Roman Mithras in Apulum

Glocality of Roman religion in an urban context

Csaba Szabó ✉
Department of Religious Studies, University of Szeged, Szeged, Hungary; MTA–SZTE Lendület "Momentum" Mithras Research Group
szabo.csaba@szte.hu

Ernő Szabó
Department of Ancient History, University of Pécs, Pécs, Hungary; Janus Pannonius Museum, Pécs, Hungary; MTA–SZTE Lendület "Momentum" Mithras Research Group
szabo.erno@pte.hu

Radu Ota
National Museum of Union, Alba Iulia, Romania
eractum@yahoo.com

Received 25 November 2025 | Accepted 12 May 2026 | Published 18 November 2026

Abstract: The Roman cult of Mithras left behind nearly three hundred archaeological monuments and several archaeologically identified sanctuaries within the territory of the province of Dacia between the 2nd and 3rd centuries CE. A substantial portion of this material, remarkable both for its quantity on an imperial scale and for its importance in terms of glocal religious appropriation, is concentrated in the area of the twin city of Roman Apulum (modern Alba Iulia, Romania), comprising the *colonia* Aurelia Apulensis and the *municipium* Septimium Apulense. The Mithraic corpus represents one of the major sources for the study of the religious life of the twin city. Its detailed analysis sheds light on the local and glocal features of urban religion and the specific forms of religious communication within this context.
The present study summarises the research history of Mithraic studies in Apulum, offers an in-depth examination of several significant case studies, and presents a comprehensive corpus of Mithraic monuments known from the two urban centres.

Keywords: Roman Mithras, Apulum, Dacia, urban religion, CIMRM Supplement

The Roman city of Apulum (Alba Iulia, Romania) was one of the most significant demographic, military, economic, and religious centres of the province of Dacia between CE 106 and 271 (Fig. 1).[1] The presence of the *legio XIII Gemina* and its strategic location along the Mureș Valley (at the midpoint of the *Via Traiana*, which connected the northern and southern parts of the province) made the city one of the most religiously dense areas of the short-lived province of Dacia. The legion was stationed at Apulum almost continuously for about 160 years, and the settlement (the *pagus* that developed one *leuga* south of the *castrum*, later becoming a *municipium* and then a *colonia*)[2] grew and prospered thanks to this permanent military presence, becoming one of the richest and culturally and religiously diverse

1 About the history and evolution of the settlement see: Piso – Diaconescu 1993; Diaconescu 2004; Ota 2012.

2 Piso 1995. A completely different theory on the evolution of the civilian settlement—as a consequence of another legionary fortress—see: Opreanu 1998; Nemeti 2024.

✉ Corresponding author

urban networks in the region. The urban system formed by the *castrum*, the civilian settlement, the governor's palace complex, and the *canabae* (later a *municipium*, i.e., a military settlement), together with the large surrounding *territorium*, constituted the centre of Dacia Superior.[3]



Fig. 1. Topography of ancient Apulum (*colonia* Aurelia Apulensis, *municipium* Septimium Apulense, *praetorium consularis* and *castra legionis*) (map by O. Gyurka).

3 Diaconescu 2004; Oltean 2007, 120.

Of the approximately 1,485 votive inscriptions attested in the province,[4] 474 religious inscriptions come from the twin city of Apulum, representing about 32% of the entire provincial corpus of this kind. The complete corpus of inscribed and figurative votive stone and bronze objects produced at Apulum over a period of scarcely 160 years (around 640 items)[5] is richer than the entire votive material of several other provinces, comparable only to the religious assemblages of Carnuntum (Bad Deutsch-Altenburg, Austria) and Aquincum (Budapest, Hungary) in the neighbouring Pannonia province (Fig. 2).

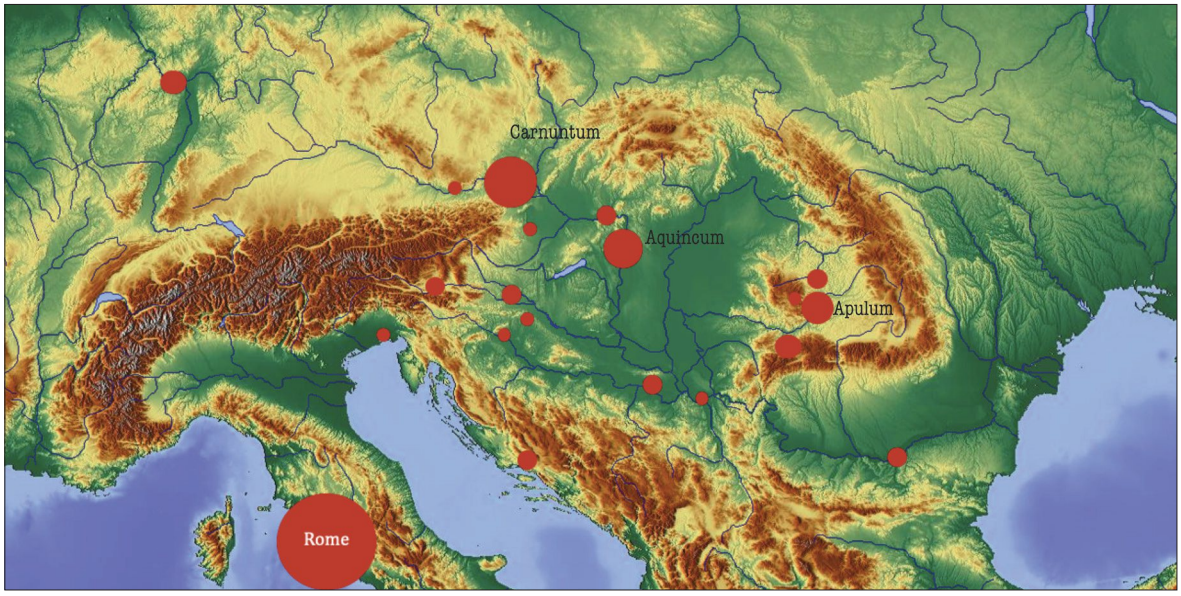


Fig. 2. Roman settlements and their votive inscriptions (after Szabó 2022c).

In this context, the local cult of Mithras must also be interpreted in relation to the exceptionally diverse and rich religious evidence, sacred topography, and pantheon of Apulum. At the same time, its interpretation cannot disregard the imperial and glocal characteristics of the cult.[6]

The cult of Mithras in Dacia: historical and chronological references

In the second half of the first century CE, a new religious movement was created most likely in Rome by an Anatolian (Cilician or Commagenean) group well-versed in Roman, Persian, and Hellenistic religious and astronomic traditions during the late Flavian period or in the time of Nerva (CE 96–98). This new religious movement spread in those regions of the Empire where the mobility and interconnectedness of merchants, tax collectors, and soldiers were especially high.[7] In the half-century following the formative and critical period for the survival of small religious movements (CE 68–90), the cult spread confidently and successfully. This phase of the second-generation of the cult's expansion coincided with the establishment of the province of Dacia, when Emperor

4 The number of votive monuments in the province varies in several statistics. The Epigraphische Datenbank Heidelberg (EDH) enrolls 1485 votive inscriptions. See also: Varga 2021, 94, Fig. 4 with 1226 votive inscriptions.

5 Szabó *et al.* 2024. Several inscriptions are still unpublished and were recently discovered in the autumn of 2025.

6 About the cult of Mithras see: Clauss 2000; Beck 2006; Bricault – Roy 2021. About the regional features of the cult see: Tóth 2015 and Szabó 2026.

7 Chalupa *et al.* 2024.

Trajan's large-scale administrative, military, and demographic measures brought about a radical transformation of the Danubian region.[8] The appearance of Mithraic communities in the province of Dacia during the reigns of emperor Trajan (98–117) and Hadrian (117–138) most likely represents the second generation of the cult, emerging some 20–30 years after its initial formation. With the establishment of the Apulum *castrum* and the first civilian and military communities between CE 106 and 117, the cult of Mithras presumably also made its appearance. However, the vast majority of Mithraic monuments known from Apulum—and from the province of Dacia as a whole—cannot be dated with precision, with only a few rare exceptions (Cat. II.15).[9] A similar difficulty arises in determining the precise topography of the Mithraic material, particularly in the case of discoveries made during the 18th and 19th centuries, when finds often recovered as *spolia* in secondary contexts provide no reliable topographical information.[10]

The diffusion of the Mithraic cult in Dacia—and within it, at Apulum—cannot be reconstructed within a local historical framework; only its broader macro-historical context can be inferred. The appearance of the cult in Dacia naturally followed the Trajanic foundation of the province, spreading primarily toward the end of Trajan's reign and the beginning of Hadrian's, and likely disappearing by the end of the Severan period, in the mid-third century. The final phases of the four archaeologically documented *mithraea* in Dacia can, without exception, be dated to the middle or the last third of the 3rd century.[11]

Research history

The rediscovery of Mithraic monuments from Apulum likely started during the Middle Ages, presumably in the period of major urban transformations associated with the Árpád dynasty (11th–13th centuries).[12] Evidence for this is provided by the *mithraeum* discovered in 2008 and excavated between 2013 and 2016 within the territory of the *municipium* Septimium Apulense (Cat. IV), where a medieval sunken house was found within the area of the Roman sanctuary.[13] The complete absence of figurative stone monuments from the sanctuary also suggests that they may have disappeared during this same period. Several Mithraic monuments are known among the decorative elements of Renaissance and early modern Alba Iulia's representative spaces; these were likely discovered or reused in the construction of new monumental buildings within the fortress area during the 16th–17th centuries, in the era of the Principality of Transylvania (Cat. II.22, III.9). These inscriptions and objects likewise indicate that numerous Mithraic sanctuaries once stood in the territory of Apulum, which was systematically plundered and whose rich stone material has been reused since the Middle Ages.

With the Habsburg conquest of Transylvania and the construction of Alba Iulia's Vauban-type fortress, as well as the establishment of the riverside port and salt office along the Mureș in the 18th century, the number of Mithraic finds from Apulum increased (Figs 3–4).[14] Among these, the rich

8 Piso 2008.

9 About the chronology of the Mithraic finds in Dacia and Apulum see: Sicoe 2014, 111–112 and Szabó 2015a, 408–410.

10 Szabó 2015a, 409–411.

11 McCarty *et al.* 2020, 124.

12 On a general overview of reception of Roman religion in Apulum see: Szabó 2014.

13 McCarty *et al.* 2019; McCarty *et al.* 2020.

14 A detailed account of the 18th century Mithras research in Transylvania: Szabó 2022a. CIL III, 1111 = CIMRM 1968 = IDR III/5, 354 was discovered by Ariosti in the ruins of a temple. It is uncertain, if this dedication of Sol Invictus is a Mithraic inscription and Ariosti attested the first *mithraeum* of Apulum. No detailed description of this rare inscription is known today.

and impressive epigraphic and figurative material of the so-called Kastal Mithraeum (Sanctuary I)[15] stands out, as well as the appearance in the scholarly literature of two monumental Mithraic reliefs, whose findspots and discovery dates remain unknown (Cat. III.3, III.5). These large, panelled reliefs—and the establishment of the Batthyaneum and Brukenthal museums, which first housed them—played a significant role in the history of research on the cult of Mithras in Transylvania and in Central and Eastern Europe more broadly.[16] The railway constructions and the expansion of the lower town during the 19th century, within the area of the governor's palace and the civilian settlement (*colonia* Aurelia Apulensis), contributed to the emergence of urban archaeology and rescue excavations, as well as to the establishment of the first museum in Alba Iulia—an achievement to which Béla Cserni made an enduring and indispensable contribution.[17] Between the 1850s and 1918, numerous significant Mithraic finds came to light, among which the so-called Pap Károly "*mithraeum*" (Sanctuary II) stands out, as well as a large Mithraic relief that even attracted the attention of Franz Cumont (Cat. III.4).[18] Among the major 19th-century collections and catalogues (Seel, Hammer-Purgstall, Müller, Lajard),[19] the catalogue of F. Cumont—the leading figure in Mithras research—stands out, as it represents the first systematic treatment of the monuments known at the time from Apulum.[20] Cumont personally visited Alba Iulia and examined the monuments of Apulum first-hand.[21]



Fig. 3. Drawing of a Mithras relief from Apulum in Hene 1836 (photo: Szabó 2022a, Fig. 3).

With the radical political and cultural changes following 1918, the museum in Alba Iulia remained closed for a long time, resulting in a troubled fate for the finds discovered between 1918 and 1945. Among these, note should be made of the so-called Oancea Mithraeum, discovered in 1930 within the territory of *municipium* Septimium Apulense, along with its rich assemblage; unfortunately, without proper documentation and excavation, very little information is available regarding its precise topography and chronology (Cat. I.7, I.8, I.11, II.17–21, II.27, III.2, and III.16).[22] There would still have been an opportunity to carry out a precise investigation of the topography of the Oancea Mithraeum even in the 1970s, when another fragment of a Mithraic relief was discovered in the area. Unfortunately, however, no such research was ever undertaken in the decades following the 1930s (Cat. III.10). During the communist period (1945–1989), the most significant study was conducted by M. J. Vermaseren, who visited the site of Alba Iulia in the summer of 1958,[23] accompanied by Constantin Daicoviciu. His work was later followed by Ion Berciu and Cloșca Băluță, two leading archaeologists of

15 Detailed presentation of the discovery: Szabó 2013.

16 Szabó 2022a.

17 Szabó 2016; Szabó 2022b.

18 Ciobanu 1994; Popescu 2000; Szabó *et al.* 2014; Szabó 2015b.

19 Seel 1823; Hammer-Purgstall 1833; Müller 1833; Lajard 1840.

20 Cumont 1896, Cat. nos 194–202.

21 Popescu 2000.

22 Christescu 1933, 624; Daicoviciu 1941, 308.

23 CIMRM II, preface; Popa 1977, 143.

the local museum.[24] From this period, the studies of Alexandru Popa are also of considerable importance.[25]

The exact topographical context of the large altar discovered in the 1990s within the area of the *colonia* Aurelia Apulensis is unknown (Cat. III.24), but it was presumably part of a nearby sanctuary. In the early 2000s, new finds discovered near the sanctuary of Liber Pater—located in the north-western part of the *colonia*, close to the city wall and to the extra-*muros* area where an Asklepieion had been established—were long thought to indicate the presence of a new Mithraic sanctuary. However, excavations carried out in 2014–2015 did not confirm the existence of such a sanctuary in the vicinity of the Liber Pater complex (Cat. II.6, II.7).[26] The work of Ioan Pioariu and Gabriel Sicoe between 2001 and 2014 is noteworthy for their synthetic character, while the first author of the present study has addressed the cult of Mithras at Apulum in several publications since 2012.



Fig. 4. Drawing of a Mithras relief from Apulum in Hene 1836 (Photo: Szabó 2022a, Fig. 4).

The most significant discovery after the Oancea Mithraeum—and the only Mithraic sanctuary in the city of Apulum to have been systematically excavated—was uncovered in 2008 and excavated between 2013 and 2016 in the territory of the *canabae* or *municipium* Septimium (Sanctuary IV and Cat. II.1–5). This discovery once again brought Apulum's rich Mithraic material culture to the forefront of scholarly research, inspiring several important studies on the subject over the past decade.[27] Unfortunately, following the 2016 excavation season, the sanctuary has not yet been restored or made accessible for the public.

Material agency: figurative and epigraphic sources

Due to the complex historiographical and topographical difficulties outlined above, the precise number of Mithraic monuments from Apulum remains a matter of debate in the scholarly literature. In many cases, the provenance of the objects is uncertain (for example, items discovered within the *territorium* of Apulum, such as those from Vinţu de Jos (Alvinc), which may in fact have originated from the city itself, or the well-known relief from Doştat.[28] In other instances, the Mithraic character of certain objects or inscriptions is ambiguous or open to question.[29] Unfortunately, most of the objects cannot be unequivocally associated with a specific sanctuary or religious community, which complicates their broader interpretation in terms of archaeology of religion and

24 Berciu – Petolescu 1976; Şerban – Băluţă 1979.

25 Popa 1977.

26 Haynes 2005; Diaconescu *et al.* 2014.

27 McCarty *et al.* 2019; McCarty *et al.* 2020.

28 Sicoe 2014, Cat. 188, 189, and 194. Could belong also to colonia Sarmizegetusa or Apulum or perhaps, an in situ find in the rural area of Dostat.

29 CIMRM 1946, 1952, 1966–1971, 1978, 1983–84, 1989–90, 1995–99.

human agency. However, recent research has shed light on several plausible connections that have allowed scholars to link a number of these objects to particular sanctuary communities with considerable certainty. This has provided a new interpretative framework for understanding the Mithraic material from Apulum.

The Mithraic finds from Apulum were first systematically collected and catalogued by Franz Cumont,[30] yet this corpus expanded considerably over the course of his long career during the first half of the twentieth century. The catalogue published by Maarten Jozef Vermaseren in 1960, a number of debated Mithraic objects were included.[31] In his 2001 study, Ioan Pioariu sought to assemble all Mithraic monuments known up to that time,[32] a task later undertaken by Gabriel Sicoe who incorporated new scholarly perspectives as well.[33] Research and discoveries over the past decade have rendered Sicoe's catalogue outdated. Accordingly, the following analysis presents the corpus of objects from the urban area of Apulum that can be confidently identified as Mithraic, considering also the most recent findings.

By comparing the number of large reliefs (cult images) and Mithras Petrogenitus statues with antiquarian reports and archaeological excavations, it can be stated with reasonable certainty that at least five or six *mithraea* existed in the conurbation of Apulum. Information is available for the following sites:[34] the so-called Kastal Mithraeum (Cat. I), Pap Mithraeum (Cat. II), Oancea Mithraeum (Cat. III), and Vitalis Mithraeum (Cat. IV) are the main possible sites identified. Among the tauroctony depictions that served as the *signum*, or central cult image of the sanctuaries (statues and reliefs; Cat. I.1, III.1–5 and perhaps III.10), only the statue of Secundinus (Kastal Mithraeum) and the central cult image of the Oancea Mithraeum can be securely associated with a sanctuary context; the provenance of the others remains unknown. From the Vitalis Mithraeum and the Pap Mithraeum within the *colonia*, no central relief can be confidently assigned to a particular sanctuary, although it is not excluded that the known large-scale reliefs may originally have stood in these sanctuaries. The Mithraic objects from the sanctuary discovered around 1782 by Franciscus Kastal were documented in detail by Bartalis Antal. The Mithras finds held in the Brukenthal Collection in Sibiu are presumed to have all originated from Apulum, although the precise provenance of two Mithras Petrogenitus statues (Cat. I.2–5) and a statue base featuring a Mithras riding a bull-relief remains unknown.[35] The central cult image *(signum)* of the Kastal Mithraeum represented the only tauroctony in the province of Dacia rendered in statuary form. Its closest analogy is known from the Symphorus Mithraeum in Aquincum, while no other comparable examples are known from Dacia.[36] Together with the statue, a three-register, relatively small relief presumably from the same sanctuary fits well within the typology of the complex reliefs known from Apulum in terms of iconographic program (see Cat. III.1, 2, 3, 5, 10, but also III.12 and III.15).[37] The Mithras Petrogenitus representations probably from Apulum, which became part of the former Brukenthal Museum collection at the end of the 18th century, display a different iconography.

30 Cumont 1896, 308–317, Cat. 192–203.

31 CIMRM 1934–2004. The presence of a possible sanctuary of Sol, as Sun god and another of Bonus Puer confused Vermaseren, who interpreted numerous inscriptions of these gods as Mithraic.

32 Pioariu 2001. Important addition to the catalogue the epigraphic corpus of Apulum published by Ioan Piso in 2001: IDR III/5, Vol. 1.

33 Sicoe 2014, 144–166, Cat. 16–55.

34 This number is not surprising in a double town such as Apulum. For analogy see the case of Poetovio (at least four sanctuaries) and Aquincum (at least six sanctuaries): Szabó *et al.* 2025.

35 It is not impossible, that one of the representations of Mithras Petrogenitus and the statue base is part of the Kastal Mithraeum.

36 Szabó 2013.

37 Sicoe 2014, 119–120.

In one statue (Cat. I.3), the snake climbs the birth rock toward Mithras' genitals, and the deity is visible only from the groin up. In the other, more finely and elaborately crafted statue (Cat. I.4), Mithras emerges almost to the knees from the life-giving rock, with the snake resting at his feet. The two statues, differing in iconography, likely belonged to different sanctuaries, making their identification with the Kastal Mithraeum uncertain at present. In the so-called Kastal Mithraeum, the three-register complex relief and a medium-sized statue base were dedicated by the same individuals: Euthices and his patrons, Marcus Aurelius Timotheus and Marcus Aurelius Maximus. Together with Secundinus, the donor of the *signum*, they presumably formed a single religious community. The Mithras Bouklopos statue base (Cat. II.26) in the Brukenthal Museum from Sibiu shows strong similarities with a column base also from Apulum, although both were likely situated in different sanctuaries (Cat. II.25).

Three inscriptions are associated with the so-called Pap Mithraeum.[38] A distinctive feature of these inscriptions is that two of them were dedicated by the same individual, Dioscurus, with identical dedications (Cat. II.12–13). From this sanctuary context identified in the mid-nineteenth century, no figurative monuments are known; however, in his publication, Károly Torma mentions a fragment of a relief and a statue fragment in addition to the altars of Chrestion and Dioscurus, which he allegedly found in the garden of Károly Pap.[39] Dioscurus' votive column is not unique among the Mithraic monuments of Apulum: a dedication inscribed on a column is also attested in the so-called Oancea Mithraeum (Cat. II.27), and a column fragment can be presumed on one of the monuments depicting Mithras riding the bull (Cat. II.25). A distinctive feature of the so-called Pap Mithraeum is that the sides of the two altars are decorated with reliefs (a dolphin and a sacrificial jug), for which no analogy has been found in other case studies from Apulum. The altars from the Pap Mithraeum are similar in size, letter type, and decorative technique, so they were likely the products of the same workshop.

The so-called Oancea Mithraeum is one of the richest Mithraic sanctuaries in Apulum. Despite its undocumented nature, it can be established that the sanctuary was built in the 2nd century CE and was primarily used by a military community. Reliefs, statues, and inscriptions have been recovered from the prospective site of the sanctuary. Its three-registered, panelled cult relief is considered a medium-sized one in comparison to the large cult images of Dacia (Cat. III.2). Several other figurative representations of the tauroctony from the sanctuary are also known (Cat. III.8, 16). A notable feature of the sanctuary inventory is the presence of two large statues of torchbearers (Cat. I.7–8), like in the *mithraeum* in Sarmizegetusa. This follows a distinctive local iconographic type reflecting the glocal character of the cult: Cautes holds a *bucranium* and Cautopates a scorpion in his hand.[40] An interesting aspect of the sanctuary's finds is the discovery of a Jupiter altar within this context, which Richard Gordon interpreted as *spolium*; however, Jupiter appears on multiple occasions within the Mithras pantheon.[41]

The so-called Vitalis Mithraeum is the only one excavated systematically (Cat. IV); however, its sculptural material is unknown. Its epigraphic corpus (Cat. II.1–5) highlights the role of the *publicum Portorium Illyrici* and the human agency of the customs system in the Mithras cult, as repeatedly emphasised in the literature, as well as the prominent significance of the local priesthood *(flaminia)* in Dacia within Mithraic communities.[42]

38 About a recently identified column see: Szabó *et al.* 2016.

39 Torma 1863, 134. The identification of the relief and statue is impossible at the moment, as Torma didn't publish drawings or photograph and didn't provide a detailed presentation of the finds.

40 Szabó 2015c.

41 Gordon 2009. See also: Bonnet 2021.

42 Egri *et al.* 2018.

Among the Mithras monuments discovered within the urban area of Apulum but lacking contextual provenance, the most prominent are the sculptural representations of Mithras Petrogenitus (Cat. I.2–6) and several presumed torsos of the torchbearers (Cat. I.7–10 and perhaps I.12–13). The iconographic characteristics of these objects demonstrate, on the one hand, the unique, workshop-independent nature of the sanctuaries (each Petrogenitus depiction is entirely different and singular) and, on the other hand, provide examples for the visual particularities of glocality. As in other communities of the empire, the Mithraic communities of Apulum selectively adapted from the multiple narrative episodes of the Mithras myth, resulting in complex reliefs that are unique creations and exemplars of religious glocalisation. Specific features include the depiction of Helios' solar nimbus, with one ray pointing toward Mithras' face on several reliefs (Cat. III.4–5), Mithras riding the bull and the unique representation of the bull's capture on two anepigraphic statue bases (Cat. II.25–26), as well as the torchbearers depicted with a bull's head and a scorpion (Cat. I.7–10). These elements reflect the distinctive appropriations and religious glocalisation characteristic of Apulum workshops, while simultaneously indicating connections with Italian, Pannonian, and Germanic networks.[43] Due to the early disturbance and destruction of the sanctuaries, the Apulum corpus lacks figurative small finds and frescoes, and thus no relevant sources attest their presence or use. The new sanctuary discovered in 2008 did not significantly alter this situation (Cat. IV).

Divine agency: forms and names of Mithras

Mithras, as a divine agent, appears in numerous forms on the monuments of Apulum. Many episodes of the deity's presumed myth are depicted on the large, panelled reliefs from the conurbation, as well as on other statues and statue bases (e.g., Cautes with a *bucranium*, Cautopates holding a scorpion, Mithras riding the bull). The extremely varied representations, arguably the richest in Dacia, reflect the theological knowledge of the founders of the Mithraic communities in Apulum and likely indicate a direct network associated with the founding generation. The theonyms attested in the epigraphic sources (altars, statue bases, columns, reliefs, and statues) also present a highly diverse picture. The name of the principal deity appears in numerous forms: Sol Deus Invictus Mithras, Deus Sol Invictus Mithras, Sol Invictus Mithras, Deus Invictus Mithras, Sol Mithras, Sol Invictus Mytra, Invictus Mythra, Deus Mithras, Invictus Deus, Numen Invictus, Transitus Dei. The names of the torchbearers, Cautes and Cautopates, are attested on three inscriptions (Cat. II.3, II.6, II.22). Among the material associated with the so-called Oancea Mithraeum is also an altar dedicated to Jupiter Optimus Maximus, though its precise interpretation is impossible due to the lack of contextual information. In contrast to the examples from Sarmizegetusa and Aquincum, the Apulum corpus entirely lacks theonyms associated with Persianism (e.g., Arimanius, Nabarze)[44] as well as other deities that appear relatively frequently elsewhere (e.g., Mercurius). A distinctive feature of the Apulum material is the Hellenised forms of names: Mytra, Mythra, and the deity is even mentioned in Greek (Cat. III.13). The four altars referring to the deity as Mytra and Mythra, discovered in and around the so-called Pap Mithraeum between 1852 and 1867, may indicate a specific naming practice by a Hellenised provincial community, possibly from Moesia Inferior, Thracia, or Syria (Cat. II.9, 12, 13, 14). See also Cat. II.19.

Human agency: the Mithraic communities

From the dual city of Apulum, 27 men dedicating to Mithras are known, while on numerous inscriptions and sculptural monuments the dedicator remains unnamed. Taking into account

43 Szabó 2015a; Szabó 2015b.

44 Gordon 2017.

analogies and the two detailed Mithras albums (Virunum and Sentinum),[45] as well as the five or six sanctuaries that likely existed in Apulum, it can be estimated that each generation may have included at least 50–60, and possibly up to 100–150 individuals affiliated with the cult. Compared to the total population of the dual city, however, this represents a very small proportion, approximately 1–2%.

The Mithraic communities of Apulum varied in size, and their social composition reflected the broader society of Apulum. Among the Mithras dedicators, one individual of senatorial rank is attested (Cat. II.15.), a rare occurrence not only provincially but also across the Danubian region.[46] Marcus Valerius Maximianus, the *legatus legionis* of the *legio XIII Gemina* around 181/82 CE provides an excellent example of the role of personal networks in local religious appropriation and the expression of individual religious identity. The son of a prominent magistrate from Poetovio (Ptuj, Slovenia), he was likely initiated into the mysteries of Mithras for the first time in his native town. His subsequent career from Poetovio to Germania, Apulum, and Lambesis attests to a sustained loyalty to this group religion. In addition to several dedications, which reinforced both his *homo novus* status and his fidelity to the imperial family, he is also considered the first known adept of Jupiter Depulsor in Africa, thereby contributing to the spread of this cult.[47] His personally chosen favourite divinities became popular and persistent in those parts of the Empire where he was stationed for a short period of time. This suggests that the criticised theory of 'prophets' within small-group religions[48] is still plausible, but one can replace this Judeo-Christian notion by the charismatic religious entrepreneur model of Weber.[49] The case of Marcus Valerius Maximianus shows that personal charisma, individual power and respect of a senator could help or serve as a catalyst in the diffusion and stability of a cult and even in forming religious groups, as the case of the House of the Tribunus Laticlavius in Aquincum also shows.[50] The level of individual choice and innovation of senators in the spread of these cults is contested, and, due to the lack of sources, we cannot affirm whether their personal pantheon was indeed accepted by a later group or whether it should be interpreted as a general tendency of religious thought and diffusionism.[51] An interesting issue, which is hard to solve, is the role of senators in the interior hierarchy of the Mithraic groups. In any case, the example of Marcus Valerius Maximianus shows the opposite of what we observe in the religious life of the senatorial elite in the conurbation of Apulum: as a Mithras worshipper, he must be an active member of a group, interacting directly and very personally with soldiers or civilians, much 'lower' categories of society. His charisma, fame and power were transformed into a more personalised, intimate power of forming and shaping groups by direct interaction and conviviality, which made him probably the most 'visible' senator within the conurbation, the others being characterised by an unattainable and invisible attitude.[52]

45 Clauss 2000, 139; Chalupa 2006.

46 About Maximianus, as a Mithraic see: Szabó 2018, 106–110; Kovács 2024.

47 Várhelyi 2010, 147–148.

48 On the idea and historiography of small-group religions, see: Tóth 1992. He uses the word 'apostol', which obviously sounds anachronistic in this context. R. Gordon highly criticised this theory of the important role of the senatorial elite in the formation of Mithraic groups within the military groups, although he admitted that some cases, such as the group in the 'House of the Laticlavi' from Aquincum prove this: Gordon 2009. On the senators and Mithraism in Aquincum, see also: Alföldy 1963, 73–74.

49 Rüpke 1996; Winkler 2010, 32.

50 Kocsis 1991; Gordon 2009, 407.

51 Várhelyi 2010, 147–149.

52 It is important to mention, however, that there are no literary or archaeological sources on the frequency of Mithraic gatherings, meeting or events. During his short stay in Apulum, Marcus Valerius Maximianus probably met his Mithraic brothers several times.

The military, long considered in the literature as one of the main social drivers of the spread of the Mithras cult,[53] appears only marginally in the inscriptions, primarily in the context of the so-called Oancea Mithraeum (Cat. II.17,19, III.2), which was established within the *canabae* of the later *municipium* Septimium Apulense.

Among the Mithras members, however, there are attestations of an *Augustalis*, a *decurio*, several *flamines* (Cat. II.1, 24).[54] and a *beneficiarius*. In numerous cases, the inscriptions reveal the relationships between freedmen and their patrons (Cat. II.8, 13, III.1), supporting Roger Beck's and others' theory that personal, familial, friendly, and professional (occupational and economic) networks played an essential role in the establishment and maintenance of Mithras communities.[55]

The prominence of personal connections is further indicated by the large number of joint dedications. It is noteworthy that some individuals, such as Dioscurus and Vitalis, enriched the inventory of a given sanctuary with multiple objects, playing a decisive role in shaping and maintaining the sacralised space of the sanctuary interior. Similarly significant were figures like Secundinus or Eutiches, who donated large-scale tauroctony depictions (statues and reliefs) to their sanctuary communities, and Statorius, who financed the restoration of a sanctuary at his own expense. Based on a new inscription discovered in 2003 we were able to identify Lucius Octavius Gratus, *Augustalis coloniae* on two different inscriptions (Cat. II.6, III.14).

Although Marcus Valerius Maximianus' *cursus honorum*, imperial-level mobility, and network are exceptional due to his social status, the use of Greek onomastics by several Mithras dedicators suggests that some community members may have originated from Hellenised provinces (Moesia Inferior, Thracia, Syria). The appearance of Cautes depicted with a *bucranium* in Boppard further underscores the significant impact of military dislocations and mobility of members of Mithraic communities. While the topography of the sanctuaries is known in only one case, south of the *castrum*, in a densely inhabited sector of the *municipium* Septimium Apulense between the cemetery and the fort (Cat. IV), the approximate find locations make it clear that the sanctuaries were not established near the representative, central spaces of the twin city but rather within domestic, residential areas.

At the same time, they were situated in visible, frequented, and densely populated locations, confirming the cult's discreet but non-secret character. The Mithras communities in Apulum thus formed an integral part of the local urban religious landscape, and their material and human agency reflects the characteristics of citification, which could not have emerged without the city's resources, commercial activity, and economic and architectural density and intensity.[56] The individual and group dynamics emerging from the epigraphic material may indicate competition, rivalry, and internal group dynamics within the sanctuary communities that went beyond the formal social hierarchy. However, the details of these interactions cannot be reconstructed due to the limited nature of the sources (Tab. 1).

Lived religion and the limits of cognitive religion

Among contemporary approaches to Mithraic studies, the lived ancient religion perspective and the extensive application of cognitive science of religion stand out.[57] Both methodological approaches aim to illuminate the ritual world of *mithraea*, the individual and communal experience, the litur-

53 A revision of this theory: Gordon 2009.

54 See also: Sicoe 2014, Cat. 63.

55 Beck 1996.

56 About the notion see: Rüpke 2020; Rüpke – Urciuoli 2023.

57 On lived religion see: Dirven 2015; Rüpke 2018, 313–318; Szabó 2018, 98–120. On cognitive aspects: Misic 2015; Martin 2015; Panagiotidou – Beck 2017; Misic – Graham 2024.

gical sphere, the evolution of religious communication strategies, and sensory changes, although their methodological frameworks differ significantly. While certain aspects of the lived ancient religion approach, such as religious appropriation, embodiment, and the sociological dimensions of religious communication,[58] can be studied within the context of Roman provincial archaeology in Central and Eastern Europe, the cognitive dimensions of religion are considerably more difficult to investigate in this setting and largely remain limited to the speculative application of contemporary theoretical frameworks and the enumeration of hypotheses.

Tab. 1. List of dedicators attested in inscriptions from Apulum and its surrounding *territorium.*

	Name	Place	function	divinity	Bibliography	Notes
1	[Sec]undinus	Apulum – Alba Iulia (colonia)	unknown	Sol Deus Invictus Mithras tauroctony	Sicoe 2014, Cat. 16 = CIMRM 1947–48	—
2	Euthices	Apulum – Alba Iulia (colonia)	*libertus*	Deus Sol Invictus Mithras	Sicoe 2014, Cat. 17, 20 = CIMRM 1935–36, 1937	See nr. 10 and 11.
3	Marcus Aurelius Thimotheus	Apulum – Alba Iulia (colonia)	*patronus*	Deus Sol Invictus Mithras	Sicoe 2014, Cat. 17, 20 = CIMRM 1935–36, 1937	See nr. 9 and 11.
4	Marcus Aurelius Maximus	Apulum – Alba Iulia (colonia)	*patronus*	Deus Sol Invictus Mithras	Sicoe 2014, Cat. 17, 20 = CIMRM 1935–36, 1937	See nr. 9 and 10.
5	Dioscorus	Apulum – Alba Iulia (colonia)	*servus* or *filius* of Marcus	Invictus Mythra	Sicoe 2014, Cat. 21 = CIMRM 1942–43; Szabó *et al.* 2016	Two monuments (altar and column). See also nr. 13.
6	Chrestion	Apulum – Alba Iulia (colonia)	unknown	Invictus Mythra	Sicoe 2014, Cat. 26 = CIMRM 1944–45; Szabó *et al.* 2016	See also nr.12.
7	Sex(tius) Syntrofus	Apulum – Alba Iulia (colonia)	unknown	Invictus Mythra	Sicoe 2014, Cat. 23 = CIMRM 1939	See nos. 12 and 13 for the divine name
8	Lucanus	Apulum – Alba Iulia (colonia)	unknown	Deus Mithras	Sicoe 2014, Cat. 25 = CIMRM 1941	—
9	L(ucius) Octavius Gratus	Colonia Aurelia Apulensis	*Augustalis coloniae*	Invictus Mithras and Cautopates	Sicoe 2014, Cat. 66 = CIMRM 2003; Sicoe 2014, Cat. 22	Sicoe was reading Cat. 22 as Cratus. The new reading see our Cat. II.6.
10	Spatalus	Apulum – Oarda de Sus (probably colonia)	*Servus – actor*	Invictus Deus	Sicoe 2014, Cat. 27 = IDR III/5, 720	Carbó García 2010 questions its Mithraic nature. See nr. 18.
11	Caius Iulius Rufinus	Apulum – Oarda de Sus (probably colonia)	*Patronus* (?)	Invictus Deus	Sicoe 2014, Cat. 27 = IDR III/5, 720	Carbó García 2010 questions its Mithraic nature. See nr. 17.
12	Anulinus	Apulum – Alba Iulia (municipium)	imaginifer	—	Sicoe 2014, Cat. 29 = CIMRM 1954–55	Oancea Mithraeum

58 Albrecht *et al.* 2018.

	Name	Place	function	divinity	Bibliography	Notes
13	Titus Aurelius Fabia tribu Marcus	Apulum – Alba Iulia (municipium)	*Veteranus legionis XIII Geminae*	Deus Invictus Mithras	Sicoe 2014, Cat. 30, 33 = CIMRM 1958–60	Oancea Mithraeum
14	Caius Iulius Marcianus	Apulum – Alba Iulia (municipium)	*Signifer legionis XIII Geminae*	Sol Invictus Mytra	Sicoe 2014, Cat. 35 = CIMRM 1962	Oancea Mithraeum
15	[Val]er(ius) ...?uiu[s]	Apulum – Alba Iulia (municipium)	unknown	Numen Invictus	Sicoe 2014, Cat. 36 = CIMRM 1963	Oancea Mithraeum
16	Aelius Mestrius	Apulum – Alba Iulia (municipium)	unknown	—	Sicoe 2014, Cat. 37 = CIMRM 1964	Oancea Mithraeum
17	Aelius Gordianus	Apulum – Alba Iulia (municipium)	unknown	Sol Mithras	Sicoe 2014, Cat. 38 = CIMRM 1965	—
18	Euhemerus	Apulum – Alba Iulia (municipium)	unknown	Deus Invictus Mithras	Sicoe 2014, Cat. 41 = CIMRM 1975–76	—
19	...imus	Apulum – Alba Iulia (municipium)	*Beneficiarius consularis*	—	Sicoe 2014, Cat. 44 = CIMRM 1981–82	—
20	Turranius Marcellinus	Apulum – Alba Iulia (perhaps municipium)	*Conductor armamentarii*	Sol Invictus Mithras	Sicoe 2014, Cat. 47 = CIMRM 1992–93	Together with nr. 28.
21	Ant(onius) Senecio	Apulum – Alba Iulia (perhaps municipium)	*Conductor armamentarii*	Sol Invictus Mithras	Sicoe 2014, Cat. 47 = CIMRM 1992–93	Together with nr. 27.
22	Marcus Val(erius) Maximianus	Apulum – Alba Iulia (perhaps municipium)	*Legatus Augusti*	Sol Deus Invictus Mithras	Sicoe 2014, Cat. 51 = CIMRM 1950	—
23	C(aius) Nummius Amandus	Apulum – Alba Iulia (perhaps municipium)	unknown	Sol Invictus Mithras	Sicoe 2014, Cat. 52 = CIMRM 1951	Probably an unfinished inscription or an unusual supernomina
24	Statorius [...] anus	Apulum – Alba Iulia (perhaps municipium)	*Decurio et flamen municipii Septimii Apulensis*	Deus Invictus Mithras sacrum	Sicoe 2014, Cat. 53 = IDR III/5, 709	Uncertain, if the mithraeum was in the colonia or municipium.
25	C(aius) Herenius Ermes	Apulum – Alba Iulia (perhaps municipium)	unknown	Cautes	Sicoe 2014, Cat. 55 = CIMRM 1977	—
26	Vitalis	Apulum – Alba Iulia (municipium)	*arcarius*	Sol Invictus Mithras, Transitus Dei and Cautopates	Egri *et al.* 2018 = AE 2018, 1338–1340	Three (and a possible 4th) incription dedicated by Vitalis. The name of Publius Aelius Marus is also mentioned.
27	Attius Valerianus	Apulum	unknown	relief	Sicoe 2014, Cat. 5 = CIMRM 2198; Nyulas 2021, 174	Uncertain provenience, but recently was suggested to be from Apulum (Nyulas 2021)

	Name	Place	function	divinity	Bibliography	Notes
28	Victo[r---]	Ozd (territorium Apulense)	unknown	—	Sicoe 2014, Cat. 56 = IDR III/4, 131	—
29	For[tu]natus	Săcădate (territorium Apulense)	unknown	Sol Deus Invictus Mytra	Sicoe 2014, Cat. 58 = IDR III/4, 87	—
30	Surus	Decea Mureșului	unknown	Invictus Mithras	Sicoe 2014, Cat. 61 = CIMRM 1932	—
31	Marcus Aurelius Maximus	Lopadea Nouă	*Flamen municipii apulensis*	tauroctony	Sicoe 2014, Cat. 62 = IDR III/4, 63	—
32	Potinus	Oarda de Sus	unknown	Invictus Mythras	Sicoe 2014, Cat. 63 = CIMRM 2005	—
33	Αὐρήλι(ο)ς Στέφανος	Vințu de Jos (possibly Apulum)	unknown	θεῷ Μίθρᾳς	Sicoe 2014, Cat. 65 = CIMRM 2002	Ioan Piso interprets as being from Apulum

A fundamental prerequisite for studying the sensory dimension of religious experience is the availability of a sanctuary that has been archaeologically excavated with precision, documented stratigraphically in detail, and preserved with a relatively complete and materially diverse assemblage. Unfortunately, among the roughly fifty Mithras sanctuaries known from the Danubian provinces, only a few meet these conditions (Poetovio I and III; Aquincum II, IV, V, VI; and perhaps Carnuntum I and III), and none of them can be compared to the examples from Ostia, Rome, Syria (Dura Europos, Hawarte), or Güglingen.[59]

Due to the near-total absence of archaeologically and stratigraphically attested material evidence, the Mithraic material from Apulum is almost impossible to study using the methods of cognitive science of religion. Similarly, the methodological approaches of the lived ancient religion perspective could only be applied partially and fragmentarily, owing to the lack of contextual information for the objects, poor documentation, and the incomplete or only partially excavated nature of the sanctuaries.[60] In many sanctuaries across the Empire, initiation rites are indicated only by iconographic and a few epigraphic features (e.g., *Transitus Dei* dedications, reliefs of Mithras riding the bull),[61] but very few sources document the rites themselves, even considering the small finds from the so-called Vitalis Mithraeum.[62] The full spectrum of sculptural material suggests that Mithras sanctuaries in Apulum likewise followed the theological rules and the so-called sacred geography of the *mithraea*.[63] However, the local particularities, glocal forms, and strategic variations of these practices cannot be analysed in detail due to the absence of archaeological context.

Conclusions

The Mithraic material from Apulum represents one of the most significant and visually striking assemblages in the province of Dacia. These monuments have adorned the princely palace and the city's earliest epigraphic collections since the 16th century, and in the 18th century, the corpus was expanded with remarkable reliefs, elevating it to a continental fame and to the centre of Mithraic studies. Systematic collections of these monuments were undertaken by Franz Cumont, Maarten J. Vermaseren, and Gabriel Sicoe during the 19th, 20th and 21st centuries.

59 Siemers-Klenner 2020.

60 Szabó 2018, 98–120.

61 Nemeti – Nemeti 2007.

62 McCarty *et al.* 2020; Drăgan 2020.

63 Gordon 1976; Beck 2006.

Building on these collections and incorporating new sources, the present study aims to provide a historical overview and religious analysis, as well as to produce an updated catalogue. The study summarises the history of research on the cult as well as the agents and strategies of ancient religious communication, highlighting and substantiating the glocal character of the communities associated with the estimated five or six *mithraea* in Apulum. These communities reflect a glocalised interpretation of a universal religious narrative and visual program originating in Rome, shaped according to the city's particular social groups. In the visual sources of the Mithraic material from Apulum, one observes not only iconographic traditions common throughout the Empire but also numerous local innovations, which testify to the dynamic character of the local community, its economic resources, and its wide-ranging mobility. Epigraphic evidence, including theonyms and the onomastic patterns of human agency, provides clear support for this mobility.

Finally, it is important to note that the rich Mithras material of Alba Iulia also represents an excellent resource and creative workspace for contemporary museology and religious tourism, the valorisation of which, however, remains largely unrealised.[64]

CIMRM Supplement of Apulum

Presumed and excavated sanctuaries

I. Kastal Mithraeum

Location: unknown; on the territory of the *colonia* Aurelia Apulensis.
Dimensions: unknown.
Description: Around 1782 Franciscus Kastal "*ponderum magistri*" found a spectacular group of monuments dedicated to Mithras, the finest pieces of this kind from the province in the territory of the Marospartos (south part of the *colonia* Aurelia Apulensis). The nature of the finds (free standing Mithras Tauroctonos, complex relief) suggests the existence of a *mithraeum*. It is possible that further, unepigraphic finds came from the same spot. The exact place of the discovery is impossible to establish.
Archaeological repertory: Cat. I.1, II.8, III.1 perhaps I.3 or I.4.
Literature: Szabó 2013, 45–64; Szabó 2021, 61.

II. Pap Mithraeum

Location: uncertain. On the territory of the *colonia* Aurelia Apulensis.
Dimensions: unknown.
Description: In 1852 Károly Pap, shipmaster *(hajómester)* discovered the ruins of a Roman building and three Mithraic monuments in his garden, two altars (IDR III/5, 272–273) and a fragmentary relief which is considered disappeared today. The exact place of this garden is not located yet, but the first publisher mentioned the "*Marospartos*" which is the south part of the *colonia* Aurelia Apulensis. The function of the discoverer and the dolphin representation on the altar of Dioscorus could suggest the vicinity of the river. Recently, a votive column was found on the black market, which could belong to the same context.
Archaeological repertory: Cat. I.14, II.12, 13, 14 and a relief attested only in the 19th century.
Literature: Torma 1863, 134; Szabó *et al.* 2016.

III. Oancea Mithraeum

Location: in the area of the *canabae*/*municipium*. Found on the property, garden or field *(Grundstück, jardin)* of Ioan (or Ștefan) Oancea on the plateau of the Vauban fortress on the B-dul Încoronării (today Bulevardul 1 Decembrie 1918). Later, C. Băluță mentioned that a sarcophagus and a Mithraic relief were discovered on the Dealul Furcilor, in the garden of Tăutu Constantin at B-dul 6 Martie, no. 3 in the vicinity of this possible *mithraeum* (approx. coordinates: 46.0648, 23.5651); the place is not yet located on terrain.
Dimensions: unknown. The number of the monuments (ten or eleven) suggests a large or at least, middle sized sanctuary.
Description: In 1930 Virgil Cucuiu attested a Roman building with numerous Mithraic monuments discovered probably by the owner of the garden or field. The context and the exact location of the discovery was never

64 Szabó *et al.* 2023.

published properly. The finds and the discovery entered the literature as a sanctuary *(mithraeum)* already from the first publication and cited numerous times later. The very nature of the discovery was questioned only once and the possibility of a Late Antique *spolia* was raised based on a IOM altar that was found also at the site. Without a systematic excavation and topographic identification of the site, the existence of the sanctuary is hypothetical.
Archaeological repertory: Cat. I.7, 8, 11, II.17–21, II.27, III.2, III.16.
Literature: Christescu 1933, 620–625; Daicoviciu 1941, 299–336; Carbó Garcia 2010, 131; Ota 2012, 106; Sicoe 2014, 21; Szabó 2021, 60–61.

IV. Vitalis Mithraeum

Location: Bulevardul 1 Decembrie 1918, southwest part of the Roman fort, probably on the territory of the *canabae*, later *municipium* Septimium Apulense, part of a densely built area with numerous sacralised spaces (coordinates: 46.066403, 23.565013). Excavated during the 2010s.
Dimensions: Approx. 13 × 7 m (with naos and annexed rooms). The exact dimensions of the building have not yet been published, although several plans are available in the publications.
Description: Named by the publishers as "mithraeum III", the building is the first sanctuary dedicated to Mithras excavated systematically in Alba Iulia. The structure of the building follows a general architectural and spatial tendency of the Mithras sanctuaries, being divided in three main parts: a *pronaos* (antechamber) in the SE, a *naos* with two benches and an additional room in the NE part. The first campaign revealed that the building was built of mud with timber framing covered with tiled roof. The stratigraphy was severely damaged and modified by medieval (12th–13th century) and modern (17th–18th century) layers and interventions.
Archaeological repertory: Cat. II.1–5. The finds are not yet published. The recovered inventory consists of four altars, architectural elements, pottery, objects made of glass, iron, bronze, bone, stone and a large quantity of animal bones. Palynological, archaeobotanical, archaeozoological, soil and radiocarbon samples were also collected.
Literature: Rustoiu *et al.* 2014; Rustoiu *et al.* 2015; Egri *et al.* 2018; McCarty *et al.* 2019; McCarty *et al.* 2020.

Catalogue of the Mithraic monuments from Apulum
(*colonia Aurelia Apulensis* and *municipium Septimium Apulense*)

I. Statues, statuettes

I.1. Cult statue *(signum)* of Mithras Tauroctonos (Fig. 5)

Material: marble.
Dimensions: 108 × 108 × 30 cm.
Place of discovery: Alba Iulia.
Provenance: Partoş district, 1782 from the so-called Kastal Mithraeum.
Place of preservation: Brukenthal Museum, Sibiu, Inv. no.: A 3391 (7164).
Remarks: The iconographic type is well known—though not exclusively—from Roman Italy, depicting the god in a Hellenistic manner. Fine quality marble of uncertain origin. The nature of the damage suggests a possible intentional destruction.
Description: High-quality cult statue *(Kultbild)*. The statue's base is fragmentary, semi-oval and narrow in shape, with the epigraphic field framed by a border. The statue depicts the tauroctony scene with canonical elements. The kneeling and agonising bull, executed with refined artistic skill, is fragmentary: the right hind leg and left foreleg are missing. The animal's mouth, from which the god's hand is also missing, is damaged. One of the bull's horns, decorated with meticulous detail, survives partially. Below the animal, the snake is partially preserved, and in front of it, the dog is seen fragmentarily as it leaps toward the bull's wound. Mithras, shown in the canonical pose with his left foot placed on the bull's back, is represented wearing a short tunic rendered in Hellenistic style, with elegantly crafted folds of superior quality. The god's right leg is fragmentary, and the upper body from the waist upward is missing. Traces of the dagger can be seen on the bull's neck.



Fig. 5. Statue of Mithras Tauroctonos (photo: O. Harl, lupa 17291 and Cs. Szabó with the permission of the Brukenthal Museum).

Date: 2nd–3rd century CE.
Inscription: *[S(oli?)] I(nvicto) ◦ M(ithrae) signum | [- - - Sec]undinus ◦ ex ◦ voto ◦ pos(uit).*
Literature: CIMRM 1947–48; IDR III/5, 284; Müller *et al.* 2012, 57, no. AP32; Szabó 2013; Sicoe 2014, Cat. 16.

I.2. Fragmentary statue of Mithras Petrogenitus (Fig. 6)

Material: sandstone.
Dimensions: 50 × 46 cm.
Place of discovery: Alba Iulia.
Provenance: "Apulum," probably the Partoș district.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no. 208.
Remarks: Judging from the size of the fragment, the statue originally must have exceeded 1 meter in height. Based on analogies, the object stood at the pronaos of a sanctuary.
Description: Statue base depicting Mithras Petrogenitus. The rock from which Mithras emerges is encircled by a serpent. The back part of the monument has a rudimentary elaboration, the cliff sems to be unfinished. The body of Mithras Petrogenitus is missing, probably destroyed, or reused (intentionally or accidentally).
Date: 2nd–3rd century CE.
Literature: CIMRM 1949; Sicoe 2014, Cat. 19. Abb. 3.



Fig. 6. Statue of Mithras Petrogenitus (photo: O. Harl, lupa 19257 with the permission of MNUAI and by Cs. Szabó with the permission of MNUAI).

I.3. Statue of Mithras Petrogenitus (Fig. 7)

Material: limestone.
Dimension: 86 × 43 cm.
Place of discovery: uncertain. As most of the Mithraic material from the Brukenthal Museum comes from Apulum, this monument was probably found there as well.
Provenance: uncertain.
Place of preservation: originally in the Brukenthal Museum, Sibiu, moved probably after 1958 in the National Museum of History in Bucuresti, Inv. no.: 47438.
Description: limestone statue of Mithras Petrogenitus, representing the birth of the god from the primordial rock. The rock is rudimentarily elaborated. The rock is encircled by a large snake, moving towards the god's body. The head of the snake is in frontal view with the genitalia of the divinity. Mithras is represented naked with a Phrygian cap on his head, as a young man, rising from the rock. He is visible from thigh up, his left arm (probably holding a torch) is missing, in his right hand he holds a knife.
Date: 2nd–3rd century CE.
Literature: CIMRM 2184 = Sicoe 2014, Cat. 223, Abb. 6.



Fig. 7. Statue of Mithras Petrogenitus (photo: M. Perpits, MNIR with the kind permission of O. Țentea, director of the MNIR).

I.4. Statue of Mithras Petrogenitus (Fig. 8)

Material: marble.
Dimension: 155 × 57 × 29 cm.
Place of discovery: uncertain. As most of the Mithraic material from the Brukenthal Museum comes from Apulum, this monument was probably found there as well.
Provenance: uncertain



Fig. 8. Statue of Mithras Petrogenitus (photo: O. Harl, lupa 17355).

Place of preservation: Brukenthal Museum, Sibiu, Inv. no.: A 3441 (7275).
Description: Marble statue of Mithras Petrogenitus, representing the birth of the god from the primordial rock. The rock is rudimentarily rendered. The knees of Mithras are encircled by a large snake, but only the upper part of the snake is elaborated. Mithras is represented naked, as a young man, rising from the rock, visible from thigh up. The god is represented with a Phrygian cap, his right arm (probably holding a knife) is missing, in his left hand he holds a torch. The statue is beautifully executed, although anatomically doesn't follow the iconographic standards.
Date: 2nd–3rd century CE.
Literature: CIMRM 2188 = Sicoe 2014, Cat. 224, Abb. 8. See also: Müller *et al.* 2012, 105, Cat. TR.1.

I.5. Fragment of Mithras Petrogenitus (Fig. 9)

Material: Bucova marble.
Dimension: 48 × 34 × 24 cm.
Place of discovery: Alba Iulia.
Provenance: Apulum, unidentified location
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no.: R7.
Description: Votive statue in marble representing Mithras Petrogenitus (Mithras born from the rock). The head and arms of the statue are missing. The nude and robust body of the god with a muscular abdomen is visible from waist up, the rock is encircled by a bearded serpent. The monument was known already in the early 19th century, therefore, it must be from the early discoveries (Kastal or another *mithraeum*).
Date: 2nd–3rd century.
Literature: CIMRM 1991 = Sicoe 2014, Cat. 48, Abb. 4.



Fig. 9. Statue of Mithras Petrogenitus (photo: Cs. Szabó with the permission of MNUAI).

I.6. Fragment of Mithras Petrogenitus (Fig. 10)

Material: limestone.
Dimension: 73 × 32 cm.
Place of discovery: Alba Iulia.
Provenance: Apulum, unidentified location.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no.: R9.
Description: Votive statue in limestone representing Mithras Petrogenitus. The head and arms of the god are missing. The nude and robust abdomen of the deity rises from a roughly worked rock composed of ovoid motifs, encircled by a bearded serpent. It is uncertain in which sanctuary and area of the Roman settlement it was discovered.
Date: 2nd–3rd century CE.
Literature: CIMRM 1994; Sicoe 2014, Cat. 49, Abb. 5.



Fig. 10. Statue of Mithras Petrogenitus (photo: Cs. Szabó with the permission of MNUAI).

I.7. Statue fragment of Cautopates (Fig. 11)

Material: limestone.
Dimension: h – 92 cm.
Place of discovery: Alba Iulia.
Provenance: Discovered in the so-called Oancea Mithraeum on the property of Ioan Oancea in 1930, located on the Citadel Plateau, probably from the *municipium Septimium Apulense*.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no.: 203.



Fig. 11. Statue of Cautopates (photo: Cs. Szabó with the permission of MNUAI).

Remarks: This finely crafted statue was part of the inventory of a sanctuary.
Description: Fragmentary statue representing a figure dressed in Oriental attire with finely rendered folds, wearing a *chlamys*. In his left hand he holds a scorpion, now unidentifiable due to damage. The head of the figure is missing. The legs are not crossed.
Date: 2nd–3rd century CE.
Literature: CIMRM 1956; Sicoe 2014, Cat. 32. Abb. 17; Szabó 2015c.

I.8. Statue fragment of Cautes (Fig. 12)

Material: limestone.
Dimensions: h: 52 cm.
Place of discovery: Alba Iulia.
Provenance: the so-called Oancea Mithraeum on the property of Ioan Oancea in 1930, located on the Citadel Plateau, probably from the *municipium* Septimium Apulense.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no.: ?
Remarks: This finely crafted statue was part of the inventory of a sanctuary together with the previous one.
Description: Torso of a figure dressed in Oriental attire, wearing a *chlamys*. In his left hand he holds a *bucranium*, head of a bull, now unidentifiable due to damage. The head, arms, and legs of the figure are missing. This iconography seems to be a glocal form of religious appropriation identified especially in Apulum and Sarmizegetusa.
Date: 2nd–3rd century CE.
Literature: CIMRM 1957; Sicoe 2014, Cat. 31. Abb. 16; Szabó 2015c.



Fig. 12. Statue of Cautes (photo: Cs. Szabó with the permission of MNUAI).

I.9. Statue of Cautes (Fig. 13)

Material: marble.
Dimensions: uncertain (probably large sized).
Place of discovery: probably Alba Iulia.
Provenance: uncertain.
Place of preservation: in the early 19th century it was part of the Batthyaneum collection, but as it is missing at present, it is only known from 19th century drawings. Could be identical with I.10. Inv. no.: unknown.



Fig. 13. Statue of Cautes (drawing after Hammer-Purgstall 1833).

Description: Standing figure of Cautes, shown not cross-legged, wearing a Phrygian cap and a short tunic. He has boots with scalloped (crenelated) tops, which could be an imagination of the artist from the 19th century. In his raised right hand, he holds a burning torch, while in his left hand he carries a bull's head *(bucranium)*. The iconography of the torchbearer is identical with I.8. and I.10.
Date: 2nd or 3rd century CE.
Literature: CIMRM 2185 with the previous literature; Sicoe 2014, Cat. 222, Abb. 18; Szabó 2015c.

I.10. Two statue fragments of Cautes (Fig. 14).

Material: marble.
Dimensions: torso: 37 cm (height) × 29 cm (width) × 6–10 cm (thickness). The head: 19 cm (height) × 4 cm width (uncertain thickness).
Place of discovery: Alba Iulia, secondary position (reused in one of the buildings of the Roman Catholic seminar since the 1990s). Before the 1990s, apparently in reused position in a late Renaissance house.
Provenance: probably Apulum.



Fig. 14. Statue of Cautes – fragments (after Szabó 2015c).

Place of preservation: decorative elements at the Roman Catholic seminar (private property), has no inventory number. The torso is in the inner wall of a private garden, the head is in the cellar.
Description: Fragment 1 (torso of the torchbearer): The preserved part represents the bust of Cautes, torchbearer of Mithras, holding the head of the bull in his left hand. The head, right arm and the lower part of the torchbearer are missing. The head of the bull is carefully carved with the details of the curly hair of the animal. The left hand of Cautes is rudimentarily carved and is oversized. He wears a long tunic, with a fibula on his right shoulder fastening his cloak *(chlamys)*, which is partially preserved. The oriental dress is decorated with carefully carved pleats. The back part of the cloak is also rendered with pleats, and a small part of the hair is preserved, which proves the statuary nature of the artefact. However, the thickness of the fragment suggests that the statue was not free-standing, but surrounded by a wall or niche, intended for a frontal view. Similar analogies from Dacia and other provinces indicate that the monument could be part of a statuary group representing Mithras Tauroctonos with the torchbearers, an individual statue of Cautes standing in a niche of the pronaos or on a statue base. Fragment 2 (the head of the torchbearer): The thick hair, curly tresses, rough lines of the face and the break line of the head prove its concordance with the torso. The Phrygian cap is partially preserved. The eyes and nose of the person are superficially carved or deformed due to the poor conditions of the statue. The face represents a young, beardless person with a melancholic expression, a very common iconography for the torchbearers. The full height of the statue was approx. 90–100 cm. The iconography of the torchbearer is identical with I.4. and I.5. The fragments could be identical with Cat. I.5. although no clear evidence for this hypothesis.
Date: 2nd or 3rd century CE
Literature: Szabó 2015c.

I.11. Statue of a man and a woman (?).

Material: unknown.
Dimension: unknown.
Place of discovery: Alba Iulia.
Provenance: unknown, probably near the Fortress (presumably from the Oancea Mithraeum).
Place of preservation: unknown, Inv. no.: unknown.
Remarks: Statues of a man and a woman from the collection of Vasile Cucuiu, who discovered and saved the monuments of the Oancea Mithraeum. Their Mithraic character is uncertain.
Date: probably 2nd–3rd century CE.
Literature: CIMRM 1967.

I.12. Head of a torchbearer or Mithras (Fig. 15).

Material: sandstone.
Dimensions: h – 35 cm.
Place of discovery: Alba Iulia.
Provenance: Apulum, unidentified location.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no.: 264/II (probably lost).
Remarks: The Mithraic character of the piece is uncertain.
Description: Fragment of a large sandstone statue. The preserved head depicts a young man with finely rendered, wavy hair, wearing a Phrygian cap—possibly representing one of the torchbearers, Mithras himself, or Attis.
Date: 2nd–3rd century CE.
Literature: CIMRM 1987; Sicoe 2014, Cat. 254, Abb. 20.



Fig. 15. Head of a torchbearer or Mithras (after CIMRM 1987).

I.13. Head of a torchbearer (Fig. 16).

Material: sandstone.
Dimensions: h – 16 cm.
Place of discovery: Alba Iulia.
Provenance: Apulum, unidentified location.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no.: R803.

Remarks: The Mithraic character of the piece is uncertain.
Description: Fragment of a sandstone statue. The preserved head represents a young man with long, curly hair, without a Phrygian cap.
Date: 2nd–3rd century CE.
Literature: CIMRM 1988; Sicoe 2014, Cat. 255. Abb. 21.



Fig. 16. Head of a torchbearer (photo: O. Harl, lupa 19358 with the permission of MNUAI).

I.14. Fragment of a Mithraic statue.

Material: unknown.
Dimension: unknown.
Place of discovery: Alba Iulia.
Provenance: *colonia* Aurelia Apulensis, the so-called Pap Mithraeum.
Place of preservation: uncertain. In 1863 was part of the Erdélyi Múzeum (Transylvanian Museum). No current information.
Description: The fragment of a Mithraic statue (uncertain iconography) is shortly mentioned by Károly Torma in his publication of the material from the so-called Pap Mithraeum.
Date: uncertain, probably 2nd–3rd century CE.
Literature: Torma 1863, 134.

II. Altars, statue bases, columns

II.1. Altar or statue base (Fig. 17).

Material: Ighiu limestone.
Dimension: 120 × 52.8 × 38.8 cm.
Place of discovery: Alba Iulia.
Provenance: *municipium* Septimium Apulense (*canabae legionis*), the so-called Vitalis Mithraeum (coordinates: 46.066224, 23.564902).
Place of preservation: National Museum of the Union, Alba Iulia, Inv.no.: R11857. Description: A statue base or altar of large size (one of the largest in the Mithraic corpus). Both the base and the cornice of the piece are decorated with mouldings. The corona features simple acroteria framing a central motif of *acanthus* leaves. The piece was discovered overturned within the nave, with its inscribed face downward and the cornice oriented eastward, toward the *mithraeum*'s entrance. A significant part of the backside is missing, proving that it was repurposed as building material during the Árpád dynasty within the sanctuary (probably was not moved).



Fig. 17. Mithraic altar or statue base (drawing after Egri *et al.* 2018, Fig. 1, and Clauss Slaby Database).

Date: 2nd century CE.
Inscription: *Soli | Invicto | Mitrhae (!) | pro salute* |[5] *P(ubli) ◦ Ael(i) ◦ Ma|ri ◦ flam(inis) col(oniae) | Vitalis ◦ ark(arius) | v(otum) l(ibens) s(olvit).*
Literature: AE 2018, 1338; Rustoiu *et al.* 2014; Rustoiu *et al.* 2015; Egri *et al.* 2018, 268–271; McCarty *et al.* 2019; McCarty *et al.* 2020.

II.2. Statue base (Fig. 18).

Material: Ighiu limestone.
Dimension: 60.2 × 32.3 × 25.6 cm.
Place of discovery: Alba Iulia.
Provenance: *municipium* Septimium Apulense (*canabae legionis*), the so-called Vitalis Mithraeum (coordinates: 46.066224, 23.564902).
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no.: R11858.

Description: The base and the cornice of the statue base are decorated with mouldings. The monument was reused in Medieval times, split in half vertically. The upper part is partially missing and damaged. The stone was broken in two unequal parts vertically. The same dedicant as in II.1. The interpretation of the inscription, especially the letters after the name of the dedicant (G S) is problematic.
Date: 2nd century CE.
Inscription: *Transi|to (!)* ◦ *dei | sacr[u]m | Vitalis |*[5] *G(- - -)* ◦ *S(- - -)* ◦ *v(otum) s(olvit).*
Literature: AE 2018, 1339; Rustoiu *et al.* 2014; Rustoiu *et al.* 2015; Egri *et al.* 2018, 271–272; McCarty *et al.* 2019; McCarty *et al.* 2020.



Fig. 18. Mithraic altar or statue base (drawing after Egri *et al.* 2018, Fig. 2, and Clauss Slaby Database).

II.3. Statue base (Fig. 19).

Material: Ighiu limestone.
Dimension: 62.2 × 32.3 × 25.8 cm.
Place of discovery: Alba Iulia.
Provenance: *municipium* Septimium Apulense *(canabae legionis)*, the so-called Vitalis Mithraeum (coordinates: 46.066224, 23.564902).
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no.: R11859.
Description: The base and the cornice of the statue base are decorated with mouldings. The monument was reused in Medieval times, split in several parts. The lower left corner is partially missing and damaged. The same dedicant as in II.1.
Date: 2nd century CE.
Inscription: *Cauto|pati | sacrum | Vitalis |*[5] *[ar]k(arius)* ◦ *G(- - -)* ◦ *S(- - -) | [v(otum)] s(olvit).*
Literature: AE 2018, 1340; Rustoiu *et al.* 2014; Rustoiu *et al.* 2015; Egri *et al.* 2018, 272–273; McCarty et al. 2019; McCarty *et al.* 2020.



Fig. 19. Mithraic altar or statue base (drawing after Egri *et al.* 2018, Fig. 4, and Clauss Slaby Database).

II.4. Statue base.

Material: Ighiu limestone.
Dimension: unknown.
Place of discovery: Alba Iulia.
Provenance: *municipium* Septimium Apulense (*canabae legionis*), the so-called Vitalis Mithraeum (coordinates: 46.066224, 23.564902).
Place of preservation: National Museum of the Union, Alba Iulia (no photo available), Inv. no.: unknown.
Description: The details of this statue base are not published in Egri *et al.* 2018.
Date: 2nd century CE.
Inscription: no preserved inscription (although presumably was a dedication for Cautes).
Literature: Egri *et al.* 2018, 273; McCarty *et al.* 2019; McCarty *et al.* 2020.

II.5. Fragment of an altar or statue base.

Material: limestone.
Dimension: 7.4 × 6.5 × 4.3 cm.
Place of discovery: Alba Iulia.
Provenance: *municipium* Septimium Apulense *(canabae legionis)*, the so-called Vitalis Mithraeum (coordinates: 46.066224, 23.564902).
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no.: unknown.
Description: Small fragment of a limestone inscription. The material is different than the previous Ighiu lime-

stones. Due to the fragmentary nature of the monument, it is impossible to establish its functionality (altar or statue base).
Date: 2nd century CE.
Inscription: - - - - - - / [- - -]C [- - -] / [- - -] ◦ P[- - -] / - - - - - -
Literature: Egri *et al.* 2018, 273; McCarty *et al.* 2019; McCarty *et al.* 2020.



Fig. 20. Statue base of Cautopates (photo: Apulum Project with the kind permission of I. Haynes).

II.6. Statue base (Fig. 20).

Material: limestone.
Dimensions: 20 × 16 × 8 cm.
Place of discovery: Alba Iulia.
Provenance: Discovered during the 2003 excavation campaign of the Liber Pater sanctuary (RAN code: 1026.13), in the southwestern part of the building (coordinates: 46.050373, 23.564927). Place of preservation: National Museum of the Union, Alba Iulia, Inv. no.: unknown (photograph published with the permission of the Apulum Project, prof. dr. Ian Haynes).
Description: Epigraphic limestone statue base, preserving a fragment of the statue's left foot. The small pedestal of the statue was mobile and replaceable in a rectangular base with inscription. The inscription field contains three lines of text. On the upper moulding, a fragment of the left foot of Cautopates is preserved (3.5 cm).
Date: The devotee originated from *colonia* Aurelia Apulensis (after 180 CE).
Inscription: *Cautopaṭi | deo | L(ucius) ◦ Oc(tavius) ◦ Gratus ◦ Aug(ustalis) col(oniae).*
Literature: Sicoe 2014, Cat. 22.

II.7. Altar (Fig. 21).

Material: limestone.
Dimension: approx. 60 × 50 cm.
Place of discovery: Alba Iulia (Partos, Marospartos).
Provenance: Discovered during the 2003 excavation campaign of the Liber Pater sanctuary (RAN code: 1026.13), in the north-eastern part of the building, in the corner of a structure (coordinates: 46.050373, 23.564927).
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no.: unknown. (photograph published with the permission of the Apulum Project, prof. dr. Ian Haynes).
Description: Votive altar made of limestone, preserved in its entirety but roughly worked. The base and the cornice of the pedestal are decorated with mouldings. A rectangular *foculus* decorates the upper part of the altar. The inscription field is crudely executed, probably unfinished, with several depressions. The corona is decorated with incised *hederae distinguentes*. The Mithraic nature of the monument remains uncertain due to the lack of systematic archaeological excavations.



Fig. 21. Mithraic altar (photo: Apulum Project with the kind permission of I. Haynes).

Date: 2nd–3rd century CE.
Inscription: ◦ *Deo* ◦ *Invic|to* ◦ *pro* ◦ *salu͡te | boni com[mu͡]+|nio (!)* ◦ *NI+[- - -] f*[5] - - - - - -
Literature: Haynes 2005, 44; Sicoe 2014, Cat. 28.

II.8. Statue base (Fig. 22).

Material: white marble.
Dimension: 36 × 44 × 22 cm.
Place of discovery: Alba Iulia.
Provenance: Partoș quarter, territory of the *colonia* Aurelia Apulensis, from the so-called Kastal Mithraeum.

Place of preservation: Brukenthal Museum, Sibiu, Inv. no: A 3390 (7163).
Description: Traces of lead used for fixing the statue to the pedestal are visible on the top of the monument. The statue base has an unusual shape, probably a reused monument (originally an architectural element, possibly a cornice). In line 4, the name *Timotei* may also be read as *Timothi*, with an unfinished 'H.'
Dating: 161–180 CE, based on the dedicant's onomastics, or alternatively to the Severan period, according to the presence of ligatures and the form of the letters *A* and *S*.



Fig. 22. Mithraic statue base (photo: O. Harl, lupa 17290).

Inscription: *D(eo) S(oli) I(nvicto) M(ithrae) | pro salute inc|o{t}flu͡mitate M(arci) Au͡re(li) | Timotei et A͡ur(eli) M[s]aximi ◦ votu͡m nu͡n|cupavit ◦ solvit◦que | Eu{t}[l]hyces ◦ eorum lib(ertus) ◦ | retulit.*
Literature: CIL III, 1110; CIMRM 1937; IDR III/5, 281; Sicoe 2014, Cat. 20.

II.9. Altar or statue base (Fig. 23).

Material: limestone.
Dimension: 43 × 23 × 20 cm.
Place of discovery: Alba Iulia.
Provenance: Partoş quarter, *colonia* Aurelia Apulensis, discovered in 1867 during the railway construction.
Place of preservation: Sighişoara Museum, Inv. no: 2482.
Description: Votive altar or statue base bearing an inscription. The base and the cornice are decorated with mouldings. The dado of the monument is damaged on the right side. The corona is decorated with four vegetal motifs, the third from the left is fragmentary. The text is rudimentarily engraved. The letter c in line I was added later and is disproportionate compared to the other letters. The inscription field is damaged in several places. The decoration of the altar is very similar to Cat. II.11.



Fig. 23. Mithraic altar or statue base (photo: N. Tescula with the permission of the Sighisoara Museum).

Dating: Based on the letter forms, it appears to belong to the second half of the 2nd century CE.
Inscription: *Invict[o] | Mythra͡[e] | Sex(tius) ◦ Synt͡r|ofus ◦ v(otum) ◦ s(olvit) ◦ l(ibens).*
Literature: CIMRM 1939; IDR III/5, 277; Sicoe 2014, Cat. 23.

II.10. Altar or statue base (Fig. 24).

Material: limestone.
Dimension: 53 × 25 × 24 cm.
Place of discovery: Alba Iulia.
Provenance: Partoş quarter, *colonia* Aurelia Apulensis, discovered in 1879.
Place of preservation: Brukenthal Museum, Sibiu, Inv. no: A 3406 (17179).
Description: Rudimentarily worked votive altar or statue base with a base and cornice decorated with mouldings. Given the rough and unrefined workmanship and the small dimensions of the monument, the object served more likely as a votive altar. The reading of line II is uncertain *(G = C?).*
Dating: 2nd–3rd century CE.
Inscription: *I(nvicto) ◦ M(ithrae) | A(- - -) ◦ G(- - -).*
Literature: CIMRM 1940; IDR III/5, 269; Sicoe 2014, Cat. 24.



Fig. 24. Mithraic altar or statue base (photo: O. Harl, lupa 17288).

II.11. Altar (Fig. 25).

Material: limestone.
Dimension: 45 × 22 × 17 cm.
Place of discovery: Alba Iulia.
Provenance: Partoș quarter, territory of the *colonia* Aurelia Apulensis, discovered in 1868 probably during the railway construction works.
Place of preservation: Brukenthal Museum, Sibiu, Inv. no: A 3416 (7189).
Description: Crudely executed votive altar with a base and a cornice. The cornice is decorated with two corner and an acroteria. Very roughly worked piece with an epigraphic text that is difficult to interpret. As in other examples, the letter *E* is rendered with only two vertical strokes *(hastae)*. The decoration of the altar is very similar to Cat. II.9.
Dating: 2nd–3rd century CE.
Inscription: *D(eo) Inv̂(icto) O(mnipotenti) M(ithrae) | vota | retuli | Lucanus.*
Literature: CIMRM 1941; IDR III/5, 268; Sicoe 2014, Cat. 25.



Fig. 25. Mithraic altar or statue base (photo: O. Harl, lupa 17287).

II.12. Altar or statue base (Fig. 26).

Material: limestone.
Dimensions: 63 × 50 × 39 cm.
Place of discovery: Alba Iulia.
Provenance: Partoș quarter, *colonia* Aurelia Apulensis, discovered in 1852 in the garden of Károly Pap (the so-called Pap Mithraeum).
Place of preservation: Originally in the Museum of the History of Transylvania, Cluj-Napoca, today in the National Museum of History of Romania in Bucuresti, Inv. no: 69933.
Description: Well-crafted votive statue base with a tall and carefully executed base. Listed as "altar" by Vermaseren, the monument is probably a statue base, based on the flat surface and large dimensions of its base. On both sides, a finely carved dolphin is depicted. The inscription is clearly legible. The corona is thin and undecorated. On the lateral sides, a dolphin and a trident are visible possibly indicating a degree of initiation. The reliefs can suggest also a reused funerary altar or workshop markers. The text of the altar is identical with the inscription on Cat. II.13.
Dating: Based on the letter forms and stylistic features, probably 2nd century CE.
Inscription: *Invicto | Mythrâe (!) | Diosco|rus ◦ Marci f(ilius) v(otum) ◦ s(olvit) ◦ l(ibens) ◦ m(erito) ◦.*
Literature: CIMRM 1942–1943; IDR III/5, 273; Nemeti – Nemeti 2007, no. 6; Sicoe 2014, Cat. 21; Szabó *et al.* 2016.



Fig. 26. Mithraic altar or statue base (photo: M. Perpits, with the kind permission of O. Țentea, director of MNIR).

II.13. Column (Fig. 27).

Material: sandstone (biomicrite).
Dimensions: the current height of the monument is 120 cm; the shaft (diam. 38 × 24 cm) has been cut with unusual care and accuracy.
Place of discovery: probably Alba Iulia.
Provenance: probably Partoș quarter, *colonia* Aurelia Apulensis, discovered in 1852 in the garden of Károly Pap (the so-called Pap Mithraeum). The monument was discovered on the black market in the collection of an individual.



Fig. 27. Mithraic column (photo: C. Toma in Szabó *et al.* 2016).

Place of preservation: private collection, has no inventory number.
Description: The monument is of a coarse-grained carbonaceous sandstone (biomicrite), that occurs mainly in the eastern part of the Transylvanian basin. It is completely preserved, though it was repaired in Antiquity after suffering damage. The upper and lower part of the column each has a 7 × 4 cm hole for metal installations, possibly for fixing the corona and the pedestal, however, it is not sure if it was made in Antiquity or later. The current height of the monument is 120 cm; the shaft (diam. 38 × 24 cm) has been cut with unusual care and accuracy. The text of the column is identical with the inscription on Cat. II.12 which suggest the same context of discovery.
Dating: probably 2nd century CE.
Inscription: *Invicto | Mythrâe (!) | Diosco|rus ◦ Marci f⁵ v(otum) ◦ s(olvit) ◦ l(ibens) ◦ m(erito).*
Literature: Szabó *et al.* 2016.

II.14. Altar (Fig. 28).

Material: limestone.
Dimensions: 68 × 45 × 31 cm.
Place of discovery: Alba Iulia.
Provenance: Partoş quarter, *colonia* Aurelia Apulensis, discovered in 1852 in the garden of Károly Pap (the so-called Pap Mithraeum).
Place of preservation: Museum of the History of Transylvania, Cluj-Napoca, Inv. no: V 51139.
Description: Well-executed votive altar. The base is damaged. On both lateral sides of the inscription field there are figural representations: an *urceus* on the left and a *patera* on the right. The altar's cornice is tall and elegantly decorated with a triangular pediment (*fronton*): a *tympanum* and two *acroteria*. Within the *tympanum* appears the image of Sol with twelve rays, slightly damaged. On the lateral side, a rosette with vegetal motifs is visible. As in other examples, in lines three and four the letter *E* is rendered with only two vertical strokes (*hastae*).



Fig. 28. Mithraic altar or statue base (photo: MNIT with the kind permission of the museum).

Dating: 2nd–3rd century CE.
Inscription: *Invicto | Myth{i}r|ae (!) ◦ Chr|estion f⁵ v(otum) s(olvit) ◦.*
Literature: CIMRM 1944–1945; IDR III/5, 272; Sicoe 2014, Cat. 26; Szabó *et al.* 2016.

II.15. Altar or statue base.

Material: unknown.
Dimension: unknown.
Place of discovery: Alba Iulia.
Provenance: Probably discovered within the area of the *canabae* or *municipium* Septimium Apulense, embedded in the wall of the medieval fortification.
Place of preservation: lost.
Remarks: The altar was drawn in 1722–1723 by Giuseppe Ariosti and belonged to the group of seventeen inscriptions later sank in the River Tisza near Szeged.
Dating: 180–182 CE.
Inscription: *[Soli?] Invicto | Mit(h)rae | M(arcus) Val(erius) Maxi|mianus f⁵ leg(atus) Aug(usti) f⁵ v(otum) s(olvit).*
Literature: CIMRM 1950; IDR III/5, 286; Ariosti 2010, 319, no. III; Sicoe 2014, Cat. 51.



Fig. 29. Mithraic altar or statue base (photo: O. Harl, lupa 17289).

II.16. Altar (Fig. 29).

Material: limestone.
Dimension: 77 × 43 × 23 cm.
Place of discovery: Alba Iulia.

Context: Probably from the *canabae or municipium* Septimium Apulense; discovered reused as a building stone in a modern cemetery.
Place of preservation: Brukenthal Museum, Sibiu, Inv. no: A 3404 (7177).
Description: Fragmentary votive altar. The right side of the cornice and a small portion of the inscription field are missing, though the text itself is undamaged. The base is tall and divided. The cornice is fragmentary, decorated with a triangular pediment and acroteria; decoration of the corona is almost entirely lost. This inscription likely attests the existence of a Mithraic sanctuary either in the *vicus* or in the *municipium* Septimium Apulense. The last line (containing the verb *fecit*) is probably missing.
Date: 2nd–3rd century CE.
Inscription: *Soli ◦ I(nvicto) ◦ M(ithrae) ◦ | C(aius) ◦ Nummius | Amandus | qui ◦ et ◦ f templum.*
Literature: CIMRM 1951; IDR III/5, 283; Sicoe 2014, Cat. 52.

II.17. Altar or statue base (Fig. 30).

Material: limestone.
Dimension: 63 × 40 × 30 cm.
Place of discovery: Alba Iulia.
Provenance: Discovered in the so-called Oancea Mithraeum in 1930, located on the Citadel plateau, probably on the territory of the *municipium* Septimium Apulense.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no: 906.
Description: Altar or statue base of good quality preserved fragmentarily. The lower and upper left corners of the pedestal are broken. The inscription field is tall and rather narrow, with finely carved letters. The first line and the upper moulding are fragmented. The object is fragmented into four pieces and was probably dedicated together with piece no. 16. The letter 'E' in the first line is difficult to read. The final line allows for several interpretations.



Fig. 30. Mithraic altar (photo: R. Ota and D. Zudor, MNUAI).

Date: 2nd–3rd century CE.
Inscription: *Deo ◦ Invi|cto ◦ Mith(rae) | T(itus) ◦ Aur(elius) ◦ Fabia | Marcus | vet(eranus) ◦ leg(ionis) ◦ XIII ◦ G(eminae) | d(onum) ◦ d(edit) ◦ d(edicavit).*
Literature: CIMRM 1960; IDR III/5, 270; Sicoe 2014, Cat. 33.

II.18. Altar or statue base (Fig. 31).

Material: limestone.
Dimension: 23 × 22 × 13 cm.
Place of discovery: Alba Iulia.
Provenance: Discovered in the so-called Oancea Mithraeum in 1930, located on the Citadel plateau, probably on the territory of the *municipium* Septimium Apulense.
Place of preservation: National Union Museum, Alba Iulia, Inv. no: 373.
Description: The piece is fragmentary, the lower part with parts of the inscription and the name of the dedicator is missing. The corona is beautifully decorated with acroteria and plant motifs.
Date: 2nd–3rd century CE.
Inscription: *Invict(o) | [D]eo ◦ vo|[tum? sol(vit)?] | - - - - - -*
Literature: CIMRM 1961; IDR III/5, 287; Sicoe 2014, Cat. 34.



Fig. 31. Mithraic altar (photo: R. Ota and D. Zudor, MNUAI).

II.19. Altar or statue base (Fig. 32).

Material: limestone.
Dimension: 59 × 33 × 20 cm.
Place of discovery: Alba Iulia.
Provenance: Discovered in the so-called Oancea Mithraeum in 1930, located on the Citadel plateau, probably on the territory of the *municipium* Septimium Apulense.
Place of preservation: National Union Museum, Alba Iulia, Inv. no: 358.
Description: Limestone altar or statue base. The monument is damaged on the lower right side. The inscription field is well preserved. The cornice is fully preserved, without decoration, probably unfinished. Noteworthy is the rare ligature in the fourth row ('NVS').
Date: 2nd–3rd century CE, based on the shape and style of the letters, it seems to be more likely from the 3rd century.
Inscription: *Soli ◦ Invicto | Mythrâe (!) | C(aius) ◦ Iulius | Marcianus̃ | [f] signif(er) ◦ leg(ionis) | XIII ◦ Gem(inae) | libens ◦ posuit.*
Literature: CIMRM 1962; IDR III/5, 282; Sicoe 2014, Cat. 35.



Fig. 32. Mithraic altar (photo: R. Ota and D. Zudor, MNUAI).

II.20. Altar or statue base (Fig. 33).

Material: limestone.
Dimension: 35 × 27.5 × 18 cm.
Place of discovery: Alba Iulia.
Provenance: Discovered in the so-called Oancea Mithraeum in 1930, located on the Citadel plateau, probably on the territory of the *municipium* Septimium Apulense.
Place of preservation: National Union Museum, Alba Iulia, Inv. no: 300.
Description: Fragmentary limestone altar or statue base. The lower half of the altar with half of the inscription field is missing. The upper part is damaged and is difficult to see. The cornice is divided, decorated with a triangular pediment with a rosette and corner acroteria with plant motifs. Palmette decorations are visible on the sides.
Date: 2nd–3rd century CE. Ioan Piso argued that based on the iconographic features of the corona it can be dated to the 2nd century CE (see IDR III/5, 266 as analogy).
Inscription: *Ṇumini | [in]ẏicti | [- Va]ler(ius) | [- - -] viu[s] [f] [- - -]+[- -] | - - - - - -*
Literature: CIMRM 1963; IDR III/5, 288; Sicoe 2014, Cat. 36.



Fig. 33. Mithraic altar or statue base (photo: R. Ota and D. Zudor, MNUAI).

II.21. Statue base (Fig. 34).

Material: limestone.
Dimension: 70 × 37 × 28 cm.
Place of discovery: Alba Iulia.
Provenance: Discovered in the so-called Oancea Mithraeum in 1930, located on the Citadel plateau,



Fig. 34. Mithraic altar or statue base (photo: O. Harl, lupa 19197).

probably on the territory of the *municipium* Septimium Apulense.
Place of preservation: National Union Museum, Alba Iulia, Inv. no: 280.
Description: Limestone statue base. The base and cornice are decorated with mouldings and are slightly damaged. The inscription field is well preserved. The corona is decorated with a triangular pediment with acroteria in the corners and a tympanum with plant motifs. On the top of the pedestal, we can see where the statue was attached. The name of the god is missing from the inscription.
Date: 2nd century CE (probably Antonine period).
Inscription: *Ael(ius)* ◦ *Mes|trius* ◦ *l(ibens)* ◦*| pos(uit)*◦.
Literature: CIMRM 1964; IDR III/5, 289; Sicoe 2014, Cat. 37.

II.22. Altar or statue base (Fig. 35).

Material: limestone.
Dimension: 65 × 30 × 27 cm.
Place of discovery: Alba Iulia.
Provenance: discovered probably on the territory of Apulum, observed by Opitz in 1622 in the wall of the Jesuit College already in secondary position, and in 1857 by Mommsen in the garden of the Roman Catholic Cathedral.
Place of preservation: National Union Museum, Alba Iulia, Inv. no: 67.
Description: Votive altar or statue base made of limestone, slightly damaged due to reuse. The base and the cornice are decorated with mouldings. The inscription field is well preserved. The corona is decorated with two corner acroteria and a rosette with plant motifs in the centre. The monument bears traces of reuse on its sides.
Date: 2nd or 3rd century CE.
Inscription: *Cauti* ◦*| G(aius)* ◦ *Hēren|nius* ◦*| (H)ermes* ſ *v(oto).*
Literature: CIMRM 1977; IDR III/5, 42; Sicoe 2014, Cat. 55 (wrongly claims that it is a lost piece).



Fig. 35. Mithraic altar or statue base (photo: O. Harl, lupa 11133).

II.23. Altar (Fig. 36).

Material: limestone.
Dimension: 15 × 8.7 × 8.2 cm.
Place of discovery: Alba Iulia.
Provenance: probably the territory of the *colonia* Aurelia Apulensis. Uncertain.
Place of preservation: National Museum of History Cluj, Inv. no: 3672.
Description: Roughly executed limestone votive altar. The base and the cornice are disproportionately high and decorated with mouldings. An egg-and-dart motif runs along the lower edge of the cornice. The inscription field is rough and unfinished. The corona is decorated with acroteria and plant motifs. Three sides of the dado are decorated: on the left side there is a floral motif, on the right the head of an animal that is difficult to identify, probably a bull, on the back of the altar is a portrait surrounded by a wrath. Traces of paint are visible on the inscription field. The inscription is unfinished and is difficult to read in the current state of the monument. Its Mithraic nature is also questionable.
Date: 2nd or 3rd century CE.
Inscription: *Mi[thrae?] | [-] Au[r(elius?) - - -] | [-]+[- - -].*
Literature: CIMRM 1989; IDR III/5, 292; Sicoe 2014, Cat. 54 (wrongly claims that it is a lost piece).



Fig. 36. Mithraic altar (photo: with the kind permission of the MNIT).

II.24. Altar (Fig. 37).

Material: limestone.
Dimension: 125 × 62 × 62 cm.
Place of discovery: Alba Iulia.
Provenance: discovered on the banks of the Mureş River in 1998, probably in secondary position. Presumably from the territory of *colonia* Aurelia Apulensis.
Place of preservation: National Union Museum, Alba Iulia, Inv. no: 9568.
Description: Limestone altar of large dimensions. The pedestal is in a bad state of preservation. The inscription field is damaged on the left side, where a fragment is missing. The cornice is decorated with plant motifs but is very fragmentary. The monument is one of the largest inscriptions belonging to the Mithraic cult discovered in Dacia. It mentions the reconstruction of a sanctuary and a new *flamen*. It certainly belonged to a sanctuary *(mithraeum)*, although impossible to establish which one from the presumed sanctuaries of the *colonia* Aurelia Apulensis (Kastal Mithraeum, Pap Mithraeum).



Fig. 37. Mithras altar (photo: O. Harl, lupa 12244).

Date: probably 3rd century CE (after 197 CE).
Inscription: *[D]eo ◦ Invicto | [Mi]t(h)rae ◦ sac(rum) | [-] Statorius | [- - -]anus dec(urio) |[5] [et] flamen m|[uni] c(ipii) ◦ Sep(timi) ◦ Ap[ul(ensis)] | [In]vict(i) templum pr[o] | [sal]utem (!) sua ◦ suorum|[que p]ecunia mea feci.*
Literature: IDR III/5, 709; Sicoe 2014, Cat. 53.

II.25. Statue base (Fig. 38).

Material: limestone.
Dimension: 118 × 35–44 × 30–38 cm.
Place of discovery: Alba Iulia.
Provenance: uncertain place of discovery. Territory of Apulum.
Place of preservation: National Union Museum, Alba Iulia, Inv. no: 33/I.
Description: Large, fragmentary, uninscribed limestone statue base (column base?) in a bad state of preservation. Based on its size and the preserved upper fragment, the piece could have served as the base of a votive column or statue base. The piece belonged to a sanctuary. In the central field appears Mithras (or Cautes) riding the bull to the right, holding a torch raised in his right hand (possibly the symbol of the grade *heliodromus*). Under the front leg of the bull, we see three ears of wheat or the stylized representation of a tree. The cornice is tall, divided, without decorations. The iconography of the relief is almost identical with Cat. II.26.



Fig. 38. Mithraic statue base (photo: Cs. Szabó with the permission of MNUAI).

Date: 2nd–3rd century CE.
Inscription: no traces of inscription (the column is missing).
Literature: CIMRM 1985; Nemeti – Nemeti 2007; Sicoe 2014, Cat. 50.

II.26. Statue base (Fig. 39).

Material: limestone.
Dimension: 100 × 34 × 44, 29 × 34 cm.
Place of discovery: probably Alba Iulia.
Provenance: uncertain place of discovery. Territory of Apulum.
Place of preservation: Brukenthal Museum, Sibiu, Inv. no: A 3440/7274.

Description: Large, uninscribed limestone statue base. Based on its size and proportions, the piece could have served as the base of a large statue. The piece belonged to a sanctuary. The base and the cornice are decorated with mouldings. In the central field Mithras (or Cautes) is riding the bull to the right, holding a torch in his right hand (possibly the symbol of the grade *heliodromus*). Traces of red pigment are still visible. The iconography of the relief is almost identical with Cat. II.25.
Date: 2nd–3rd century CE.
Inscription: no traces of inscription (the column is missing).
Literature: CIMRM 2186; Nemeti – Nemeti 2007; Sicoe 2014, Cat. 255.

II.27. Statue base/column (Fig. 40).

Material: limestone.
Dimension: 55 × 22 × 34 cm.
Place of discovery: Alba Iulia.
Provenance: Discovered in the so-called Oancea Mithraeum in 1930, located on the Citadel plateau, probably on the territory of the *municipium* Septimium Apulense.
Place of preservation: National Union Museum, Alba Iulia, Inv. no: 290.
Description: Fragment of a limestone column capital, which served probably as a statue base or an architectural / decorative element in the so-called Oancea Mithraeum. There is a three-line inscription on the corona. The mouldings are elegantly carved, without decorations. The column does not follow any of the classical canons. The object is in a bad state of preservation.
Date: 2nd century CE.
Inscription: *[So]l(i) ◦ Mit(h)rae | [P(ublius?)] Ael(ius) Gordianus | v(otum) ◦ s(olvit) ◦ l(ibens) ◦ m(erito).*
Literature: CIMRM 1965; IDR III/5, 279; Sicoe 2014, Cat. 38.

II.28. Altar or statue base (Fig. 41).

Material: limestone.
Dimension: 98 × 61 × 38 cm.
Place of discovery: Alba Iulia.
Provenance: Discovered in secondary position close to the river Mures in the same area as Cat. II.24. Probably from the territory of the *colonia* Aurelia Apulensis. Its Mithraic nature is uncertain.
Place of preservation: National Union Museum, Alba Iulia, Inv. no: uncertain.
Description: Large sized altar or statue base of limestone. The upper part of the altar (the cornice and the first line of the inscription) is missing. The rest of the inscription field is partially preserved, but small parts of the left and the right side are missing (9 letters on both sides).
Date: 2nd–3rd century CE.



Fig. 39. Mithraic statue base (photo: O. Harl, lupa 17353).



Fig. 40. Mithraic statue base or column (photo: Cs. Szabó with the permission of MNUAI).



Fig. 41. Mithraic altar or statue base (photo: O. Harl, lupa 12264).

Inscription: *Invi[cto] | Deo ◦ pro | saluſe ◦ C(ai) ◦ Iu[l(i)] | Rufini ◦ l[ibe]|rorumqu[e] | [eiu]s ◦ Spatalu[s] | [se] r(vus) ◦ actor ◦| [v(otum) ◦] s(olvit) ◦ l(ibens) ◦ l(aetus) ◦ m(erito).*
Literature: IDR III/5, 720; Sicoe 2014, Cat. 27.

III. Reliefs

III.1. Panelled relief with three registers (Fig. 42).



Fig. 42. Mithraic relief (photo: O. Harl, lupa 17299).

Material: White marble.
Dimension: 62 × 63 × 10 cm.
Place of discovery: Alba Iulia.
Provenance: Found in the territory of Partoş (*colonia* Aurelia Apulensis) district in 1782 as part of the so-called Kastal Mithraeum.
Place of preservation: Brukenthal Museum, Sibiu, Inv. no: A 3389 (7162).
Description: The relief belongs to Type II.a1 in Gabriel Sicoe's typology and is divided into three registers. It could have served as the central relief of the sanctuary, although the context of discovery (Kastal Mithraeum), the moderate size of the relief and the presence of the *signum* dedicated by Secundinus (Cat. I.1.) indicates, that this monument was not the central dedication of the sanctuary. In the central register the tauroctony scene takes place: Mithras, dressed in Persian attire, tunic girded at the waist, fluttering *chlamys*, long trousers fastened at the ankles, and Phrygian cap; he turns his head to the left toward Sol. With his right hand he holds a dagger, killing the bull, whose head he pulls back by the jaw with his left hand. The head of the god is damaged. The bull's tail ends in three coarsely rendered ears of wheat. The votive inscription D·S·I·M appears on the bull's body, which is unusual in Mithraic iconography. The scene is surrounded by the usual elements of the tauroctony: the raven perched on the god's cloak, the serpent under the bull rising toward its spilled blood, and the dog leaping toward the wound on the right side of the relief. The torchbearers are also placed in the central register *(dadophoroi)*, Cautes (right) and Cautopates (left), in typical Persian dress with Phrygian caps, holding their torches upward (left) and downward (right) respectively, both unusually facing directly toward the tauroctony. The head of Cautes is damaged. Cautopates probably holds a scorpion in his left hand. Mithras is depicted on horseback over the bull and Mithras Taurophoros on the left side of the central register; on the right side, a *krater* and a lion in vertical position can be seen. Above the lion stands Mithras Petrogenitus, holding a torch and a dagger. The central register is separated from the upper register by a row of seven altars. There are small scenes in the upper register, from left to right: the bust of Sol without the solar crown; Mithras seated on a rock, shooting an arrow toward another rock in front of which a human figure kneels; a crescent-shaped boat containing a bull appears as an independent, yet associated motif; near the rock stands a structure resembling a house with a deformed bull inside. In front of these elements unfolds a bucolic scene showing a running dog, a resting ram, and a figure with crossed legs leaning on a staff-like object. A recumbent figure lies below him, probably Oceanus or Saturnus (a special form of the lion-headed god, Arimanius). On the right side of the upper register is the bust of Luna with a crescent moon. The left part of the lower register is missing; only a fragment of an arcade remains, probably representing the *dextrarum iunctio* between Mithras and Sol. In the next arcade appears the ritual banquet scene, with Mithras and Sol seated and holding an object, or possibly an animal on the table. The final scene depicts Mithras ascending in Sol's quadriga, holding a torch in his hand; before him lies an elderly figure, reclining and gazing toward the chariot, surrounded by a serpent. The dedicatory inscription is placed under the lower register. The lower left part of the relief is damaged.
Date: 161–180 CE, based on the onomastics of the dedicator, or alternatively, the Severan period according to the presence of ligatures.
Inscription: *◦ D(eo) ◦ S(oli) ◦ I(nvicto) ◦ M(ithrae) ◦|| [pro sal(ute) et incolumi]taſe ◦ M(arci) Aur(eli) ◦ Thimotheſi ◦ eſt ◦ Aur(eli) ◦ Maximi | [votum nuncupavit so]lvitq(ue) ◦ Euthices ◦ eorum li[b](ertus).*
Literature: CIL III, 1109; CIMRM 1935–6; IDR III/5, 280; Sicoe 2014, Cat. 17.

III.2. Panelled relief with three registers (Fig. 43).



Fig. 43. Mithraic relief (photo: O. Harl, lupa 19324).

Material: Marble.
Dimension: 63 × 74 × 3.5 cm.
Place of discovery: Alba Iulia.
Provenance: Discovered in the so-called Oancea Mithraeum in 1930, located on the Citadel plateau, probably on the territory of the *municipium* Septimium Apulense.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no: 455.
Description: Central relief with three registers, belonging to Type I.b in Sicoe's typology, displaying the same iconographic program as reliefs Cat. III.1, III.3, with minor variations. The central register is framed by two pilasters with capitals decorated with vegetal motifs. The tauroctony scene is represented beneath a semicircular arch composed of vegetal elements imitating the form of a grotto *(spelaeum)*. In the central scene, Mithras is shown in canonical pose slaying the bull, turning his gaze toward Sol. The raven is absent from the god's *chlamys*. Cautopates on the left is depicted with crossed legs, holding an arrow in his hand; the head and upper part of the body are missing. Beneath the bull, the serpent and the dog appear; the scorpion is either absent or not visible. Cautes stands on the right side, also with crossed legs, in Oriental dress, holding a raised torch with both hands. On the left side of the central register, outside the semicircular arch, Mithras riding the bull is probably missing. Above this area Mithras Taurophoros can be seen and the bust of Sol with a radiate crown. On the right side are the bust of Luna with a crescent, Mithras Petrogenitus holding a torch (right hand) and a dagger (left hand), and below them, a lion and a *krater*. The central and the upper register are separated by a band containing the dedicatory inscription. In the upper register, from left to right, one observes: an unidentified figure in Oriental attire with Phrygian cap, placing his left hand on the shoulder of Mithras, the archer. In front of him, Mithras stands on a rock, shooting an arrow toward a tree. In front of them, a figure in Oriental dress is climbing a tree. Near the tree is the crescent-shaped boat containing a bull, beneath which are two rams. In the following scene, an animal leaps onto the back of a figure in Oriental dress, beside whom stands another figure with crossed legs and a fluttering cloak. The final scene of the upper register depicts Oceanus or Saturnus (probably a special form of the lion-headed god Arimanius) reclining on a *kline*. The lower register is fragmentary, the left corner is missing. Beneath a fragmentary semicircular arch is the scene of the sacred banquet, with Sol and Mithras reclining on a *kline*; with a *mensa tripes in the foreground*. The final scene represents the ascension of Sol's *quadriga* with Mithras before him; in front of them lies a semi-nude figure surrounded by a serpent (probably Arimanius, representing the cosmic depth of the Mithraic myth). The relief has been preserved in several large fragments, now restored. A rectangular block is missing from the left corner. The thickness of the object (3.5 cm) indicates that it was used as a *Kultbild* in the apse of a sanctuary.
Date: 2nd–3rd century CE.
Inscription: *D(eo)* ◦ *I(nvicto)* ◦ *M(ithrae)* ◦ *T(itus)* ◦ *Aur(elius)* ◦ *F(abia)* ◦ *Marcus* ◦ *vet(eranus)* ◦ *leg(ionis)* ◦ *XIII* ◦ *G(eminae)*.
Literature: CIMRM 1958–1959; IDR III/5, 271; Sicoe 2014, Cat. 30.

III.3. Panelled relief with three registers (Fig. 44).

Material: Marble from Bucova.
Dimension: 120 × 100 × 8 cm.
Place of discovery: Alba Iulia.
Provenance: discovered in the territory of Apulum. Uncertain context, known already in 1823. Although it was certainly a central relief of a sanctuary, it cannot be associated with any of the presumed *mithraea*.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no: 204.II.
Description: Central relief with three registers, belonging to Type I.b according to Sicoe's typology, exhibiting the same iconographic program as reliefs Cat. III.1, III.2 with minor variations. In the central scene, Mithras is depicted in canonical pose slaying the bull, gazing toward Sol. The dagger is disproportionately large. The raven is rendered in a rudimentary manner on the god's *chlamys*. Cautopates (left), dressed in Oriental attire, is shown with crossed legs, holding a torch in his right hand and with his left, grasping

the bull's tail, which ends in stylised ears of wheat. Beneath the bull appear the scorpion, serpent, and dog. On the right side stands Cautes, also in Oriental dress with crossed legs, holding a raised torch with both hands. On the left side of the central register appears Mithras riding the bull and Mithras Taurophoros, executed with fine workmanship. Above Cautes's head is a bearded figure reclining on a *kline,* probably Saturnus (or a special form of Arimanius), holding an object, perhaps a falx, in his right hand. Next to him Mithras Petrogenitusis holding a dagger in his right hand, but his left hand and shoulder are missing. Beneath Cautes a lion is depicted beside a *krater*. In the upper register, from left to right, Sol can be seen in a *biga* (two-horse chariot), the head and shoulder of the deity are missing. A figure in Oriental costume with a fluttering *chlamys* assists Mithras, who stands upon a rock and shoots an arrow toward another rock. A figure in Oriental dress kneels in front of him, facing the rock. Near the rock appears the crescent-shaped boat containing a bull, beneath which stands a structure resembling a house with a bull or ram inside. Below this 'house of the bull' are seven altars. Further to the right are two figures in Oriental dress: the first, probably Mithras, looks and strikes toward the house with a torch; the second is shown with crossed legs, leaning on a staff-like object. The next scene depicts Luna in a *biga* drawn by two oxen; only the whip and the deity's hand are preserved, the body is lost. The left corner of the lower register is missing. A fragment of an arch is still visible. The final scene represents the ascension of Sol's *quadriga*, with Mithras standing in front of it. In the lower right corner sits a bearded, semi-nude figure, probably Saturnus (or Arimanius, the god of cosmic creation and eternity) surrounded by a serpent, his hands raised. The lower left corner and parts of the left side of the upper register are missing.



Fig. 44. Mithraic relief (photo: O. Harl, lupa 19314).

Date: 2nd–3rd century CE.
Inscription: no inscription visible.
Literature: CIMRM 1972; Müller *et al.* 2012, 48, AP13; Sicoe 2014, Cat. 40.

III.4. Relief with one register (Fig. 45).

Material: Marble from Bucova.
Dimension: 104 × 67–77 × 9–12 cm.
Place of discovery: Alba Iulia.
Provenance: discovered in 1905 in the territory of the *colonia* Aurelia Apulensis in secondary position. It is uncertain if it was ever used as a central relief of a sanctuary.
Place of preservation: Museum of Arad, Inv. no: unknown.
Description: The relief is one of the biggest known representations of Mithras Tauroctonos in Dacia and the biggest of its type. The upper part of the relief is fragmentarily preserved, the edge and the framework of the relief are missing. Similarly, the Phrygian cap of Mithras and the bust of Luna in the right corner is fragmentarily preserved. The face and cloak of Mithras, the radius of Sol and some parts of the raven is beautifully carved and well preserved. The face of Mithras is represented in an unusual, frontal position, not turning to Sol, but staring towards the viewer—a very rare iconographic feature. His face, as Cserni mentioned in his second letter, is extremely detailed, one of the most beautiful features of the provincial art from Dacia. Even the cheeks and eyelids are carved. Cautopates is entirely battered, similarly to the bull,



Fig. 45. Mithraic relief (photo: V. Sava in Szabó *et al.* 2014).

whose legs and corns are the only identifiable parts. The lower part is also severely damaged. No traces of the dog or the scorpion is visible. Cautes appears fragmentarily, but with clear lines of his attribute and shape. There is no inscription on the relief. It is possible it never was marked with an inscription, as is the case with many reliefs of this size (see Cat. III.3, III.5.) but in its present condition it is impossible to determine.
Date: 2nd–3rd century CE.
Inscription: no inscription visible.
Literature: CIMRM 1938 and 1986 (wrongly interpreted as two monuments); Sicoe 2014, Cat. 46. (wrongly considered as lost); Szabó *et al.* 2014.

III.5. Relief with one register (Fig. 46).

Material: Marble of unknown origin.
Dimension: 113 × 145 × 10–23 cm.
Place of discovery: Alba Iulia.
Provenance: discovered in the territory of Apulum. Uncertain context, known already in 1823. Although it was certainly a central relief of a sanctuary, it cannot be associated with any of the presumed *mithraea*.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no: 203.II.
Description: Central relief with a single register. The main scene is placed beneath a semicircular arch imitating the mythical Persian grotto *(spelaeum)* described also by Porphyry. In the central scene, Mithras is depicted in the act of slaying the bull. The god is shown in Oriental attire, wearing a finely worked *chlamys* with rich folds and a double tunic. His face is damaged, slightly inclined toward Sol, and he wears the Phrygian cap. His trousers are decorated with an elaborately embroidered pattern. The kneeling bull bears a wide ornamental band around its body, its tail ends in oversized ears of wheat. Beneath the bull the scorpion, the serpent are depicted, and a dog leaping toward the wound. To the left of the tauroctony stands Cautopates, dressed in Oriental costume but without his torch (possibly holding a scorpion); on the right, Cautes holds a raised torch in his right hand and an object (possibly a *bucranium*) in his left. Above the arch, in the upper left corner is the bust of Sol with a crown of twelve rays, one of which points toward Mithras. Along the upper band runs a row of seven altars with flames, alternating with daggers and trees topped with Phrygian caps. This rare iconography points to the Germanic provinces (Heddernheim). In the upper right corner is the bust of Luna with a crescent.
Date: 2nd–3rd century CE.
Inscription: no inscription visible.
Literature: CIMRM 1973; Sicoe 2014, Cat. 39.



Fig. 46. Mithraic relief (photo: O. Harl, lupa 19256).

III.6. Relief (Fig. 47).

Material: Marble of unknown origin.
Dimension: 33 × 23 × 4.5 cm.
Place of discovery: Alba Iulia.
Provenance: discovered in the territory of Apulum. Uncertain context, known already in 1823.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no: R644.
Description: Small cult relief with three registers, executed according to the Moesian model. The three registers are framed by a border bearing the inscription. The central register is filled with the tauroctony scene. Mithras, in canonical pose, is dressed in Oriental costume, wears the Phrygian cap and kills the bull with a dagger. Beneath the bull is the serpent, while on its right side the dog leaps toward the wound. The scorpion and raven are absent. The scene is flanked by the *dadophoroi*: on the left, Cautopates



Fig. 47. Mithraic relief (photo: O. Harl, lupa 19290).

stands with legs uncrossed, holding the torch downward; on the right, Cautes holds an upright torch in his right hand and a bow. Behind Mithras the busts of Sol and Luna can be seen. In the upper register several figures are depicted from left to right: a figure in Oriental attire advancing toward Mithras, who stands upon a rock shooting an arrow; next follows a crescent containing the bull, beneath which appears the 'house of the bull', rendered in a rough manner. On the right is the continuation of the miracle of the water: a kneeling figure in front of a rock. The final scene depicts Mithras Petrogenitus with raised hands. In the lower register are three scenes separated by arches. In the first, Sol is represented kneeling before Mithras, who holds an object in his right hand. The second scene shows the sacred banquet with Mithras and Sol, while the final scene depicts the ascension of Mithras in Sol's *quadriga*. On the right side a roughly executed figure appears, probably Saturnus (a form of Arimanius, *cosmokrator*).
Date: 2nd–3rd century CE.
Inscription: *Deo Invicto Mithr(a)e || Euhemerus ◦ ex voto | posuit.*
Literature: CIMRM 1975–6; IDR III/5, 274; Sicoe 2014, Cat. 41.

III.7. Relief fragment (Fig. 48).

Material: Marble of unknown origin.
Dimension: 27 × 9.5 × 3 cm.
Place of discovery: Alba Iulia.
Provenance: discovered in the territory of Apulum. Uncertain context, possibly discovered in the first half of the 20th century.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no: 290.
Description: Three fragments of a votive marble relief, probably with two registers, heavily damaged. Only the left part of the relief is preserved. In the lower register the head of Mithras can be seen wearing the Phrygian cap, situated beneath an arch; above it is an altar. From the central register only the leg of a *kline*, the raven, and part of the bust of Sol are preserved.
Date: 2nd–3rd century CE.
Inscription: *Soli ◦ Invi[cto Mithrae - - -] || - - - - - -*
Literature: CIMRM 1979–80; IDR III/5, 278; Sicoe 2014, Cat. 45.



Fig. 48. Mithraic relief (photo: R. Ota and D. Zudor, MNUAI).

III.8. Relief (Fig. 49).

Material: Marble of unknown origin.
Dimension: 13,5 × 25 × 5 cm.
Place of discovery: Alba Iulia.
Provenance: discovered in the territory of Apulum. Uncertain context, possibly discovered in the first half of the 20th century.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no: 643.
Description: Fragment of a votive marble relief, probably with a single register, belonging to Type I in Sicoe's typology. Only the lower part of the bull is preserved, together with the serpent, the dog, and the crossed legs of Cautes, who is depicted wearing a short tunic.
Date: 2nd–3rd century CE (probably after 168 CE based on the consular title).
Inscription: *[- - -]imus ◦ b͡e(ne)f(iciarius) co(n)s(ularis) ◦ v(otum) [s(olvit)].*
Literature: CIMRM 1981–82; IDR III/5, 291; Sicoe 2014, Cat. 44.



Fig. 49. Mithraic relief (photo: I. Piso).

III.9. Relief.

Material: unknown (perhaps marble).
Dimension: unknown.
Place of discovery: Alba Iulia.
Provenance: discovered in the territory of Apulum. Uncertain context, possibly discovered in the 15–16th century. Based on the inscription it might come from the territory of the *canabae* or *municipium* Septimium Apulense.
Place of preservation: disappeared.
Description: Fragment of a Mithraic relief (probably of large size) representing the tauroctony (Mithras killing the bull) with the accompanied symbols (snake, dog). In the 17th century the monument already decorated the palace of the Transylvanian prince, today it is lost.
Date: 2nd–3rd century CE.
Inscription: *S(oli) ◦ I(nvicto) ◦ M(ithrae) ◦ Turranius ◦ Marcellinus | et ◦ Ant(onius) Senecio ◦ Iunior ◦ conductores ◦ armament(arii) | ex voto posuerunt.*
Literature: CIMRM 1992–93; IDR III/5, 285; Sicoe 2014, Cat. 47.

III.10. Relief fragment (Fig. 50).

Material: marble.
Dimension: 42 × 45 × 8.5 cm.
Place of discovery: Alba Iulia.
Provenance: discovered in the territory of the *canabae*, *municipium* Septimium Apulense, probably in the same area as the so-called Oancea Mithraeum.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no: 656.
Description: Fragmentary votive relief with three registers, belonging to Type I.a according to Sicoe's typology. Part of the lower register and of the main scene, the tauroctony is preserved. From the tauroctony scene the kneeling and wounded bull, the scorpion and serpent beneath it are visible, as well as the dog leaping toward the wound. The god's leg and part of his short tunic can be seen on the animal's back. From the lower register, a section of the arcade is preserved, showing a figure in Oriental attire holding a torch in the right hand, and Sol with a torch before the *quadriga*. The relief fragment could belong to a large relief that once stood in a sanctuary in the *canabae*.
Date: 2nd–3rd century CE.
Inscription: no inscription preserved.
Literature: Sicoe 2014, Cat. 43.



Fig. 50. Mithraic relief (photo: S. Olea with the kind permission of the author).

III.11. Relief (Fig. 51).

Material: marble.
Dimension: 40 × 34.5 × 3 cm.
Place of discovery: Alba Iulia.
Provenance: discovered in the territory of ancient Apulum based on the manuscript of József Kemény. Franz Cumont cited the place of discovery as Apulum, the later bibliography associated with Potaissa (Turda). Nyulas 2021 confirmed its provenance as Apulum based on the Kemény manuscript.
Place of preservation: National History Museum of Transylvania, Cluj, Inv. no: 1135.
Description: Single-register marble relief. The upper part of the relief is curved, marked by an elegant border that frames the sculpted surface and symbolises the mythical Persian cave *(spelaeum)*. At the centre of the composition, Mithras, depicted in Persian at-



Fig. 51. Mithraic relief (photo: with the kind permission of MNIT).

tire and finely carved, turns slightly to the right toward Sol as he plunges the dagger into the bull. At the bull's leg and genitals are the serpent and scorpion, while from the left a small dog leaps toward the wound. The tauroctony scene is framed on both sides by the torchbearers Cautes and Cautopates: Cautes on Mithras' left holds the torch raised upward, while Cautopates on the right holds his torch downward. Above the deities a large, pinecone-shaped tree stands. A raven is shown descending upon Mithras' *chlamys* from the right, with the busts of Sol and Luna appearing to his right and left, respectively. Unusually, a lion's protome is depicted above Mithras, which may refer to the dedicator's grade of *leo* or to an astrological constellation or seasonal moment.
Date: 2nd–3rd century CE.
Inscription: *Pro [salute? - - -] | Att(ius?) ◦ Va[- - -].*
Literature: CIMRM 2198; CIL III, 901; Sicoe 2014, Cat. 5; Nyulas 2021, 174, 188.

III.12. Relief (Fig. 52).

Material: marble.
Dimension: 24 × 19.5 × 3 cm.
Place of discovery: Vinţu de Jos (Alvinc), close to Alba Iulia.
Provenance: discovered in Vinţu de Jos in the river Mureş in secondary position in 1859. The detailed context of the discovery is not documented. It was in the possesion of László Bartschi, surgeon from Orăştie (Broos, Szászváros). The Brukenthal Museum bought it on 11th March 1875 for 100 forint.
Place of preservation: Brukenthal Museum, Sibiu, Inv. no: 1826.
Description: Small-sized marble relief divided into three registers. The central, main register is filled with the tauroctony scene, rendered in detail with unusually refined and elegant execution. Mithras, shown in an almost frontal position, slays the bull, whose hide and dewlap are elaborately modelled. Beneath the bull is a schematically depicted scorpion; the serpent is missing, and the dog is crudely represented. The two torchbearers, Cautes and Cautopates, appear in elegant form, each wearing a *chlamys* over the shoulders. The Persian trousers *(braccae persicae)* are absent on both Mithras and the torchbearers, giving the impression that their legs are bare. Both *dadophoroi* hold their torches raised upward. In the right *dadophoros*' right hand, a club is visible, from which presumably the bull's hide or a bundle is suspended. The busts of Sol and Luna are placed above Cautes and Cautopates. A finely carved raven descends onto Mithras' cloak from the right, while above him nine small altars stand in a line, five to Mithras' right and four to his left. The upper register depicts various episodes from the *vita* Mithrae: Mithras as Taurophoros (carrying the bull on his shoulders, the *Transitus Dei*), the bull in a boat, Mithras seated on a rock shooting an arrow (the *Fons Perennis*), the bull housed within an *aedicula*-like structure, and three kneeling male figures, likely representing Mithras' various trials and preparations for his struggle with the bull. The last scene on the left of the upper register shows Mithras Petrogenitus, suggesting that the narrative may be read from left to right. In the lower register the post-tauroctony episodes can be seen between Sol and Mithras, placed beneath schematic arcades symbolising the mythical cave (three cave-like arches). In one scene Mithras kneels before Sol; in the next, the divine pair reclines at the ritual banquet *(convivium)* on a *kline*; this is followed by their celestial ascent in a *biga* (or *quadriga*). The sequence likely concludes with a depiction of Saturnus–Arimanius, symbolising eternal cosmic renewal, though the figure is rendered in a very schematic manner. The relief is almost completely identical with Cat.III.15. The central and upper part of the relief has a bronze copy in the Staatliche Antikensammlungen und Glyptothek from München (Inv. no. NI 3431). The object has been acquired after 1872 from the art dealer Aron Drey (1813–1891).
Date: 2nd–3rd century CE.
Inscription: no inscription preserved.
Literature: CIMRM 2000; Sicoe 2014, Cat. 64.



Fig. 52. Mithraic relief (photo: O. Harl, lupa 17466).

III.13. Relief (Fig. 53).

Material: marble.
Dimension: 23 × 16 × 2 cm.
Place of discovery: Vinţu de Jos, close to Alba Iulia.
Provenance: discovered in Vinţu de Jos in the river Mures. Probably in secondary position, although the detailed context of the discovery was not documented. Cumont and Ioan Piso considered as monuments from Apulum.
Place of preservation: Brukenthal Museum, Sibiu, Inv. no: A1277.
Description: Small, single-register marble relief. The central scene depicts the tauroctony. Mithras, shown in the traditional canonical pose, slays the bull. Beneath the sacrificial animal, the scorpion and the serpent are crudely represented, while a dog leaps toward the wound from the left. On either side of Mithras appear the busts of Sol and Luna, and a raven descends onto Mithras' *chlamys*. The tauroctony scene is framed by the two torchbearers, Cautes and Cautopates, both of whom, in an unusual manner, are shown holding their torches raised. Along the lower frame of the relief runs a Greek inscription.
Date: 2nd–3rd century CE.
Inscription: *Αὐρήλι(ο)ς Στέφανος θεῷ Μίθρᾳ | εὐχαριστήρι(ο)ν.*
Literature: CIMRM 2001–2; IDR III/5, 267; Sicoe 2014, Cat. 65.



Fig. 53. Mithraic relief (photo: O. Harl, lupa 17451).

III.14. Relief.

Material: unknown.
Dimension: unknown.
Place of discovery: he relief was attested in the 16th century by Mezerzius as a reused monument in the Dominican monastery of Alvinc, later reused in the Martinuzzi castle.
Provenance: uncertain, probably the ancient territory of Apulum, although it was associated also with Vinţu de Jos.
Place of preservation: disappeared (known since the 16th century).
Description: Mithras relief. No details known.
Inscription: *Invicto | Mit[h]rae | L(ucius) ◦ Octavius | Gratus |ˢ v(otum) ◦ s(olvit) ◦ l(ibens) ◦ m(erito).*
Literature: CIL III, 1119; CIMRM 2003; IDR III/5, 275; Sicoe 2014, Cat. 66.

III.15. Relief (Fig. 54).

Material: marble.
Dimension: 24 × 19.5 × 3 cm.
Place of discovery: probably Alba Iulia.
Provenance: uncertain, probably the ancient territory of Apulum.
Place of preservation: Cumont mentioned in his catalogue that a marble relief—originally kept in the collections of the Transylvanian Museum from Cluj (Kolozsvár)—was later in a private collection in Budapest. No current data about the monument. Gypsum copy of the monument was made in 1877 in Vienna by the Hofmuseum. Today the copy is at the Archaeological Museum of Innsbruck, inv. no. 105.
Description: Small-sized marble relief divided into three registers. In the central, main register appears The tauroctony scene fills the central register, rendered in detail with unusually refined and elegant execution. Mithras, shown in an almost frontal position, slays the bull, whose hide and dewlap are elaborately modelled. Beneath the bull is a schematically depicted scorpion; the serpent is missing, and the dog is crudely



Fig. 54. Mithraic relief (gypsum copy) (photo: M. F. Müller, with the kind permission of the Archaeological Museum of Innsbruck).

represented. The two torchbearers, Cautes and Cautopates, appear in elegant form, each wearing a *chlamys* over the shoulders. The Persian trousers *(braccae persicae)* are absent on both Mithras and the torchbearers, giving the impression that their legs are bare. Both *dadophoroi* hold their torches raised upward. In the right *dadophoros*' right hand, a club is visible, from which presumably the bull's hide or a bundle is suspended. Above Cautes and Cautopates are the busts of Sol and Luna. A finely carved raven descends onto Mithras' cloak from the right, while above him nine small altars stand in a line, four to Mithras' right and five to his left. The upper register depicts various episodes from the *vita* Mithrae: Mithras as Taurophoros (carrying the bull on his shoulders, the *Transitus Dei*), the bull in a boat, Mithras seated on a rock shooting an arrow (the *Fons Perennis*), the bull housed within an *aedicula*-like structure, and three kneeling male figures-likely representing Mithras' various trials and preparations for his struggle with the bull. The last scene on the left of the upper register shows Mithras Petrogenitus, suggesting that the narrative may be read from left to right. In the lower register, the post-tauroctony episodes between Sol and Mithras are depicted, placed beneath schematic arcades symbolising the mythical cave (three cave-like arches). In one scene Mithras kneels before Sol; in the next, the divine pair reclines at the ritual banquet *(convivium)* on a *kline*; this is followed by their celestial ascent in a *biga* (or *quadriga*). The sequence likely concludes with a depiction of Saturnus–Arimanius, symbolizing eternal cosmic renewal, though the figure is rendered in a very schematic manner. The relief is almost identical with Cat. III.12. The only minor detail is a krater represented under the raven. The monument can be also a forgery based on Cat. III.12, however the available data does not allow us to prove it.
Date: 2nd–3rd century CE.
Inscription: no inscription preserved.
Literature: CIMRM 1974; Sicoe 2014, Cat. 42.

III.16. High relief (Fig. 55).

Material: marble.
Dimension: 36 × 10–33 cm.
Place of discovery: Alba Iulia.
Provenance: Discovered in the so-called Oancea Mithraeum on the property of Ioan Oancea in 1930, located on the Citadel Plateau, probably from the *municipium* Septimium Apulense.
Place of preservation: National Museum of the Union, Alba Iulia, Inv. no: uncertain.
Description: Fragment of a marble high relief, a rare type in Apulum (known in some case studies in Sarmizegetusa). The bull-slaying scene is represented on a standing slab. On the right shoulder of Mithras Tauroctonos there was a dagger originally, of which only the base remains. The scorpion is not depicted, while the serpent and the dog are shown beside the bull's wound. To the right of the tauroctony scene appears Cautes, with crossed legs, holding a raised torch in his right hand, resting it upon his right shoulder. In his left hand he holds a round object. Above him is the bust of Luna. Cautopates is no longer preserved, nor are the head and right leg of Mithras Tauroctonos, as well as the hind leg and tail of the sacrificial bull.
Date: 2nd–3rd century CE.
Inscription: *[- - -] Ạn͡ulinus imag(inifer) l(egionis) XIII G(eminae).*
Literature: CIMRM 1954–55; IDR III/5, 290; Sicoe 2014, Cat. 29.



Fig. 55. Mithraic high-relief (photo: A. Diaconescu and A. Schäfer, after Sicoe 2014, 151, Cat. 29. with the kind permission of the author).

IV. Other objects

None of the Mithraic sanctuaries discovered before 2008 were excavated, therefore Apulum is completely lacking in the small finds (ceramic, metal, bone objects) of the sanctuary-inventories. The small finds of the so-called Vitalis Mithraeum, discovered in 2008 and excavated in 2013–2016, are not yet published.[65]

65 McCarty *et al.* 2019. The sanctuary was used in the Medieval times and almost completely destroyed, the number of small finds is extremely limited and cannot be compared to undisturbed sites, such as Güglingen.

V. Uncertain place of discovery / debated monuments

There are several monuments in the catalogue of Maarten J. Vermaseren and Gabriel Sicoe, which have an uncertain provenance or their Mithraic nature is uncertain. In the catalogue above, we included only those monuments, which were certainly found in the territory of the two cities of Apulum (the *colonia* and the *municipium*) and their Mithraic nature is certain (the case of Cat. II.23 is problematic). CIMRM 1966 (an altar dedicated to Jupiter) might come from the so-called Oancea Mithraeum, although the details of the discovery are uncertain. An altar dedicated to Deus Invictus was considered as uncertain by some authors,[66] however, it might be Mithraic (Cat. II.28). The monuments from Vinţu de Jos (Cat. III.12–14) probably come from the territory of Apulum, as there are no traces of Roman buildings associated with these finds in Vinţu de Jos. The provenance of a large, extraordinary marble relief[67] was often associated with Apulum, however, its exact provenance is problematic: Karl Gooss mentioned that it was discovered on the 16th of July, 1723 in Comuna Doştat (Hosszútelke, Dorstadt), while later bibliography claimed that it was found in Apulum or Sarmizegetusa. Several monuments were identified on the *territorium* of Apulum in present-day Ozd, Boian, Săcădate, Lopadea Nouă, Oarda, Cincşor.[68] The context of their discovery is uncertain, but most of them seems to be local finds and not *spolia* from Apulum.

Funding

This work was supported by the MTA–SZTE Lendület (Momentum) Mithras Research Group, hosted by the University of Szeged and funded by the Hungarian Academy of Sciences (LP 2025–9/2025).

Acknowledgements

We are grateful to Dana Zudor (MNUAI) for her kind help and support in the *lapidarium* of Alba Iulia, and to Gabriel Rustoiu, Ovidiu Ţentea, Sidonia P. Olea, Gabriel Sicoe, Ian Haynes, Irina Nemeti, Eugenia Beu-Dachin, Martin Florian Müller, Ortolf Harl, and Nicolae Tescula for their assistance with new photographs.

Sources

AE: *L'Année Épigraphique: Revue des publications épigraphiques relatives à l'antiquité romaine.* Paris, 1888–.

CIL III: Mommsen, Th. (ed.): *Corpus Inscriptionum Latinarum. Vol. III. Inscriptiones Asiae, provinciarum Europae Graecarum, Illyrici Latinae.* Berlin, 1873.

CIMRM: Vermaseren, M. J.: *Corpus Inscriptionum et Monumentorum Religionis Mithriacae.* Haga Comitis, 1956–1960.

EDH: Feraudi-Gruénais, F. *et al.* (eds): *Epigraphic Database Heidelberg.* https://edh.ub.uni-heidelberg.de

IDR: Russu, I. I. *et al.* (ed.): *Inscriptiones Daciae Romanae.* Bucharest, 1975–.

lupa: Harl, F. – Harl, O. (eds): *Ubi Erat Lupa. Bilddatenbank zu antiken Steindenkmälern.* https://lupa.at

References

Albrecht, J. – Degelmann, C. – Gasparini, V. – Gordon, R. L. – Patzelt, M. – Petridou, G. – Raja, R. – Rieger, A.-K. – Rüpke, J. – Sippel, B. – Urciuoli, E. R. – Weiss, L. 2018: Religion in the making: the Lived Ancient Religion approach. *Religion* 48:4, 568–593. https://doi.org/10.1080/0048721X.2018.1450305

66 Sicoe 2014, Cat. 27 = IDR III/5, 720.

67 CIMRM 2006–2007, Sicoe 2014, 227, Cat. 188.

68 Sicoe 2014, Cat. 56–71.

Alföldy, G. 1963: Aquincum vallási életének története (Geschichte des religiösen Lebens in Aquincum). *Budapest Régiségei* 20, 47–69.

Ariosti, G. 2010: *Epigrafi romane di Transilvania raccolte da Giuseppe Ariosti e postillate da Scipione Maffei.* Biblioteca Capitolare di Verona, manoscritto 267. Verona.

Beck, R. 1996: The Mysteries of Mithras. In: Kloppenborg, J. S. – Wilson, S. G. (eds): *Voluntary associations in the Graeco-Roman world.* Religious studies, classical studies. London–New York, 176–185.

Beck, R. 2006: *The religion of the Mithras cult in the Roman Empire: mysteries of the unconquered sun.* Oxford. https://doi.org/10.1093/acprof:oso/9780199216130.001.0001

Berciu, I. – Petolescu, C.C. 1976: *Les cultes orientaux dans la Dacie méridionale.* Études préliminaires aux religions orientales dans l'Empire romain 54. Leiden. https://doi.org/10.1163/9789004295278

Bonnet, C. 2021: Mithra dans le polythéisme romain. In: Bricault, L. – Veymiers, R. – Amoroso, N. (eds): *Le mystère Mithra. Plongée au coeur d'un culte romain.* Morlanwelz, 39–50.

Bricault, L. – Roy, P. 2021: *Les cultes de Mithra dans l'Empire romain: 550 documents présentés, traduits et commentés.* Amphi 7. Toulouse.

Carbó García, J. R. 2010: *Los cultos orientales en la Dacia romana. Formas de difusión, integración y control social e ideológico.* Colección Vítor 265. Salamanca.

Chalupa, A. 2006: Mithraistické album z Viruna a jeho význam pro studium mithraismu. *Religio* 14:2, 243–258.

Chalupa, A. – Glomb, T. – Sarkisjan, J. 2024: Stations of the Publicum Portorium Illyrici are a Strong Predictor of the Mithraic presence in the Danubian Provinces: Geographical analysis of the distribution of the Roman cult of Mithras. *Open Archaeology* 10:1, 20240020. https://doi.org/10.1515/opar-2024-0020

Christescu, V. 1933: Nouveaux monuments d`Apulum. *Dacia - Revue d'archéologie et d'histoire ancienne* 3–4, 620–625.

Ciobanu, R. 1994: Din corespondenţa lui Adalbert Cserni: Franz Cumont. *Apulum* 31, 247–250.

Clauss, M. 2000: *The Roman cult of Mithras: The god and his mysteries.* New York.

Cumont, F. 1896: *Textes et monuments figurés relatifs aux mystères de Mithra. Vol. 2. Textes et monuments.* Bruxelles.

Daicoviciu, C. 1941: Neue Mitteilungen aus Dazien. *Dacia: Revue d'archéologie et d'histoire ancienne* 7–8, 299–336.

Diaconescu, A. 2004: The towns of Roman Dacia. An overview of recent archaeological research in Romania. In: Hanson, W. S. – Haynes, I. (eds): *Roman Dacia. The making of a provincial society.* Journal of Roman Archaeology – Supplementary Series 56. Portsmouth, RI, 87–142.

Diaconescu, A. – Bogdan, D. G. – Ciută, B. – Gligor, M. – Lipot, Ş. – Dobos, A. – Mustaţă, S. – Ötvös, K. B. – Pánczél, Sz. P. – Vass, L. – Fiedler, M. – Grunwald, M.-H. – Höpken, C. – Sidó, K. – Szabó, M. 2014: 63. Alba Iulia, jud. Alba [Apulum]. In: Iosipescu, R. – Mihai, D. – Gamureac, E. – Şerban, R. (eds): *Cronica Cercetărilor Arheologice. Campania 2013.* Bucureşti, 100–101.

Dirven, L. 2015: The Mithraeum as tableau vivant. A Preliminary study of ritual performance and emotional involvement in Ancient mystery cults. *Religion in the Roman Empire* 1:1, 20–50. https://doi.org/10.1628/219944615X14234960199678

Drăgan, A. 2020: Pottery from Apulum Mithraeum III. Preliminary results. In: McCarty, M. – Egri, M. (eds): *The archaeology of Mithraism: New finds and approaches to Mithras-worship.* BABESCH – Annual Papers on Mediterranean Archaeology – Supplement 39. Leuven–Paris–Bristol, 135–146. https://doi.org/10.2307/j.ctv1q26jz8.15

Egri, M. – McCarty, M. M. – Rustoiu, A. – Inel, C. 2018: A new Mithraic community at Apulum (Alba Iulia, Romania). *Zeitschrift für Papyrologie und Epigraphik* 205, 268–276.

Gordon, R. L. 1976: The sacred geography of a mithraeum. *Journal of Mithraic Studies* 1:2, 119–165.

Gordon, R. L. 2009: The Roman army and the cult of Mithras: A critical view. In: Wolff, C. – Le Bohec, Y. (eds): *L' armée romaine et la religion sous le Haut-Empire romain: actes du quatrième congrès de Lyon, 26-28 octobre 2006.* Collection du Centre d'Études et de Recherches sur l'Occident Romain, N.S. 33. Paris, 379–450.

Gordon, R. L. 2017: Persae in spelaeis solem colunt: Mithra(s) between Persia and Rome. In: Strootman, R. – Versuys, M. J. (eds): *Persianism in antiquity*. Oriens and occidens 25. Stuttgart, 289–326.

Hammer-Purgstall, J. von 1833: *Mithriaca ou les Mithriaques: mémoire académique sur le culte solaire*. Caen–Paris.

Haynes, I. 2005: Apulum: The shrine of Liber Pater. *Current World Archaeology* 1:10, 38–45.

Hene, F.-X. 1836. *Beyträge zur dacischen Geschichte*. Hermannstadt.

Kocsis, L. 1991: A tribunus laticlaviusok háza az aquincumi 2–3. sz-i legiotáborban (Előzetes jelentés) (Das Haus der tribuni laticlavii aus dem Legionslager vom 2-3. jh. in Aquincum Wandgemälde des Mithrasheiligtums). *Budapest Régiségei* 28, 117–121.

Kovács, P. 2024: Notes on the rock inscription of Trenčín (CIL III 13439). In: Forisek, P. – Kovács, P. – Szabó, Á. (eds): *The Danubian region and the Balkans during the Roman empire in military inscriptions*. Studia Epigraphica Pannonica – Supplementum 2. Wien, 65–102.

Lajard, F. 1840: Mémoire sur deux bas-reliefs mithriaques qui ont été découverts en Transylvanie. *Mémoires de l'Institut de France* 14:2, 54–185. https://doi.org/10.3406/minf.1840.1337

Martin, L. H. 2015: *The mind of Mithraists: Historical and cognitive studies in the Roman cult of Mithras*. Scientific Studies of Religion: Inquiry and Explanation. London.

McCarty, M. M. – Egri, M. – Rustoiu, A. 2019: The archaeology of ancient cult: From foundation deposits to religion in Roman Mithraism. *Journal of Roman Archaeology* 32, 279–312. https://doi.org/10.1017/S1047759419000151

McCarty, M. M. – Egri, M. – Rustoiu, A. 2020: Apulum Mithraeum III and the multiplicities of Mithraism. In: McCarthy, M. M. – Egri, M. (eds): *The archaeology of Mithraism: New finds and approaches to Mithras-worship*. Babesch – Supplement 39. Leuven–Paris–Bristol, 123–134. https://doi.org/10.2307/j.ctv1q26jz8.14

Misic, B. 2015: Cognitive theory and religious integration: The case of the Poetovian Mithraea. In: Brindle, T. – Allen, M. – Durham, E. – Smith, A. (eds): *TRAC 2014: Proceedings of the twenty-fourth annual theoretical Roman archaeology conference*. Oxford–Philadelphia PA, 31–40. https://doi.org/10.2307/j.ctvh1dw2c.6

Misic, B. – Graham, A. (eds) 2024: *Senses, cognition, and ritual experience in the Roman world*. Ancient Religion and Cognition. Cambridge. https://doi.org/10.1017/9781009355513

Müller, N. 1833: *Mithras. Eine vergleichende Uebersicht der berühmteren mithrischen Denkmäler und Erklärung des Ursprungs und der Sinndeute ihrer Symbole, mit besonderer Beziehung auf die reiche Ausbeute des Mithräums von Heddernheim*. Wiesbaden.

Müller, H. W. – Schwaighofer, B. – Piso, I. – Benea, M. 2012: *Der Marmor im römischen Dakien*. Cluj-Napoca.

Nemeti, I. – Nemeti, S. 2007: Planets, grades and soteriology in the Mithraism of Roman Dacia. *Acta Musei Napocensis* 41–42:1, 107–124.

Nemeti, S. 2024: Canabae legionis in Dacia. Military presence and municipal evolution at Apulum and Potaissa. In: Nemeti, S. – Timoc, C. (eds): *Alfred von Domaszewski: Latin epigraphy in the Roman empire: acts of the colloquium held in Timişoara in December 14th–17th 2022*. Cluj-Napoca, 239–253.

Nyulas, D. 2021: When a long-lost inscription (CIL III, 944) suddenly grows. About a manuscript regarding Roman discoveries from Călugăreni/Mikháza. *Marisia. Archaeologia, Historia, Patrimonium* 3, 165–190.

Oltean, I. A. 2007: *Dacia: landscape, colonisation and romanisation*. Routledge monographs in classical studies 9. London.

Opreanu, C. 1998: Castrul legiunii i adiutrix de la Apulum în timpul lui Traian. Consecinte asupra urbanismului roman la Apulum. *Apulum* 35:1, 121–133.

Ota, R. 2012: *De la canabele legiunii a XIII-a Gemina la Municipium Septimium Apulense*. Alba Iulia.

Panagiotidou, O. – Beck, R. 2017: *The Roman Mithras cult: A cognitive approach. Scientific studies of religion: inquiry and explanation*. Scientific studies of religion: Inquiry and explanation. London–New York.

Pioariu, I. 2001: Cultul zeului Mithras la Apulum şi împrejurimi. *Annales Universitatis Apulensis Series Historica* 4–5, 25–35.

Piso, I. 1995: Le territoire de la Colonia Sarmizegetusa. *Ephemeris Napocensis* 5, 63–82.

Piso, I. 2008: Les débuts de la province de Dacie. In: Piso, I. (ed.): *Die römischen Provinzen: Begriff und Gründung (Colloquium Cluj-Napoca, 28. September – 1. Oktober 2006)*. Cluj-Napoca, 297–331.

Piso, I. – Diaconescu, A. 1993: Apulum. In: Alicu, D. (ed.): *La politique édilitaire dans les provinces de l'empire romain [IIème - IV ème siècles après J.C.]. Actes du 1er Colloque Roumano-Suisse, Deva 1991 [21 - 26 octobre]*. Cluj-Napoca, 67–82.

Popa, A. 1977: Iconografia mithraică de la Apulum. *Acta Musei Porolissensis* 1, 139–145.

Popescu, M. 2000: Quand Franz Cumont cherchait Mithra en Dacie. Remarques sur les voyages du savant d'après la correspondance conservée à l'Accademia Belgica de Rome. *Ephemeris Dacoromana* 11, 21–51.

Rustoiu, A. – Egri, M. – Inel, C. – McCarty, M. 2014: 6. Alba Iulia, jud. Alba. In: Iosipescu, R. – Mihai, D. – Gamureac, E. – Șerban, R. (eds): *Cronica Cercetărilor Arheologice din România. Campania 2013*. Bucureşti, 17.

Rustoiu, A. – Egri, M. – Inel, C. – McCarty, M. 2015: 5. Alba Iulia, jud. Alba. Punct: Cartier Cetate. In: Iosipescu, R. – Mihai, D. – Gamureac, E. – Șerban, R. (eds): *Cronica Cercetărilor Arheologice din România 2015. Campania 2014*. Bucureşti, 9–21, 260–261.

Rüpke, J. 1996: Controllers and professionals: Analyzing religious specialists. *Numen* 43:3, 241–262. https://doi.org/10.1163/1568527962598872

Rüpke, J. 2018: *Pantheon. A new history of Roman religion*. Princeton, NJ. https://doi.org/10.1515/9781400888856

Rüpke, J. 2020: *Urban religion: A historical approach to urban growth and religious change*. Berlin–Boston, MA. https://doi.org/10.1515/9783110634426

Rüpke, J. – Urciuoli, E. R. 2023: Urban religion beyond the city: theory and practice of a specific constellation of religious geography-making. *Religion* 53:2, 289–313. https://doi.org/10.1080/0048721X.2023.2174913

Seel, H. 1823: *Die Mithrageheimnisse während der vor- und urchristlichen Zeit*. Aarau.

Şerban, I. – Băluţă, C. L. 1979: On Mithraism in the army of Dacia Superior. In: Bianchi, U. (ed.): *Mysteria Mithrae. Proceedings of the international seminar on the "Religio-historical character of Roman Mithraism, with particular reference to Roman and Ostian sources". Rome and Ostia 28–31 March 1978*. Études préliminaires aux religions orientales dans l'Empire romain 80. Leiden, 573–578. https://doi.org/10.1163/9789004295605_034

Sicoe, G. 2014: *Die mithräischen Steindenkmäler aus Dakien*. Cluj-Napoca.

Siemers-Klenner, I. 2020: *Archäologie des Mithraskultes: Architektur und Kultpraxis am Beispiel der Tempel von Güglingen, Kreis Heilbronn*. Forschungen und Berichte zur Archäologie in Baden-Württemberg 16. Wiesbaden. https://doi.org/10.29091/9783954909124

Szabó, Cs. 2013: The Mithraic statue of Secundinus from Apulum. *ReDIVA: The Postgraduate Journal of Ancient History and Archaeology* 1, 45–64.

Szabó, Cs. 2014: Discovering the gods in Apulum: Historiography and new perspectives. *ReDIVA: The Postgraduate Journal of Ancient History and Archaeology* 2, 53–82.

Szabó, Cs. 2015a: The cult of Mithras in Apulum: Communities and individuals. In: Zerbini, L. (ed.): *Culti e religiosità nelle province danubiane. Atti del II Convegno Internazionale Ferrara 20-22 Novembre 2013*. Pubblicazione del LAD 2. Bologna, 403–418.

Szabó, Cs. 2015b: Mithras rediscovered II. Further notes on CIMRM 1938 and 1986. *Journal of Ancient History and Archaeology* 2, 67–73. https://doi.org/10.14795/j.v2i2.111

Szabó, Cs. 2015c: Notes on a new Cautes statue from Apulum. *Archäologisches Korrespondenzblatt* 45:2, 237–247.

Szabó, Cs. 2016: *Béla Cserni and the beginnings of urban archaeology in Alba Iulia*. Cluj-Napoca.

Szabó, Cs. 2018: *Sanctuaries in Roman Dacia: Materiality and religious experience*. Archaeopress Roman Archaeology 49. Oxford. https://doi.org/10.2307/j.ctvndv53c

Szabó, Cs. 2021: Sacralised spaces of Mithras in Roman Dacia. *Acta Archaeologica Academiae Scientiarum Hungaricae* 72:1, 55–65. https://doi.org/10.1556/072.2021.00004

Szabó, Cs. 2022a: The reception of Roman Mithras in Transylvania in the 18th–19th century. *Revista de Historiografía* 37, 249–271. https://doi.org/10.20318/revhisto.2022.6170

Szabó, Cs. 2022b: The beginnings of the first museum(s) of Alba Iulia (Gyulafehérvár) in the 19th century.

In: Farkas, I. G. (ed.): *"We should not, however, think that we are pioneers": Museums on Troubled Waters in the Past and Today 2021*. Nyíregyháza–Szeged, 183–196.

Szabó, Cs. 2022c: *Roman religion in the Danubian provinces. Space sacralisation and religious communication during the Principate (1st–3rd century AD)*. Oxford. https://doi.org/10.2307/j.ctv2v6pcph

Szabó, Cs. 2026: *Mithras in Roman Dacia. Local appropriation of a universal god*. Newcatle upon Tyne.

Szabó, Cs. – Valentin, B. G. – Sava, V. 2014: Mithras rediscovered. Notes on CIMRM 1938. *Ziridava. Studia Archaeologica* 28, 149–156.

Szabó, Cs. – Boda, I. – Bunoiu, V. – Timoc, C. 2016: Notes on a new Mithraic inscription from Dacia. In: Ardevan, R. – Beu-Dachin, E. (eds): *Mensa Rotunda Epigraphica Napocensis*. Cluj-Napoca, 91–104.

Szabó, Cs. – Libiță-Partică, M. – Muntean, I. 2023: Mithras exhibited. Perspectives of sensory museology in Mithraic contexts. *Cercetări Arheologice* 30:2, 737–762. https://doi.org/10.46535/ca.30.2.19

Szabó, Cs. – Muntean, I. – Libiță-Partică, M. – Gyurka, O. 2024: Materiality of Roman religion in Apulum: Catalogue and topography of the finds. *Apulum* 61, 311–375.

Szabó, Cs. – Budai-Balogh, T. – Milbich, T. – Pázsint, A. – Lovász, I. – Vágási, T. 2025: Archaeology of Mithras in Aquincum. Sanctuaries and materiality of a Roman cult. *Cercetări Arheologice* 32:2, 501–532. https://doi.org/10.46535/ca.32.2.07

Torma, K. 1863: Tizenkét római felirat Dáciából. *Az Erdélyi Múzeum-Egyesület Évkönyve* 2:1, 129–135.

Tóth, I. 1992: A Dacian "Apostle" of the cult of Mithras? *Specimina nova* 8, 153–160.

Tóth, I. 2015: *Pannoniai vallástörténet*. Ókor–Történet–Írás 2. Pécs–Budapest.

Varga, R. 2021: The nature of Roman dominion over the province of Dacia. Notes on the romanization phenomenon and its limits. *Journal of Ancient History and Archaeology* 8:4, 89–97. https://doi.org/10.14795/j.v8i4.670

Várhelyi, Zs. 2010: *The religion of senators in the Roman Empire: Power and the beyond*. Cambridge. https://doi.org/10.1017/CBO9780511676543

Winkler, I. 2010: *Contemporary leadership theories: Enhancing the understanding of the complexity, subjectivity and dynamic of leadership*. Heidelberg.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 657–668. 10.17204/dissarch.suppl.5.2026.657

Becoming Roman?

Tracing Mediterranean influences in the archaeological finds of the Hungarian excavations from the monumental complex of the "Grandes Forges" *insula* at Bibracte

Dániel Szabó
Institute od Archaeological Sciences, ELTE Eötvös Loránd University, Budapest, Hungary
szabo.daniel@btk.elte.hu

Received 26 June 2025 | Accepted 16 July 2026 | Published 18 November 2026

Abstract: Bibracte (Mont Beuvray, France), the principal *oppidum* of the Aedui and a key site during the Gallic Wars, constitutes a compelling case study for examining the dynamics of cultural transformation in central Gaul. As a major political, economic, and religious centre in the late Iron Age, Bibracte played a central role in the interactions between indigenous Gallic societies and the expanding Roman world. Since the early 1990s, archaeological investigations led by researchers from Eötvös Loránd University (Budapest, Hungary) have been ongoing in the sector known as the Pâture du Couvent, with a particular focus on the sector commonly referred to as the "Grandes Forges" *insula*. These excavations have brought to light a remarkably complex stratigraphic sequence. At the uppermost level, a Roman-type *domus* has been identified. This residential structure was constructed directly atop the remains of a monumental edifice with a *basilica* floor plan and underlying this level are even earlier phases of occupation, the full extent and nature of which are still under investigation. This paper examines the finds recovered from these stratified contexts, with particular emphasis on indicators of Mediterranean influence contributing to broader discussions on the mechanisms and local responses involved in the Romanisation process.

Keywords: Romanisation, Bibracte, Gallia, *oppidum*, *basilica*, *domus*, antefix

The site

The *oppidum* of Bibracte (Mont Beuvray) is located in the Morvan mountain range in Burgundy (France). It served as the capital of the Gallic group of people known as the Aedui.

Julius Caesar mentions numerous *oppida* occupied by the Aedui in his *Commentarii de Bello Gallico*. The identification of most of these sites is more or less certain, for example: Cavillonum = Chalon-sur-Saône, Matisco = Mâcon, Decetia = Decize, Noviodunum = Nevers (?), and Gortona/Gorgobina = Sancerre.[1] According to Caesar, Bibracte was the most important, largest, and wealthiest among them.[2]

Bibracte played a major role in the course of the Gallic War (58–50 BCE). It was near this site that Caesar defeated the Helvetian army in 58 BCE in the first major battle of the conflict, and it was there that the *totius Galliae concilium* elected Vercingetorix as leader of the Gallic coalition in 53 BCE. It was also at Bibracte that Caesar began composing his account of the war.[3]

1 Goudineau 1990, 161.
2 Caes. *B. Gall.*, 7.55: "*oppidum apud eos maxime auctoritatis*", 1.23: "*longe maximum*", 1.23: "*copiosissimum*".
3 Bertin – Guillaumet 1987; Goudineau – Peyre 1993.

✉ Corresponding author

The identification of Bibracte, as mentioned by Caesar, with Mont Beuvray was not always straightforward. Until the 19th century, historians identified it with the Roman Augustodunum, the modern city of Autun.[4] Jacques-Gabriel Bulliot, a wine merchant from Autun with a strong interest in history, ultimately located the ancient site of Bibracte on Mont Beuvray, approximately 25 km from Autun. His excavations, begun in 1867, confirmed this hypothesis. From 1870 onward, he continued his work with the financial support of Napoleon III, who was himself an enthusiast of Caesar and the Gallic War. His nephew, the prominent French archaeologist Joseph Déchelette, led the investigations at Mont Beuvray from 1895.

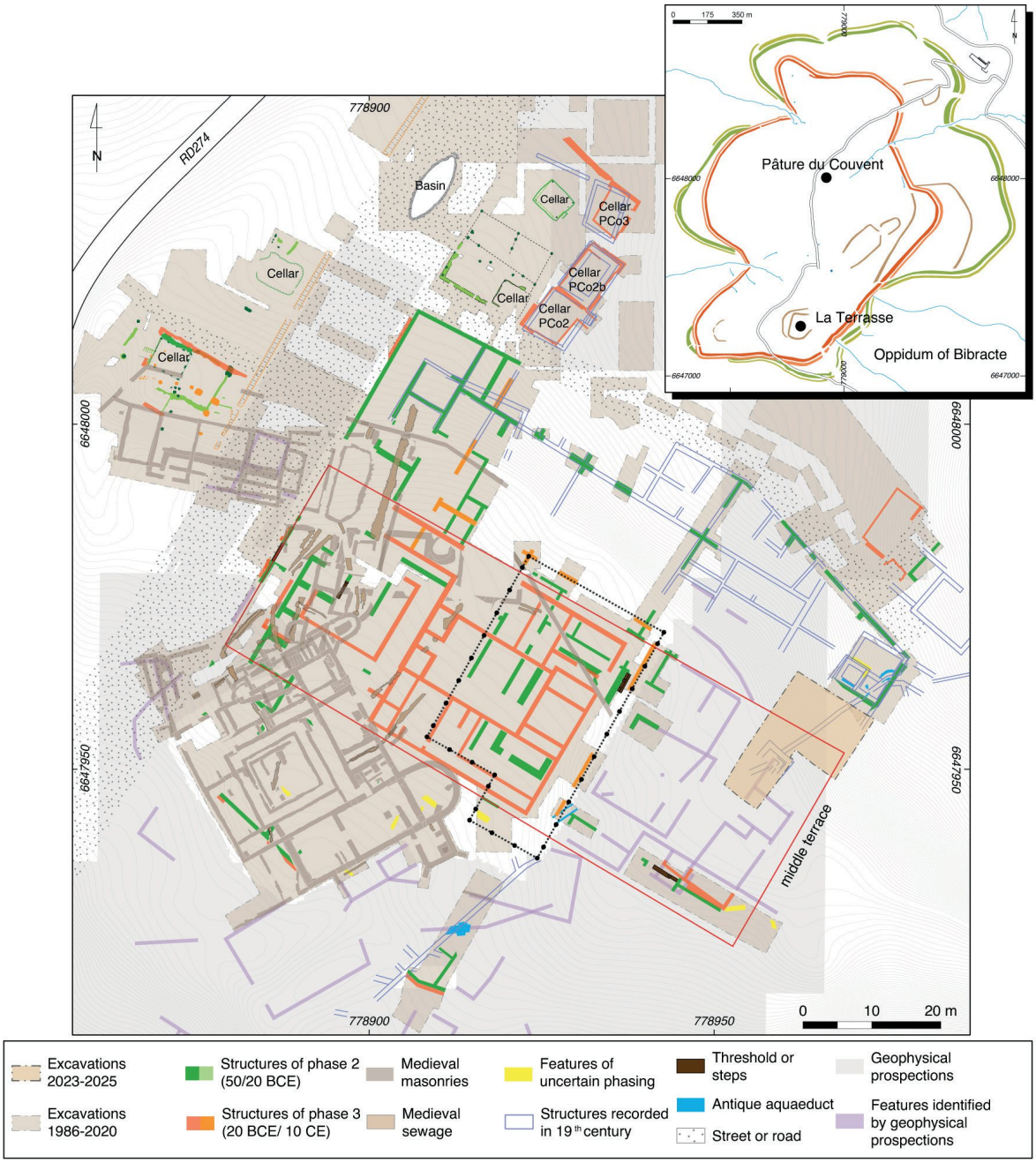


Fig. 1. Bibracte. Plan of the "Grandes Forges" *insula*, showing the Phase 2 *basilica* (green) and the Phase 3 *domus* (orange) (plan by A. Meunier, Bibracte).

4 Goudineau – Peyre 1993, 4. For the bibliography, as well as for the ancient plans, see: Guillaumet 1996.

The surviving documentation of their work shows that neither employed the stratigraphic method derived from geology, and this lack of stratigraphic observation largely explains why they attributed all remains uncovered at the site to the period of the Gallic War. In contrast, modern excavations resumed in 1984 have demonstrated that the remains studied by Bulliot and Déchelette belong to the final phase of occupation of the site, dating to more than half a century after the Gallic War. Despite this chronological misinterpretation, the 19th-century excavations proved highly significant, even on a European scale, and contributed substantially to the development of the concept of the "*oppida* civilisation".[5]

Since 1986, research at Bibracte has taken on a European dimension. The University of Edinburgh was the first to join the French team, followed by the Universities of Madrid and Brussels (1987), then Lausanne and Budapest (ELTE Eötvös Loránd University), the Archaeological Institute of Prague (1988), and the University of Kiel (1989). Since then, numerous other universities and research institutes have participated in this collaborative work.[6]



Fig. 2. Pit associated with Phase 1, filled with Dressel 1 *amphorae* (Photo: D. Szabó).

The team from Eötvös Loránd University joined the European research program on the *oppidum* of Bibracte in 1988 under the direction of Professor Miklós Szabó. Since then, Hungarian excavations have been conducted at La Pâture du Couvent (a modern name dating back to the 14th century, referring to land associated with a convent formerly located in the southern part of the area). Research by the Hungarian team at this site can be divided into two phases. Initially, investigations focused on the main road of Bibracte. From 1995 onward, excavations shifted to the "Grandes Forges" *insula*, where research continues to the present day. The excavations, relaunched in 2023, are currently being carried out under the direction of Professor László Borhy. Numerous articles and volumes have been produced from the excavation results,[7] and every year they were published in the Bibracte excavation reports.[8]

Excavations conducted by Eötvös Loránd University in the "Grandes Forges" *insula*

The main focus of the Hungarian archaeological research in Bibracte has been the "Grandes Forges" *insula* since 1993. Here, in the central zone of the *insula*, a stone building of Roman character was discovered.[9] The organisation of the rooms, as well as the particular features of the layout, suggest that it was a Roman-type house, a *domus* with *atrium* and peristyle (Fig. 1). The interpretation of the rooms was carried out on the basis of parallels in the plan and the description provided by Vitruvius.

5 Déchelette 1927, 475–478.

6 Romero 2006, 63–64.

7 For example, Szabó *et al.* 2007; Szabó *et al.* 2019; Szabó 2012a.

8 These reports are being published every year since 1984 by the Bibracte – European Archaeological Centre, located in Glux-en-Glenne (France), the most recent being: Fochesato – Guichard 2025.

9 Timár *et al.* 2006.

Since 2000, research has been extended to the layers predating the *domus*, and the investigation quickly yielded results with the discovery of an earlier monumental masonry structure.[10] This is a monumental building with a *basilica*-type columned plan, flanked on the east and west by two courtyards. Due to its architectural features, the columned building has been identified as a *basilica*, while the eastern, as yet unexcavated courtyard has been hypothetically interpreted as a *forum* (Fig. 1).[11]

Deep excavations carried out in the area since 2002 and later, have revealed traces of even earlier structures beneath the floor levels and construction phases of the *basilica*. In excavation reports, these are referred to as pre-Roman structures.[12] Under this term we have grouped the assemblages that predate the construction of the *basilica* phase of the "Grandes Forges" *insula*. These structures are located beneath the construction fills of the *basilica* within the stratigraphy of the *insula*. Unfortunately, our research has been limited to restricted trenches, constrained by existing structures that had to be kept intact: those of the *domus* and the *basilica*. Therefore, the interpretation of these remains is currently not possible. The complete absence of Roman-style masonry in these levels justifies the designation "pre-Roman". However, it must be emphasised that this applies only to the architectural features, among the small finds, there are also items of Mediterranean origin within these structures.

To summarise, the Hungarian excavations made it possible to establish the relative chronology of the construction phases of the central part of the "Grandes Forges" *insula*. Three major phases were distinguished:

- Phase 1, the earliest, sometimes described as pre-Roman in certain publications, corresponds to a period during which, according to current knowledge, no elements of Roman-type architecture are attested.
- Phase 2 comprises the monumental *basilica* building and the structures associated with it.
- Phase 3 corresponds to the *domus*, built after the destruction and dismantling of Phase 2.

The analysis of the finds uncovered during the excavations was carried out by organising them into chronological horizons.[13] We followed the method developed during the excavations of the PC1 site at Bibracte.[14] According to this system, stratigraphic units from the occupation and demolition layers of a phase are grouped together with those from the construction layers of the following phase, provided that the finds do not indicate an interruption in occupation between them. The first horizon consists only of the construction layers of the earliest phase, while the final horizon includes the occupation and demolition layers of the last phase.

In what follows, we shall examine the principal Mediterranean influences observable in the three main phases of the "Grandes Forges" *insula*. In the present paper, particular attention will be paid to the pottery.[15]

10 For a brief overview, see Guichard 2004. For the excavations, see the annual reports published by the Centre Archéologique Européen du Mont Beuvray (Glux-en-Glenne) and Szabó *et al.* 2007, 389–393.

11 See Szabó *et al.* 2007; Szabó *et al.* 2019.

12 For example: Szabó 2012a, 51–103.

13 For the ceramic finds from the Hungarian excavations, see Szabó 2012a. The most recent overview of the ceramic finds from Bibracte is presented in the following volume: Barrier – Luginbühl 2021.

14 Paunier – Luginbühl 2004, 187, Fig. 7.1.

15 The topic of Romanisation in Gaul, and especially in relation to the *oppidum* of Bibracte, has been extensively studied and has generated a substantial body of scholarship. To mention only two major contributions, it forms the central theme of two important volumes published in 2011, as well as of an important monograph by S. Barrier, which focuses more specifically on pottery production: Reddé *et al.* 2011; Barrier 2014.

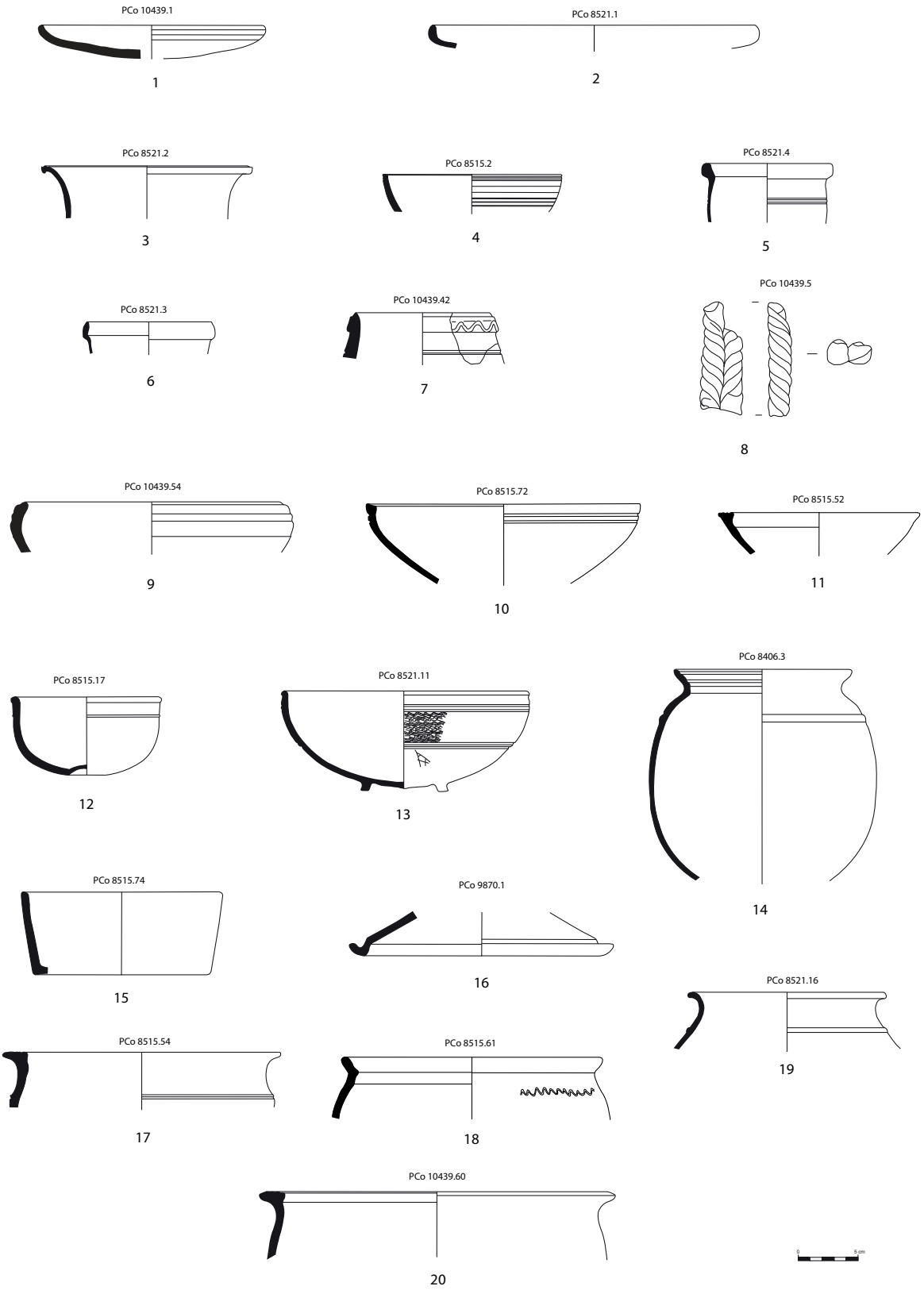


Fig. 3. Ceramic assemblage from the Phase 1 (pre-Roman) layers: "Campanian" black-gloss ware, Type B (nos 1–2, 4); "Campanian" black-gloss ware, Type CC (no. 3); Mediterranean-type jugs (nos 5–6, 8); regional fine ware (nos 12, 13, 16, 19); regional semi-fine ware (nos 7, 14); and regional coarse ware (nos 9–11, 15, 17–18, 20).

Phase 1: The Pre-Roman structures (circa 80–50 BCE)[16]

According to our present knowledge, these layers represent the earliest evidence of occupation identified within the "Grandes Forges" *insula*. In publications and excavation reports, these features have occasionally been described as pre-Roman. This designation should be understood in the sense that architecture of a Roman type is not yet present within these strata. It must be emphasised, however, that other finds attesting Mediterranean connections, such as *amphorae* and imported pottery, are already present.

In some pit fills, for example, Dressel 1 *amphorae* occur in high concentrations (Fig. 2). The precise nature of this occupation remains difficult to determine, since our evidence is limited to small and fragmentary observations obtained from the depth of the trenches. This phase clearly predates the appearance of Italic architecture: so far, no elements of Roman-style building have been identified, and the evidence consists chiefly of pits and traces of timber construction.

It should also be noted that, alongside the *amphorae*, certain Mediterranean ceramic imports are present in these layers. These include "Campanian" black-gloss ware (types B and CC; Fig. 3.1–4), Mediterranean-type jugs (Fig. 3.5–6,8), a fragment of pre-*sigillata*, and a fragment of a Pompeian-red ware platter.

Phase 2: The monumental *basilica* building (circa 50–30 BCE)

In this subsequent phase, a radical transformation took place. Mediterranean-style stone architecture appeared, and a monumental building with a *basilica* layout was constructed in the central part of the "Grandes Forges" *insula*.[17] The discovery of one of its *in situ* column bases in the early 2000s was wholly unexpected (Fig. 4).



Fig. 4. *In situ* column base from Phase 2 (Photo: A. Maillier, Bibracte).



Fig. 5. *In situ* remains of terracotta roof tiles from the Phase 2 of the "Grandes Forges" *insula* (Photo: D. Szabó).



Fig. 6. Terracotta antefix with human face from the Phase 2 of the "Grandes Forges" *insula* (Photo: D. Szabó).

16 For the chronology of the Hungarian excavations of the "Grandes Forges" *insula*, see Szabó 2012a, 361–371.

17 Szabó *et al.* 2019.

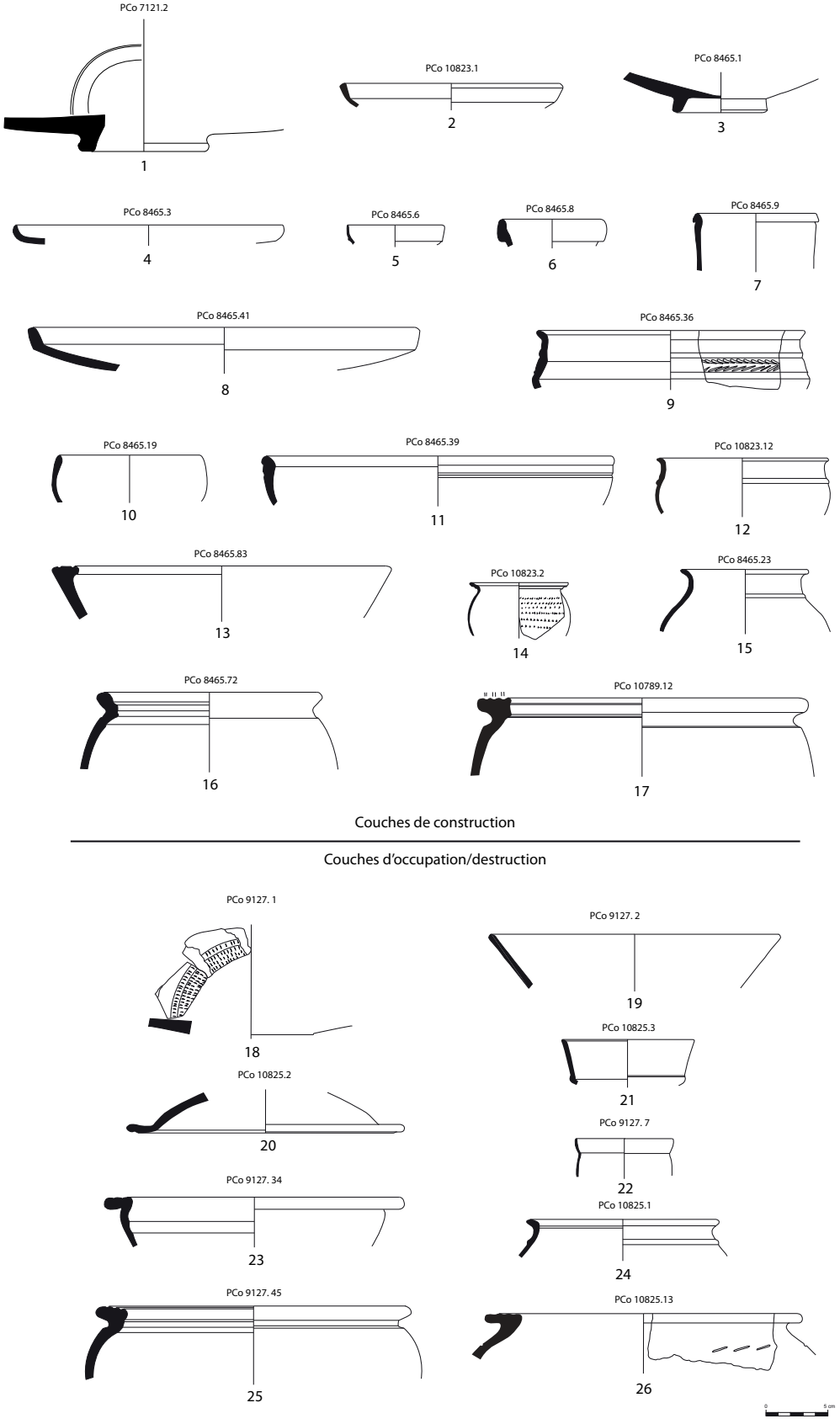


Fig. 7. Ceramic assemblage from Phase 2 of the "Grandes Forges" *insula*: pre-*sigillata* (nos 1, 18, 19); Campanian black-gloss ware, Type B (nos 2, 4); Campanian black-gloss ware, Type A (no. 3); Mediterranean-type jugs (nos 6–7); regional fine ware (nos 5, 8–11, 14–15, 20, 22, 24); regional semi-fine ware (nos 12, 21); and regional coarse ware (nos 13, 16–17, 23, 25–26).

Mediterranean influence is evident in most aspects of the building's design. The use of terracotta roof tiles (*tegulae* and *imbrices*, Fig. 5),[18] together with antefixes decorated with human masks (Fig. 6),[19] suggests a marked sudden increase in the intensity of these Mediterranean influences, at least in this sector of the *oppidum*. Antefixes with human masks belong to a type whose prototypes ultimately could be traced back to Latium and Etruria.[20] In the case of the specimens found in Bibracte, both form and fabric[21] indicate that they are to be interpreted as antefixes rather than *ex votos*.

The ceramic assemblage also reflects a development in Mediterranean influences: "Campanian" black-gloss wares of types A, B, and CC, fragments of pre-*sigillata* (predominantly of the Goudineau 1[22] plate form), Pompeian-red ware platters, thin-walled wares, *mortaria*, and Mediterranean jugs demonstrate that Mediterranean ceramics are considerably more abundant here than in the Phase 1 deposits (Fig. 7).

Phase 3: The *domus* (circa 20/15–1 BCE)

After the destruction of the *basilica* (Phase 2), a new stone building was erected in the central zone of the "Grandes-Forges" *insula*, likewise drawing on Mediterranean architectural traditions. This building reflects Italic domestic architectural models. The arrangement of the rooms, as well as the specific features of the layout, suggest that it was a Roman-type house, a *domus* with an *atrium* and peristyle (Fig. 1). The interpretation of the rooms was based on parallels in the ground plan and on the description provided by Vitruvius; in this way, it was possible to identify the function of some of them.[23] Given that no archaeological features associated with the final construction phase of the *domus* were found, that might have provided clearer indications of room function, these interpretations should be regarded as hypothetical. Not only did the layout follow Mediterranean traditions, but the roof was also covered with terracotta *tegulae* and *imbrices*,[24] just like that of the *basilica* in the earlier phase; however, the antefixes differed in this case, as a series with palmette decoration was found in association with the Phase 3 (Fig. 8).



Fig. 8. Terracotta antefix fragments with palmette decoration from the "Grandes Forges" *insula*, Phase 2-*domus* levels (Photo: A. Maillier, Bibracte).

As for the ceramic assemblage, it is important to note that the finds associated with the *domus* include *terra sigillata* and jug types characteristic of the Augustan period (Fig. 9). More generally, a wider range of Mediterranean ceramic categories is present. Some of these are residual (for example the Campanian black gloss ware), but ceramic categories already attested in earlier phases also

18 For the terracotta roof elements of the "Grandes Forges" insula, see Clément 2012.

19 An overview of the topic can be found in Clément 2011. A very similar antefix has been found by the Belgian team in Bibracte, Bonenfant 2014, 126, Fig. 101.

20 Some very early examples belong to the Orientalising complex in Murlo, see: Tuck 2014, Fig. 4.

21 Delencre 2012, 380.

22 Goudineau 1968.

23 Timár *et al.* 2006, 28–33.

24 See Clément 2012.

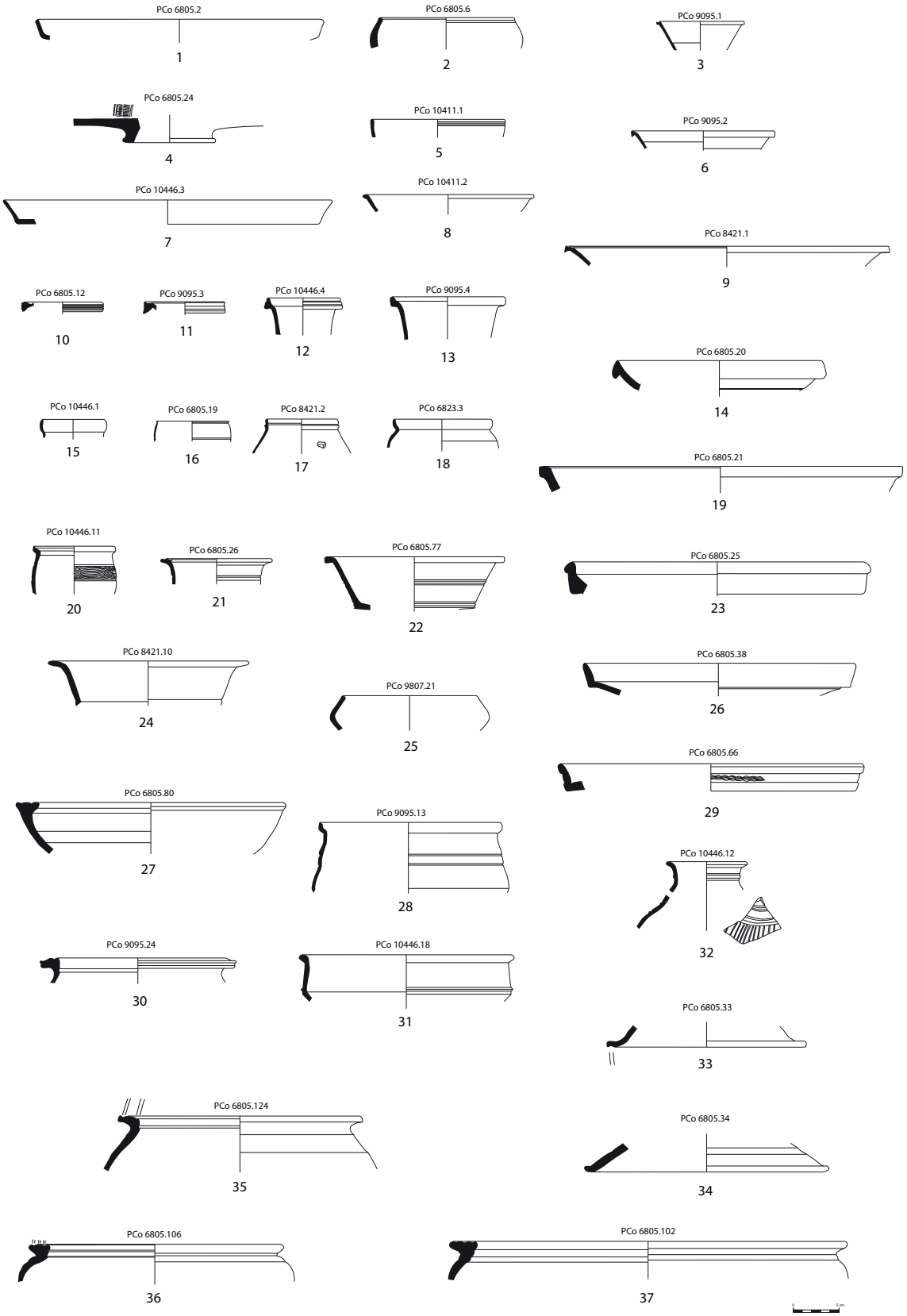


Fig. 9. Pottery assemblage from Phase 3 *(domus)* of the "Grandes Forges" *insula*: black-gloss "Campanian" ware, Type B (nos 1, 5); black-gloss "Campanian" ware, Type CC (no. 2); *terra sigillata* (nos 3, 6, 8–9); pre-*sigillata* (nos 4, 7); Mediterranean-type jugs (nos 10–13); Pompeian-red ware platters (nos 14, 19); thin-walled ware (nos 15–18); *mortarium* (no. 23); regional fine ware (nos 20–21, 24, 26, 28–29, 32–34); regional semi-fine ware (nos 22, 25, 27, 31); and regional coarse ware (nos 30, 35–37).

occur in greater quantities, such as thin-walled ware cups and Pompeian-red ware platters, the vast majority of which derive from the stratigraphic sequence of the *domus*.

Summary and open questions of interpretation

During the study of the pottery finds, a total of 8,245 fragments representing 1,153 vessels were analysed and assigned to the major construction phases of the *insula*.[25] In the course of this work, the pottery was examined in different ways: first, through the proportion of Mediterranean finds within the various ceramic categories, and second, through the study of Mediterranean forms. These Mediterranean forms are also present in regional ceramic categories and therefore had to be examined separately. This is illustrated in Figs 10 and 11.

As regards the representation of forms belonging to the Mediterranean tradition, it can be observed that their proportion increases gradually through the successive construction phases of the "Grandes Forges" *insula*. From the Augustan period onward, the Romanisation of the ceramic form repertoire clearly surpasses the representation of imported ceramic categories. This phenomenon may be explained by the fact that Mediterranean forms are also well represented among regional wares, as for example in the case of plates imitating forms Lamboglia 5/7 in regional dark-fabric pottery.

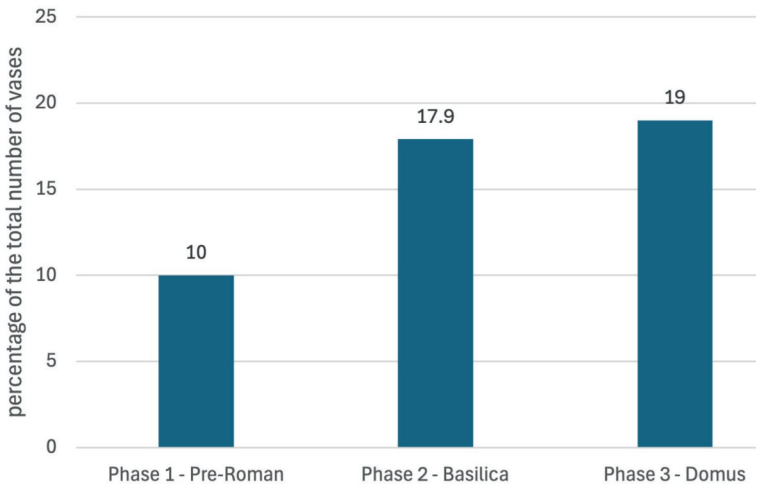


Fig. 10. Percentage of Mediterranean pottery across the phases of the "Grandes-Forges" *insula*.

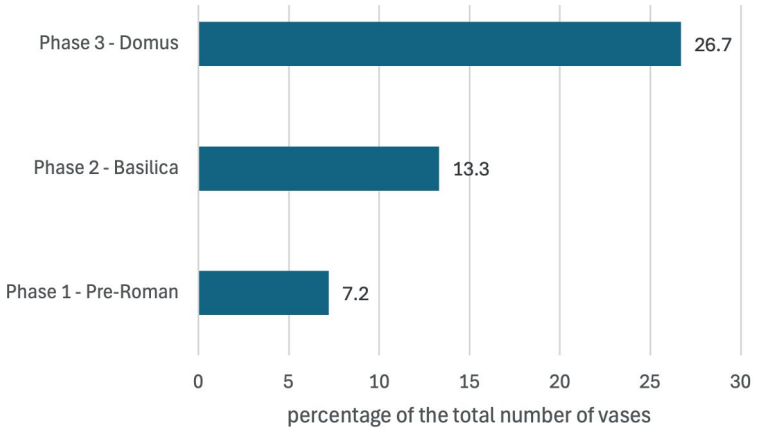


Fig. 11. Percentage of Mediterranean vase shapes across the Phases of the "Grandes-Forges" *insula*.

The nature of this Romanisation of the repertoire sometimes appears rather unusual. In the case of platters with red internal slip (Pompeian-red ware), for instance, regional imitations precede the appearance of the Italic prototypes.[26] The opposite pattern can be observed in thin-walled wares: regional imitations are attested only in the *domus* fills, well after the imported prototypes.[27]

Certain categories are replaced by others over time. The proportion of Campanian black-gloss wares declines gradually through our horizons, whereas the reverse trend is observed for red-slip

25 The greater part of this study was published here: Szabó 2012a, and here Szabó 2012b.

26 Szabó 2012b, 240–241.

27 Szabó 2012b, 240, 243.

wares.[28] The basilical assemblages (Phase 2) are characterised by the presence of pre-*sigillata*, which is succeeded by *sigillata* in the layers of the *domus* (Phase 3).

In conclusion, the earliest signs of the Romanisation of the ceramic repertoire are already visible in the oldest assemblages (Phase 1) from the "Grandes Forges" *insula*. The process continues and becomes more marked in the levels of the basilical phase (Phase 2), but it accelerates significantly from the Augustan levels of the *domus* (Phase 3) onward. A very similar process can be observed at other major sites on the *oppidum* of Bibracte, for example at PC1 in the Parc aux Chevaux.[29]

We have a substantial body of data, although its interpretation is often far from straightforward. The central question is whether we should understand these developments as evidence of Romanisation, acculturation or rather as evidence for the direct presence of Romans. The evolution of the material culture, and the architecture of the 3 phases of the "Grandes Forges" *insula* points to a profound transformation. Both the *basilica* (Phase 2) and the *domus* (Phase 3) are Italic building types, conceived and executed according to Italic architectural principles. The increasing quantity of imported pottery likewise indicates that this transformation affected not only the built environment, but also other aspects of daily life and consumption. All this raises an important question: who built the *basilica*, and for what purpose? It is difficult to imagine the construction of such a building without direct Roman intervention and/or the presence of Roman architects. Its early date makes the issue even more striking. Caesar famously states that the Roman senate regularly referred to the Aedui as the "blood brothers"[30] of the Romans. Did the Aedui in fact enjoy a privileged relationship with Rome? The *basilica* may well be one indication that they did.

At the same time, many problems remain unresolved. How did the *basilica* relate functionally to the monumental wooden building at PC15?[31] Both were large public buildings, yet one was constructed according to Roman architectural principles, while the other belonged to a Gallic timber-building tradition. Their coexistence raises important questions about the interaction of local and Mediterranean forms of public architecture.

It is equally difficult to explain the functional transformation of the "Grandes Forges" *insula*, from an area with public building to one occupied by a luxurious Roman-type *domus*. Why did this change occur? Similar elite Roman-style houses are known from other parts of the *oppidum* as well. This leads to the question of who lived in these residences: members of the local elite, Romans, merchants? In any case, these processes at Bibracte were relatively short-lived, since the *oppidum* was soon abandoned and Augustodunum (Autun) emerged as the principal settlement that succeeded it.

Sources

Caes. *B. Gall.*: Caesar *Bellum Gallicum.*

References

Barrier, S. 2014: *La romanisation en question. Vaisselle céramique et processus d'acculturation à la fin de l'âge du Fer en Gaule interne. Bibracte* 25. Glux-en-Glenne.

Barrier, S. – Luginbühl, T. 2021: *La vaisselle céramique de Bibracte. De l'identification à l'analyse.* Bibracte 31. Glux-en-Glenne.

Bertin, D. – Guillaumet, J.-P. 1987: *Bibracte (Saône-et-Loire). Une ville gauloise sur le mont Beuvray.* Paris.

28 Szabó 2012a, 333–335.

29 Paunier – Luginbühl 2004, 343.

30 Caes. *B. Gall.*, 1.33: *"fratres consanguineosque".*

31 Guichard *et al.* 2018, 47–55.

Bonenfant, P.-P. 2014: Fouilles de l'Université libre de Bruxelles à Bibracte (1987–1995): la Pâture du Couvent, Îlot des Grandes Caves. In: Guichard, V. (ed.): *Études sur Bibracte 2*. Bibracte 24. Glux-en-Glenne, 9–165.

Clément, B. 2011: Antéfixes à tête humaine tardo-républicaines en Gaule du Centre-Est. *Gallia* 68:2, 83–108.

Clément, B. 2012: *Les terres cuites architecturales de l'Îlot des Grandes Forges, Bibracte. Rapport Annuel d'Activité*. Glux-en-Glenne, 383–394.

Déchelette, J. 1927: *Manuel d'archéologie préhistorique, celtique et gallo-romaine. IV: Second âge du Fer. Époque de La Tène*. Paris.

Delencre, F. 2012: Les antéfixes découvertes dans l'Îlot des Grandes Forges: observations pétrographiques. *Rapport annuel 2012 du programme de recherche sur le Mont Beuvray IV – Études Spécialisées*. Glux-en-Glenne, 379–382.

Fochesato, A. – Guichard, V. 2025: *Rapport intermédiaire 2024 du programme de recherche archéologique 2022–2025 sur le mont Beuvray*. Bibracte EPCC. Glux-en-Glenne.

Goudineau, C. 1968: Fouilles de l'École Française de Rome à Bolsena (Poggio Moscini). IV. La céramique arétine lisse (1962–1967). *Mélanges d'archéologie et d'histoire*, Suppléments 6. Rome.

Goudineau, C. 1990: *César et la Gaule*. Paris.

Goudineau, C. – Peyre, C. 1993: *Bibracte et les Éduens. À la découverte d'un peuple gaulois*. Glux-en-Glenne.

Guichard, V. 2004: Un aperçu des acquis récents des recherches sur l'oppidum de Bibracte (1997–2002). *Revue archéologique de l'Est* 52, 45–90.

Guichard, V. – Meunier, A. – Paris, P. 2018: Chronique des recherches sur le Mont Beuvray: 2013–2016. *Revue archéologique de l'Est* 67, 151–211. https://doi.org/10.4000/jgib

Guillaumet, J.-P. 1996: *Bibracte: Bibliographie et plans anciens*. Documents d'archéologie française 57. Paris. https://doi.org/10.4000/books.editionsmsh.42155

Paunier, D. – Luginbühl, T. 2004: *Le site de la maison 1 du Parc aux Chevaux (PC 1). Des origines de l'oppidum au règne de Tibère. Bibracte* 8. Glux-en-Glenne.

Reddé, M. – Barral, P. – Favory, F. – Guillaumet, J.-P. – Joly, M. – Marc, J.-Y. – Nouvel, P. – Nuninger, L. – Petit, C. (eds) 2011: *Aspects de la Romanisation dans l'Est de la Gaule*. Bibracte 21. Glux-en-Glenne.

Romero, A.-M. 2006: *Bibracte. Archéologie d'une ville gauloise*. Glux-en-Glenne.

Szabó, D. 2012a: *Étapes de l'urbanisation au cœur de l'oppidum de Bibracte: étude du mobilier céramique des fouilles hongroises de l'Îlot des Grandes Forges*. Tálentum sorozat 12. Budapest.

Szabó, D. 2012b: Éléments méditerranéens dans le répertoire de céramique de l'Îlot des Grandes Forges à Bibracte. In: Borhy, L. (ed.): *Studia Celtica Classica et Romana Nicolae Szabó septuagesimo dedicata*. Budapest, 235–247.

Szabó, M. – Timár, L. – Szabó, D. 2007: La basilique de Bibracte. Un témoignage précoce de l'architecture romaine en Gaule centrale. *Archäologisches Korrespondenzblatt* 37:3, 389–408.

Szabó, M. – Timár, L. – Szabó, D. 2019: La basilique de Bibracte et son environnement. In: Guichard, V. – Vaginay, M. (eds): *Les modèles italiens dans l'architecture des IIe–Ier siècles avant notre ère en Gaule et dans les régions voisines*. Bibracte 30. Glux-en-Glenne, 389–406.

Timár, L. – Szabó, M. – Czajlik, Z. 2006: La domus du dernier état de l'îlot des Grandes Forges. In: Guillaumet, J.-P. – Szabó, M. (eds): *Études sur Bibracte – 1*. Bibracte 10. Glux-en-Glenne, 13–46.

Tuck, A. 2014: Manufacturing at Poggio Civitate: Elite consumption and social organization in the Etruscan seventh century. *Etruscan Studies* 17:2, 121–139. https://doi.org/10.1515/etst-2014-0016

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 669–685. 10.17204/dissarch.suppl.5.2026.669

The *'basilica'* of Bibracte

A derivative or prototype of Vitruvius' *basilica*?

Lőrinc Timár
HUN-REN–ELTE Research Group for Interdisciplinary Archaeology, ELTE Eötvös Loránd University, Budapest, Hungary
timar.lor@gmail.com

Received 19 December 2025 | Accepted 25 February 2026 | Published 18 November 2026

Abstract: This study reevaluates the so-called *'basilica'* of Bibracte to assess whether it represents a derivative of the Vitruvian *basilica* or an early prototype of a new architectural type in the Late Republican period. Excavations in the Pâture du Couvent revealed a large complex dating to c. 40 BCE, comprising a columned hall, two porticoed courtyards, and surrounding rooms. While the hall's proportions and layout correspond to Vitruvius' description, the overall design, including the dual courtyards, absence of a monumental entrance, and lack of an *aedes*, diverges from canonical *forum–basilica* complexes.
Architectural and metrological analysis, alongside comparisons with early Italian and provincial *basilica*s and contemporary *principia*, situates the complex of Bibracte within a phase of architectural experimentation. The evidence suggests that the courtyard-aisled hall concept may have originated in military contexts before an adaptation to urban civic settings as the *forum–basilica* unit.
The complex of Bibracte is thus interpreted as an early administrative building bridging the *principia* and the later *forum–basilica* complexes. As a rare archaeological snapshot of this formative period, the complex provides critical insights into the transition from Republican to early Imperial Roman architecture.

Keywords: Bibracte, Roman architecture, *oppidum*, *principia*, *basilica*

Introduction

The excavations conducted by the ELTE Eötvös Loránd University of Budapest began in 1988 in the *oppidum* of Bibracte (Mont Beuvray, Burgundy, France), under the direction of Professor Miklós Szabó. Research was initiated in the area known as the Pâture du Couvent,[1] a location chosen for its archaeological potential, and the campaigns resulted in several important observations. The name of this zone refers to the medieval monastery that once stood there, the remains of which occupied the upper layers of the stratigraphy. The first campaigns undertaken by the university team took place in the lower part of the Pâture du Couvent, at the northern perimeter of the city block known as l'Îlot des Grandes Forges, a name introduced by French archaeologist Joseph Déchelette. The Pâture du Couvent is located in the inner part of the *oppidum*, next to the road passing through the settlement (Fig. 1). The highest part of the *oppidum* is La Terrasse, about one kilometre higher up. In the present article, I will highlight only the most important results achieved so far. The *oppidum* and the Hungarian excavation site have already been described in several articles.

1 For the topography of the *oppidum* of Bibracte the modern French names are used. On the older and modern excavations see also Gruel – Vitali 1998, 6–8.

✉ Corresponding author



Fig. 1. The Pâture du Couvent in Bibracte, Mont Beuvray, France (plan: A. Meunier, BIBRACTE EPCC – Centre archéologique européen).

During the initial campaigns, a section of Bibracte's main street[2] was investigated.[3] From 1996 onwards, excavations continued in the inner part of the Îlot des Grandes Forges,[4] situated to the east of the main street, in a zone heavily disturbed by numerous post-Antique spoliations and by

2 The identification of the main street: Barral *et al.* 1996, 233–239; Gruel – Vitali 1998, 26–30.

3 The construction of this road was undoubtedly a fundamental moment in the elaboration of Bibracte's urban structure. The dating of the structures discovered under the pavement, which was made when the street was widened towards the west (Street 1B), is the end of the 2nd or the beginning of the 1st century BCE. This provides a *terminus post quem* for the installation of Street 1B (Gruel – Vitali 1998, 27–30, Figs 16–17; cp. Fig. 10).

4 Guichard 2004; Guichard 2007, 131–137; Szabó – Timár 2008, 55–67; Bessière – Guichard 2010, 219–223.

buildings belonging to a medieval monastery (Phase 4).[5] In this area, a large Augustan-period building with a floor plan characteristic of the Roman *domus* was uncovered (Phase 3).[6] This structure appears to have been left unfinished and was therefore never used.[7] From 2000 onwards, research focused on the phases predating the *domus*. In a room where the flooring of the *domus* was well preserved, further remains belonging to an earlier architectural phase (Phase 2) were discovered.[8] This phase comprises a large complex constructed over the middle terrace of the *insula*. The earliest traces of human occupation (Phase 1), dated to the pre-Roman period, lay beneath the vestiges of the basilical compound. As these remains were accessible only in small deep test pits, this earliest phase remains poorly understood.

The large complex of Phase 2 and its interpretation

The principal structure of Phase 2, occupying the central part of the *insula*, was a covered hall (Figs 2–3). This hall of columns (Rooms A and B) measured approximately 21 × 12.5 metres.[9] Its central space *(spatium medium)* was surrounded by a colonnade of four by eight columns and measured approx. 18 × 9 metres (Room A). The hypothetical interpretation of the structure as a basilical building was supported by the discovery of a flight of steps adjoining the eastern boundary of the hall of columns. These steps led to Courtyard C, which measured approximately 21.5 × 22 metres. The courtyard possessed a carefully constructed earthen *(argile)* floor, identified in several test pits. Geophysical surveys had already indicated the presence of masonry structures here,[10] and the excavations confirmed that the courtyard was flanked by porticoes (Y).

None of the finds enabled a definitive conclusion regarding the function of this compound, yet its dimensions and architectural features correspond closely to the basilical type described by Vitruvius.[11] Identification of the core building as a *basilica* is further supported by a series of architectural parallels. Indeed, it seemed to be difficult to propose any preliminary interpretation other than that the eastern Courtyard C functioned as a *forum*.[12]

A narrow room (Room D) was attached to the hall of columns from the west. North of the hall, three rooms were identified: the large central Room G and two smaller Rooms, H and F. It is plausible that this arrangement had a symmetrical counterpart on the southern side of the hall of columns (Room J). It should be noted that numerous fragments of red wall plaster were found in Room G. A test pit in Room H confirmed that the destruction of the building complex was preceded by a fire. On the *basilica*'s western side lay a second courtyard (M), measuring approx. 16 × 16 metres, also flanked by lateral porticoes (V, N and E). This western courtyard was delimited by a long wall, and a granite step or threshold led to an entrance opening (through Corridors P and R) onto the *oppidum*'s main street. This entrance lay on the central axis of the basilical complex. A row of rooms (O, Q, S, T and U), to be identified as *tabernae* opening onto the *porticus* (X and W) along the main street, was also

5 The monography on the medieval archaeology of the site: Beck – Saint-Jean Vitus 2018.

6 On the floor-plan of the *domus* and other architectural questions, see Timár 2015; Timár 2016.

7 For the complete analysis see Timár *et al.* 2005, and also Timár – Meunier 2016.

8 The principal publication on Phase 2 is Szabó *et al.* 2007, and from a different aspect: Szabó 2007, supplemented by Szabó *et al.* 2018.

9 It is somewhat problematic that the basilical complex was never accessible at once and we had to rely on measurements taken in small test pits. As the excavation progressed, it was possible to refine the measurements, therefore the values given in previous publications could have changed minimally.

10 The site was subject to several geophysical surveys. The most relevant results: Czajlik *et al.* 2013; Timár *et al.* 2013; Czajlik *et al.* 2014; Timár *et al.* 2014; Milo 2015.

11 Vitr. *De arch.*, V.1.

12 Szabó *et al.* 2007, 391; Szabó *et al.* 2018, 15.

documented. It is worth emphasising that the ground plan of the entrance area shows no evidence of a monumental gate structure.

Progressive exploration of the zone east of the basilical complex revealed additional rooms forming a continuation of those adjacent to the hall of columns. On the southern side, Rooms K and L were identified, along with their counterparts, Rooms F, G, H, and I, on the northern side. Excavations have not yet reached the eastern side of the *forum*, so we do not have information about what rooms or buildings are located there.[13] On the side of the compact imperial *forum*s opposite the *basilica*, a temple is usually present; however, geophysical surveys revealed here no evidence of a structure of sufficient size.



Fig. 2. Plan of the basilical complex (Phase 2) (plan: L. Timár).

From the aspects of metrology, one can discover some rules that were used for the planning of the basilical complex (Fig. 4). The dimensions indicated here in pM (*pes Monetalis*, Roman feet of 296 mm) were derived from metric measurements. The whole complex is approx. 250 pM long, and its width is around 100 pM. The foundation masonries do not have definite surfaces or edges, therefore, all the measurements were taken between irregular-shaped stones and they represent an average value. It does not seem to be very likely that the ichnography would have been based on precise dimensions broken down to difficult fractions (smaller than half feet as seen on the marble plan of the tombstone in Perugia).[14] Studies revealed that there were multiple ways of Roman

13 The aim of the new excavation campaigns ongoing since 2023 is to investigate this area: Szabó – Timár 2024; Timár – Szabó 2025.

14 CIL VI, 9015; Gros 1996, 381, Fig. 435.

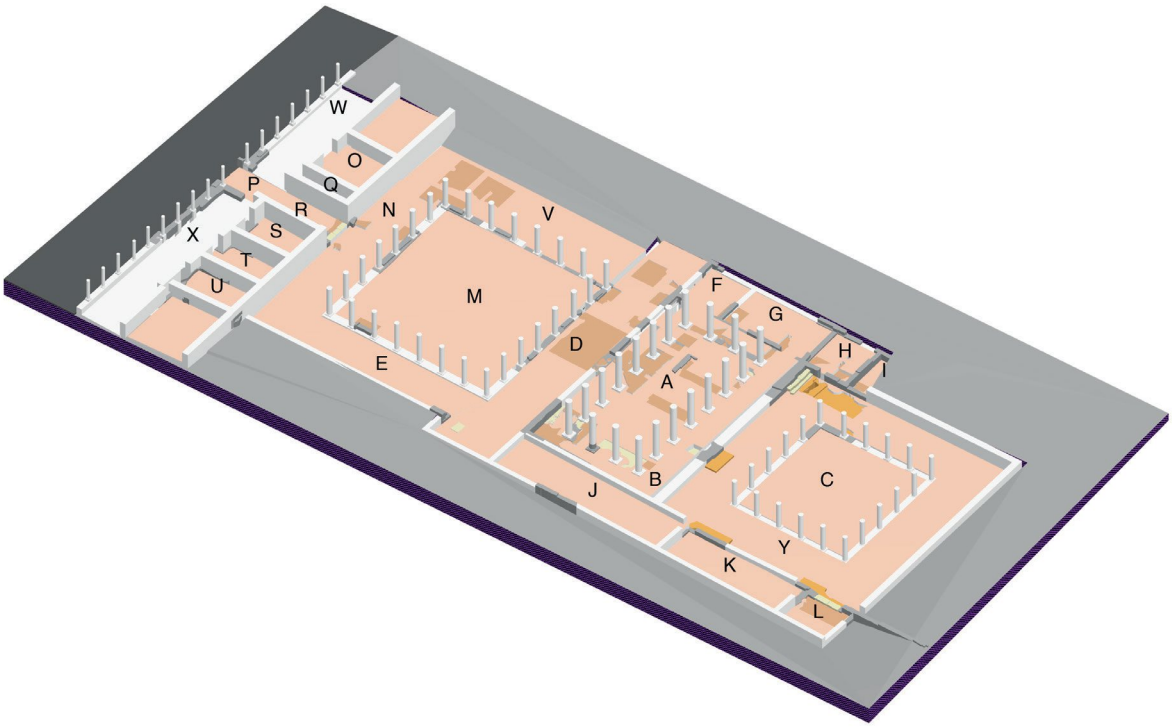


Fig. 3. Axonometric view of the floor plan with reconstructed structures. The excavated parts of the building are shown in a darker colour (drawing: L. Timár).

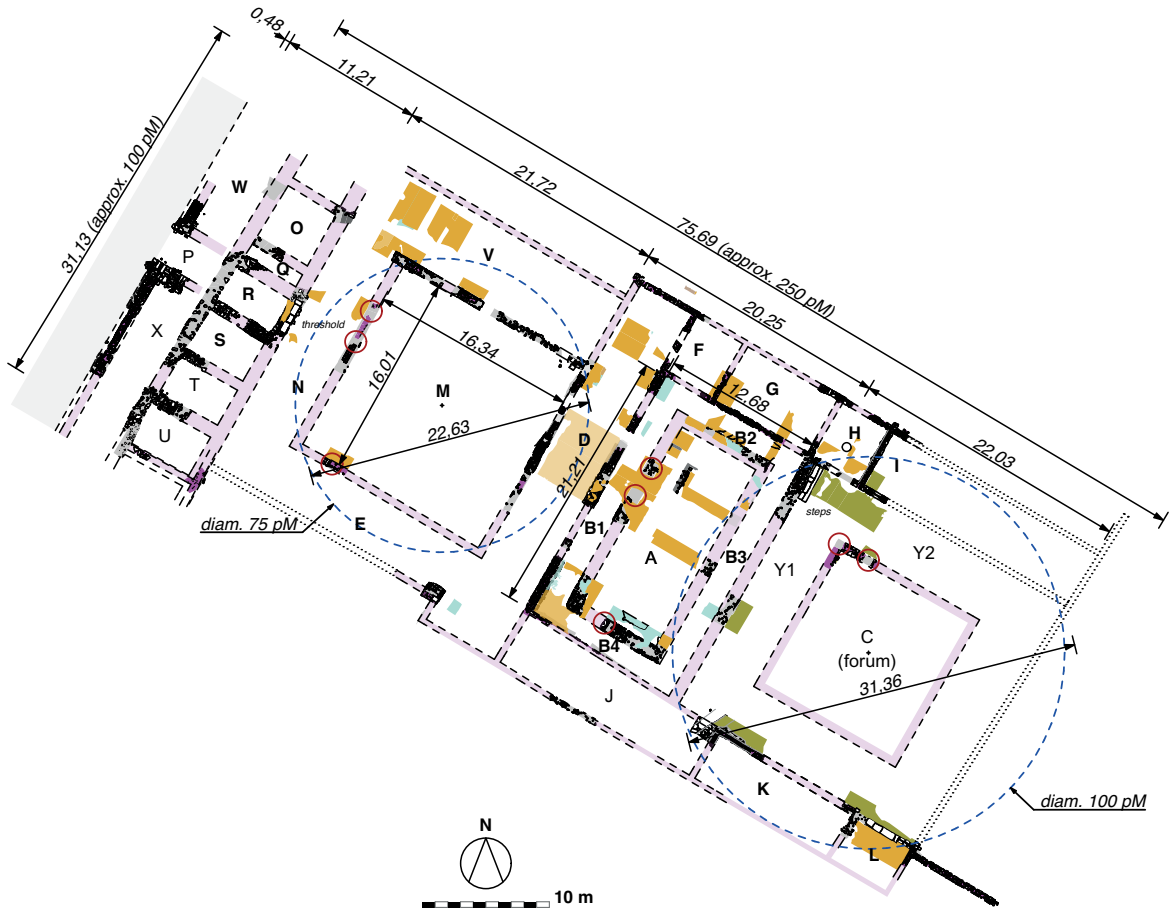


Fig. 4. Dimensions of the basilical complex (plan: L. Timár).

planning and the setting out of the walls, and it is highly likely that main dimensions were given in exact numbers and the smaller dimensions were derived from them through ruler-and-compass constructions.[15] In the entrance zone we find rooms with an average size of 15 × 10 pM. The western courtyard's *quadriporticus* is approx. 55 × 55 pM (its diagonal measurement is roughly 77 pM), and Room D's interior dimensions are 100 × 25 pM. Rooms F, G, H, I and J are approx. 16 pM wide, and the *porticus* on the *forum* is approx. 15 pM wide. The *forum*'s dimensions are approx. 75 × 75 pM, thus its diagonal is around 100 pM. As it is usual in such cases, it is not straightforward to see how the floor-plan was set out. Circles drawn around the rectangular rooms intersect each other where the corners are, but there is hardly any reason to regard this as the proof of the Roman planning methods. What is worth mentioning here is the fact that the *forum*'s dimensions are obviously derived from the middle terrace's width of 100 pM. The terrace's width was evidently further divided, and finally it determined the length of the basilical hall. There can be little doubt that the *intercolumnia* were derived from the basilical hall's length, which was apparently a common practice.[16] The internal proportion of the naves is also the conventional 1:2 as recommended by Vitruvius[17] and seen in many cases.[18]

The fragments of stone mouldings found during the excavation[19] made it possible to reconstruct the façade[20] and the cross section of the building (Fig. 5). Based on the column bases, the fallen column shaft excavated *in situ* in the basilical hall (Rooms A and B) and the removed columns' emplacements on the flooring, it can be said with certainty that large, approx. 540 cm high columns stood there, which in all likelihood had Corinthian capitals. The smaller columns and pillar remains found on the site can be relatively easily associated with the excavated structures. Two versions have been proposed for the reconstruction of the façade,[21] of which the arched version seems to be more likely, not only because all the elements found there could be assigned to their place, but also because the foundations of the forum's portico (Room Y) have also been found in the meantime. The roof of this portico would have been difficult to connect to a façade with giant columns. Nevertheless, any reconstructed façade must be treated as speculative. For this reason, the comparison of floor plans is given priority when identifying architectural parallels.

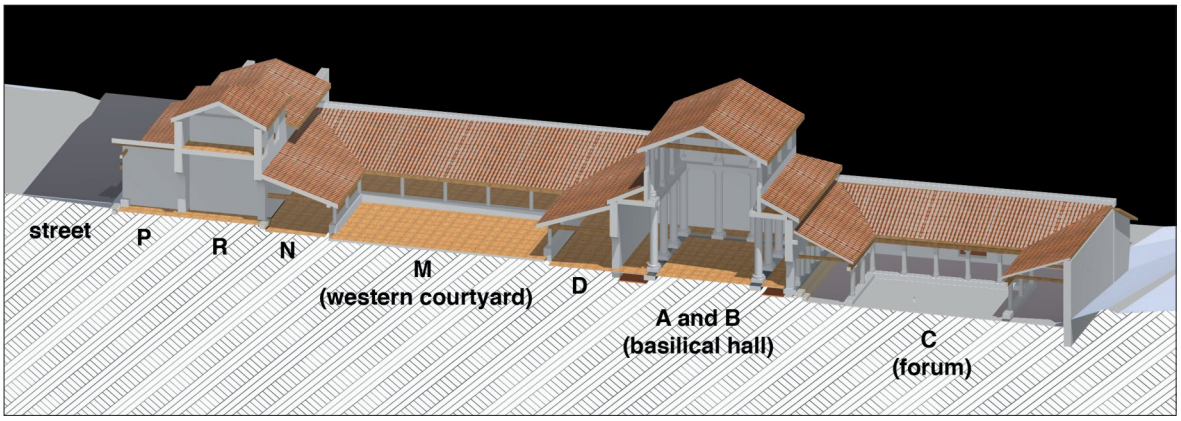


Fig. 5. Cross-section of the complex (drawing: L. Timár).

15 Gros 2001, 513–514.
16 Walthew 2002, 99.
17 Vitr. *De arch.*, V.1.6.
18 Walthew 2002, 102.
19 Szabó *et al.* 2007, 394–398.
20 Szabó *et al.* 2007, 398–400.
21 Szabó *et al.* 2007, 400, Figs 12–13.

The wider architectural context must also be taken into account when evaluating the remains. It is important to keep in mind that the basilical complex of Phase 2 was constructed within a former *oppidum*. Had it been built on La Terrasse, the summit of Mont Beuvray in the very centre of the settlement (see Fig. 1), it could more readily be identified as one of the principal buildings of civic administration or cult. Instead, it stands in the Pâture du Couvent, a location that appears secondary for such a compound. Nevertheless, it occupied a prominent position along the main street and was clearly visible from the approach road leading from the Porte du Rebout. This situation undoubtedly contributed to a degree of monumentalisation: a substantial and wholly new Roman edifice dominated the view behind the wooden houses of the artisanal quarter of Come Chaudron. Although the visual impact was far less dramatic than, for instance, the temple of Jupiter Anxur at Terracina, the complex must still have been a notable feature. Upon passing by the naviform basin (Fig. 1),[22] the visitor would have seen the colonnaded portico extending along the street, enhancing the perspective of the route leading towards the heart of the settlement.

Apart from the architectural aspects, the great significance of the *basilica* lies in the fact that it stood only for a very short time. After approximately two decades of existence it was replaced by a private building, a luxurious *domus* that was probably never inhabited.[23] The explanation for this seems very simple: the transfer of the capital of the Aedui tribe to Autun (Augustodunum) was underway, so the *basilica* lost its function.[24]

The problems of function and identification

There are many Roman building types that are relatively easy to identify. In some cases (such as *collegia*, which are often not different from residential buildings), identification is far from straightforward, as architectural form does not necessarily reflect function.

The modern understanding of the Early Imperial *basilica* as a building type derives largely from the interpretation of Vitruvius' text.[25] Yet scholarship has long demonstrated that the term *basilica* does not necessarily denote a three-aisled building with an elevated central nave. Rather, it refers more broadly to buildings designed to accommodate the range of activities that could be performed within a *basilica*.[26]

Consequently, even a portico may fulfil the functional role of a *basilica*, while a group of rooms with a basilical layout may serve entirely different purposes—for example, an *oecus Aegyptius* in a residential complex,[27] a foyer in a palace, or the central room of the *principia* or *valetudinarium* in military camps. These examples emerged at different times in Roman architecture. The important question is how the basilical complex of Bibracte fits into this architectural evolution.

Unfortunately, no epigraphic evidence exists to clarify the function of the basilical complex at Bibracte. It should be emphasised that only one eroded inscription has been found anywhere on Mont Beuvray, and the legal status of Bibracte has long been the subject of scholarly debate. The general scarcity of monumental inscriptions on the site represents a broader interpretive challenge.

22 An exhaustive study: Almagro-Gorbea – Gran-Aymerich 1991.

23 The chronology of the *domus*: Timár *et al.* 2005, 44. See also Szabó 2012 for the detailed analysis of the ceramic finds.

24 Szabó *et al.* 2007, 406. Describing Sacrovir's revolt of 21 CE, Tacitus mentions *"Augustodunum caput gentis"* (Tac. *Ann.*, III.43). See also Goudineau – Peyre 1993, 195–197.

25 Vitr. *De arch.*, V.1.

26 *Basilica*s fulfilled a wide range of functions, including use as markets, courts, assemblies, and sometimes as products of political competition: Nünnerich-Asmus 1994, 10–11 and 22–24.

27 On the functions and architectural features: Gros 2004.

In the specific case of our basilical complex, this difficulty is compounded by the absence of artefacts that might indicate its use. We are thus compelled to rely exclusively on architectural criteria.

According to the finds, the basilical complex of Bibracte has to be dated to around 40 BCE.[28] This date is earlier than what was established for most of the similar *basilica*s. Its basilical hall has its parallels among contemporary and early Augustan buildings in Italy and southern Gaul.[29] Several studies have emphasised the relative frequency of *basilica*s of the so-called Fano type[30] (at least with regard to the floor plan), and these *basilica*s, together with their associated *fora*, form compact units (Fig. 6).[31]

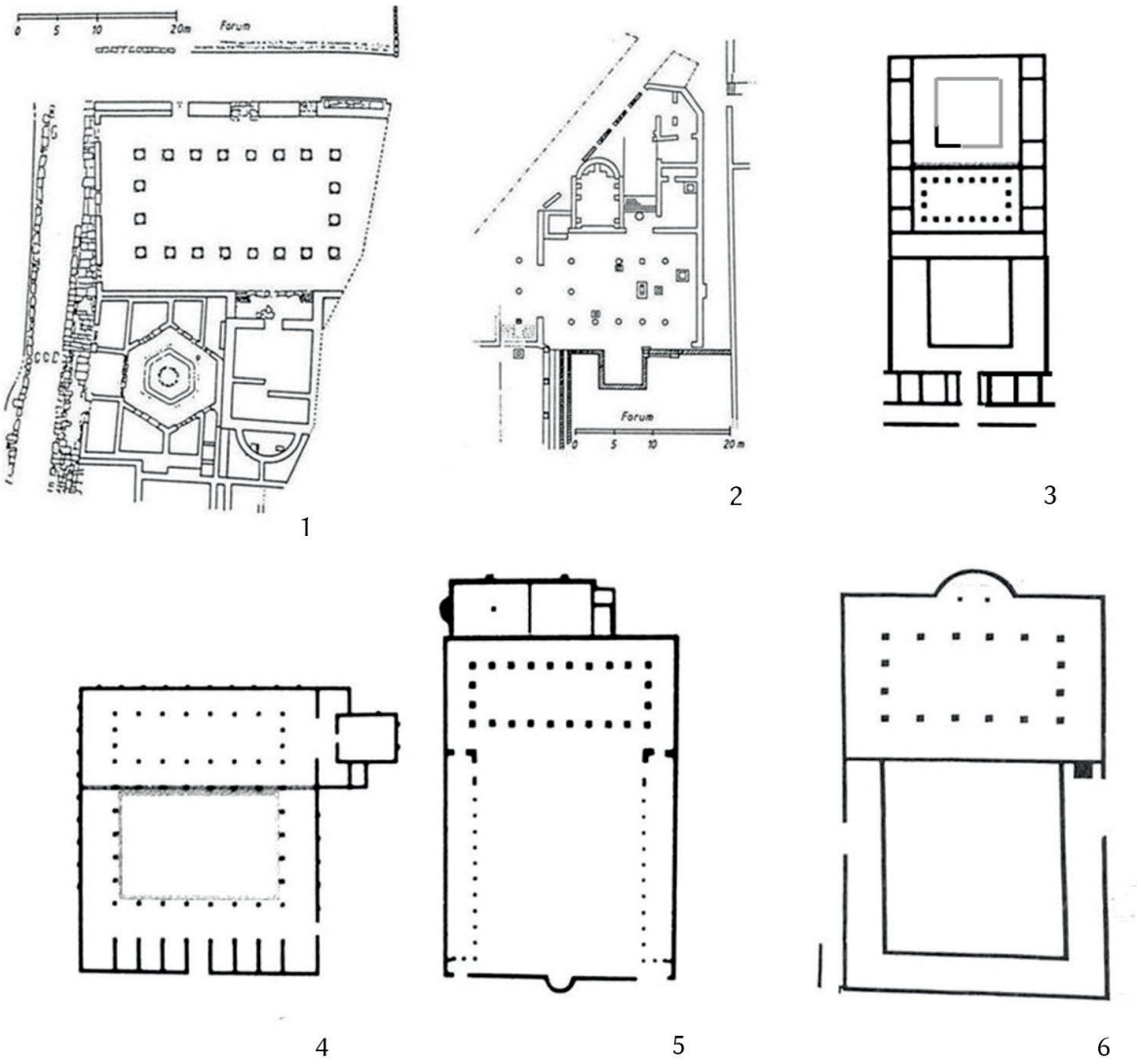


Fig. 6. Comparison of some *basilica*s, to the same scale. 1– Saepinum (after Nünnerich-Asmus 1994, Abb. 55), 2 – Lucus Feroniae (after Nünnerich-Asmus 1994, Abb. 54), 3 – Bibracte, 4 – Ruscino (after Barruol – Nickels 1980, Fig. 21), 5 – Glanum (after Gros – Varène 1984, 30, Fig. 5), 6 – Laudun (after Provost 1999, Figs 442–443).

28 Szabó *et al.* 2007, 404–406. Szabó 2012, 364 and also Chapter 4 which is dedicated to the analysis of ceramics in the destruction layers of Phase 2.

29 It should be noted that the dates of the buildings listed are more or less uncertain.

30 Gros 1990, 47.

31 Earlier Republican *basilica*s did not play a prominent role in the *forum* zone, and were sometimes added later: Gros 1990, 41–45.

The small *basilica* at Ardea appears to be the oldest known example, although its dating to 100–80 BCE is based chiefly on construction techniques.[32] The *basilica* at Alba Fucens may be contemporary; it was presumably built together with other public buildings in the town centre during the first half of the 1st century BCE.[33] The *basilica* at Lucus Feroniae was constructed before CE 14,[34] while that at Saepinum must date to the final decades of the 1st century BCE.[35] The *basilica* at Veleia was associated with a notably small *forum* (32.75 × 17.25 m) and is dated to CE 15.[36] The *basilica* at Ruscino appears contemporary with that at Saepinum and was already integrated into a *forum* and *porticus* complex.[37] Another early example is the *forum–basilica* complex at Laudun, dated to the first decades of the 1st century CE.[38] The *basilica* at Laudun corresponds also to the relatively small Vitruvian type. By the turn of the 1st century BCE to the 1st century CE, the concept of an axial, unified *forum–basilica* arrangement seems to have become widespread. Its precise origins, however, remain difficult to determine.

Architectural evolution

As such a building constitutes a complex arrangement, an architectural analysis inevitably requires an examination of each component. In the following sections, the architectural concepts underlying the principal elements are reviewed, together with the processes by which they became integrated into the basilical building and its adjoining courtyard complex.

The concept of composing an architectural unit framed by a surrounding porticus seems to have been developed within Republican temple architecture in Rome. Among the earliest examples is the Porticus Metelli[39] which means that this concept was incorporated into Roman architecture quite a long time ago. A subsequent stage in this architectural evolution was the transformation of the *porticus* into a courtyard connected to the principal building rather than merely surrounding it. The early imperial *fora* of Caesar and Augustus in Rome, however, did not include dedicated *basilica*s, which suggests that the *forum–basilica* complex did not originate in these settings.[40] The concept of an internal colossal order can be traced back to the *basilica* at Pompeii. In the treatise of Vitruvius it was still one of the key architectural elements.[41]

Although the two-storey façade of the basilical hall of Bibracte is based on circumstantial evidence and is hypothetical, it is still worth examining this feature. A two-storey façade type appears on a series of Roman silver *denarii*, specifically on the type RRC 429, issued by P. Fonteius Capito in 55 BCE.[42] The reverse depicts a building labelled *VIL(la) PVB(lica)*.[43] No material remains of the Villa Publica survive,

32 Nünnerich-Asmus 1994, 162–163.

33 Nünnerich-Asmus 1994, 157–158.

34 Nünnerich-Asmus 1994, 175–176.

35 Nünnerich-Asmus 1994, 206–209.

36 Nünnerich-Asmus 1994, 213–215.

37 Walthew 2002, 195; Barruol – Nickels 1980, 41–66.

38 Goury 1997, 159.

39 Apparently the first complex with porticus of more than a simple wing: Richardson 1992, 312; Nünnerich-Asmus 1994, 42–44.

40 The Curia Pompei, together with the Porticus Pompei linked to Pompey's Theatre, appears to approach most closely what may be termed a 'basilical unit'. Since the Curia was used for Senate meetings, it can reasonably be assumed that it performed functions analogous to those of a *basilica* (Nünnerich-Asmus 1994, 49–52).

41 Gros 1996, 242–244.

42 Elkins 2015, 31–32.

43 It has been supposed that this representation recalls an earlier triumph of T. Didius, perhaps with some reference to Caesar's campaigns (Hamilton 1955, 225–226) or the renovation of the building (Fuchs 1969, 22 and 82).

but literary sources confirm that it stood on the Campus Martius, near the Saepta.[44] According to the authors, the building housed the censors' office and functioned as an assembly place for both citizens and troops—roles closely aligned with those of a *basilica* or a headquarters. Although functional similarity does not necessarily imply architectural similarity, this reverse depiction shows a façade type that could equally represent a *basilica*. Given that the Villa Publica stood on the Campus Martius —a kind of architectural testing ground for Roman generals—it is not unreasonable to propose that the building represented a transitional architectural type with roots in military architecture.

The images on the coins were thoroughly analysed by G. Fuchs, who also published a reconstruction of the façade, noting its resemblance to the barrel-vaulted exedra of the sanctuary of Fortuna Primigenia. He therefore interpreted it as a typical example of Roman *Blendarchitektur*.[45] While this façade type was originally associated with vaulted buildings, it also appears as a display façade for structures erected on natural slopes or hilltops, such as the Tabularium and the sanctuaries of Palestrina and Tivoli. Subsequently, the type underwent further development and was eventually adopted in basilical architecture.[46] It is particularly noteworthy that this façade type also appeared in the Augustan rebuilding of the Basilica Aemilia after 14 BCE. According to the reconstruction proposed by H. Bauer, this later phase exhibited arched openings flanked by pilasters and engaged columns.[47] Although the building was far more elaborate and much larger than the *basilica* at Bibracte, the façade type itself remains relevant as a parallel.

It has to be noted that earlier numismatic depictions of the Basilica Aemilia are almost contemporary with those of the Villa Publica, but these earlier images show no arches; rather, they depict giant columns, architraves and a pitched roof belonging to its pre-Augustan phase.[48] It is therefore reasonable to suggest that *basilica*s with giant columns represent an earlier model, which was largely of Hellenistic origin, while the arched façade constitutes a distinctly Roman development of the Late Republic.

I have already mentioned above that the layout characteristic of a three-nave basilica is not related to the function of the basilica. Although this architectural feature had been part of Roman architecture for a very long time, it was given new purposes towards the end of the Republic. The emergence of the *oecus Aegypticus* in residential architecture is well documented and is clearly part of a trend in which the details of Hellenistic palaces were widely adopted by the upper classes of Roman society both in civilian and military context.[49]

Approaching the question from a broader perspective, it must be emphasised that, despite superficial similarities, a fundamental distinction exists between the provincial *forum–basilica* complex and the *principia*. When a *forum* and *basilica* are constructed together, the result is a composite of two architecturally independent units, each with its own principles of composition, proportional systems, and metrological rules. A comparable situation may be observed in the case of certain *valetudinaria*, where a cross-hall is attached to flanking ranges of rooms (e.g., in the fortress of Vetera II).[50] By contrast, a *principia* constitutes a single building in which the courtyard and cross-hall function merely as components rather than autonomous architectural entities. From this viewpoint, the *principia* may be regarded as a utilitarian reinterpretation of the palace type—itself a Roman adaptation of Hellenistic palatial architecture.

44 Richardson 1976; Richardson 1992, 430–431.

45 Fuchs 1969, 83–91.

46 Nünnerich-Asmus 1994, 66–69.

47 Bauer 1988, 206, Fig. 33; see also Gros 1996, 250–252.

48 Fuchs 1969, 21–22; Gros 1996, 240; Elkins 2015, 28–29.

49 Timár 2021, 269–270.

50 Reddé 2006, 119–121.

The *principia* floor plan is based on a strongly axial sequence comprising an entrance, courtyard, and reception hall. This architectural lineage ultimately derives from Hellenistic palaces such as the Palazzo delle Colonne in Ptolemais (Cyrenaica), a large and architecturally complex structure measuring c. 37 × 90 metres—approximately the size of a smaller early Imperial *principia*. Although the building's function and chronology are matters of ongoing debate, its ground plan and decorative system are indisputably Hellenistic, dating to the 2nd century BCE and drawing on Alexandrian precedents.[51] The palace also conforms broadly to the Greek house plan described by Vitruvius.[52] Its core consisted of three principal units—an entrance hall, a courtyard, and a reception hall—arranged axially. During the transitional period between Republic and Empire, a reduced and simplified version of this suite of rooms—termed *la trilogie publique* by French scholars[53]—became widespread in a particular type of peristyle house. A paradigmatic example is the Casa dei Cervi (IV.21) at Herculaneum, which served as the model for numerous provincial derivatives. If the longitudinal reception hall is replaced with a basilican hall, more suitable for accommodating large numbers of people, the resulting configuration approximates closely the *principia* type discussed above. This relationship offers a plausible explanation for the divergent architectural development of the *principia* when compared with civilian *fora*.

Moving forward in time, we see that the basilical layout acquired additional functions. It has long been recognised that civilian *fora* in Britain during the 1st century CE resemble the *principia* of legionary fortresses, indicating continuous interaction between civilian and military architecture.[54] This relationship is often overlooked, despite the well-known fact that retired soldiers played a significant role in Roman civilian life. Former military architects were involved at multiple levels in municipal construction projects, facilitating the transmission of architectural knowledge and practices.[55] Roman terminology in this context is relatively clear: the term *basilica* appears to denote a hall or building associated with particular functions. The Reculver inscription,[56] dated to the early 3rd century CE, refers to a *basilica* connected to a fortress' *principia*. Although a later one, this evidence nonetheless demonstrates that *basilica* could designate a cross–hall and was not necessarily restricted to civilian contexts.[57] The term *forum* could likewise be used in military settings from the 1st century CE.

Returning to the Late Republican era, it poses a problem that little is known about pre-Augustan military camps and fortresses[58]. The earliest known *principia* of the Imperial period—those at Oberaden, Haltern and Marktbreit—offer some insight (Fig. 7). The *principia* at Oberaden, occupied c. 11–7 BCE, covered an area of 103 × 94 metres.[59] A large *porticus* was enclosed by a cross-hall in the form of a relatively narrow *porticus duplex* rather than a true basilical building. Nevertheless, the key architectural components (courtyard, *porticus*, cross-hall, row of rooms) resemble the entrance area and the western courtyard of the basilical complex at Bibracte.

The *principia* at Haltern[60] and Marktbreit[61] followed the same basic scheme, though with somewhat more sophisticated plans. Both were occupied between c. 8/7 BCE and 9 CE and share many

51 McKenzie 2007, 97–98; 153.

52 Vitr. *De arch.*, VI.7; Raeder 1988, 367.

53 Vipard *et al.* 2007, 239–249.

54 Euzennat – Hallier 1986, 92–93; Fellmann 2006, 101.

55 Gros 1994, 79–81.

56 RIB 3, 3027 = AE 1962, 258 (https://romaninscriptionsofbritain.org/inscriptions/3027, accessed 19 February 2026); see also Fellmann 1983, 14.

57 Fellmann 2006, 92.

58 Johnson 1987, 245–251; Bishop 2012, 10–13.

59 Kühlborn 2006a, 220–224.

60 Kühlborn 2006b, 285–290.

61 Pietsch 2006, 320–324; see also Pietsch 1993.

features, including a corridor-like entrance. Since these buildings were constructed of perishable materials, their plans must have been adapted to the available resources: constructing a Vitruvian *basilica* in timber would have made little sense. It is evident that the availability of construction materials played a significant role in rendering the floor plans of early *principia*. Nevertheless, it may be reasonably assumed that this diversity is also likely attributable to the fact that the standard architectural forms of this building type had not yet been fully established. Although much later in date, the *principia* of Neuss/Novaesium Camp G[62] (the *Koenenlager*) also deserves mention. This structure represents a more developed form of the earlier *principia*, supplemented with flanking rows of rooms.

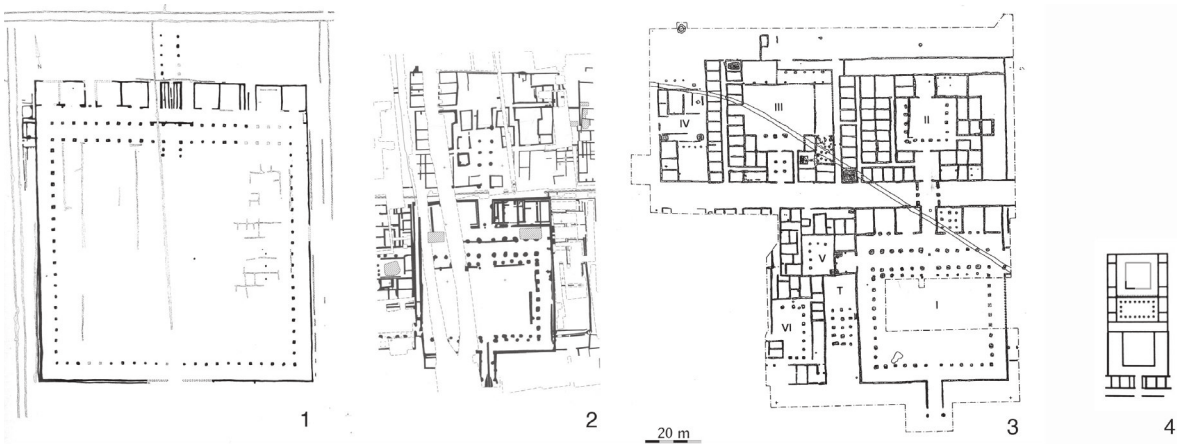


Fig. 7. Comparison of some principia, to the same scale. 1 – Oberaden (after Fellmann 2006, 95, Fig. 61), 2 – Haltern (after Fellmann 2006, 95, Fig. 62), 3 – Marktbreit (after Fellmann 2006, 95, Fig. 63), 4 – Bibracte.

These architectural parallels all date to the reign of Augustus and later—that is, at least thirty years after the construction of the basilical complex at Bibracte. This suggests that our complex followed an early model predating those later adopted in legionary camps. Vitruvius states that he personally knew Caesar,[63] which provides a rough indication of his birth date. In the same passage, he notes service as an artilleryman; we may therefore assume he had already left the army and spent time as a civilian architect by the time he designed the *basilica* at Fanum.[64] The date of this *basilica* is uncertain, but Vitruvius mentions a temple of Augustus and refers to the settlement as *colonia* Iulia Fanestris,[65] implying that the building cannot predate the early Augustan period. A further complicating factor lies in the fact that, in newly founded settlements, the earliest buildings were presumably temporary in nature from the outset. The archaeological traces of these structures were subsequently obliterated by later phases of reconstruction. From this perspective, Bibracte represents a snapshot of equal value to that provided by Waldgirmes.[66]

The use of a two-storey façade on a basilical building appears to be also a Late Republican development, as the first unambiguous evidence is provided by the Augustan phase of the Basilica Aemilia. The example of the Villa Publica demonstrates that the concept was already adapted to the scale of a smalltown *basilica*. Although speculative, it is not unreasonable to suppose that the architecture of the Villa Publica was fundamentally derived from the layout of a *villa suburbana*, subsequently

62 The stone period of which is dated to the Claudian period (Bishop 2012, 90–91).

63 Vitr. *De arch.*, I.1.2.

64 Fensterbusch 1964, 1–6.

65 Vitr. *De arch.*, V.1.6–7.

66 On the evaluation of Waldgirmes: Schnurbein 2010.

augmented with a hall furnished with the façade type depicted on the coins of Fonteius Capito. It is perhaps for this reason that the arched façade type was only later adopted for *basilica*s, as Vitruvius' description still presupposes an interior articulated by colossal columns, similar to the earlier depictions of the Basilica Aemilia on Republican coinage.

In summary, by the end of the Republic the three-aisled *basilica* was already an established building type. Although the *basilica* was consistently associated with a *forum*, the creation of an axial, integrated *basilica–forum–temple* unit appears to have been a new development, the origins of which remain less apparent.[67] The type spread widely during the first half of the 1st century CE in the provinces. Architectural differences between the civilian and military versions of the basilical hall appear minimal at this early stage, but their later development diverged significantly. Whereas the restricted conditions of military camps limited the evolution of the *principia*, the civilian *forum–basilica* complex underwent substantial transformation, culminating in the monumental Forum of Trajan, the most elaborate expression of the type.

The 'new architecture'

The chronological reference points emerging from the foregoing analysis suggest a significant architectural transformation at the beginning of the Augustan period. Several elements—colossal interior colonnade, two-storey arcaded façade, and porticoes used as framing devices—were already present in Roman architecture by the 1st century BCE. It does not seem at all exaggerated to assume that the profound transformations in Roman society and military organization already began in the Late Republican period. As a result, the military administration suddenly began requiring palace-like buildings.[68] After Pompey's triumphs and his building projects in the Campus Martius which surpassed all imagination,[69] it is highly likely that even officers of the army developed a demand to conduct camp administration in representative buildings of a Hellenistic character, and the intensified incorporation of Hellenistic influences into residential architecture can be seen as a continuation of this trend.

Vitruvius, our principal literary witness, was active during this transitional period. He served as a soldier in Caesar's campaigns and commenced his architectural career as a veteran at the start of Augustus' reign. Yet in *De architectura* VI, Vitruvius describes the *atrium* as the primary space within the *domus*. Archaeological evidence, however, demonstrates that *atria* and their associated rooms fell rapidly out of favour in the ensuing decades, replaced by suites of Hellenistic origin that emerged at the beginning of the Imperial period. Likewise, the Third Style in Pompeian wall painting—which Vitruvius regarded as a distasteful fashion—soon became dominant.[70] These observations indicate that Vitruvius was no longer fully attuned to the architectural paradigm shifts of his own time. The *basilica* at Fanum, which he claims to have designed, followed traditional (perhaps already old fashioned) principles and was rooted in earlier architectural traditions.

In this light, the integrated conception visible in the Bibracte complex—in which the porticoed square and *basilica* form a unified architectural composition—belongs stylistically to the architectural developments of the following decades, if not centuries.

Accordingly, the only viable answer to the question posed in the title is that the Bibracte complex employs elements characteristic of the Vitruvian *basilica*, yet it simultaneously embodies features

67 Gros 1990, 29–31; Gros 1996, 220–223.

68 A detailed paper on this subject: Förtsch 1995.

69 Plin. *NH*, XVIII,13.

70 Timár 2015, 282–283.

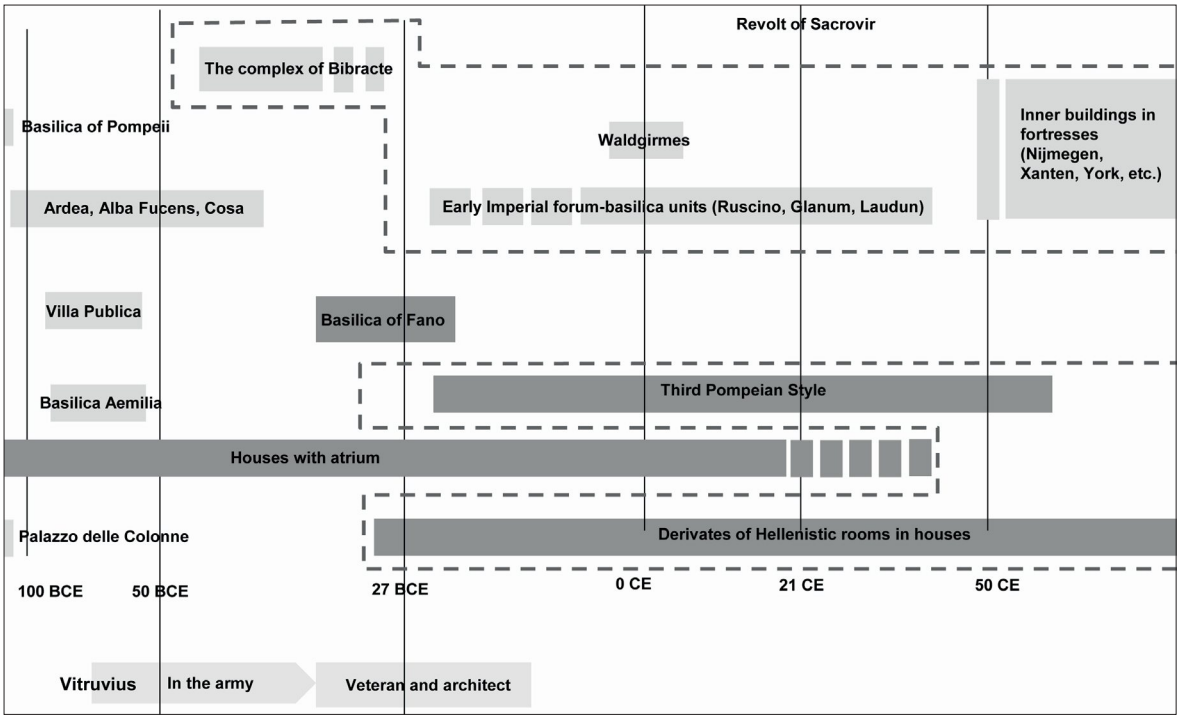


Fig. 8. An overview chart of the end of the Roman Republic and the beginning of the Imperial Era. The elements enclosed within the dashed outline represent the 'new architecture' (see text for details).

of what may be termed the emerging 'new architecture'. Given its early date, it is plausible that the invention of the *forum–basilica* concept originated in military architecture during the transitional phase between Republic and Empire—which may explain why its earliest known representative appears in a recently conquered *oppidum* of uncertain legal status. This 'new architecture' is represented on the timeline shown in Fig. 8 by the elements enclosed within the dashed outline. In this context, the basilica of Bibracte can be defined by its architectural design as an early (almost experimental) building that forms a kind of transition between the *principia* and the *forum–basilica*. Its basilical hall and its courtyards, with the rooms surrounding them, form a single unit. Whatever way we look at it, the architectural design allows for a large number of people to gather in the building and provides for additional rooms, where, for example, administrative tasks can be carried out. Given the absence of the monumentalised entrance characteristic of *principia*, the atypical layout with two courtyards, and the lack of an *aedes*, the only plausible interpretation at present is that the Bibracte complex functioned as some form of administrative building. It may have been an administrative building modelled after contemporary *principia* but adapted to an urban context.

Sources

AE: *L'Année Épigraphique: Revue des publications épigraphiques relatives à l'antiquité romaine.* Paris, 1888–.

CIL VI: Henzen, G. – de Rossi, I. B. – Bormann, E. *et al.* (eds): *Corpus Inscriptionum Latinarum, Vol. VI. Inscriptiones urbis Romae Latinae.* Berlin, 1876–.

RIB 3: Tomlin, R. S. O. – Wright, R. P. – Hassall, M. W. C. (eds): *The Roman Inscriptions of Britain, Vol. III. Inscriptions on Stone (Found 1955–2006).* Oxford, 2009.

Plin. *NH*: Plinius Secundus, Gaius *Naturalis Historia.*

Tac. *Ann.*: Tacitus, Publius Cornelius *Annales.*

Vit. *De Arch.*: Vitruvius *De architectura.*

References

Almagro-Gorbea, M. – Gran-Aymerich, J. 1991: *El estanque monumental de Bibracte (Mont Beuvray, Borgoña). Excavaciones del equipo franco–español en el Programa Internacional del Mont Beuvray. Campañas 1987–1988.* Madrid.

Barral, P. – Beck, P. – Bernal, J. – Boyer, F. – Buchsenschutz, O. – Flouest, J.-L. – Laszlovszky, J. – Luginbühl, T. – Paratte, C.-A. – Paunier, D. – Quinn, D.– Ralston, I. – Szabó, M. – Vitali, D. – Wiethold, J. 1996: Les fouilles du Mont Beuvray (Nièvre – Saône-et-Loire): Rapport biennal, 1992–1993. *Revue archéologique de l'Est et du Centre-Est* 46, 217–293.

Barruol, G. – Nickels, A. 1980: Le Forum et le centre monumental de Ruscino. In: Barroul, G. (ed.): *Ruscino, Château-Roussillon (Pyrénées-Orientales). Études archéologiques I. Actes du colloque archéologique organisé par la D.A.H. du Languedoc-Roussillon, Perpignan, 1975.* RAN Suppl. 7. Paris.

Bauer, H. 1988: Basilica Aemilia. In: Hofter, M. R.: *Kaiser Augustus und die verlorene Republik: Eine Ausstellung im Martin–Gropius–Bau, Berlin 7. Juni–14. August 1988.* Berlin, 200–212.

Beck, P. – Saint-Jean Vitus, B. (eds) 2018: *Le couvent des Cordeliers du Mont Beuvray. Histoire et archéologie.* Bibracte 27. Glux-en-Glenne.

Bessière, F. – Guichard, V. (eds) 2010: Chronique des recherches sur le Mont Beuvray 2006–2008. *Revue Archéologique de l'Est*, 211–239. https://doi.org/10.4000/jgft

Bishop, M. C. 2012: *Handbook to Roman legionary fortresses.* Barnsley.

Czajlik, Z. – Puszta, S. – Timár, L. – Holl, B. 2013: Prospections géophysiques à la Pâture du Couvent et au Champlain. In: V. Guichard (ed.): *Programme de recherches sur le Mont Beuvray. Rapport intermédiaire 2013.* Glux-en-Glenne, 57–64.

Czajlik, Z. – Puszta, S. – Timár, L. – Bödőcs, A. – Meunier, A. 2014: Prospections géophysiques à la Pâture du Couvent, In: Guichard, V. (ed.): *Programme quadriennal de recherche 2013–2016 sur le Mont Beuvray. Rapport intermédiaire 2014.* Glux-en-Glenne, 206–210.

Elkins, N. 2015: *Monuments in miniature. Architecture on Roman coinage.* Numismatic Studies 29. New York.

Euzennat, M. – Hallier, G. 1986: Les forums de Tingitane. Observations sur l'influence de l'architecture militaire sur les constructions civiles de l'Occident romain. *Antiquités africaines* 22, 73–103. https://doi.org/10.3406/antaf.1986.1125

Fellmann, R. 1983: *Principia – Stabsgebäude.* Schriften des Limesmuseums Aalen 31. Stuttgart.

Fellmann, R. 2006: Principia et praetorium. In: Reddé, M. – Brulet, R. – Fellmann, R. – Haalebos, J. –K. – Von Schnurbein, S. – Aupert, P. (eds): *L'architecture de la Gaule romaine – Les fortifications militaires.* Documents d'Archéologie Française 100. Paris, 98–102.

Fensterbusch, C. 1964: *Vitruv. Zehn Bücher über Architektur. Übersetzt und mit Anmerkungen versehen von Curt Fensterbusch.* Darmstadt.

Förtsch, R. 1995: Villa und Praetorium. Zur Luxusarchitektur in frühkaiserzeitlichen Legionslagern. *Kölner Jahrbuch* 28, 617–634.

Fuchs, G. 1969: *Architekturdarstellungen auf römischen Münzen der Republik und der frühen Kaiserzeit.* Antike Münze und geschnittene Steine 1. Berlin.

Goudineau, C. – Peyre, C. 1993: *Bibracte et les Éduens: à la découverte d'un peuple gaulois.* Paris.

Goury, D. 1997: L'oppidum du Camp de César à Laudun (Gard): premières acquisitions de la recherche 1990–1994. *Revue archéologique de Narbonnaise* 30, 125–172. https://doi.org/10.3406/ran.1997.1490

Gros, P. 1990: Les étapes de l'aménagement monumental du forum: observations comparatives (Italie, Gaule Narbonnaise, Tarraconaise). In: *La Città nell'Italia settentrionale in età romana. Morfologia, strutture e funzionamento dei centri urbani delle Regiones X e XI Atti del convegno di Trieste (13–15 marzo 1987).* Publications de l'École française de Rome 130. Rome, 29–68.

Gros, P. 1994: Munus non ingratum. Le traité vitruvien et la notion de service. In: *Le projet de Vitruve. Objet, destinataires et réception du De architectura Actes du colloque international de Rome (26-27 mars 1993).* Publications de l'École française de Rome 192. Rome, 75–90.

Gros, P. 1996: *L'architecture romaine 1. Les monuments publics*. Paris.

Gros, P. 2001: *L'architecture romaine 2, Maisons, palaces, villas, et tombeaux*. Paris.

Gros, P. 2004: La basilique dans les maisons des notables. In: Lamoine, L. – Trément, F. – Cebeillac-Gervasoni, M. (eds): *Autocélébration des élites locales dans le monde romain. Contextes, images, textes (2e s. av. J.-C. – 3e s. ap. J.-C.). Actes du colloque tenu à Clermont–Ferrand, 21–23 novembre 2003*. Collection Erga 7. Clermont–Ferrand, 311–328.

Gros, P. – Varène, M. 1984: Le forum et la basilique de Glanum: problèmes de chronologie et de restitution. *Gallia* 42, 21–52. https://doi.org/10.3406/galia.1984.1909

Gruel, K. – Vitali, D. (eds) 1998: L'oppidum de Bibracte: un bilan de onze années de recherche (1984–1995). *Gallia* 55, 1–140.

Guichard, V. (ed.) 2004: Un aperçu des acquis récents des recherches sur l'oppidum de Bibracte (1997–2002). *Revue archéologique de l'Est* 52, 45–90.

Guichard, V. 2007: Chronique des recherches sur le Mont Beuvray, 2003–2005. *Revue Archéologique de l'Est* 56, 127–152. https://doi.org/10.4000/jgeo

Hamilton, J. R. 1955: T. Didius and the Villa Publica. *The Numismatic Chronicle and Journal of the Royal Numismatic Society* 15:45, 224–228.

Johnson, A. 1987: *Römische Kastelle*. Kulturgeschichte der antiken Welt 37. Darmstadt.

Kühlborn, J. S. 2006a: Oberaden. In: Reddé, M. – Brulet, R. – Fellmann, R. – Haalebos, J.-K. – von Schnurbein, S. – Aupert, P. (eds): *L'architecture de la Gaule romaine – Les fortifications militaires*. Documents d'Archéologie Française 100. Paris, 220–224.

Kühlborn, J. S. 2006b: Haltern. In: Reddé, M. – Brulet, R. – Fellmann, R. – Haalebos, J.-K. – von Schnurbein, S. – Aupert, P. (eds): *L'architecture de la Gaule romaine – Les fortifications militaires*. Documents d'Archéologie Française 100. Paris, 285–303.

McKenzie, J. 2007: *The architecture of Alexandria and Egypt, c. 300 B.C. to A.D. 700*. New Haven–London.

Milo, P. 2015: Prospections géophysiques à la Côme Chaudron, à la Pâture du Couvent, au Porrey et à la Chaume. In: Guichard, V. (ed.): *Rapport annuel d'activité 2015*. Glux-en-Glenne, 22–36.

Nünnerich-Asmus, A. 1994: *Basilika und Portikus. Die Architektur der Säulenhallen als Ausdruck gewandelter Urbanität in später Republik und früher Kaiserzeit*. Arbeiten zur Archäologie 13. Köln–Weimar–Wien.

Pietsch, M. 1993: Die Zentralgebäude des augusteischen Legionslagers von Marktbreit und die Principia von Haltern. *Germania* 71:2, 355–368. https://doi.org/10.11588/ger.1993.70674

Pietsch, M. 2006: Marktbrei. In: Reddé, M. – Brulet, R. – Fellmann, R. – Haalebos, J.-K. – von Schnurbein, S. – Aupert, P. (eds): *L'architecture de la Gaule romaine – Les fortifications militaires*. Documents d'Archéologie Française 100. Paris, 320–324.

Provost, M. 1999: *Le Gard*. Carte Archéologique de la Gaule 30/3. Paris, 409–412.

Raeder, J. 1988: Vitruv, *De architectura* VI.7 (*aedificia Graecorum*) und die hellenistische Wohnhaus- und Palastarchitektur. *Gymnasium* 95, 316–368.

Reddé, M. 2006: Valetudinarium. In: Reddé, M. – Brulet, R. – Fellmann, R. – Haalebos, J.-K. – von Schnurbein, S. – Aupert, P. (eds): *L'architecture de la Gaule romaine – Les fortifications militaires*. Documents d'Archéologie Française 100. Paris, 119–121. https://doi.org/10.4000/books.editionsmsh.22093

Richardson, L. Jr. 1976: The Villa Publica and the Divorum. In: Bonfante, L. – Heintze, H. (eds): *In memoriam Otto Brendel. Essays in archaeology and the humanities*. Mainz, 159–164.

Richardson, L. Jr. 1992: *A new topographical dictionary of ancient Rome*. Baltimore–London. https://doi.org/10.56021/9780801843006

Schnurbein, S. von 2010: Waldgirmes: une ville romaine éphémère située en Germanie à l'est du Rhin. In: Ouzoulias, P. – Tranoy, L. (eds): *Comment les Gaules devinrent romaines, Actes du colloque « Comment le Gaules devinrent romaines » organisé par l'Inrap et le musée du Louvre les 14 et 15 septembre 2007*. Paris, 85–96. https://doi.org/10.3917/dec.ouzou.2010.01.0085

Szabó, D. 2012: *Étapes de l'urbanisation au coeur de l'oppidum de Bibracte: Étude du mobilier céramique des fouilles hongroises de l'Îlot des Grandes Forges*. Tálentum sorozat 12. Budapest.

Szabó, D. – Timár, L. 2024: Sondage dans la cour orientale de l'îlot des Grandes Forges, In: Fochesato, A. – Guichard, V. (eds): *Rapport intermédiaire 2023 du programme de recherche archéologique 2022–2025 sur le Mont Beuvray*. Glux-en-Glenne, 138–149.

Szabó, M. 2007: La basilique de Bibracte. *Comptes rendus des séances de l'Académie des Inscriptions et Belles–Lettres* 151:2, 853–876. https://doi.org/10.3406/crai.2007.87959

Szabó, M. – Timár, L. 2008: Édifices et lieux publics. In: Dhennequin, L. – Guillaumet, J.-P. – Szabó, M. (eds): L'oppidum de Bibracte (Mont Beuvray, France) Bilan de 10 années de recherches (1996–2005). *Acta Archaeologica Academiae Scientiarum Hungaricae* 59:1, 55–67. https://doi.org/10.1556/aarch.59.2008.1.1

Szabó, M. – Timár, L. – Szabó, D. 2007: La basilique de Bibracte: un témoignage précoce de l'architecture romaine en Gaule centrale. *Archäologisches Korrespondenzblatt* 37, 389–408.

Szabó, M. – Timár, L. – Szabó, D. 2018: Bibracte, the monumental complex on the Pâture du Couvent, In: Borhy, L. – Dévai, K. – Tankó, K. (eds): *Celto – Gallo – Roman. Studies of the MTA–ELTE Research Group for Interdisciplinary Archaeology*. Paris, 11–25.

Timár, L. 2015: Roman domus in transition: The atrium houses of Bibracte. In: Borhy, L. – Tankó, K. – Dévai, K. (eds): *Studia Archaeologica Nicolae Szabó LXXV Annos Nato dedicata*. Budapest, 281–294.

Timár, L. 2016. How the floor-plan of a Roman domus unfolds. Complementary observations on the Pâture du Couvent (Bibracte) in 2016. *Dissertationes Archaeologicae* 3.4, 325–335. https://doi.org/10.17204/dissarch.2016.325

Timár, L. 2021: Correlation between military and domestic architecture: A tribune's house in Aquincum and its place in Roman architecture. *Acta Archaeologica Academiae Scientiarum Hungaricae* 72:2, 267–277. https://doi.org/10.1556/072.2021.00016

Timár, L. – Meunier, A. 2016: Compléments d'observation à la Pâture du Couvent. Bibracte, Mont Beuvray, In: Guichard, V. (ed.): *Programme quadriennal de recherche 2013–2016 sur le Mont Beuvray – Rapport annuel 2016*. Glux-en-Glenne, 234–249.

Timár, L. – Szabó, D. 2025: Sondage dans la cour orientale de l'îlot des Grandes Forges (intervention 1042). In: Fochesato, A. – Guichard, V. (eds): *Rapport intermédiaire 2024 du programme de recherche archéologique 2022–2025 sur le Mont Beuvray*. Glux-en-Glenne, 149–163.

Timár, L. – Szabó, M. – Czajlik, Z. 2005: La domus du dernier état de l'îlot des Grandes Forges. In: Guillaumet, J.-P. – Szabó, M. (eds): *Études sur Bibracte 1*. Collection Bibracte 10. Glux-en-Glenne, 13–46.

Timár, L. – Czajlik, Z. – Puszta, S. – Holl, B. 2013: 3D reconstructions using GPR data at the Mont Beuvray. *Dissertationes Archaeologicae* 3.1, 113–120. https://doi.org/10.17204/dissarch.2013.113

Timár, L. – Czajlik, Z. – Bödőcs, A. – Puszta, S. 2014: Geophysical prospection on the Pâture du Couvent (Bibracte, France). The campaign of 2014. *Dissertationes Archaeologicae* 3.2, 423–429. https://doi.org/10.17204/dissarch.2014.423

Vipard, P. – Fauduet, I. – Graham, B. – Odenhardt-Donvez, I. 2007: Maison à péristyle et élites urbaines en Gaule sous l'Empire. *Gallia* 64, 227–277. https://doi.org/10.3406/galia.2007.3312

Walthew, C. V. 2002: *A metrological study of the early Roman basilicas*. Mellen Studies in Architecture 8. Lewiston.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 687–703. 10.17204/dissarch.suppl.5.2026.687

Wine and power in Roman Lusitania

Production, epigraphy and the inland economy of the Alentejo

Pedro Trapero Fernández ✉
Institute for Wine and Agri-Food Research (IVAGRO), Department of History, Geography and Philosophy, University of Cádiz, Cádiz, Spain
pedro.trapero@uca.es

André Carneiro
Center for Art History and Artistic Research, Department of History, University of Évora, Évora, Portugal; Center for Classical and Humanistic Studies, University of Coimbra, Coimbra, Portugal
ampc@uevora.pt

Received 10 November 2025 | Accepted 28 April 2026 | Published 18 November 2026

Abstract: This paper examines viticulture and *villa* organisation as structuring forces in the inland economies of Roman Lusitania, with regional focus on the Alentejo between Ammaia, Ebora Liberalitas Iulia, Pax Iulia, and Augusta Emerita. Integrating archaeological, ceramic, epigraphic, and landscape data, it argues for an interior market system of wine production centred on *villae* supplying nearby urban centres rather than maritime trade. The archaeological record of presses, *dolia*, and road infrastructure supports a terrestrial distribution network linked to Augusta Emerita. Epigraphic evidence of curial elites and freed persons indicates local investment in production and status display. The study combines ceramic typology and architectural analysis to reconstruct agrarian economies, hydrological management, and property patterns. The Alentejo case highlights a multiproduct system where viticulture coexisted with cereal, olive, and marble industries. Ultimately, it proposes that inland viticulture was a socio-economic subsystem embedded within provincial networks of landownership, infrastructure, and civic identity.

Keywords: Roman Lusitania, Alentejo, viticulture, *villae*, Augusta Emerita, *amphorae*, *dolia*, inland trade

Introduction

This study examines the role of viticulture and the organisation of the *villae* in shaping the inland economies of Roman Lusitania, focusing its analysis on the territory of Alentejo. This area, defined by the urban axis formed by Ammaia (near Marvão, Portugal), Ebora Liberalitas Iulia (Évora, Portugal), and Pax Iulia (Beja, Portugal), was profoundly integrated, both infrastructurally and politically, with the provincial capital Augusta Emerita (Mérida, Spain).[1] The central argument maintains that the archaeology of production (expressed in wine presses, *dolia*, and workspaces), the record of containers (with particular attention to the limited presence of wine *amphorae* in certain rural

1 Le Roux 1999, for the administrative context.

✉ Corresponding author

sites),[2] the documented road network of the western and southern routes from Mérida,[3] as well as the epigraphic footprint of curial elites and freedmen, jointly point toward a model of inland viticulture centred on large private rural estates known as *villae*. This model would have directed its production mainly toward nearby urban markets and the provincial capital, rather than integrating into the major maritime export circuits that dominated the estuaries of the Sado and the Tagus.[4]

The issue is framed within a broader debate concerning economic transformation in Hispania Ulterior, later divided into Lusitania and Baetica. Lusitania, subjected early to Roman occupation since the Second Punic War (218–201 BCE), experienced a sustained process of economic, social, and territorial reorganisation between the 1st and 3rd centuries CE. Imperial administration, the foundation of colonies, and civic promotion transformed the landscapes of land ownership, agricultural labour, and mechanisms of surplus extraction. Within this context, Alentejo becomes a particularly valuable analytical laboratory for three main reasons:

- it is an inland territory but endowed with a robust road network composed of three distinct routes leading to Mérida, allowing hypotheses of non-maritime supply chains to be tested;
- it preserves rural estates equipped with infrastructures suitable for wine production, such as pressing vats, batteries of *dolia*, and storage halls, which can be contrasted with ceramic consumption records from nearby cities;
- it is embedded in a provincial environment marked by imperial power, both ideological and material, where emperors of Italic origin, such as Trajan (98–117 CE) and Hadrian (117–138 CE) in Baetica, and curial networks channelled wealth toward urban and rural projects through euergetism, cultic offices, and municipal hierarchies.

From a physical and agronomic perspective, Alentejo presents a landscape of rolling plains, with high solar exposure and a Mediterranean rainfall regime that favours the cultivation of cereals, olives and vines. The geological composition of the soil, based on schists, marls and granites, produces edaphic differentiation that generates viticultural and agricultural microzones *lato sensu*. Water management, through streams, perched aquifers and hydraulic systems at the *villa* scale, such as cisterns, canals and ponds, constitutes both a limitation and an opportunity. *Villae* endowed with powerful hydraulic infrastructures for wine and oil production display parallel investments in water capture and distribution works, as evidenced at Pisões, near Beja,[5] but also in other renowned sites such as Santa Vitória do Ameixial.[6]

The territory of Estremoz/Vila Viçosa, with its marble district, adds another layer of complexity to the economic landscape by integrating extractive activities linked to the building programs of local elites around the marbles of the anticlinal. Likewise, the mining fields stretching from Vipasca, in Aljustrel, to São Domingos in Mértola, represent a landscape of managed exploitation.[7] The coexistence of these productive sectors underscores that the Alentejan interior was not a place of a single economic activity.[8]

At the urban level, Ammaia was consolidated as a *civitas* by the mid-1st century CE, later acquiring municipal rank (166 CE). Geophysical surveys of the site have yielded a high-resolution plan

2 Berni *et al.* 2014.

3 Mantas 2012; Carneiro 2014a, vol. 1. 157–194.

4 Alarcão 1988, 123–153.

5 Caldeira *et al.* 2019; Oliveira *et al.* 2023.

6 Chaves 1956.

7 Taelman *et al.* 2013.

8 Salido Domínguez 2020, 570.

of the *forum*, *insulae*, and extra-urban elements, contributing to an understanding of how a medium-scale Lusitanian city structured its territory.[9] Ebora (nowadays Évora), in turn, functioned as a nodal point of articulation toward Salacia (Alcácer do Sal, Portugal) and Pax Iulia, with a remarkable epigraphic corpus that highlights senatorial careers and female cultic offices, signs of integration into broader provincial networks.[10] Pax Iulia, a colony and conventual capital, anchored the southern end of the axis. Its early imperial ceramic assemblages document the presence of imported *amphorae*, especially those destined for fish products and Baetican oils, alongside local and regional productions, in which Lusitanian wine *amphorae*, although present, did not play a dominant role.[11]

The infrastructure connecting these cities with Augusta Emerita reinforces the hypothesis of an efficient inland supply network.[12] Mérida was not only the symbolic capital of Lusitania but also a major consumption centre, equipped with two *fora*, one urban and one provincial, entertainment venues, and administrative headquarters that concentrated population and purchasing power. The routes described in the Itinerarium Antonini toward the west and southwest, particularly those crossing Évora toward the Atlantic and Beja, have been corroborated archaeologically through the identification of road segments, bridges, and milestones.[13] This road system had direct consequences for the wine economy: on the one hand, it reduced overland transport costs, making short- and medium-distance shipment of liquids feasible through skins, barrels, or large jars;[14] and on the other, it enabled the *villae* surpluses to be channelled toward Mérida without requiring standardised containers typical of maritime commerce.[15]

From a methodological standpoint, the study is based on the functional reconstruction of Roman wine-producing complexes, taking the *Cella Vinaria* model as a comparative reference—known from Catalan examples, while recognising the material and functional particularities of the Lusitanian context.

On these bases, five interrelated research questions are posed:

1. Geography of production: Where are the wine-producing facilities of the Alentejan interior located, and what do their architectural structures reveal about the scale, seasonal productivity and organisation of labour on the estate?
2. Containers and circulation: How do the profiles of ceramic containers and the presence of *dolia* in rural and urban contexts constrain hypotheses about short- or long-distance wine transport?[16]
3. Roads and markets: Which terrestrial corridors facilitated the circulation of wine toward Évora, Beja, and Mérida, and how did the friction of distance affect the capture of the inland market?
4. Elites and property: Which social agents, decurions, *duoviri*, priests of the imperial cult, elite women, and freedmen, are visible in the epigraphic record, and to what degree can they be plausibly linked to the management or ownership of *villae*?[17]

9 Vermeulen – Taelman 2010, 314–315.

10 Carneiro 2021b.

11 Lopes 2003, 107–118

12 Edmondson 2011.

13 In particular the Route XII: Carneiro 2008, 49–57.

14 Marlière 2001.

15 Pereira 2017, 179–193.

16 Cheung 2024; Mataix Ferrándiz 2024; Pereira 2017, 147–153.

17 See several perspectives in the collective volume by Erdkamp *et al.* 2015.

5. Continuity and change: To what extent did pre-Roman winemaking practices and the use of large containers persist or transform under Roman rule, and how are these traditions related to the contemporary survival of *vinho de talha* in the region?

Overall, this article does not aim to answer these questions but to establish the path toward their resolution. It proposes that Roman Alentejan viticulture, although technically capable of generating surpluses, was organised primarily as an inland supply system oriented toward nearby cities and, particularly, toward Augusta Emerita via overland routes. Maritime exportation existed on a secondary scale, contrasting with the maritime prominence of fishery products from the Sado and the Tagus rivers. The social agents who drove this system were curial elites and economically capable freedmen possessing symbolic capital, who invested in rural infrastructures and reinforced their social standing through civic, cultic and funerary inscriptions.

For all these reasons, the present study focuses on establishing the research problem through a state of the question, analysing the known and yet-to-be-studied components or indicators of wine production. All this information is combined with that concerning the elites and dominant groups to discuss how this productive and distributive system functioned.

State of the art

Research on viticulture in Roman Lusitania and in particular on the inland region of Alentejo, has undergone a profound evolution over the last decades.[18] Initially dominated by general studies on wine in Hispania, scholarly attention has progressively shifted toward micro-regional approaches that combine the archaeology of production, container ceramics, civic-cultic epigraphy and archaeometric techniques.[19] This shift has made it possible to move beyond linear interpretations focused on the great export harbours, to recognise the existence of complex, integrated, and functional inland economies.

Three lines of research have been decisive in redefining the wine economy of Roman Alentejo: first, the study of *villae* endowed with specialised installations such as wine presses, *dolia*, hydraulic systems, and storage areas, which offer a direct reading of production and transformation processes; second, the analysis of consumption patterns in inland cities, especially in Pax Iulia and Ebora, where the *amphora* record shows a marked asymmetry between the abundance of fish sauce or oil containers and the lesser presence of wine containers; and finally, the reinterpretation of epigraphic documentation as an indicator of networks of elites and freedmen who acted as economic agents in the terrestrial supply circuits.[20]

The contemporary debate no longer revolves around the mere existence of vineyards or wine in Lusitania, a question accepted by historiographical tradition, but rather around the specific modalities of production, the recipients of consumption, and the scale of exchanges. Current inquiries focus on how viticulture was organised in the interior, what links it established with urban centres and what role local elites played in its articulation. In synthetic studies on wine in Hispania, the coastal regions and major river valleys, the Guadalquivir, Bay of Cádiz, Sado, Tagus and Catalan coast, monopolised academic attention for a long time. The visible prominence of *amphorae* in the archaeological record generated an interpretative hierarchy that relegated inland areas to marginal positions. However, advances in the archaeology of production have changed that paradigm. The systematic identification

18 Brun 1997; Brun 2000.

19 Tchernia 1986; Brun 2003; Dodd 2022.

20 A project called VITALENTEJO is currently being carried out as part of the multi-year archaeological projects on this issue.

of wine presses and *cellae vinariae* with batteries of *dolia defossa* has made it possible to recognise the existence of organised wine production for regional and local consumption.[21]

Epigraphy, for its part, has ceased to be read solely as an instrument of civic or religious representation and has come to be interpreted also as indirect evidence of economic circuits. Texts recording offerings, banquets or religious dedications reveal a stable consumption of wine in ritual and convivial contexts, while mentions of offices such as *flamines*, *flaminicae* or *seviri Augustales* indicate the existence of hierarchical networks capable of managing and redistributing products. These phenomena, observable in the principal cities of Alentejo, show that the wine economy formed part of an interdependent system linking the *villa*, the city, and the province.

The analysis of the urban ceramic record, especially in Pax Iulia,[22] has been fundamental for measuring the intensity and the nature of exchanges. Early Imperial assemblages show an abundance of *amphorae* destined for oil and fish sauces, in contrast to a more discreet presence of wine containers.[23] This contrast should not be interpreted as a scarcity of wine, but rather as evidence of a different logistics: inland wine would have circulated mainly in organic containers, skins, and wooden barrels, or in large local ceramic vessels, whose archaeology is less visible.[24] The *villae* would thus have functioned as nodes of production and storage, supplying nearby urban markets without the need to employ standardised containers.

In recent years, the study of *dolia* found in Tourega and in the area of Cabeço de Vide has confirmed the importance of these large vessels in the Alentejan wine system.[25] The volumetric capacities recorded, ranging between 800 and 1,600 litres, together with evidence of local manufacture, reinforce the idea of a technically self-sufficient economy.

These findings corroborate the existence of specialised regional workshops and short-distance exchange networks that supplied containers to rural estates. On the other hand, evidence of production is beginning to accumulate in increasing numbers. The olive press weights identified in Alto Alentejo indicate a dual scale of production: near smaller settlements, we find weights that are recognised in isolation and are more modest in size, while near monumental *villae*, we find weights that are significant in size, sometimes in numbers greater than a single isolated find.[26] Therefore, there is a scale of self-sufficiency that complements the existence of large production units that could have larger scales in mind. It is certain, however, that for large land units, the poor or non-existent knowledge of the *partes rusticae* prevents a clearer reading of the process.[27]

On the social level, the epigraphic documentation from Pax Iulia, Evora, and Ammaia provides a coherent image of the hierarchical structure of local communities. The *curiales* and *duoviri* represented the political and economic capital that financed urban and rural infrastructure; the *flamines* and *flaminicae* embodied the religious legitimacy that sustained the ritual consumption of wine; while the *Augustales* and freedmen constituted the intermediate stratum responsible for daily management and supply logistics. This network of roles reveals a model of society in which the agricultural economy and civic life were deeply intertwined. This issue will be revisited later.

21 Rueda Prunell – Járrega Domínguez 2024.

22 Lopes *et al.* 2022.

23 For a comparison regarding the evolution of the studies, see Alarcão – Mayet 1990; Pinto *et al.* 2016.

24 Raepsaet 2008, 591.

25 Viegas – Pinto 2000; Viegas *et al.* 2024 for Tourega; Bombico *et al.* 2024 for the sites in Cabeço de Vide.

26 Carneiro 2021a, 56–57.

27 Carneiro 2010.

Epigraphic analysis also makes it possible to reconstruct territorial links. Inscriptions mentioning offerings to local deities or the dedication of public buildings show the existence of active communities bound by networks of patronage and dependency.[28]

The road corridors that connected Alentejo with Augusta Emerita played a fundamental role in this system. Milestones and remnants of roads confirm the existence of well-maintained routes toward the west and southwest, with infrastructure that reduced the friction of terrestrial transport.[29] These routes facilitated the regular shipment of perishable products, among them wine, in containers alternative to *amphorae*. Mérida, with its great concentration of population and purchasing power, acted as a magnet for consumption for the neighbouring territories, explaining why the inland *villae* could sustain surpluses without depending on a secure maritime market. The application of geospatial analysis techniques has made it possible to model the dynamics of accessibility and cost-distance more precisely. Geographic Information Systems, which weigh factors such as slope, solar exposure, hydrology, and road density, have demonstrated that much of the Alentejan territory lay within reasonable transport radii toward Mérida and the principal Lusitanian cities.[30] This reinforces the plausibility of the model of inland circulation of goods, in contrast to long-distance maritime routes.

Archaeometry, for its part, has provided objective tools for identifying the original content of containers.[31] Analyses of organic residues in *dolia* and coarse ceramics have detected the presence of tartaric and malic acids, characteristic components of wine. These results confirm that the inland wine installations were effectively devoted to the processing and storage of must, and not to other activities. Petrographic and geochemical studies have also identified local ceramic production, reinforcing the hypothesis of an integrated and self-sufficient economy.[32]

Archaeobotanical analyses, focused on the study of carbonised grape pips and vegetal remains, have corroborated the existence of vine cultivation in inland Lusitania. The combination of these data with productive architecture and epigraphy provides a coherent picture of an inland viticulture adapted to its environment and oriented toward regional consumption.[33]

Despite these advances, significant gaps remain. The spatial distribution of archaeometric analyses continues to be discontinuous, which limits possibilities for global quantification.[34] Likewise, the attribution of ownership based on epigraphy requires caution: many inscriptions do not specify direct links with particular estates. On the other hand, the bias of research toward monumental contexts leaves the smaller rural establishments still to be explored, which may have played a relevant role in the production network.[35] Finally, the urban *amphora* record of Pax Iulia and Evora requires systematic audits to assess the real proportions of the different products and the possible underrepresentation of non-amphoric wine.

Altogether, the current state of knowledge presents a solid evidentiary basis: well-documented wine infrastructures in the *villae* of Alentejo, local production of containers, urban assemblages with differentiated consumption patterns, an active civic elite, and an efficient road network linking rural centres with Mérida. This set of evidence supports the idea of a dynamic inland economy, ar-

28 A *corpus* for the deities in Alto Alentejo in Carneiro 2009.

29 Edmondson 2011.

30 Carneiro – Trapero Fernández 2023.

31 Case study in Bombico *et al.* 2024.

32 Pecci *et al.* 2013; Pecci *et al.* 2018.

33 Coradeschi *et al.* 2023, 353.

34 Pecci *et al.* 2018.

35 Carneiro 2014b.

ticulated through the combination of technical, social, and territorial factors, which allowed Roman Alentejo to play a relevant role in the regional supply of wine.

Production indicators

The analysis of wine production in inland Alentejo requires a methodological approach that combines architectural, ceramic, technological, and analytical evidence. Unlike maritime export models, where *amphorae* constitute the principal marker of volume and commercial reach, in inland economies information must be extracted from other indicators: the operational architecture of wine presses and *cellae vinariae*, the large ceramic containers *(dolia)*, workshop or *officina* stamps, archaeometric evidence of use, and the relationship between *villae* installations and urban supply systems.[36]

The *villae* of inland Alentejo display remarkable diversity in their productive infrastructure, reflecting different scales of production and degrees of investment. In the best-preserved wine presses, the architectural layout reveals advanced technical knowledge: sloped pressing platforms, reception and decantation basins connected by gravity, and rooms with alignments of *dolia defossa* embedded in the floor, arranged to facilitate winemaking and storage.[37]

These spaces were not simple agricultural annexes, but carefully planned structures designed with ergonomic and functional criteria. The flow of must from the press to the basins or *cellae* was achieved by exploiting the natural slope of the terrain, reducing human effort and improving process efficiency. In some *villae*, the separation between 'clean' and 'dirty' areas, one for initial production and another for storage and decantation, suggests a conscious differentiation of functions, a sign of technical standardisation similar to that observed in other regions of the Empire.

The issue becomes more complex when other indicators are considered, such as *lacus* or *calcatoria*, hydraulic structures associated with grape treading or wine deposition. In this respect, water management played a crucial role in the wine economy of Alentejo.[38] The *villae* with higher productive capacity, such as Pisões, display complex hydraulic systems combining cisterns, ponds, and distribution channels. These infrastructures ensured the necessary water supply for washing grapes, cleaning the presses, and maintaining temperature during fermentation.

The architecture of these *cellae vinariae* also reflects the importance of thermal control. The insertion of *dolia* into the ground allowed relatively stable temperatures to be maintained during fermentation and storage, while the partial underground location of some spaces, in semi-basements or partially excavated crypts, reinforced this function. The capacity of such facilities indicates that, at least in certain *villae*, production exceeded domestic consumption and was oriented toward regional distribution circuits.

The *dolia* are the most eloquent material testimony for assessing the scale of wine production in inland Lusitania. These vessels, with globular bodies and wide rims, served both for fermentation and for the storage of wine. Their size and spatial distribution within the *villae* allow volumetric capacities to be estimated and, therefore, to approach the magnitude of production.[39] Although this inference is problematic, it can be deducted that a significant proportion of these small-sized containers are linked to this type of production, especially in *villae* where pressing rooms or *cellae vinariae* are known.

36 Berni – Miró 2013, 72.

37 Teichner 2008, 93–448 for the 'cluster' of cases in Algarve.

38 Trapero Fernández – Carneiro in press.

39 See several cases studies in Quaresma *et al.* 2024; and for sites in Cabeço de Vide, Bombico *et al.* 2024.

Field studies have documented *dolia* with rim diameters generally ranging between 50 and 70 cm, corresponding to average capacities of between 1,000 and 1,600 litres.[40] In *cellae vinariae*, as observed in Catalonia, where traces of several dozen *dolia defossa* are preserved, the combined volumes could reach between 20,000 and 30,000 l, enough to supply nearby urban centres such as Évora or Beja for a year.

Petrographic and geochemical characterisation of coarse ceramics has made it possible to identify the local origin of many *dolia*. In several sites in Upper and Lower Alentejo, the ceramic fabrics exhibit mineral compositions consistent with the geological outcrops of the region, indicating the existence of specialised production workshops, possibly linked to the same *villae* that used them.[41]

Ideally, fragments preserve stamps or *ex officina* inscriptions, which would suggest quality control or an indication of origin. These marks could be interpreted as evidence of a semi-artisanal system of ceramic production organised at the local level, where workshops supplied nearby rural estates. However, such evidence is extremely scarce, which may indicate either its absence or the current lack of systematic research. The study of these marks, although still incipient, opens a path for tracing distribution networks and economic relationships among different productive units.

At the same time, the scarcity of wine *amphorae* in inland cities such as Évora or Beja should not be interpreted as an absence of wine, but rather as the result of a different logistical rationale.[42] Unlike maritime export products, which required standardised containers resistant to sea transport, wine intended for regional consumption could be transported in organic containers such as skins or wooden barrels.[43] These vessels, leaving no durable archaeological trace, explain the apparent 'silence' of the *amphora* record.[44]

The *dolia* functioned in this context as fermentation and storage tanks within the *villae*, while transport to urban markets was carried out using lighter containers. This duality between production container and transport container is characteristic of Roman inland economies, where short-distance trade reduced the need for standardisation.[45]

The assessment of urban ceramic assemblages must therefore include not only *amphorae* but also local coarse ware, fragmentary *dolia* and possible evidence of cooperage or waterproof coatings in storage buildings. These elements constitute the material basis for reconstructing the logistical circuits of wine in inland Lusitania.

Comparative analysis with other regions of the Empire allows the degree of specialisation in Alentejo to be evaluated. In Baetica, maritime trade stimulated the production of standardised *amphorae* such as the Dressel 7–11 or Haltern 70; in Tarraconensis, wine exportation relied on Dressel 2–4 *amphorae*. In contrast, inland Lusitania developed different solutions, based on local containers and short-distance terrestrial circuits.[46]

This divergence should not be interpreted as a deficiency, but rather as an adaptation to the context. While ports required strong and standardised containers, inland markets demanded flexibility and economy of means. The absence of *amphora* standardisation in Alentejo therefore reflects a distinct economic rationality oriented toward efficiency and regional provisioning.

40 Rueda Prunell – Járrega Domínguez 2024.

41 As an example of this kind of studies: Tremoleda Trilla – Rueda Prunell 2024.

42 Holleran 2012.

43 Marlière 2001.

44 Raepsaet 2008, 599.

45 Cheung 2024; Pereira 2017, 179–194.

46 Berni 2011, 86–96; Járrega Domínguez 2018; Mataix Ferrándiz 2024.

Elites and Epigraphy

The study of local elites and their epigraphic projection along the axis formed by Pax Iulia, Ebora and Ammaia makes it possible to understand the social and economic mechanisms that sustained the viticulture of inland Alentejo. Epigraphy constitutes an essential source for reconstructing the hierarchical structure of Lusitanian communities and their forms of integration within the Roman political system.[47] In this context, *curiales*, priests of the imperial cult, *Augustales* and *liberti* appear as key actors in the organisation of production, the redistribution of goods and the articulation of the territory.[48]

The *coloniae* and *municipia* of Lusitania, among them Pax Iulia and Ebora, were characterised by well-structured civic institutions that concentrated political and economic power in the hands of the *curiales*. These members of the *ordo decurionum* performed administrative and judicial functions, financed public works and sponsored religious or festive activities, shaping a sphere of prestige in which political capital was translated into symbolic capital and, frequently, into agricultural investment.

Honorary inscriptions and public dedications from these cities reflect the existence of stable local careers, with magistracies such as *duoviri* or *aediles*, which required personal expenditure and active participation in urban administration. This pattern of euergetism, the voluntary financing of public works and celebrations—strengthened the bond between the elite and the community, while simultaneously consolidating the legitimacy of local power.

From an economic perspective, the *curiales* were owners or administrators of rural *villae* located in territories dependent upon their cities. The interdependence between urban and rural space was manifested both in investments in agricultural infrastructure and in the circulation of goods toward local markets. Within the *villae*, the *dominus fundi* reproduced, in miniature, the hierarchies of the *ordo*, exercising paternalistic control over slave and free labour and projecting his influence across the territory.

The presence of priesthoods of the imperial cult in Lusitania constitutes direct evidence of the degree of Romanisation achieved by the province. The *flamines* and *flaminicae* played an essential role in promoting loyalty to the emperor and in organising public ceremonies, banquets and sacrifices. These practices required significant economic resources and a regular supply of wine, an indispensable element in both religious and convivial rituals.[49]

In cities such as Évora and Beja, inscriptions mentioning *flamines* and *flaminicae* suggest active participation of local families in imperial cults. The performance of these offices entailed high costs but also conferred prestige and social visibility. The *flaminicae*, in particular, represent a noteworthy phenomenon within inland Lusitania, where high-ranking women attained prominent positions in public life through official religion.

The institutionalisation of the imperial cult also generated a continuous demand for wine to be used in libations, banquets, and acts of public beneficence. This ritual consumption reinforced the local wine economy by guaranteeing a stable and socially prestigious market, independent of the fluctuations of interregional trade.

Below the *curiales* and priests, the *seviri Augustales* and *liberti* occupied a key position in the economic and social articulation of Roman Alentejo. The *Augustales* were mostly wealthy freedmen who, after obtaining manumission, gained access to positions of responsibility within the cities, organising festivals, administering resources, and participating in supply networks.

47 Edmondson 2015; Edmondson 2016; Edmondson 2022.

48 Fishwick 2004, 41–70.

49 Fishwick 2004, 351–370.

In the epigraphic record, these figures are frequently associated with donations, public works, or votive dedications. Their role in the inland economy may have been decisive, as they were often responsible for the logistical management of wine and other agricultural products. Their intermediate position, between the curial elite and the popular classes, made them effective mediators between the countryside and the city.

The *liberti* fulfilled functions related to storage, accounting and transport. The social mobility afforded by the Roman system allowed them to accumulate wealth and prestige, transforming them into an essential group for the administration of *villae* and the commercialisation of their products. Their economic activity, documented through funerary and honorary inscriptions, illustrates the existence of a managerial 'middle class', vital for the circulation of goods within inland Lusitania.

Epigraphic evidence can be analysed by city.

In the colony of Pax Iulia, the inscriptions reflect a social fabric dominated by *curiales* with economic liquidity and managerial capacity, able to intervene both in urban administration and in collective provisioning. The inscription, which honours C. Iulius Pedo,[50] *duumvir* and *flamen*, explicitly refers to the financial assistance he provided to the *annona*, indicating his involvement in the urban supply of essential goods. Although the term *annona* usually refers to grain, the reference more broadly denotes logistical capacity, availability of liquid capital, and control over networks of transport and storage, applicable to cereals as well as to other products, including wine. This same profile of economic and organisational power explains the existence of agro-industrial infrastructures in the Pax Iulia hinterland, with presses, *cellae*, and *dolia* identified in *villae* such as São Cucufate or Pisões.

The *Augustales* and *liberti* played a fundamental role as intermediate managers within these networks. The inscription dedicated to L. Marcius Pierus,[51] *Augustalis* of the *colonia* Pacensis and of the *municipium* Eborense, evidences the existence of an interurban network of sociability and business between Beja and Évora. These individuals, often wealthy freedmen, acted as mediators between rural production and urban consumption, managing transport, storage, contracts, and accounting. Likewise, in an inscription attests to C. Iulius C. l. Niger and Iulia C. l. Prima,[52] qualified freedmen and *Augustales*, who represent that professional stratum linked to the technical management of wineries and workshops that historiography associates with a semi-entrepreneurial economy.

Ritual use of wine is also evidenced by mentions of *craterae sacratae* dedicated to deities.[53] These mixing vessels demonstrate public or ritual wine consumption in the context of banquets or libations, implying a constant supply and stable urban demand. Furthermore, the cults of Mithras and Serapis, epigraphically documented,[54] reflect civic sociability expressed through collective banquets.

Lastly, the inscription *ex officina Vincinti*[55] demonstrates the existence of ceramic workshops capable of producing large and functional containers, showing that Beja possessed local technical capacity for manufacturing storage vessels, thereby complementing production from rural *villae*.

In Évora, the social structure was of higher rank than in Beja. The epigraphs reflect a senatorial or curial elite with imperial offices and interprovincial connections, complemented by a notable female presence in priesthoods and a solid network of domestic clienteles. The inscription dedicated

50 CIL II, 53 = IRCP 239.

51 EE 08-02, 00006 = IRCP 241.

52 IRCP 246.

53 CIL II, 101.

54 IRCP 339; CIL II, 46.

55 HEp 1995, 948.

to Q. Iulius Maximus, *quaestor Siciliae*, *tribunus plebis*, *legatus provinciae Narbonensis* and *praetor designatus*,[56] reveals large landholdings whose rental base explains the existence of peri-urban *villae* such as Tourega, with pressing structures and *dolia*.

Similarly, we have the mention of Canidia Albina,[57] a woman of high social rank whose family played a central role in sustaining local cults and civic celebrations. Female priesthoods, such as those of Laberia Galla (municipal or provincial *flaminica)*, and Iunia Verecunda (*flaminica perpetua*),[58] confirm the existence of aristocratic households with sufficient resources to finance banquets and *epulae* where wine was an essential element of ritual and conviviality. Moreover, the inscription of *Laribus domus Q. Sertori*,[59] referring to the *compitalia* and domestic *ludi*, attests to the role of the *domus* in organizing banquets financed with private resources and assisted by freedmen.

In the region of Ammaia, the epigraphic panorama is more discreet yet highly revealing.[60] The inscriptions demonstrate the consolidation of an *ordo decurionalis* and the presence of magistracies and provincial priesthoods that linked the community with imperial administration. One refers to the *municipes Ammaienses* dedicating a monument to L. Verus,[61] while another mentions P. Cornelius Macro,[62] who, after obtaining Roman citizenship, became *quaestor* and *duovir*, an example of social mobility typical of the provincial elites. A further inscription records the name of G. Iulius Vegeto, *flamen provinciae Lusitaniae*,[63] a regional office evidencing wider connections that facilitated inland trade.

Civic cult testimonies such as *Genio oppidi constituti* and annual vow of the *civitas Ammaiensis*[64] confirm the existence of mixed, Romanised elites who regularly spent resources on offerings and banquets, which also implies the consumption of wine in public and religious contexts.

Discussion and conclusion

The conjunction of these indicators of viticulture with the role of the elites constitutes a complex process. The purpose of this study is to clarify what is currently known and to outline the lines of research that remain pending. In any case, it can be stated that a complex network of wine production existed, probably associated with other agricultural or extractive activities such as marble exploitation, whose market focus was not primarily oriented toward export or long-distance distribution beyond the province, but rather toward a pattern of consumption connected to the elites examined in the preceding sections.

In this sense, the *villae* located in Upper Alentejo combined luxurious residential areas with extensive productive sectors, thus constituting true centres of local power. Investments in monumental architecture, baths, mosaics and peristyles coexisted with agricultural complexes equipped with presses, *dolia*, and canalisation systems. This dualism between luxury and functionality epitomises the logic of the Roman elites: to produce wealth in the countryside and to display it in the city.[65]

56 CIL II, 112 = IRCP 382.
57 CIL II, 111 = IRCP 381.
58 CIL II, 114 = IRCP 373[a]; CIL II, 115 = IRCP 373b.
59 CIL II, *00012.
60 Corsi – Vermeulen 2012.
61 CIL II, 158.
62 CIL II, 159.
63 CIL II, 160.
64 IRCP 604; IRCP 615.
65 Carneiro 2014a, vol. 1, 144–152; Carneiro 2014b.

Archaeological excavations in complexes such as Pisões and Horta da Torre have demonstrated that these were not mere leisure estates, but rather multifunctional establishments containing elaborate productive infrastructures. These complexes not only supplied domestic consumption but also generated surpluses capable of sustaining inland commercial exchange.[66]

Following this interpretation, the *villae* were not simply units that organised the territory, but the true focal points of production. By contrast, the cities functioned as the principal centres of consumption. In this respect, the importance of Augusta Emerita, capital of Lusitania, must be reconsidered, as it exerted a decisive influence over the Alentejan territory. As the administrative seat and political centre, it concentrated population, institutions, and a steady demand for essential commodities, including wine. The gravitational pull of Mérida created a hierarchical system of consumption in which intermediate cities such as Évora and Beja acted as logistical intermediaries.[67]

The layout of the overland routes, documented by milestones and ancient descriptions, confirms the existence of western and southern corridors that directly connected the productive regions with the provincial capital. These roads reduced transportation costs and facilitated the regular movement of goods. Within this context, the wine produced in inland Alentejo found a stable market, sustained by urban concentration and the purchasing power of the imperial administration.[68]

The economic model emerging from this territorial configuration corresponds to an internal supply economy, in which the proximity between producing *villae* and consuming centres permitted efficient distribution without the need for major investment in maritime transport or specialised packaging.

The integration of epigraphic evidence within this framework remains a complex and partial process, since it grants access only to a limited segment of society. Nevertheless, the aggregate of available data allows for the understanding that these groups articulated a productive and symbolic system wherein the *villa* functioned as the nucleus of the rural economy, the city as the space of redistribution and prestige and Augusta Emerita as the likely final market that absorbed surpluses. This social and economic model demonstrates that inland Lusitania was not a peripheral area dependent upon the Atlantic harbours,[69] but a territory with its own developmental logic, based on the integration of agricultural production, civic structure, and road networks.

Epigraphic interpretation, complemented by archaeology and historical geography, thus reveals a dense social landscape in which wine played a cohesive economic and cultural role. The inscriptions preserved in stone, the marks impressed on ceramics, and the architectural remains of the *villae* are the material testimonies of a society that transformed its environment into an articulated system of power, identity and prosperity. Caution is nonetheless required, first because of the uneven density of preserved data, which often depends more on the state of research than on actual historical realities. Likewise, the inherent research gaps hinder comprehensive interpretations. Nevertheless, certain hypotheses may be formulated based on the current evidence.

The examination of the offices mentioned in the epigraphic documentation of Pax Iulia, Évora, and Ammaia, and their relationship with Augusta Emerita, allows for discussion of the economic and social scope of wine production and distribution networks in Roman Lusitania. The offices of *duumviri*, *flamines*, *quaestors*, *flaminicae*, *liberti* and *Augustales* provide clear indications of both institutional and private organisation of agricultural production, even though the degree of commercialisation does not correspond to the classical model of an open Mediterranean market. Within this

66 Carneiro 2022; Conejo Delgado 2024, 191–199.

67 Edmondson 2015; Edmondson 2016; Edmondson 2022.

68 Mantas 2012.

69 Peacock – Williams 1986; Alarcão – Mayet 1990; Pinto *et al.* 2016.

context, the epigraphic record reveals a wine production system with a certain market orientation, insofar as surpluses, storage facilities, and interurban circulation existed, yet primarily devoted to regional supply. The absence of evidence for maritime export or long-distance commerce suggests a production system characterised by controlled surplus, regulated by local networks of curial elites and freedman managers who maintained a limited or closed-market economy.

Furthermore, the profile of the documented offices indicates that the administration of production and distribution fell mainly to municipal and provincial elites, rather than to a state bureaucracy of *annona* type. Inscriptions such as that of C. Iulius Pedo,[70] which mentions the *annona*, might suggest a link to public provisioning, but in reality, it represents an expression of civic euergetism, wherein prominent individuals contributed from their private wealth to guarantee urban supply. There is no evidence that Lusitania maintained a system of wine extraction intended for the army or for Rome, as is attested in other provinces more closely integrated into the maritime routes of the Empire.

The analysis of priesthoods, particularly female ones such as those of Laberia Galla (municipal or provincial *flaminica*) and Iunia Verecunda *(flaminica perpetua)*, as well as the role of the *Augustales* and *liberti*, demonstrates that much of the economic and symbolic activity related to wine was associated with ritual and prestige consumption. The *epulae*, civic banquets, and religious celebrations entailed the purchase, storage, and distribution of wine as a central element of Roman sociability. In this sense, wine possessed not only economic value but also cultural and political significance, serving as a vehicle of public visibility, an instrument of power, and a reinforcement of local hierarchies.

Altogether, the collection of offices and epigraphic evidence points to a mixed system in which wine production fulfilled economic, social, and symbolic functions simultaneously. The hierarchical structure of Lusitanian society, with *curiales* providing liquidity, *liberti* managing logistics and priests or *flaminicae* acting as ritual consumers, generated a closed circuit of production and redistribution. Wine was produced in large rural *villae* equipped with specialised infrastructure, but its circulation responded more to a logic of prestige and social redistribution than to an open market. The role of Augusta Emerita as a regional centre of consumption reinforces this interpretation: it acted as a destination for surpluses managed by local elites, not as a point of imperial export. Therefore, the Lusitanian wine system reflects a model of elite production with redistributive and ritual functions, in which wine was simultaneously a commodity, a political instrument, and a symbol of belonging to the Roman civic order.

Among the most promising perspectives is the possibility of establishing prosopographical links between the inscriptions of *curiales*, *flamines*, and *Augustales* and the *villae* identified archaeologically. If onomastic or territorial correspondences can be established between the names recorded in the epigraphy and the productive sites, it would be possible to construct an authentic social cartography of inland viticulture.[71]

Likewise, comparative study with other provinces, particularly Baetica and Tarraconensis, will make it possible to contextualise the Lusitanian model within the broader imperial typologies of regional economies. The peculiar combination of self-sufficiency, proximity, and civic representation that characterises Alentejo may offer interpretative keys applicable to other regions of the Roman West.[72]

Finally, the ethnographic continuity of *vinho de talha* in modern Alentejo poses a line of research that transcends the Roman chronological framework. Although the present technical forms are not

70 CIL II, 53.

71 Edmondson 2024.

72 Trapero Fernández – Carneiro 2023.

direct continuations, the persistence of the use of large, buried jars and a material culture centred on clay fermentation demonstrates the long-term durability of a model adapted to both environment and society.

Funding

Pedro Trapero Fernández is a Ramón y Cajal Postdoctoral Researcher, under grant RYC2024-049681-I, funded by MICIU/AEI /10.13039/501100011033 and by the ESF+.Final del formulario

Sources

CIL II: Hübner, E. (ed.): *Corpus Inscriptionum Latinarum. Vol. II. Inscriptiones Hispaniae.* Berlin, 1869 (Suppl., 1892).

EE: *Ephemeris Epigraphica. Corpus Inscriptionum Latinarum Supplementum.* Berlin, 1873–1923.

HEp: *Hispania Epigraphica.* Madrid.

IRCP: Encarnação, J. d': *Inscricoes Romanas de Conventus Pacensis.* Coimbra, 1984.

References

Alarcão, A. M. de – Mayet, F. (eds) 1990: *As ânforas lusitanas: tipologia, produção e comércio. Actas das jornadas de Estudo Realizadas em Comnímbriga a 13 e 14 Outubro de 1988.* Conímbriga–Paris.

Alarcão, J. de 1988: *O domínio romano em Portugal.* Lisbon.

Berni, P. 2011: Tipología de la Haltern 70 bética. In: Carreras Monfort, C. – Morais, R. – González Fernández, E. (eds): *Ánforas romanas de Lugo. Comercio romano en el Finis Terrae.* Traballos de Arqueoloxía 3. Lugo, 80–107.

Berni, P. – Miró, J. 2013: Dinámica socioeconómica en la Tarraconense oriental a finales de la República y comienzos del Imperio. El comercio del vino a través de la epigrafía anfórica. In: López Vilar, J. (ed.): *Govern i societat a la Hispània romana. Novetats epigràfiques. Actes del 1r Congrés Internacional d'Arqueologia i Món Antic, Tarragona, 29–30 de novembre i 1 de desembre de 2012. Homenatge a Géza Alföldy.* Tarragona, 63–83.

Berni, P. – Járrega, R. – Bernal, D. – Carreras, C. – García Vargas, E. 2014: Amphorae ex Hispania. Paisajes de producción y de consumo. Fase II: catálogo de ánforas hispanas. In: Morais, R. – Fernández, A. – Sousa, M. J. (eds): *As produções cerâmicas de imitação na Hispania.* Monografías Ex Officina Hispana 2. Porto, 131–140.

Bombico, S. – Carneiro, A. – Pereira, P. – Oliveira, C. – Quaresma, J. C. 2024: *Dolia* da *villa* romana da Horta da Torre e do sítio arqueológico de São Pedro (Cabeço de Vide, Fronteira, Alentejo): uma primeira abordagem. In: Rueda, M. – Járrega, R. (eds): *Dolia ex Hispania: Els dolia a les províncies d'Hispania en època romana. Estat de la qüestió i perspectives.* TRAMA 12. Tarragona, 317–326. https://doi.org/10.51417/trama_12_22

Brun, J.-P. 1997: Production de l'huile et du vin en Lusitanie romaine. *Conímbriga* 36, 45–72.

Brun, J.-P. 2000: Les installations agricoles. In: Lancha, J. – André, P. (eds): *La villa de Torre de Palma, Monforte (Portugal).* Lisbon, 115–122.

Brun, J.-P. 2003: *Le vin et l'huile dans la Méditerranée antique: viticulture, oléiculture et procédés de transformation.* Paris.

Caldeira, B. – Oliveira, R. J. – Teixidó, T. – Borges, J. F. – Henriques, R. – Carneiro, A. – Peña, J. A. 2019: Studying the construction of floor mosaics in the Roman Villa of Pisões (Portugal) using non-invasive methods: High-resolution 3D GPR and photogrammetry. *Remote Sensing* 11:16, 1882. https://doi.org/103390/rs11161882

Carneiro, A. 2008: *Itinerários romanos do Alentejo. Uma releitura de "As grandes vias da Lusitânia – o Itinerário de Antonino Pio" de Mário Saa, cinquenta anos depois.* Lisbon.

Carneiro, A. 2009: A cartografia dos cultos religiosos no Alto Alentejo em época romana: uma leitura de conjunto. *Hispania Antiqua* 33–34, 237–272.

Carneiro, A. 2010: Em *pars* incerta. Estruturas e dependências agrícolas nas *villae* da Lusitânia. *Conímbriga* 49, 225–250. https://doi.org/10.14195/1647-8657_49_11

Carneiro, A. 2014a: *Lugares, tempos e pessoas. Povoamento rural romano no Alto Alentejo.* Série Humanitas Supplementum Estudos Monográficos. Coimbra.

Carneiro, A. 2014b: Otium, materialidade e paisagem nas *villae* do Alto Alentejo português em época romana. *Espacio, Tiempo y Forma. Serie II, Historia Antigua* 27, 205–229. https://doi.org/10.5944/etfii.27.2014.14180

Carneiro, A. 2021a: Estruturas e padrões de povoamento rurais em época romana: estratégias e problemas. In: Mayoral, V. – Grau, I. – Bellón, J. P. (eds): *Arqueología y sociedad de los espacios agrarios: en busca de la gente invisible a través de la materialidad del paisaje (Anejos de Archivo Español de Arqueología XCI).* Madrid, 47–60.

Carneiro, A. 2021b: *Liberalitas Iulia Ebora.* In: Nogales Basarrate, T. (ed.): *Ciudades romanas de Hispania. Cities of Roman Hispania.* Hispania Antigua Serie Archeologica 13. Rome–Bristol, 167–175.

Carneiro, A. 2022: The fate of *villae*: The example of Horta da Torre (Fronteira). In: Prata, S. – Tente, C. – Cuesta-Goméz, F. (eds): *Paisajes, espacios y materialidades: arqueología rural altomedieval en la Península Ibérica.* Oxford, 166–177. https://doi.org/10.2307/j.ctv2fcctr9.14

Carneiro, A. – Trapero Fernández, P. 2022: Patrones de cambio en el poblamiento rural del norte Alentejo (Portugal): propuestas para el análisis de sitios y territorios del siglo I al X. *Cuadernos de Arqueología de la Universidad de Navarra* 30:2, 141–160. https://doi.org/10.15581/012.30.2.007

Chaves, L. 1956: Estudos lusitano-romanos. I – A Villa de Santa Vitória do Ameixial: concelho de Estremoz: escavações em 1915–1916. *O Arqueólogo Português* 30, 14–117.

Cheung, C. 2024: *Dolia: The containers that made Rome an empire of wine.* Princeton–Oxford. https://doi.org/10.1515/9780691242996

Conejo Delgado, N. 2024: *Moneta et territoria en Lusitania: Economía monetaria y rural de una provincia romana.* Monografías de Prehistoria y Arqueología UNED 2. Madrid. https://doi.org/10.5944/monografias.prehistoria.arqueologia.2024

Coradeschi, G. – Ucchesu, M. – Dias, E. – Cunha, J. – Baleiras-Couto, M. M. – Ângelo, M. – Ribeiro, C. A. – Barrocas Dias, C. – Bacchetta, G. 2023: A glimpse into the viticulture of Roman Lusitania: morphometric analysis of charred grape pips from Torre dos Namorados, Portugal. *Vegetation History and Archaeobotany* 32, 349–360. https://doi.org/10.1007/s00334-023-00912-6

Corsi, C. – Vermeulen, F. (eds) 2012: *Ammaia I: The survey. A Romano-Lusitanian townscape revealed.* Archaeological Reports Ghent University 8. Ghent.

Dodd, E. 2022: The archaeology of wine production in Roman and pre-Roman Italy. *American Journal of Archaeology* 126:3, 443–480. https://doi.org/10.1086/719697

Edmondson, J. 2011: "A tale of two colonies": Augusta Emerita (Mérida) and Metellinum (Medellín) in Roman Lusitania. In: Sweetman, R. J. (ed.): *Roman colonies in the first century of their foundation.* Oxford, 33–54.

Edmondson, J. 2015: Economic life in the Roman Empire. In: Bruun, C. – Edmondson, J. (eds): *The Oxford handbook of Roman epigraphy.* Oxford, 671–698. https://doi.org/10.1093/oxfordhb/9780195336467.013.031

Edmondson, J. 2016: Glimpses inside the *familia publica* at Augusta Emerita (Mérida). In: Carbonell Manils, J. – Gimeno Pascual, H. (eds): *A Baete ad fluvium Anam: Cultura epigráfica en la Bética Occidental y territorios fronterizos. Homenaje al profesor José Luis Moralejo Álvarez.* UAH Obras Colectivas Humanidades 54. Alcalá de Henares, 67–83.

Edmondson, J. 2022: A female doctor *(medica)* at Augusta Emerita (Mérida)? Re-examining CIL II 497 from humanist readings to the latest digital epigraphy techniques. *Veleia* 39, 255–298. https://doi.org/10.1387/veleia.23104

Edmondson, J. 2024: Epigraphy, onomastics and local society at the western limits of the territory of Augusta Emerita. *digitAR: Revista Digital de Arqueologia, Arquitectura e Artes* 10, 102–131. https://doi.org/10.14195/2182-844X_10_9

Erdkamp, P. – Verboven, K. – Zuiderhoek, A. (eds) 2015: *Ownership and exploitation of land and natural resources in the Roman world.* Oxford. https://doi.org/10.1093/acprof:oso/9780198728924.001.0001

Fishwick, D. 2004: *The imperial cult in the Latin West: studies in the ruler cult of the western provinces of the Roman Empire.* Leiden.

Holleran, C. 2012: *Shopping in ancient Rome: the retail trade in the late Republic and the Principate.* Oxford. https://doi.org/10.1093/acprof:oso/9780199698219.001.0001

Járrega Domínguez, R. 2018: Los nomina en la epigrafía anfórica de las ánforas Dressel 2–4 del NE de la Hispania Citerior. Cambios estructurales e implicación de las élites urbanas. *Sagvntvm. Papeles del Laboratorio de Arqueología de Valencia* 50, 175–202. https://doi.org/10.7203/sagvntvm.50.11408

Le Roux, P. 1999: Le territoire de la colonie auguste de Mérida: réflexions pour un bilan. In: Gorges, J. G. – Rodríguez Martin, F. G. (eds): *Économie et territoire en Lusitanie romaine.* Collection de la Casa de Velázquez 65. Madrid, 263–276.

Lopes, M. C. 2003: *A cidade romana de Beja. Percursos e debates acerca da "civitas" de Pax Iulia.* Coimbra.

Lopes, M. C. – Almeida, R. R. de – Vaz Pinto, I. (2022). Amphorae and coarse ware in early Roman assemblages of the colony of Pax Iulia (Beja, Portugal): Imports and local production. *Rei Cretariae Romanae Fautorum Acta* 46: 115–128. https://doi.org/10.32028/rcrf-acta-46-pp.115-128

Mantas, V. G. 2012: *As vias romanas da Lusitânia.* Studia Lusitania 7. Mérida.

Marlière, É. 2001: Le tonneau en Gaule romaine. *Gallia* 58:1, 181–201. https://doi.org/10.3406/galia.2001.3179

Mataix Ferrándiz, E. 2024: *Diffundere i*n the Roman sale of wine: Some consular dates written in Italic amphorae from Rome and Pompeii. *Mélanges de l'École Française de Rome – Antiquité*, 136:1, 259–278. https://doi.org/10.4000/12rxt

Oliveira, R. J. – Trapero Fernández, P. – Caldeira, B. – Borges, J. F. – Carneiro, A. 2023: Studying the water supply system of the Roman Villa of Pisões (Beja, Portugal) using ground-penetrating radar and geospatial methods. *Remote Sensing* 15:5, 1447. https://doi.org/10.3390/rs15051447

Peacock, D. P. S. – Williams, D. F. 1986: *Amphorae and the Roman economy: An introductory guide.* London–New York.

Pecci, A. – Cau Ontiveros, M. Á. – Garnier, N. 2013: Identifying wine and oil production: Analysis of residues from Roman and Late Antique plastered vats. *Journal of Archaeological Science* 40:12, 4491–4498. https://doi.org/10.1016/j.jas.2013.06.019

Pecci, A. – Domínguez-Bella, S. – Buonincontri, M. P. – Miriello, D. – De Luca, R. – Di Pasquale, G. – Cottica, D. – Bernal-Casasola, D. 2018: Combining residue analysis of floors and ceramics for the study of activity areas at the Garum Shop at Pompeii. *Archaeological and Anthropological Sciences* 10:9, 485–502. https://doi.org/10.1007/s12520-017-0573-7

Pereira, P. A. 2017: *O Vinho na Lusitânia.* Porto. https://doi.org/10.21747/9789898351715/vin2017

Pinto, I. V. – Almeida, R. R. de – Martin, A. (eds) 2016: *Lusitanian amphorae: production and distribution.* Roman and Late Antique Mediterranean Pottery 10. Oxford. https://doi.org/10.2307/j.ctvxrq19c

Quaresma, J. C. – Pereira, J. C. – Bombico, A. 2024: Dolia *ex Lusitania.* In: Rueda Prunell, M. – Járrega Domínguez, R. (eds): *Dolia ex Hispania: Els dolia a les províncies d'Hispania en època romana. Estat de la qüestió i perspectives.* TRAMA 12. Tarragona, 255–283. https://doi.org/10.51417/trama_12_18

Raepsaet, G. 2008: Land Transport, Part 2: Riding, Harnesses, and Vehicles. In: Oleson, J. P. (ed.): *The Oxford Handbook of Engineering and Technology in the Classical World.* Oxford, 580–605. https://doi.org/10.1093/oxfordhb/9780199734856.013.0024

Rueda Prunell, M. – Járrega Domínguez, R. (eds) 2024: *Dolia ex Hispania: Els dolia a les províncies d'Hispania en època romana. Estat de la qüestió i perspectives.* TRAMA 12. Tarragona. https://doi.org/10.51417/trama_12

Salido Domínguez, J. 2020: Las *villae* hispanorromanas, centros de explotación agraria cerealista. In: Martínez Gonzáles, R.Á. – Nogales Basarrate, T. – Rodà de Llanza, I. (eds): *Actas del Congreso Internacional "Las villas romanas bajoimperiales de Hispania" (Palencia, 15–17 de noviembre de 2018).* Palencia, 565–574.

Taelman, D. – Elburg, M. – Smet, I. – De Paepe, P. – Lopes, L. – Vanhaecke, F. – Vermeulen, F. 2013: Roman marble from Lusitania: Petrographic and geochemical characterisation. *Journal of Archaeological Science* 40:5, 2227–2236. https://doi.org/10.1016/j.jas.2012.12.030

Tchernia, A. 1986. *Le vin de l'Italie romaine: essai d'histoire économique d'après les amphores.* Bibliothèque des Écoles Françaises d'Athènes et de Rome 261. Rome. https://doi.org/10.3406/befar.1986.1221

Teichner, F. 2008: *Entre tierra y mar. Zwischen Land und Meer: Architektur und Wirtschaftsweise ländlicher Siedlungsplätze im Süden der römischen Provinz Lusitanien (Portugal).* Studia Lusitana 5. Mérida.

Trapero Fernández, P. – Carneiro, A. 2023: Un riche patrimonie viticole inexplité, les centres producteurs de vin romains dans le sud-ouest de la Péninsule Ibérique. *Sud-Ouest Européen* 56, 57–67. https://doi.org/10.4000/14w5g

Trapero Fernández, P. – Carneiro, A. in press: *Roman dams in southwest of Lusitania: A re-study of their use and potentials. Irrigation during the Roman period.*

Tremoleda Trilla, J. – Rueda Prunell, M. 2024: *Dolia ex Tarraconensis.* In: Rueda Prunell, M. – Járrega Domínguez, R. (eds): *Dolia ex Hispania: Els dolia a les províncies d'Hispania en època romana. Estat de la qüestió i perspectives.* TRAMA 12. Tarragona, 11–32. https://doi.org/10.51417/trama_12_01

Vermeulen, F. – Taelman, D. 2010: From cityscape to landscape in Roman Lusitania: The municipium of Ammaia. In: Corsi, C. – Vermeulen, F. (eds): *Changing landscapes: The impact of Roman towns in the Western Mediterranean. Proceedings of the International Colloquium, Castelo de Vide – Marvão, 15th–17th May 2008.* Bologna, 311–324.

Viegas, C. – Pinto, I. V. 2000: As termas da *villa romana* da Tourega (Évora, Portugal). In: Fernández Ochoa, C. – García Entero, V. (eds): *Termas romanas en el Occidente del Imperio: Coloquio Internacional Gijón* 2000. Madrid, 355–359.

Viegas, C. – Pinto, I. V. – Schmitt, A. 2024: *Os dolia da villa romana da Tourega (Évora): dados preliminares do seu estudo tipológico e petrográfico.* In: Rueda Prunell, M. – Járrega Domínguez, R. (eds): *Dolia ex Hispania: Els Els dolia a les províncies d'Hispania en època romana. Estat de la qüestió i perspectives.* TRAMA 12. Tarragona, 327–345. https://doi.org/10.51417/trama_12_23

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 705–712. 10.17204/dissarch.suppl.5.2026.705

Painted glass from Osor

Kristina Turkalj ✉
Institute of Archaeology Zagreb, Zagreb, Croatia
kturkalj@iarh.hr

Elena Perković Gjurašin
Croatian Conservation Institute, Division for Archaeological Heritage, Department for Conservation of Archaeological Finds, Zagreb, Croatia
eperkovic@hrz.hr

Andrej Janeš
Croatian Conservation Institute, Division for Archaeological Heritage, Department of Archaeology, Zagreb, Croatia
ajanes@hrz.hr

Received 6 October 2025 | Accepted 7 April 2026 | Published 18 November 2026

Abstract: In 2022, the Croatian Conservation Institute conducted rescue excavations in Osor, the Roman city of *Apsorus*, uncovering more than 200 cremation and inhumation burials in an area of approximately 4,000 m². The graves contained various ceramic and glass vessels, as well as bronze, iron, and bone objects, dating from the last decades of the 1st century to the mid-2nd century AD. Interesting and valuable finds were also discovered outside the graves, including a glass cup decorated with floral and faunal motifs on decolourised glass. Only the lower half of the cup, with images of birds and leaves and traces of yellow and red paint, has been preserved.

Keywords: Roman glass, glass beaker, enamel, paint, Croatia, Osor

Osor, the Roman city of *Apsorus* in Croatia, developed because of its strategic position on the maritime route leading to Central Europe via the Kvarner Islands. Conditions in the area have always been highly favourable. The first permanent settlement was established there in prehistoric times and the area remained continuously inhabited to the present day. The site came under Roman rule in the 1st century AD, when it reached its highest level of urban development and acquired the status of a *municipium*.[1]

The site on the north-eastern coast of the island of Lošinj, extending to both sides of the Kavanele channel, has been known as a prehistoric and ancient necropolis since the first amateur excavations in the 19th century. Occasional small-scale excavations continued until a major infrastructure development project in 2018. After preliminary archaeological research in 2019 and 2021, the Croatian Conservation Institute conducted rescue excavations at the site in 2022 under the supervision of Andrej Janeš. More than 200 graves were uncovered in an area of almost 4,000 m². The necropolis extends along the north-eastern coast of the island of Lošinj to the narrow isthmus with the island

1 Durman 2006, 200–201; Suić 2003, 37, 64; Faber 1982, 61–75; Imamović 1982, 80, 82; Starac 2000, 79–81.

✉ Corresponding author

of Cres (Figs 1–2). Graves were found in Sector 1, at the entrance to the 'Preko mosta' camp, confirming the extension of the necropolis northwards towards Kavanela. To the south, the necropolis followed the coastline for 355 m and terminated in a line of drystone walls that still enclose the plots there today. A high concentration of graves was observed in Sectors 19-29. The cremation and inhumation graves contained various ceramic and glass vessels, bronze, iron, and bone objects, and even carbonised fruits of different species, such as figs, dates, almonds, pine nuts, and *libum*. Based on the available data, the Osor necropolis was in use from the last decades of the 1st century BC until the mid-2nd century AD. The distribution of grave finds outlines the development of the cemetery: graves from the early Roman Imperial period are concentrated in the northern part, closer to Kavanel, whereas those in the southern part are later.[2]

The cemetery yielded abundant archaeological finds. The glass assemblage includes more than 300 vessels from graves, mostly high-quality pieces in a good state of preservation. These are predominantly *balsamaria*. In addition, several glass vessels representing the highest level of craftsmanship were found among the grave goods.

Two fragments from the lower part of a colourless glass vessel were discovered by the western profile wall in Sector 20, outside the graves (Figs 3–4; SU 326, SF 354, Sector 20). They belong to a conical beaker with thick walls, a flared low base ring, and a prominent horizontal rib around the bottom, below the decorated zone. It also features a small, raised disc at the centre of the outer side of the base. The decoration was arranged in two zones: two horizontal bands above the rib around the bottom, and, above them, a wide band filled with a pattern of birds and flowers or leaves. This beaker is currently the only such find from the Roman period in Croatia.

The slightly conical body of the beaker and the rib around the bottom resemble Oliver's Group



Fig. 1. Position of the archaeological site on the north-eastern coast of the island of Lošinj (graphics by V. Gligora, Source DOF, Geoportal DGU, modified by K. Turkalj).



Fig. 2. Aerial view of the excavation (photo by V. Gligora).



Fig. 3. Glass beaker from the layer SU 326 with visible traces of paint (photo by L. Gamulin).

2 Janeš *et al.* 2025.

II faceted beakers, characterised by a pair of ledges below and above the faceted decoration.[3] Some beakers do not have faceted decoration, but only a rib around the bottom, sometimes accompanied by several horizontal ridges or a painted pattern around the body.[4] On the basis of further analogies, the beaker may represent a variation of Isings Form 21,[5] Lazar's 3.3.4,[6] Rütti's AR 44,[7] or Foy's IN 14 or 15.[8] A more precise identification is not possible because the upper part is missing.

Rütti's Form AR 44 includes conical and cylindrical beakers from the Flavian period, dating from the last third of the 1st century and probably into the early 2nd century AD.[9]

The technique used to make cups such as this one remains debated. Some scholars believe that they were free-blown, whereas others argue that they were mould-blown or cast.[10] The small flat boss at the centre of the base indicates that the blank of this beaker was pressed (Fig. 5).[11]

Conical beakers were usually faceted and, less frequently, painted. The blanks for cut and painted beakers may have come from the same glass workshop and undergone the same preparation before being handed over to the *diatretarius* or to the painter or enameller, probably in the immediate vicinity.[12]



Fig. 4. The glass beaker after cleaning (photo by L. Gamulin).



Fig. 5. Detail of the glass beaker's base (photo by H. Jambrek).

Examples of painted Roman vessels are rare. They appear in both the western and eastern provinces of the Roman Empire, and even beyond, from the early 1st century AD. Complete vessels and fragments have been found in Switzerland, France, the Rhineland, Poland, Slovenia, England, Israel, Olbia, and Kerch (Rütti and Max compiled a detailed catalogue of 1st-century AD enamelled vessels).[13]

3 Oliver 1984, 36.
4 Foy *et al.* 2018, 22–24, IN 13–16.
5 Isings 1957, 37.
6 Lazar 2003, 94.
7 Rütti 1991a, 71; Fünfschilling 2015, 312.
8 Foy *et al.* 2018, 23–25.
9 Rütti 1991a, 71; Fünfschilling 2015, 312–313.
10 Foy *et al.* 2018, 13; Cool – Price 1995, 71–72; Fünfschilling 2015, 125–126, 312–315; Weinberger – Stern 2009, 52, 76; Lazar 2020, 339.
11 Lierke 2009, 75.
12 Oliver 1984, 38; Rütti 1991a, 71–72; Fünfschilling 2015, 312–313.
13 Rütti 1991b, 133, Max 2021.

Most painted vessels are hemispherical cups of the so-called Hofheim type, corresponding to Isings Form 12 and Rütti's AR 34, and dating to the early and middle 1st century AD.[14] Many such cups are strongly coloured and decorated with vegetal motifs, animals, birds, and sometimes fighting pygmies.[15]

The custom of decorating hemispherical cups in this way fades at the beginning of the Flavian period,[16] in parallel with the growing popularity of colourless glass. Colourless glass appeared with the emergence of glass production and was initially used to imitate crystal. Its popularity increased during the late 1st and 2nd centuries AD, when it was used for high-quality tableware.[17] Vessels made of colourless glass are found in both the western and eastern provinces of the Roman Empire and reflect the uniform taste of its population. The growing popularity of colourless glass led to the appearance of a diverse range of new forms; at the same time, colourless conical beakers began to be painted again.

The patterns on these beakers mainly comprised fighting gladiators and a variety of Bacchic and mythological scenes, accompanied by floral motifs. The most famous examples of such beakers come from Begram (Afghanistan), Poland, and France.[18] In the late 2nd and 3rd centuries AD, cylindrical cups representing Rütti's Form AR 98.1 were painted with animal and gladiator fight scenes, and birds, and some even included human or divine figures. Such cups are known primarily from the area north of the Alps.[19]

The depictions of birds and leaves on the cup from Osor and, on the basis of the surviving remains, even its colours show similarities to the glass from Locarno-Muralto (Figs 6–7 and 8–9);[20] both feature songbirds. Birds and leaves can also be found on bowls from Khamissa, amphorae from Kerch, and bowl fragments from



Fig. 6. Detail of the glass beaker with the depictions of birds and leaves and traces of paint (photo by L. Gamulin).



Fig. 7. Detail of the glass beaker with depictions of birds and leaves and traces of paint (photo by L. Gamulin).



Fig. 8. Detail of the glass beaker with depictions of birds and leaves and traces of paint (photo by L. Gamulin).

14 Fünfschilling 2015, 76–77.
15 Cool – Price 1995, 62–63.
16 Rütti 1991b, 135; Lazar 2004, 44.
17 Jackson 2005, 763; Lazar 2022, 72.
18 Foy *et al.* 2018, 24–25; Oliver 1984, 38.
19 Cool – Price 1995, 62–63; Foy *et al.* 2018, 68.
20 Rütti 1991b, 126, Pl. 33.a.

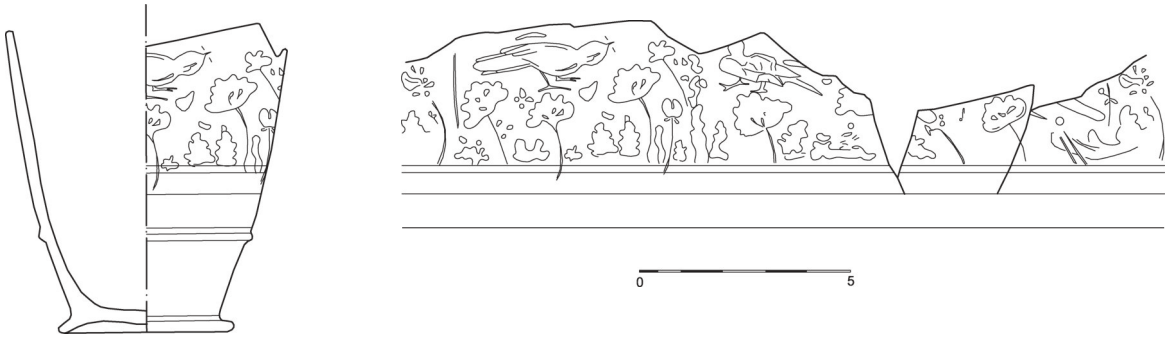


Fig. 9. Sketch of the painted (enamelled) beaker (drawing by S. Čule).

Ljubljana, as well as in the Ray Winfield Smith Collection, Masada, and the Oppenlander Collection. Birds and vines seem to have been popular motifs on enamelled glass in the 1st century.[21]

Glassware had been decorated with sophisticated multicoloured enamel since the 15th century BC in the Mediterranean and the East. Glass enamelling, or glass painting, is the application of a pigment mixed with a binder to the surface of a finished glass vessel. When the paint dries, the vessel is returned to the kiln so that the paint can fuse to the surface. This technique required highly skilled craftsmen because the vessel could easily deform during the process. Two variants of this method are known. One used a pre-melted mixture, in which powdered coloured glass mixed with a liquid such as water or gum Arabic was applied to the surface. The other required a cold mixture consisting of powdered colourless glass, or glass matching the colour of the vessel, together with a pigment and liquid, all added to a binding material.[22]

After a detailed preliminary examination of the glass, the removal of soil remains, and several analyses, we may assume that the pigments were applied using the first, so-called warm method. Traces of red and yellow pigment can be seen on the surface of the beaker wall (Figs 10–11).[23]

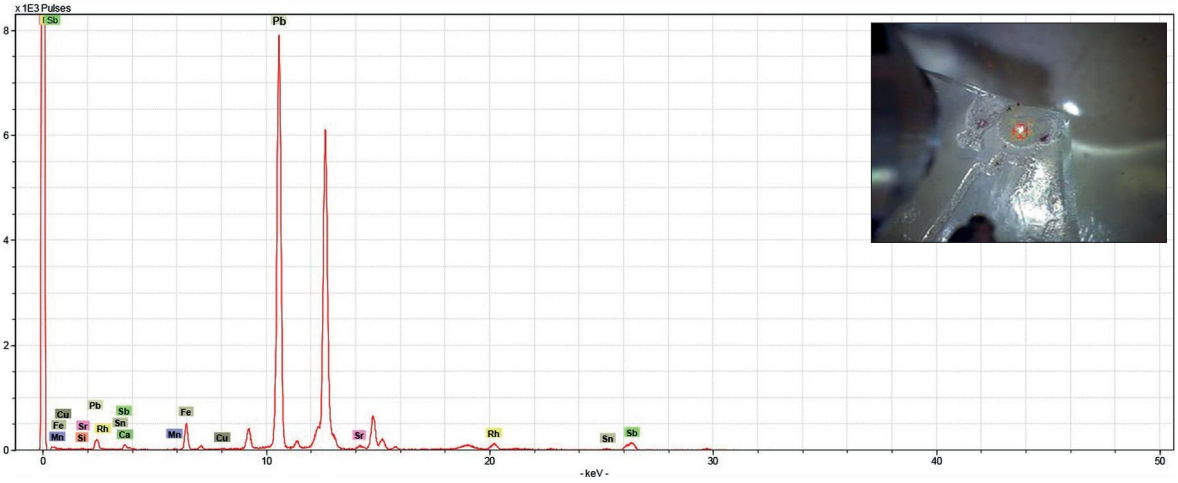


Fig. 10. XRF spectrum of a yellow area, showing lead oxide with possible iron oxide contribution (analysed by D. Mudronja, Croatian Conservation Institute, Natural Science Laboratory of the Croatian Conservation Institute).

21 Rütti 1991b, 124; Max 2021, 14, 23, 26; Lazar 2004, 45.

22 Campbell 2023, 3641.

23 Paint residues on the beaker were tracked using X-ray fluorescence spectroscopy (XRF) carried out with an Artax-Bruker device, without taking any samples. An unpainted part of the glass was also photographed for comparison. The analysis was performed by Domagoj Mudronja from the Croatian Conservation Institute (Janeš *et al.* 2025, 109–112, Prilog 2: Laboratorijsko izvješće br. 6/2025).

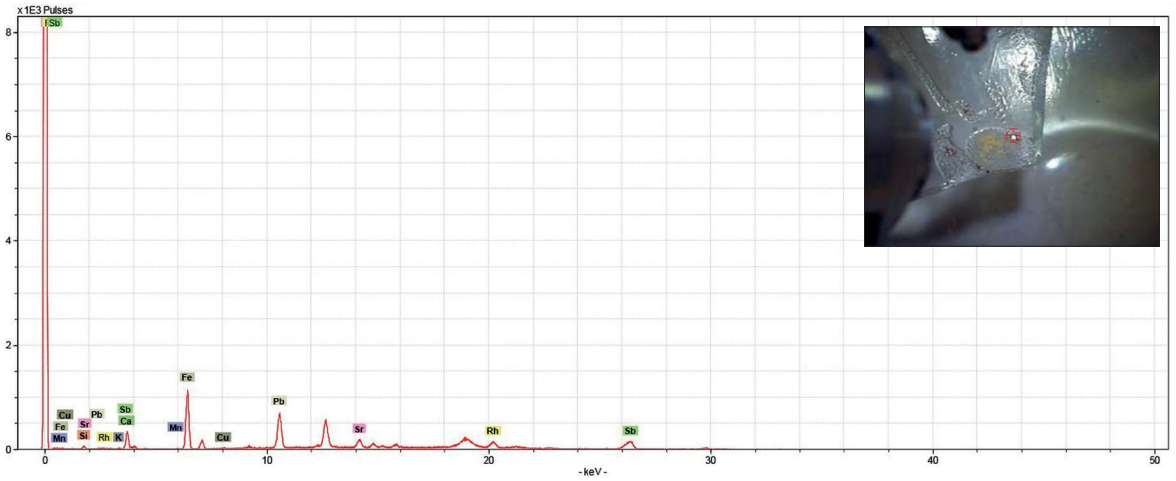


Fig. 11. XRF spectrum of a red area, showing lead oxide with possible iron oxide contribution (analysed by D. Mudronja, Croatian Conservation Institute, Natural Science Laboratory of the Croatian Conservation Institute).

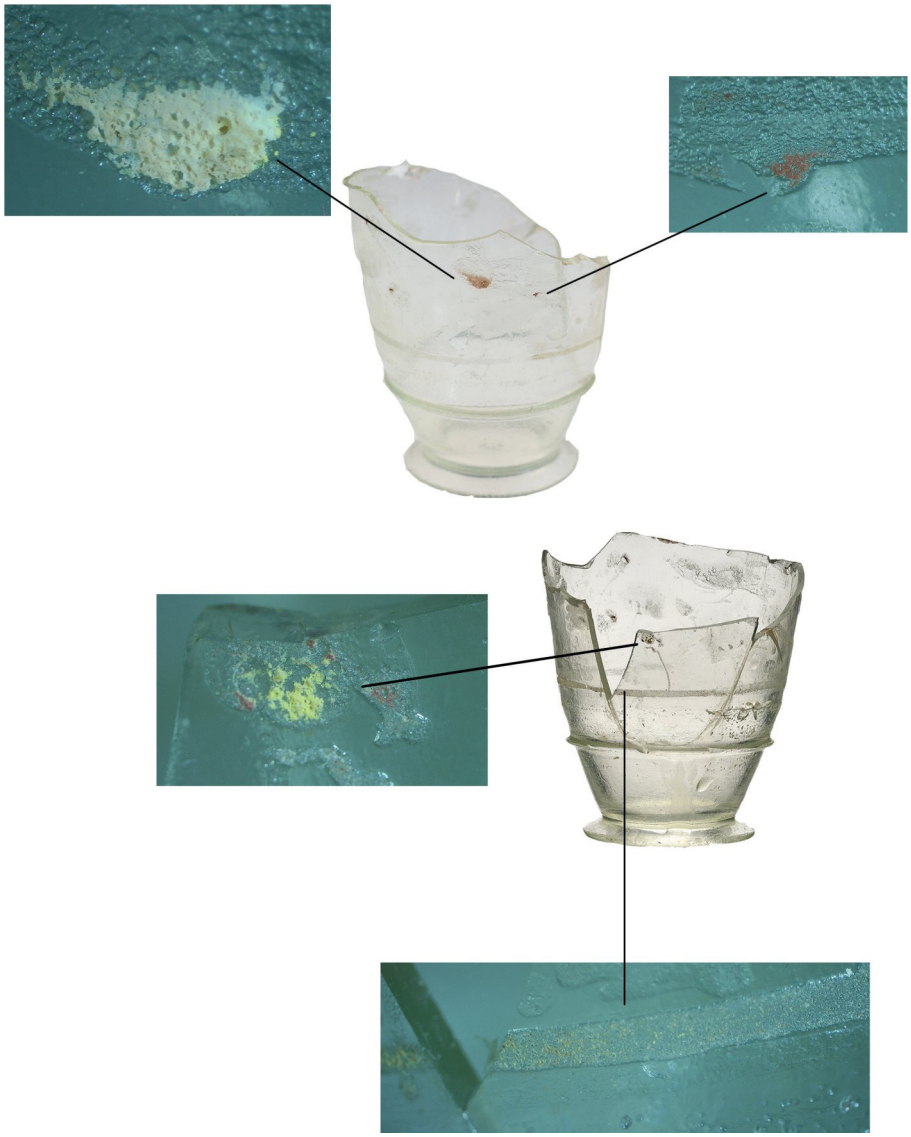


Fig. 12. Microphotographs of pigments, taken with a Bresser digital microscope (photos by E. Perković Gjurašin).

The band bordering the cup was painted yellow, a pigment also visible on the leaves and birds. The leaves and parts of the birds were painted reddish-brown (Fig. 12). These were probably not the only colours used, but traces of other pigments could not unfortunately be identified. Antimony was used to decolourise the glass (Fig. 13).[24]

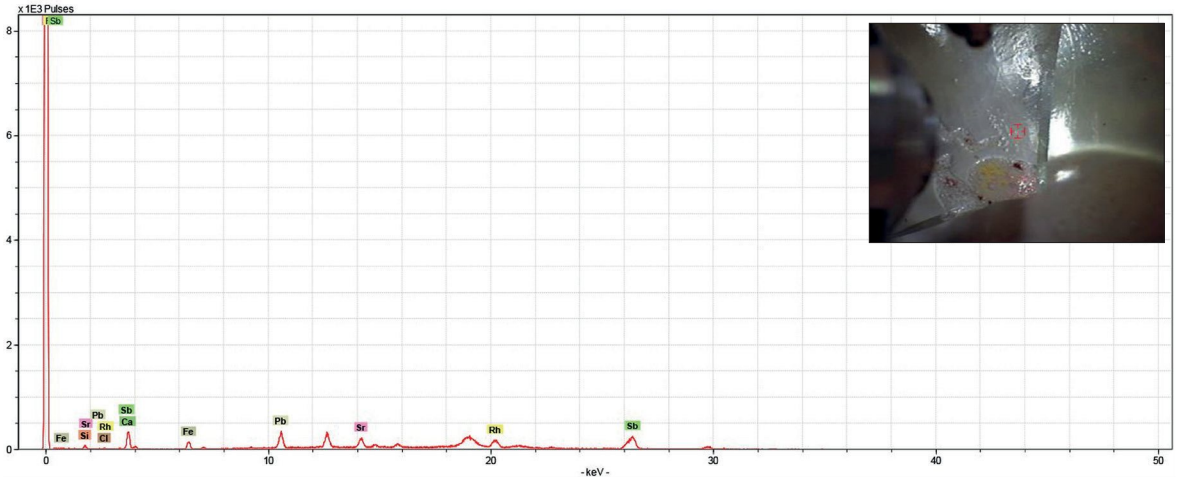


Fig. 13. XRF spectrum of a point on the glass surface, showing lead oxide with possible iron oxide contribution (analysed by D. Mudronja, Croatian Conservation Institute, Natural Science Laboratory of the Croatian Conservation Institute).

The origin of the beaker from Osor and the workshop that produced it cannot be identified with certainty. Painted beakers and cups with both facet-cut and painted decoration are generally linked to the innovative spirit of eastern artistic traditions, such as those reflected in the products of Egyptian workshops. Egypt has long been considered a centre of facet-cut glass production.[25] Although painted glass cups are rare, the distribution of known examples covers the whole territory of the Roman Empire and beyond. Recent research and publications focusing on these extraordinary examples of glassware suggest the existence of more than one production centre in different locations in both the western and eastern provinces.[26]

Conclusion

The beaker from Osor belongs to a diverse group of conical beakers, including several undecorated, faceted, and painted variants such as Rütti's AR 44–46, dated to the end of the 1st and the beginning of the 2nd century AD. The glass assemblage from the Osor necropolis does not include AR 45-type faceted beakers, but the finds do include luxury objects made of glass and other materials, which makes this beaker all the more unique.[27]

Although painted conical beakers are not unknown, this example from the end of the 1st century AD is special because its tendril-and-bird pattern recalls early enamelled cup decorations, highlighting the continuity of decorative themes from the first half of the 1st century AD.The Osor beaker is not a mass-produced vessel, but a unique and individually crafted luxury artefact made by highly skilled craftsmen.

24 Janeš *et al.* 2025, 109–112 Prilog 2: Laboratorijsko izvješće br. 6/2025.

25 Oliver 1984, 38; Foy *et al.* 2018, 14.

26 Rütti 1991b, 133; Foy *et al.* 2018, 14; Lazar 2020, 339; Antonaras 2017, 73; Weinberger – Stern 2009, 52.

27 Janeš *et al.* 2025.

References

Antonaras, A. Ch. 2017: *Glassware and glassworking in Thessaloniki 1st century BC – 6th century AD.* Archaeopress Roman Archaeology 27. Oxford. https://doi.org/10.2307/j.ctv170x4f0

Campbell, L. 2023: The Vindolanda Vessel: pXRF and Microphotography of an Enamel-Painted Roman Gladiator Glass. *Heritage* 6, 3638–3672. https://doi.org/10.3390/heritage6040194

Cool, H. E. M. – Price, J. 1995: *Roman vessel glass from the excavations in Colchester, 1971–85.* Colchester Archaeological Report 8. Colchester.

Durman, A. (ed.) 2006: *Stotinu hrvatskih arheoloških nalazišta.* Zagreb.

Faber, A. 1982: Počeci urbanizacije na otocima sjevernog Jadrana a) Arheološka topografija Osora. *Arheološka istraživanja na otocima Cresu i Lošinju, Izdanja Hrvatskog arheološkog društva* 7. Zagreb, 61–78.

Foy, D. – Labaune-Jean, F. – Leblond, C. – Martin Pruvot, C. – Marty, M.-T. – Massart, C. – Munier, C. – Robin, L. – Roussel-Ode, J. 2018: *Verres incolores de de l'Antiquité romaine en Gaule et aux marges de la Gaule, Vol. 2: Typologie et analyses.* Archaeopress Roman Archaeology 42. Oxford. https://doi.org/10.2307/j.ctv19vbgmw

Fünfschilling, S. 2015: *Die römischen Gläser aus Augst und Kaiseraugst, Kommentierter Formenkatalog und ausgewählte Neufunde 1981–2010 aus Augusta Raurica. Text und Formenkatalog.* Forschungen in Augst 51. Augst.

Imamović, E. 1982: O municipalitetu rimskog Osora. *Arheološka istraživanja na otocima Cresu i Lošinju, Izdanja Hrvatskog arheološkog društva* 7. Zagreb, 79–83.

Isings, C. 1957: *Roman glass from dated finds.* Archaeologica Traiectina 2. Groningen–Djakarta.

Jackson, C. 2005: Making colourless glass in the Roman period. *Archaeometry* 47, 763–780. https://doi.org/10.1111/j.1475-4754.2005.00231.x

Janeš, A. – Matković, M. – Turkalj, K. 2025: *Osor, Državna cesta DC 100.* Izvještaj o arheološkom istraživanju 2022. godine. Zagreb.

Lazar, I. 2003: *Rimsko steklo Slovenije – The Roman glass of Slovenia.* Opera Instituti Archaeologici Sloveniae 7. Ljubljana. https://doi.org/10.3986/9789610503156

Lazar, I. 2004: Čaša s slikanim okrasom iz Emone (Ljubljana). In: Lazar, I. (ed.): Drobci antičnega stekla – Fragments of Ancient Glass. Koper, 43–46.

Lazar, I. 2020: Transparence Luxury: A new group of Roman glass with facet-cut decoration. In: Radman Livaja, I. – Bilić, T. (eds): *Monumenta marmore aereque pereniora.* Collectanea Archaeologica Musei Archaeologici Zagrabiensis 3. Zagreb, 338–345.

Lazar, I. 2022: Finds of Roman colourless glass from *Romula.* In: Lazar, I. (ed): *Pogled skozi steklo – A Look through the glass.* Koper, 71–79. https://doi.org/10.26493/978-961-293-203-9

Lierke, R. 2009: *Die nicht-geblasenen antiken Glasgefäße – ihre Herstellung von den Anfängen bis zu den Luxusgläsern der Römer – The non-blown ancient glass vessels: Their manufacturing from the beginning to the luxury glasses of the Romans.* Deutsche Glastechnische Gesellschaft. Offenbach/Main.

Max, Y. 2021: The enameled cups from Masada. *Journal of Glass Studies* 63, 11–32. https://www.jstor.org/stable/48635691 (accessed: 30 April 2026).

Oliver, A. Jr. 1984: Early Roman faceted glass. *Journal of Glass Studies* 26, 35–58. https://www.jstor.org/stable/i24187028 (accessed: 30 April 2026).

Rütti, B. 1991a: *Römische Gläser aus Augst und Kaiseraugst.* Forschungen in Augst 13.1. Augst.

Rütti, B. 1991b: Early enameled glass. In: Newby, M. – Painter, K. (eds): *Roman glass: Two centuries of art and inventions.* London, 122–140.

Starac, A. 2000: *Rimsko vladanje u Histriji i Liburniji II. Društveno i pravno uređenje prema literarnoj, natpisnoj i arheološkoj građi. Liburnija.* Monografije i katalozi Arheološkog muzeja Istre 10.11. Pula.

Suić, M. 2003: *Antički grad na istočnom Jadranu.* Zagreb.

Weinberg, G. D. – Stern, E. M. 2009: *Vessel glass.* The Athenian Agora 34. Princeton, NJ.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).

Borhy, L. – Dévai, K. – Dobosi, L. – Sáró, Cs. (eds): ARRC – Acculturation, Romanisation, Roman Culture: Processes of Integration Across the Roman Empire. *Dissertationes Archaeologicae Supplementum* 5 (2026) 713–724. 10.17204/dissarch.suppl.5.2026.713

Continuity and change

The romanisation of Southern Etruria

Tatiana Votroubeková ✉
East Slovak Museum, Košice, Slovakia
tatiana.votroubekova@vsmuzeum.sk

Received 30 November 2025 | Accepted 18 September 2026 | Published 18 November 2026

Abstract: The Roman conquest of Etruscan territory began in the late 4th century BC through military campaigns and political treaties. Each city and region faced an individual fate—complete destruction, decline, or prosperity. The Etruscans responded to Roman military actions by introducing changes in architecture and settlement, particularly through the construction of defensive structures and the establishment of new towns to strengthen control and defend the land against Roman invasion. After the Romans conquered the main coastal centres of Vulci and Tarquinia, some of the smaller towns in their hinterland, such as Sovana and Norchia, entered a period of prosperity. The construction of aristocratic tombs revived from the late 4th century BC, flourished in the 3rd century BC, and disappeared in the 2nd century BC. It is noteworthy that this period corresponded to the harshest phase of the Roman conquest, especially in the 3rd century BC. Even after the Roman conquest, some settlements maintained continuity of burial for some time: there are examples of Etruscan and Roman interments in the same tomb, or of Roman imitations of Etruscan tombs or grave markers, illustrating cultural fusion and the transformation of society. The custom of building Etruscan aristocratic tombs faded as a sign of the gradual process of romanisation and the introduction of a new funerary practice. Depictions of members of the elite in Roman dress and the construction of Roman baths are further evidence of the adoption of Roman culture.

Keywords: Etruscan, architecture, burial customs, Hellenism, romanisation

Historical context

Between 396 and 264 BC, all the most important Etruscan cities of southern Etruria—Veii (396 BC), Vulci (280 BC), Volsinii (280 BC, 264 BC), Caere (273 BC), and Tarquinia (281 BC)—were conquered by the Romans. In 295 BC, Rome won the Battle of Sentinum, defeating a coalition of Etruscans, Samnites, Gauls, and Umbrians. The 4th and 3rd centuries BC were an era of wars and peace treaties, while the 2nd and 1st centuries BC witnessed the incorporation of the Etruscan people and territory into the Roman state. Accordingly, the 4th and 3rd centuries BC were the last period in which Etruscan culture flourished. Coastal cities focused on developing their hinterland through agriculture and trade, which brought prosperity to the small towns there, whose local elites thus gained wealth and political power. This process is most evident in the construction of costly, elaborately designed and decorated tombs, as well as in the construction and renovation of public buildings. In general, each Etruscan city managed its relations with Rome independently, carving out its own fate—decline, destruction, or prosperity. By the end of the 3rd century BC, most Etruscan towns supported Rome in its wars against Hannibal of Carthage. In the subdued territories, the Romans introduced a new territorial framework mainly by two means: by founding new colonies (Sutri and Nepi close to Veii, Castrum Novum, Pyrgi, Alsium, and Fregenae in the area of Caere, Cosa and Forum Aurelii close to Vulci, and Gravisca near Tarquinia) and by constructing new paved roads

✉ Corresponding author

(Via Aurelia, Via Clodia). During the Social War (91–88 BC), some Etruscan cities took the side of Marius against Sulla, and when Sulla won, they were plundered and damaged as punishment. In 90 BC, the *lex Iulia*, and in 89 BC the *lex Plautia Papiria*, ended the Social War, and the Etruscans were granted Roman citizenship. In 6 BC, Etruria became the seventh Roman region, and its formal integration into the Roman Empire was completed.[1]

Changes in architecture and settlements associated with Roman military attacks

Traces of these historical events from the beginning of the Roman conquest of Etruria are found in the archaeological record, appearing as destruction layers, as well as changes in architecture and settlement structure. In preparation for Roman attacks, the Etruscans built modern fortifications, strategically expanded and adapted existing defensive works to the specific conditions of the local landscape and settlement structure in order to withstand the advance of Roman troops from the south.

Tarquinia was quick to build new walls in the second half of the 4th century BC; the works were probably completed by the end of the century.[2] Simultaneously, in the last quarter of the 4th century BC, it founded a new settlement, Musarna, to reinforce the defences of the area and its military presence in the interior. The orthogonal network of streets and *insulae* in Musarna reveals that it was built as a true colony, with an urban ground plan.[3] At the time of its establishment, Musarna was likely part of a large-scale development of defensive installations in settlements (Norchia, Castel d'Asso, San Giovenale, Luni sul Mignone, and others) and fortresses (Castellaccio di Caporipa and Grotte Pinza), forming an effective line of defence against the advance of Rome.[4] This defence system consisted of elements such as gates, towers, galleries, ditches, and *diateichismata*, which drew inspiration from the new principles of Hellenistic military architecture.[5] Musarna was one of the settlements that did not suffer significant damage, and after the defeat of Tarquinia in 281 BC, life seems to have continued there without any apparent interruption, revealing a slow and continuous process of Romanisation in architecture as well. Inscriptions testify to the use of the Etruscan language until the 1st century BC. The occupation of the site continued until the beginning of the 7th century AD.[6]

Under the threat of attack by Rome, Vulci also built new city walls in the second half of the 4th century BC; these were modified and reinforced with a triangular bastion in front of the West Gate in the years before the Roman attack.[7] According to written sources *(Fasti Triumphales)*, the consul Tiberius Coruncanius celebrated his triumph over Volsinii and Vulci in 280 BC. The city walls were probably damaged, and the filling of the defensive ditch, originally created in the 8th century BC, was completed at that time.[8] The fortification in the area of the West Gate was dismantled and rebuilt.[9]

Ghiaccio Forte, a fortified rural settlement in the territory of Vulci, was a contemporary of Musarna; it was likewise reinforced with a perimeter wall built using Hellenistic construction techniques and defensive elements akin to those at Musarna.[10] Ghiaccio Forte is situated on the top of a hill, in a naturally defended strategic position above the River Albegna, with occupation dating back

1 Marcone 2017; Ceccarelli 2016; Jolivet 2013a.
2 Pulcinelli 2010, 28–29.
3 Broise – Jolivet 2004, Fig. 12; Pulcinelli 2010, 34–36, Fig. 12; Jolivet 2013b, 5, Fig. 3.
4 Pulcinelli 2010, 31–32; Pulcinelli 2012.
5 Pulcinelli 2010.
6 Jolivet 2013a, 4.
7 Moretti Sgubini 2005, 461; Moretti Sgubini 2008; Pulcinelli 2010, 28–29.
8 Moretti Sgubini 2008.
9 Moretti Sgubini 2005, 462.
10 Firmati 2002, 65–66, 70–71.

to the Archaic period, when it was established as the result of Vulci's territorial assessment of the area. However, the defence of Ghiaccio Forte could not withstand the Roman attacks, as is evident from the destruction layers in the buildings. The settlement of Ghiaccio Forte never recovered from the destruction, and traces of later occupation are scarce.[11] Layers of destruction interpreted as the remains of fighting with the Romans leading to the Etruscan defeat in 280 BC were also found in other settlements in the hinterland of Vulci, namely at Sovana, Saturnia, and Doganella.[12]

In Sovana, the Etruscan settlement lies mostly beneath the built-up area of the modern town or under cultivated land; therefore, it has been explored only partially. In its northern part, a layer of abandonment or destruction was found inside an imposing wall structure, perhaps a *domus*, dated to the second half of the 4th century BC and abandoned at the beginning of the 3rd century BC.[13] If the destruction layer can be connected to the Roman attack and the defeat of Vulci in 280 BC, this event did not have a major impact on the prosperity of the inhabitants, at least based on the costly Etruscan rock-cut tombs with elaborate facades surrounding the settlement, which were constructed between ca. 325 BC and 175 BC, as well as other monumental structures in the settlement that attest to continuous development between the 3rd and 1st centuries BC.[14] Sovana entered a period of prosperity in the second half of the 4th century BC, reached its peak after the Roman conquest of Vulci in the 3rd and 2nd centuries BC. The end of the 2nd and the beginning of the 1st century BC was a period of decline or stagnation, probably in connection with the Social War, but thereafter Sovana continued to prosper and, although with a small population, was never completely abandoned.[15]

Layers of destruction and traces of fire linked to the defeat of Vulci in 280 BC were also found in Saturnia inside Hellenistic structures dated to the end of the 4th and the beginning of the 3rd century BC. After this horizon, life in Saturnia was shaped by a strong Roman influence, as is evidenced by the fact that, already around 250 BC, the Romans made Saturnia the seat of *praefectura*, a magistracy imposed by Rome in regions recently subjected to its dominion.[16]

Unlike Sovana and Saturnia, which survived the destruction associated with the defeat of Vulci in 280 BC, the Etruscan fortified settlement at Doganella, which had developed uninterrupted since the 7th century BC, most likely ceased to exist at the end of the 4th century BC or in the first half of the 3rd century BC. If life continued there after the conquest of Vulci in 280 BC, it was certainly destroyed by the end of the 3rd century BC.[17]

The architectural transformation of Etruscan cities into Roman settlements

Following the Roman conquest, a small Hellenistic temple, probably devoted to Hercule or Dionysus/Bacchus, was built in Musarna between 250 and 225 BC.[18] Later, according to an inscription in the mosaic floor, two Etruscan magistrates, Avle Alethna and Luvce Hulchnie, were responsible for the construction of a bath complex on the same plot—a typical Greek structure and cultural phenomenon that had already evolved in Italy at that time and later became a typical Roman structure. The baths in Musarna were built between 150 and 100 BC, used until the reign of Tiberius, lacked

11 Firmati 2002, 64.

12 Michelucci 1982, 32–35; Michelucci 1994; Rendini 2002, 21–22.

13 Maggiani 2005b, 35; Pellegrini – Raffanelli 2005, 737, 742.

14 Pellegrini – Raffanelli 2005, 742, 744.

15 Maggiani 2005a, 503; Maggiani 2005b, 35–36.

16 Michelucci 1982, 32–35.

17 Michelucci 1985, 113; Perkins – Walker 1990, 77; Michelucci 1994.

18 Broise – Jolivet 2004, 23–36.

a *hypocaustum* floor, and, with a capacity of 20 guests, were so small that they were certainly not intended for the general public but for the local elite. It is a unique example of the introduction of a new type of building into the architecture of an Etruscan town and also of a new cultural and social phenomenon adopted by the Etruscans.[19] Other structures built at the end of the Hellenistic period were a *domus publica* used until the late Imperial period, the so-called marketplace, and an underground system of water management structures.[20]

The Etruscan settlement in Tuscania lies under the current town. Small residential units scattered over the hillside, terrace walls in the western part, and a complex system of water-management structures are known from the Hellenistic period of the city. On top of these were the Roman structures built using primarily the *opus incertum* and *opus reticulatum* techniques, a Roman *domus* with mosaic floors from the Augustan era, a complex system of cisterns and a paved road next to it among them, as well as, in the southern slopes of the hill, massive terraces in *opus reticulatum*, rectangular structures, tunnels, and cisterns.[21]

In 183 BC, Saturnia became a *colonia* founded by the *triumvirs*.[22] The subsequent fundamental reconstruction of the whole town followed a new, orthogonal ground plan with orientations and blocks completely different from that of the older Etruscan settlement; only the axis of the main road between the two main gates remained unchanged. In addition, new city walls and a drainage system were built. The construction techniques applied in this reconstruction were likely implemented by specialised Roman craftsmen who came to the city with the Roman colonists.[23]

After the conquest of Vulci in 280 BC, the city was granted the status of *civitas foederata* and lost its sovereignty in foreign policy and military affairs. The extent of the territory controlled by Vulci after this battle is uncertain, but in 273 BC, the Latin colony of Cosa was founded on the coast. According to historical accounts, the second Roman town founded near Vulci was Forum Aurelii, which has not yet been precisely located.[24] After the Social War (91–88 BC), Vulci became a Roman *municipium* governed by *quattuorviri iure dicundo*, and its inhabitants were ascribed to the Sabatina tribe.[25] In the Late Republic and the Imperial period, the Romans made important changes to the Etruscan city.

One by one, several private and public buildings were erected on the main street at the behest and funded by individuals who must have held significant social positions in the city: a spacious private residence *(domus)*, an arch, a *porticus*, *scholae*, and a *mithraeum*. In addition, the Tempio Grande and the original Etruscan bridge (the so-called Ponte della Badia) were reconstructed, a *forum* was built, the streets were (re)paved, and a new aqueduct was erected. Among the oldest Roman constructions in Vulci are the new paving of the *decumanus* in the area of the West Gate, dated to the beginning of the 2nd century BC,[26] and a great Roman *domus*, the so-called Domus del Criptoportico. The earliest building phase of the *domus* dates to the end of the 2nd and the beginning of the 1st century BC. It occupies a prominent plot in the centre of Vulci along the *via decumanus*, the main street. It was a private Roman residence with two *atria* and private baths *(balnea)*. In the baths, a piece of lead pipe was found bearing an inscription with the name Mar-

19 Andreau *et al.* 2002, 13; Broise – Jolivet 2004, 36–91.

20 Andreau *et al.* 2002, 11–17, 28–33; Jolivet 2013b, 2.

21 Moretti Sgubini 1997b.

22 Michelucci 1982, 32; Moretti Sgubini 2012, 1090.

23 Michelucci 1982, 16.

24 Nonnis – Pocobelli 1995, 263, 271–273.

25 Tamburini 2000, 34; Moretti Sgubini 2012, 1082.

26 Moretti Sgubini 2005, 462.

cus Vinicius. According to one interpretation, this is the name of the pipe maker *(plumbarius)*; according to another, it is the name of the owner of the *domus*, who could be identified with one of the persons known from written sources to having held office in Rome between 33 BC and AD 45.[27] In the Roman period, the city and the *balnea* of the Domus del Criptoportico were supplied with water by a new Roman aqueduct that crossed the river Fiora towards the city over the reconstructed bridge Ponte della Badia, parts of which are still visible near the West Gate.[28] During the 1st century BC, another aqueduct was built, passing over Ponte Rotto. The Romans also built a new bridge over the river Fiora, today called Ponte Rotto; it was 85 m long with five arches.[29] The Etruscans had already constructed aqueducts, bridges, and roads, but after the Roman conquest, the Romans often rebuilt them by adding a new layer and more support to the older structures. With the new Roman population in the city came the demand for new contemporary building types typical of Hellenistic and Roman architecture. According to an inscription that probably comes from Vulci and is dated to the 1st century BC, Lucius Caelius and his daughter Caelia Lucia financed the construction of a *porticus* and at least two *scholae* in the city.[30] An arch, perhaps honorary, is dated to the reign of Emperor Tiberius (AD 14–37). The inscription on it mentions a person of senatorial rank, Publius Sulpicius Mundus, and the official positions he held. The arch was erected in accordance with his will. The construction and location of the arch directly on the main road, near the West Gate, the Tempio Grande, and the *forum*, speak of the prominent place of the person mentioned in the inscription within the city's society.[31]

Moreover, in the 19th century, V. Campanari discovered a monumental structure probably dating from the Roman Period; however, all information on the location has been lost since. Based on excavation notes, it stood somewhere at the south-western corner of the *forum*. This building is perhaps identical to the monumental structure whose outline is visible on aerial photographs at approximately the same place.[32] According to 19th-century reports, remains of a complex two-level building with mosaic floors, marble tiles, statue pedestals, and architectural decoration were discovered there. The only element of this structure to survive until today from his excavations is a Corinthian column capital dated to the reign of the Julio-Claudian dynasty, reused in the construction of the Basilica of San Pietro in Tuscania.[33] V. Campanari interpreted the building as a theatre, amphitheatre, or thermal complex; based on its ground plan in aerial photographs, it was likely a small theatre.[34] This interpretation was confirmed in 2026, when archaeological excavations uncovered the remains of a building with a semicircular plan and a diameter of 30 meters. According to preliminary data, the theatre is dated to the late Republic to the early Imperial period and could house 2,000 spectators.[35]

As for other Roman buildings in Vulci, geophysical surveys have revealed that the 1.6 hectares of the eastern plateau were densely built up with a network of rectangular buildings, with at least one paved road running between them.[36]

27 Moscetti 1975, 172; Moretti Sgubini 2012, 1083.

28 Moretti Sgubini 2012, 1118.

29 Moretti Sgubini 2012, 1105.

30 Nonnis – Pocobelli 1995, 273–281; Pocobelli 2004, 132; Moretti Sgubini 2012, 1083.

31 Moretti Sgubini 2004; Moretti Sgubini 2012, 1083, 1118.

32 Pocobelli 2004, 132–133, 138, Figs 6, 7, and 13; Moretti Sgubini 2012, 1088.

33 Moretti Sgubini 2012, 1088.

34 Pocobelli 2004, 132–133.

35 https://www.viterbotoday.it/attualita/teatro-romano-vulci-scoperta-17-giugno-2026.html (last access 15 July 2026).

36 Kay *et al.* 2021.

The Romanisation of the countryside

After 280 BC, the population of Vulci and the inhabited area of the city started to shrink. By contrast, the population in its countryside started to grow, mostly in the 2nd century BC, due to Roman colonisation. Since the 3rd, but especially in the 2nd century BC, a significant number of Roman *villas* and farms *(fattorie)* to produce wine and olive oil were established, most of which did not have an Etruscan predecessor.[37] The colonies were small towns in which veterans were settled with their families, as well as Latins and Roman citizens. Most of them were established in the 3rd and 2nd centuries BC. In 90 BC, many Etruscan cities and towns were given the status of *municipium*, and afterwards, Roman construction activity increased in the area, replacing Etruscan buildings and roads with Roman ones. Numerous Roman farms were established on the hills around the destroyed fortified settlement at *Ghiaccio Forte* and around the Etruscan settlements of Pitigliano and Sovana.[38] In the 2nd century BC, a Roman villa was built directly on the remains of the fortified Etruscan settlement of Doganella.[39]

Etruscan temples and places of worship after the Roman conquest

During the period of Roman expansion, Etruscan temples and places of worship established in the Archaic (6th century BC) and Hellenistic (4th century BC) periods remained active. Some even show signs of continued use into the late Republican and early Imperial periods. While some fell out of use during the Roman period, there is currently insufficient evidence to determine when exactly that occurred. Several known sacred structures exhibiting a continuation of the Etruscan Hellenistic decorative style and religious traditions were actually built after the Roman conquest.

The Tempio Grande in Vulci, founded in the 6th century BC, underwent major reconstruction in the 4th century BC. During the reign of the first emperor, Augustus, it was renovated again as part of the renewal of old centres around the turn of the millennia.[40] Right next to the temple, a stone structure containing a bronze statue of a woman, a piece of a helmet, and the inscription *fulgur conditum* was discovered, attesting to the continuous maintenance and veneration of the sacred place even in the Roman period, when a lightning bolt was ritually buried there.[41] Approximately at the time of establishment of the Tempio Grande, a second great temple was built northeast of it, which was discovered during an excavation in 2020. Based on preliminary results, it had already been dismantled down to its foundations by the 4th century AD, when a necropolis was established on the site.[42] A possible third temple at Vulci was discovered, also during excavations, in 2026. Based on initial observations, the structure—along with a nearby altar base—was built around the 4th century BC and was not rebuilt during the Roman period.[43] Another place of worship, a sanctuary of Hercle, was built near the East Gate at the end of the 4th century BC. In the first half of the 2nd century BC, there was a choragic monument on the plot; the last building phase dates from the second half of the 1st and the beginning of the 2nd century AD.[44] During the 1950s, researchers found an irregularly shaped sacred basin filled with anatomical *ex votos* and pottery from the Hellenistic period in

37 Nonnis – Pocobelli 1995, 265.

38 Firmati 2002, 64; Maggiani 2005a, 503; Barbieri 2011.

39 Perkins – Walker 1990, 5.

40 Moretti Sgubini 2004; Moretti Sgubini 2012, 1083, 1118.

41 Moscetti 1975, 159, Fig. 1; Tamburini 2000, 35; Moretti Sgubini 2012, 1089.

42 Della Fina 2025.

43 https://www.viterbotoday.it/attualita/teatro-romano-vulci-scoperta-17-giugno-2026.html (last access 15 July 2026).

44 Moretti Sgubini 2012, 1105.

the area of the East Gate, and another votive deposit close to the North Gate with materials dated between the beginning of the 2nd and the 1st century BC.[45] The suburban sanctuary of *Fontanile di Legnisina*, located near the East Gate on the opposite bank of the Fiora River, was founded in the 5th century BC and comprised a temple, a monumental altar, and a votive deposit. Based on the dating of the *ex voto*s from the deposit, the sanctuary lived its heyday between the 4th and 1st centuries BC, although it remained in use at least until the 1st century AD.[46] Another votive deposit is presumed to be in the area of the steep eastern slopes of the plateau, just below the perimeter of the city walls, from which the *ex voto*s accumulated in a secondary position in the so-called Area I, dated from the 4th to the 1st century BC, originate.[47]

After the Romans conquered the area, construction and reconstruction of Etruscan public buildings continued on a small scale, as evidenced by several examples. The last not typically Roman buildings erected in Vulci include the *aedicula* (small temple) at the Ponte Rotto necropolis, constructed around the mid-3rd century BC.[48] Based on its terracotta decoration, it was dedicated to Dionysus and Ariadne. Its location within an active necropolis, which was in use since the 6th century BC, highlights the eschatological and funerary aspects of the cult. The find material attests to the worship of Dionysus in Vulci from the 5th century BC.[49]

Decades into Roman rule, a monumental building, likely a temple, was constructed at Sovana; it featured terracotta decoration in the Hellenistic–Etruscan style, applied in two building phases, one spanning from the late 3rd to the early 2nd century BC and a another around 150 BC.[50] Most of the discovered *ex voto*s, evidence of worship in the settlement and its surroundings, also date back to the 3rd and 2nd centuries BC.[51] In the Etruscan settlement of Telamon a new temple was built on Talamonaccio Hill around the half of the 4th century BC. In 225 BC, the Battle of Telamon, in which the Romans defeated an alliance of Celtic tribes, took place somewhere in the vicinity of the settlement; however, it seems to have had no significant negative impact on the city, its port, or the surrounding area. Even after the arrival of Roman colonists, the city still retained the Etruscan language and institutions. The temple received new terracotta decoration around 170 BC. The choice of depicted mythical scenes can be interpreted as a reminder of ancient local traditions associated with the founding of the settlement.[52]

The persistence of Etruscan burial customs

The construction of lavish aristocratic tombs was a typical feature of Etruscan culture from the Orientalising Period. The 4th and 3rd centuries BC were the last period when Etruscan aristocratic tombs were constructed in numbers. At the Ponte Rotto necropolis in Vulci, a last building boom is clearly visible in the second half of the 4th century BC and at the turn of the 4th and 3rd centuries BC, as well as the gradual filling of these tombs, a decline in the construction of new ones, the continuous use of some tombs before and after the Roman conquest, and isolated evidence of the construction of new tombs during the period of Roman rule and of the persistence of Etruscan funerary traditions until the 1st century BC. For example, the Tomba François was founded between

45 Moretti Sgubini 2012, 1101, 1102.
46 Ricciardi 1993, 41.
47 Moretti Sgubini *et al.* 2005, 263.
48 Bonamici 1992.
49 Bonamici 1992, 137.
50 Maggiani 1992, 269.
51 Maggiani 2005a, 502.
52 Strazzulla 2007, 148–150; Ciampoltrini 2011, 21–22.

350 and 325 BC, was used by successive generations during the 3rd and 2nd centuries BC, and was sporadically reused in the late Republican period.[53] Another example of the persistence of Etruscan burial customs is the Tomba delle Cinque Camere at the Ponte Rotto necropolis, situated on higher ground above two older tombs—the Tomba dei Tetnie (also known as Tomba dei Due Ingressi) and the Tomba dei Tarna (also known as Tomba dei Tori), both dated to shortly after the mid-4th century BC. This tomb, or a group of tombs, was built decades after the Roman conquest of Vulci, at the end of the 3rd century BC, and remained in use over several generations. The oldest burials followed the older Etruscan customs of inhumation with appropriate grave goods.[54] Four of this group of tombs contained grave goods dated between the 3rd and the 1st century BC.[55] The Tomba delle Iscrizioni in Vulci, founded around 300–250 BC, served as the final resting place of members of the Etruscan Pruslnas and Zimarus families. In the Roman period, two members of the Semproni family and a woman from the Postumii family were also inhumed there.[56]

In Sovana, all necropolises around the town contain rock-cut tombs with highly elaborate façades from the Hellenistic period, dated between 325 and 175 BC.[57] In Tarquinia, Hellenistic aristocratic tombs were built mainly in the 4th and the first half of the 3rd century BC, with the last of them dating between 250 BC and 200 BC. In Norchia, the rock-cut tombs with the most elaborate monumental façades—the Tomba Lattanzi at the Biedano Nord necropolis and the Tombe Doriche at the Acqualta necropolis—were built approximately between 320 BC and 250 BC, so they were used for at least one generation after the Roman conquest of Tarquinia. The left tomb of the pair constituting *Tombe Doriche* was built in the late 4th and early 3rd centuries BC, while the right one in the late 4th century BC. The façades of both tombs were modified during the first half of the 3rd century BC. The façades of both tombs were modified during the first half of the 3rd century BC.[58] The *Tomba Lattanzi* was built around 320 BC and remained in use until 250 BC.[59] In Tuscania, the tombs of the important family of the Curunas—the Tomba dei Curunas I (340/330–240/230 BC), II (320/310 BC–end of the 2nd century BC), and III (340–300 BC)—are situated in the Madonna dell'Olivo necropolis.[60] In addition to these tombs, the Tomba dei Vipinana (second half of the 3rd century BC) in the Carcarello necropolis is worth mentioning for its supposed decorated monumental structure above the burial chamber, and the Tomba dei Nevznas at Val Vidone (from around 350 BC), which also had monumental decoration.[61]

The fusion of the Etruscan and Roman cultures in funerary customs and architecture

In the Hellenistic period in southern Etruria, inhumation burials in stone sarcophagi prevailed. The custom of burying the dead in typical Etruscan stone sarcophagi with representations of the reclining deceased on the lid flourished between 375 BC and 250 BC. Later, artistic quality declined until the custom was finally abandoned around 200 BC. Some of the latest representations of the reclining deceased are known from Sovana, appearing on the façades of approximately nine rock-cut tombs (PF 29, S 4, S 5, F 16, PS 22, PS 27, PS 28, PG 3, M 2).[62] The best-preserved portrait is a relief of a deceased Etruscan

53 Moretti Sgubini 2012, 1093.
54 Moretti Sgubini 2023, 10–11.
55 Moretti Sgubini 2004, 20.
56 Casi 2017, 106–107.
57 Maggiani 1994.
58 Ambrosini 2018.
59 Ambrosini 2018, 199–206.
60 Moretti Sgubini 1997a, 137.
61 Colonna 1978; Oleson 1982, 60.
62 Maggiani 1994, 124; Maggiani 2014, 305, Fig. 27.

man reclining on a *kline* on the façade of the Tomba dei Demoni alati (PF 29, dated to around 200 BC). The owner of the tomb was represented dressed in Roman fashion, wearing a *toga* over a *tunica angusticlavia*. The ring on his left hand is a sign that he belonged to the *equites* within Roman society. His name was written in Etruscan script. The deceased on the lids of the sarcophagi in the Tomba degli Anina in Tarquinia and the Tomba dei Treptie in Tuscania (dated to the 3rd and 2nd centuries BC) wear similar garments. Vel Nulina, son of Vel, identified by an inscription in Etruscan script on the façade of his tomb, now known as the Tomba della Sirena (S 4) also wore some kind of tunic.[63]

Roman burial culture preferred more modest graves than its Etruscan counterpart. Cremated remains were placed inside a simple urn or chest, while in the case of inhumations, the remains were buried inside a *tomba a cappuccina*. Architecturally elaborate Roman tombs are rare; the exception is the so-called La Rotonda in Vulci. The shape of this original Roman tomb from the 1st century BC imitates Etruscan burial mounds or *tumuli*. Evidently, inspiration was at hand, since it is situated near the two much older *tumuli*, Cuccumella and Cuccumeletta, built in the Polledrara necropolis in the 7th century BC, a period when such aristocratic burial structures were common. The construction technique and material of La Rotonda are purely Roman innovations. It has a core made in *opus caementicium* covered with stone blocks. It houses a burial chamber with a barrel vault and niches for cremation burials. *Cippi* were placed on top or near the structure.[64]

The typical Etruscan grave markers *(cippi)* ceased to be used in the Roman period; only a few exceptions are known. In Vulci, near the aforementioned *aedicula* in the Ponte Rotto necropolis, two typical Etruscan *cippi* with Latin names written in Latin script were found. They look similar to the so-called Cippus Ara Guglielmi from Vulci (dated between 300 BC and 280 BC), which bears an inscription in Etruscan script with an Etruscan name.[65] One *cippus* belonged to a man called C. Claius or Clasius from the Quirina tribe and a freedwoman Volumnia Hilara. The other belonged to a single woman, Posilla Poblicia. Their simple cinerary urns were placed in the front part of the base, on top of the *cippi*, and each person had his own smaller grave marker. According to the mentions about the find from the 19th century, under both *cippi* were burial chambers with inhumations and rich grave goods. A third *cippus* was found between these two; it bore no inscription, but a marble block with a relief portrait of the *quattuorvir* C. Septumius was set in it. These monuments are dated to the last decades of the 1st century BC.[66]

Conclusions

The study, focusing primarily on Vulci, its territory, and the wider area of southern Etruria, demonstrates, using examples of archaeological finds, that the process of Romanisation between the 4th and 1st centuries BC was a complex transformation of Etruscan material and non-material culture, which ended with its dissolution into the culture of the Roman Empire during the 1st century BC and the 1st century AD. This process took place individually in each settlement. Some settlements, such as Dogaella and Ghiaccio Forte, fell into decline or were destroyed as a result of the battles related to the subjugation of the main centres in the area of Vulci and Tarquinia. Other settlements, such as Sovana, Saturnia, Musarna, Tuscania, survived the battles with the Romans without suffering significant damage and, after the Romans took control, continued to develop and prosper under their influence, preserving their Etruscan culture and also beginning to adopt some aspects of Roman culture (see, for example, the Etruscans portrayed wearing Roman clothing and accessories on the façade of a typical Etruscan rock-cut tomb in Sovana and sarcophagi in Tarquinia, representing

63 Bianchi Bandinelli 1929, 69, 132, Ref. no. 53, Fig. 4.

64 Moretti Sgubini 1994, 43–44; Mazet 2023, 23–24, Fig. 10.

65 Jannot 2005, 51.

66 Ciampoltrini 1993.

the acquisition of status in a Roman society). The adoption of Roman culture by the Etruscans was a gradual process encompassing various aspects of life; it began to unfold in the 3rd century BC and took place mainly in the 2nd and 1st century BC.

Archaeological and textual sources testify to how settlements gradually became Roman cities, mainly from a formal, material—architectural—point of view. The initial Etruscan reaction to the Roman military threat, appearing in the archaeological record as the modernisation of fortifications, was replaced by a profound Roman reorganisation of the land. The main elements of this restructuring included the strategic construction of Roman roads, which allowed quick deployment of troops and connected several settlements to trade networks, thus facilitating logistics and the controlling of the territory; the founding of colonies and the intensive development of the countryside through the founding of Roman *villa* farms and lesser farms on fertile coastal plains for the production of wine and olive oil; and centuriation, the systematic division of land, which triggered demographic and cultural changes and an influx of immigrants, mainly veterans and colonists with diverse (Roman, Latin, and other) cultural backgrounds.

The architectural evolution of major urban centres and smaller settlements in former Etruscan territory, starting at the beginning of the 2nd century BC, reveals a large-scale adoption of Roman building innovations, including new techniques *(opus reticulatum*, *opus caementicium)*, building types (baths, honorary arch, *mithraeum*, *porticus*, *schola*, theatre), and urban planning elements, alongside the deliberate preservation of sacred spaces and cultic practices. Some of the most important Etruscan temples remained in use well into the late Republican and early Imperial periods, as evidenced, for instance, by the renovation of the Tempio Grande at Vulci during the reign of Augustus, by finds of votive offerings inside the votive deposits indicating continuous cult activity until the 1st century BC, for example, in the so-called Area I and at the North Gate in Vulci, and even into the 1st century AD (see the suburban sanctuary of Fontanile di Legnisina in Vulci).

The continuity of Etruscan culture was therefore most evident in the religious and funerary realm. In Sovana, the last rock-cut tombs with elaborate decorated façades were carved around 175 BC; besides, some aristocratic tombs built in the 4th and 3rd centuries BC remained in use until the 2nd and 1st centuries BC. Examples of such long persistence of Etruscan burial customs include the Tomba delle Cinque Camere and the Tomba delle Iscrizioni at Vulci.

Burial practice presents the most profound evidence of cultural blending and syncretism, vividly illustrated by the appearance of traditional Etruscan grave markers *(cippi)* bearing Latin names and script and monuments such as the La Rotonda at Vulci, a remarkable 'hybrid' tomb intentionally imitating ancient Etruscan burial mounds *(tumuli)* with grave markers *(cippi)*, yet constructed using a Roman construction technique *(opus caementicium)* and housing modest burials representing Roman funerary traditions.

References

Ambrosini, L. 2018: *Norchia III.* Le necropoli rupestri dell'Etruria meridionale 4. Roma.

Andreau, J. – Broise, H. – Catalli, F. – Galeotti, L. – Jolivet, V. 2002: *Musarna 1: les trésors monétaires.* Collection de l'École française de Rome 304. Rome.

Barbieri, G. 2011: *Il territorio di Sovana. Un decennio di ricognizioni e indagini archeologiche.* Siena.

Bianchi Bandinelli, R. 1929: *Sovana.* Firenze.

Bonamici, M. 1992: L'edicola di Ponte Rotto a Vulci. In: Olschki, L. S. (ed.): *La coroplastica templare etrusca fra il IV e il II secolo a. C. Atti del XVI Convegno di Studi Etruschi ed Italici. Orbetello, 25–29 aprile 1988.* Firenze, 127–142.

Broise, H. – Jolivet, V. 2004: *Musarna 2. Les bains hellénistiques.* Collection de l'École française de Rome 344. Rome.

Buranelli, F. 1991: *Gli scavi a Vulci della Società Vincenzo Campanari-Governo Pontificio (1835–1837).* Roma.

Casi, C. 2017: *Vulci. Il parco archeologico e naturalistico.* Roma.

Ceccarelli, L. 2016: The Romanization of Etruria. In: Bell, S. – Carpino, A. A. (eds): *A Companion to the Etruscans.* Chichester, 28–40. https://doi.org/10.1002/9781118354933.ch3

Ciampoltrini, G. 1993: Per due monumenti funerari vulcenti (CIL XI, 2934 e 2942). *Rassegna di Archeologia* 11, 301–308.

Ciampoltrini, G. 2011: Talamone. In: Gulletta, M. I. – Cassanelli, C. – Casa, G. (eds): *Bibliografia topografica della colonizzazione greca in Italia e nelle isole Tirreniche* 20. Pisa–Roma–Napoli, 16–36.

Colonna, G. 1978: A dell'età romantica in Etruria: I Campanari di Toscanella e la Tomba dei Vipinana. *Studi Etruschi* 46, 81–117.

Della Fina, G. M. 2025: Vulci: da tempio etrusco a cimitero. *Il Giornale dell'Arte.* https://www.ilgiornaledellarte.com/Articolo/Vulci-da-tempio-etrusco-a-cimitero (last access: 30 June 2026).

Firmati, M. 2002: New Data from the Fortified Settlement of Ghiaccio Forte in the Albegna Valley. *Etruscan Studies* 9:1, 63–75. https://doi.org/10.1515/etst.2002.9.1.63

Jannot, J.-R. 2005: *Religion in Ancient Etruria.* Madison, WI.

Jolivet, V. 2013a: A long twilight (369–90BC): "Romanization" of Etruria. In: MacIntosh Turfa, J. (ed.): *The Etruscan World.* London–New York, 151–179.

Jolivet, V. 2013b: Civita Musarna tra passato, presente e futuro. *The Journal of Fasti Online* 283, 1–15.

Kay, S. – Sabatini, S. – Pomar, E. – Goransson, K. 2021: Revisiting Vulci: New Data from a Geophysical Investigation in the Urban Area, *ArcheoSciences* 45:1, 83–76. https://doi.org/10.4000/archeosciences.8690

Maggiani, A. 1992: Le terrecotte architettoniche di Sovana. In: Maetzke, G. – Tamagnano Perna, L. (eds): *La coroplastica templare etrusca fra il IV e il II secolo a. C. Atti del XVI Convegno di Studi Etruschi ed Italici (Orbetello, 25–29 aprile 1988).* Firenze, 253–272.

Maggiani, A. 1994: Tombe con prospetto architettonico nelle necropoli rupestri d'Etruria. In: Martelli, M. (ed.): *Tyrrenoi Philotechnoi. Atti della giornata di studio di Viterbo 1990.* Roma, 119–159.

Maggiani, A. 2005a: Sovana. In: Guletta, M. I. – Cassanelli, C. (eds): *Bibliografia topografica della colonizzazione greca in Italia e nelle Isole Tirreniche. Vol. 19. Siti: Siracusa – Surbo.* Pisa–Roma–Napoli, 499–510.

Maggiani, A. 2005b: Il quadro storico-archeologico. In: Preite, M. (ed.): *Il patrimonio archeologico di Pitigliano e Sorano. Censimento, monitoraggio, valorizzazione.* Science and Technology for Cultural Heritage 1. Pisa, 33–36.

Maggiani, A. 2014: La Tomba dei Demoni Alati e le più tarde tombe a edicola di Sovana. In: Steingräber, S. – Ceci, F. (eds): *L'Etruria meridionale rupestre: Atti del convegno internazionale "L'Etruria rupestre dalla Protostoria al Medioevo. Insediamenti, necropoli, monumenti, confronti" (Barbarano Romano–Blera, 8–10 ottobre 2010).* Roma, 298–316.

Marcone, A. 2017: Romanization. In: Naso, A. (ed.): *Etruscology.* Boston–Berlin, 665–684. https://doi.org/10.1515/9781934078495-037

Mazet, Ch. 2023: Scavi di Canino: les premières campagnes des fouilles Bonaparte dans le Catalogo generale des archives Faina de Pérouse (1828–1833). Chroniques vulciennes 1. De l'âge d'or des fouilles à création de service de tutelle des monuments – Varia. *Mélanges de l'École française de Rome – Antiquité* 135:1, 19–42. https://doi.org/10.4000/mefra.14520

Michelucci, M. 1982: *Saturnia. Ricerche nell'area urbana e nella necropolis del Puntone.* Pitigliano.

Michelucci, M. 1985: Doganella – Kalousion. In: Carandini, A. (ed.): *La romanizzazione dell'Etruria: il territorio di Vulci.* Milano, 110–114.

Michelucci, M. 1994: Doganella. In: Encyclopedia dell'Arte Antica. https://www.treccani.it/enciclopedia/doganella_(Enciclopedia-dell'-Arte-Antica)/ (last access: 30 June 2026).

Moretti Sgubini, A. M. 1994: Ricerche archeologiche a Vulci: 1985–1990. In: Martelli, M. (ed.): *Tyrrenoi Philotechnoi. Atti della giornata di studio di Viterbo 1990.* Roma, 9–50.

Moretti Sgubini, A. M. 1997a: Tuscania. In: *Encyclopedia dell'Arte Antica.* https://www.treccani.it/enciclopedia/tuscania_(Enciclopedia-dell'-Arte-Antica)/ (last access: 18 April 2026).

Moretti Sgubini, A. M. 1997b: Il Tempio Grande i Vulci: le terrecotte architettoniche di fase arcaica. In: Lulof, P. S. – Moormann, E. M. (eds): *Deliciae fictiles 2. Proceedings of the second international conference on Archaic architectural terracottas from Italy held at the Netherlands Institute in Rome, June 1996.* Amsterdam, 151–166.

Moretti Sgubini, A. M. 2004: La necropoli di Ponte Rotto. In: Moretti Sgubini, A. M. (ed.): *Eroi Etruschi e Miti Greci. Gli affreschi della Tomba François tornano a Vulci*, Florence, 17–28.

Moretti Sgubini, A. M. 2005: Risultati e prospettive delle ricerche. In: Paoletti, O. (ed.): *Dinamiche di sviluppo delle città nell'Etruria meridionale: Veio, Caere, Tarquinia, Vulci. Atti del XXIII Convegno di Studi Etruschi ed Italici (Roma–Veio–Cerveteri/Pyrgi–Tarquinia–Tuscania–Vulci–Viterbo,1–6 ottobre 2001).* Pisa–Roma, 457–484.

Moretti Sgubini, A. M. 2008: Le mura di Vulci: un aggiornamento sullo stato della ricerca. In: Camporeale, G. (ed.): *Città murata in Etruria, Atti del XXV Convegno di Studi Etruschi ed Italici (Chianciano Terme–Sarteano–Chiusi, 30 marzo –3 aprile 2005).* Pisa–Roma, 171–189.

Moretti Sgubini, A. M. 2012: Vulci. In: Gulletta, M. I. – Cassanelli, C. – Casa, G. (eds): *Bibliografia topografica della colonizzazione greca in Italia e nelle Isole Tirreniche* 21, Siti: Torre Castelluccia – Zambrone, Pisa – Roma–Napoli, 1082–1154.

Moretti Sgubini, A. M. 2023: Le attività di Raniero Mengarelli e di Ugo Ferraguti a Ponte Rotto e alla Cuccumella di Vulci (1928–1930). Chroniques vulciennes 2. Histoires des fouilles, dispersions patrimoniales et horizons numériques. *Mélanges de l'École française de Rome – Antiquité* 135:2, 361–375. https://doi.org/10.4000/mefra.15490

Moretti Sgubini, A. M. – Ricciardi, L. – Costantini, S. 2005: Testimonianze da Vulci. In: Comella, A. – Mel, S. (eds): *Depositi votivi e culti dell'Italia antica dall'età arcaica a quella tardo-repubblicana.* Bari, 259–266.

Moscetti, E. 1975: Le iscrizioni latine di Vulci e Ischia di Castro. *Rendiconti della Classe di Scienze Morali, Storiche e Filologiche* 8.30:5–6, 159–175.

Nonnis, D. – Pocobelli, G. F. 1995: Contributo alla topografia del territorio vulcente: l'età tardo-repubblicana. *Scienze dell'Antichità – Storia, Archeologia, Antropologia* 8–9, 263–281.

Oleson, J. P. 1982: *The sources of innovation in later Etruscan tomb design (ca. 350–100 B.C.).* Rome.

Pellegrini, E. – Raffanelli, S. 2005: Recenti ritrovamenti di strutture monumentali nell'antica città di Sovana. In: Paoletti, O. (ed.): *Dinamiche di sviluppo delle città nell'Etruria meridionale: Veio, Caere, Tarquinia, Vulci. Atti dell XXIII convegno di Studi Etruschi ed Italici (Roma–Veio-Cervteri/Pyrgi–Tarquinia–Tuscania–Vulci–Viterbo, 1–6 ottobre 2001).* Pisa–Roma, 737–745.

Perkins, P. – Walker, L. 1990: Survey of an Etruscan city at Doganella, in the Albegna Valley. *Papers of the British School at Rome* 58, 1–143. https://doi.org/10.1017/S0068246200011624

Pocobelli, G. F. 2004: Vulci: il contributo della fotografia aerea alla conoscenza dell'area urbana. In: Ceraudo, G. – Piccarreta, F. (eds): *Archeologia Aerea. Studi di Aerotopografia Archeologica* 1, 127–143.

Pulcinelli, L. 2010: Etruria ellenistica: l'architettura militare e l'urbanistica. *Bollettino di Archeologia on line* I.2010 – Volume speciale, 27–43.

Pulcinelli, L. 2012: Le fortificazioni di confine: l'organizzazione del territorio tarquiniese al tempo della conquista romana. In: Cambi, F. (ed.): *Il ruolo degli oppida e la difesa del territorio in Etruria: casi di studio e prospetive di ricerca.* Aristonothos 5. Trento, 69–120.

Rendini, P. 2002: I Romani. In: Pellegrini, E. (ed.): *Tra Natura e Archeologia. "L'altra Maremma" e gli Etruschi.* Pitigliano.

Ricciardi, L. 1993: Dalla stipe votiva di Fontanile di Legnisina a Vulci. In: Boitani, F. (ed.): *La civiltà degli Etruschi. Scavi e studi recenti.* Roma, 41.

Strazzulla, M. J. 2007: L'uso delle immagini nell'edilizia pubblica dell'ellenismo a Roma e nel mondo etrusco-italico. In: Massa Pairault, F.-H. – Sauron, G. (eds): *Images et modernité hellénistiques: appropriation et représentation du monde d'Alexandre à César.* Rome, 139–161.

Tamburini, P. 2000: Vulci e il suo territorio. In: Celuzza, M. (ed.): *Vulci e il suo territorio nelle collezioni del Museo Archeologico e d'Arte della Maremma. Catalogo della Mostra.* Milano, 17–45.

© 2026 The Author(s).
This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC 4.0).