COMMUNICATIONES ARCHÆOLOGICÆ HUNGARIÆ

2018

COMMUNICATIONES ARCHÆOLOGICÆ HUNGARIÆ

2018

Magyar Nemzeti Múzeum
Budapest 2020

Szerkesztőség

Magyar Nemzeti Múzeum Régészeti Tár
H-1088, Budapest, Múzeum Krt. 14–16.

Szakmai lektorok

Pamela J. Cross, Delbó Gabriella, Mordovin Maxim, Pásztókai-Szeőke Judit,
Szenthe Gergely, Szőke Béla Miklós, Tarbay János Gábor

HU ISSN 0231-133X

Felelős kiadó

Varga Benedek főigazgató

TARTALOM – INDEX

KÖZLEMÉNYEK

Polett Kósa

BAKS-TEMETŐPART
ANALYSIS OF A GÁVA-CERAMIC STYLE MEGA-SETTLEMENT

This paper focuses on the analysis and interpretation of the ceramic material discovered in 2007 during the excavations of the site Baks-Temetőpart (Csongrád County). This was the first time when an excavation took place on this previously researched Late Bronze Age site, resulting a rather intense amount of finds. The most significant part of the material consists of ceramic fragments (approximately 4000 pieces), which are kept in the Móra Ferenc Museum in Szeged. The pottery as evaluated typologically and correspondence analysis as a statistical method was also applied. The results from these methods are specifically meant for this particular material, which indicates that a further study or a larger amount of ceramic fragments can in some extent affect the conclusions described below.

Jelen cikk a Baks-Temetőparton (Csongrád megye) végzett 2007-es tervásatás kerámiaanyagának elemzésére és értelmezésére összpontosít. Ez volt az első alkalom, hogy ezen a korábban már ismert és kutatott késő bronzkori lelőhelyen ásatás történt, mely meglehetősen intenzív leletanyagot eredményezett. A szegedi Móra Ferenc Múzeumban őrzött leletanyag döntő többsége kerámiatöredékekből áll (körülbelül 4000 db). A kerámiák a hagyományos tipológiai értékelés mellett a korszak szempontjából új statisztikai módszerrel, korrespondencia analízissel is elemzésre kerültek. A módszerekből nyert eredmények kifejezetten erre a leletanyagra vonatkoznak, tehát egy további vizsgálat vagy egy nagyobb mennyiségű kerámiaanyag bizonyos mértékben befolyásolhatják az alábbiakban leírt következtetéseket.

Keywords: *Gáva-ceramic style, 'mega-settlement', ceramic typology, correspondence analysis, settlement analysis*

Kulcsszavak: *Gáva-kerámia stílus, „megatelepülés", kerámia tipológia, korrespondencia analízis, telep elemzés*

Introduction

In 2007 a planned excavation was carried out in Baks-Temetőpart by the faculty members of the Eötvös Loránd University, Institute of Archaeological Sciences, led by dr. Gábor V. Szabó. The site was previously researched by non-destructive investigations, such as minor fieldwalkings and several metal-detector reconnaissances (V. Szabó 2011a, 93–94). Five different sized trenches were marked out (Fig. 1), but due to time constraints, only four of them were fully excavated. The trenches were positioned on top of the previously found hoards, some 100 meters apart from each other.

Regardless of the size of the trenches, different amounts of features were found in them. Altogether 82 features were documented containing more than 4000 pieces of ceramic fragments. The structures also included clay figurines, animal bones, burned seeds, daub pieces, stone artefacts and bronze objects (for each category, see below).

The comparative typological study of the ceramic material of Baks was executed in order to locate the site among other Gáva settlements and find assemblages of the region. With such a large amount of find material, it is apparent that Baks was an extremely dense site with outstanding pottery quality and also quantity. In addition, its location is unusual as well, since it is situated on the right side of the Tisza River, while research currently considers that all the settlements of the Gáva-ceramic style are concentrated in the Tiszántúl (Trans Tisza region).

After a short topographical introduction, I will briefly look at the cultural background of the site and the Gáva culture in the Great Hungarian Plain.

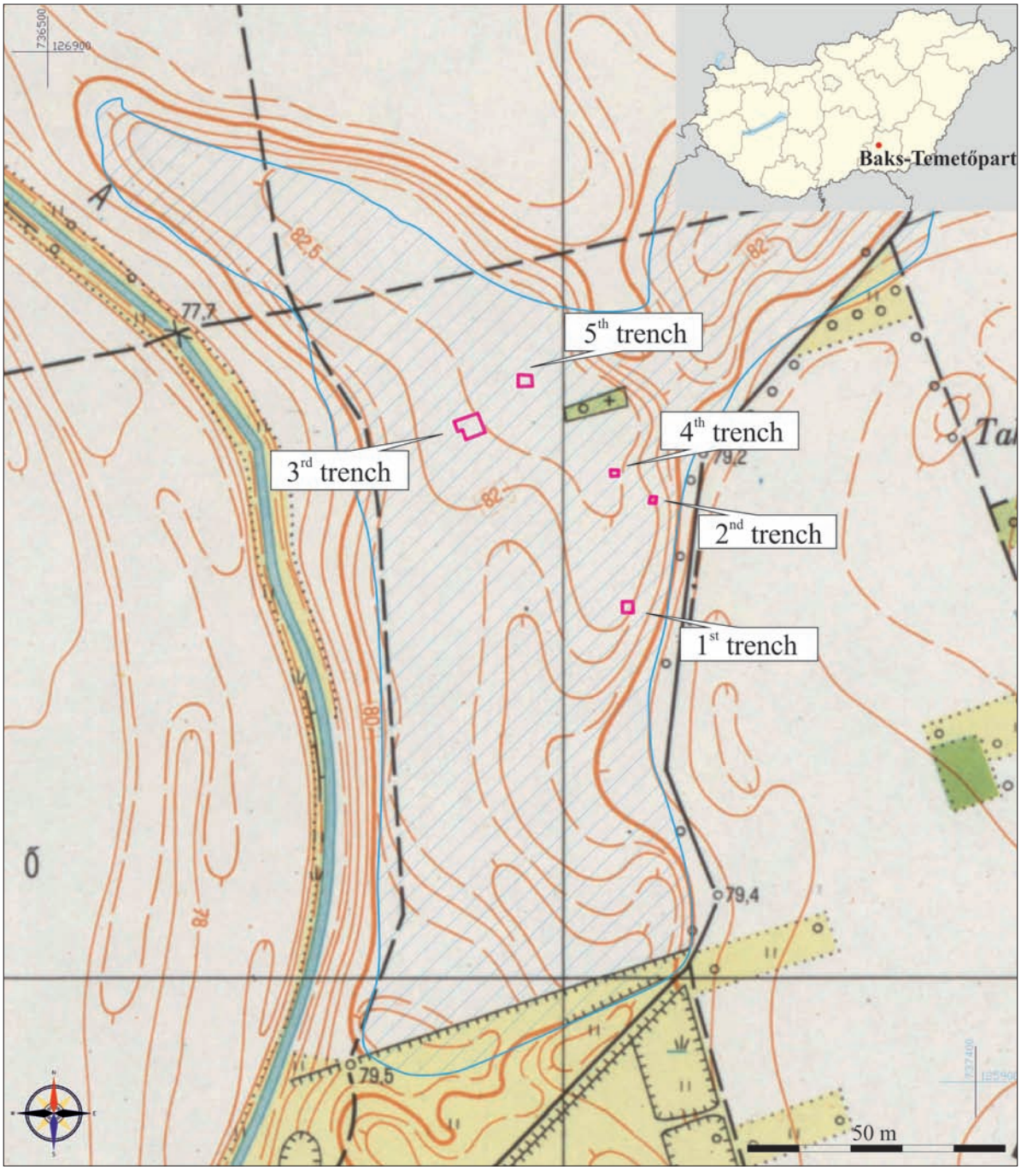

Fig. 1 The position of trenches at Baks-Temetőpart (purple) and the presumed extension of the site (light blue)
1. kép A szelvények elhelyezkedése Baks-Temetőparton (rózsaszín) és a lelőhely feltételezett kiterjedése (világoskék)

Before analysing the find material, the excavation itself will be discussed, along with the examination of the features. Following the evaluation of the ceramic finds, the interpretation of the site will be attempted. Lastly, some details of the finds will be illustrated with a few tables and images as a non-exhaustive overview.

The location and characteristics of the site

Baks-Temetőpart is located in Csongrád County, between the villages of Baks and Dóc, on the right side of the Tisza River. The site lies about 82–83 m above sea level, so it stands out from the surrounding flat areas to some extent (V. Szabó 2011a, 91).

Since the site is quite close to the Tisza, the area was endangered by floods before the 19th century water regulations. On the maps of the first military survey (1782–1785) it is still clear that the immediate surroundings of the site was periodically covered with water. Following the water regulations the area became much drier.

The flora of the region was also determined by water. The most widespread vegetation could have been hardwood forest in prehistoric times (Dövényi 2010, 191). Reeds and bulrush types are characteristic for the wetlands. These could have been good source materials for house constructions, basket making or preparing other goods. The meadows and the nearness of water meet the requirements of animal husbandry, which is likely to be more common than agriculture at the end of the Bronze Age.

From the Late Bronze Age (LBA) no soil samples have been drilled from the site that could provide an answer on whether or not the area was endangered by flooding and what kind of vegetation can we exactly remodel. The archaeobotanical analysis is currently being carried out, which can give us an idea about the cultivated and consumed plants or about possible food ingredients. The analysis of animal bones was already performed by Anna Zsófia Biller. There is currently no information available on any further research concerning the site.

The state of research at the site

The first mention of the site is known from László Saliga's diary dating back to 1970 (V. Szabó 1996, 13, 11. footnote; V. Szabó 2011a, 91). As an employee of the Móra Ferenc Museum in Szeged, he was the first to visit this area. Later, Csilla Farkas completed a field survey here in 1995, collecting material for her thesis (Farkas 1995). In addition to the most intense Temetőpart site, three smaller concentrations of finds were found in the area.[1] Gábor V. Szabó has been visiting the site annually since 1995 (V. Szabó 1996), and he has found bronze hoards and several metal stray finds with his metal-detector survey team (V. Szabó 2011a, 92). In 2007, he also conducted an excavation season for a couple of weeks for authentication and in the same time a metal detecting survey took place.

Brief research history of the Gáva culture

The first summary covering all aspects of the culture was published in 1984 by Tibor Kemenczei (Kemenczei 1984). His chronological system was refined by Gábor V. Szabó. According to him only the classical Gáva-ceramic style can be dated to the HaA2–HaB1 phase, while we can count with individual pottery styles in the previous period that preceded the typical Gáva (V. Szabó 1996, 9; V. Szabó 1999, 87; V. Szabó 2004a, 81; V. Szabó 2017, 231–278). The Proto-Gáva-ceramic style spread in the north-eastern part of the Carpathian Basin. It can be characterized by different forms and decorations and it can be handled as a collectivble name for several ceramic style groups (Przybyła 2009, 134–136), which were probably closely connected to the later classical Gáva-style (V. Szabó 2017, 239). The Pre-Gáva-ceramic style concentrated on the middle and southern part of the Great Hungarian Plain and it existed at the same time as the Proto-Gáva style, that is, in the Rei. Br D–HaA1 period (V. Szabó 2004a, 84–85, 19. fn.; V. Szabó 2004b, 157, 17. fn.; V. Szabó 2017, 242). This pottery style is less of a source of the Gáva-style, but there are some noticeable formal and decorative features which connects it to the Transdanubian late tumulus and early urnfield cultures (V. Szabó 2017, 242). Similarly to the north-eastern region, the Pre-Gáva-ceramic style is also a composition of various style groups, continously reforming by external impacts.

Therefore, in the last decades, research has become increasingly cautious about the term 'culture' and it is trying to use more comprehensive expressions, which are less restrictive for the communities with similar material cultures. Nowadays it is much more common to use the definition Gáva-complex (Bukvić 2000, 31) or the Gáva-Holihrady cultural circle or cultural complex (Bader 2012, 9), or simply the Gáva-ceramic style.

At present, research dates the classical Gáva-ceramic style to the HaA2–HaB1 period, while in the previous period two pottery groups can be outlined, the Pre- and Proto-Gáva-style. The entire research history of the Gáva-culture was summarized by Tibor Bader in 2012 (Bader 2012, 7–22). In precise and full picture about the research history of all countries concerned.

Analysis of the site and the assemblage

Evaluation of features

A total of 82 features were found during the excavation.[2] In the four completely excavated trenches, pits of different sizes dominated, but in a very diverse proportion. In the first trench a total of 25 pits were discovered, in the second trench 7

pits, the third consisted of 33, while in the fourth trench only a single pit was found. In addition to the pits, a vessel (O57/S81) and a filling layer (O20/S34) was also documented by separate stratigraphic unit numbers. In four cases, parts or some sections of ditches were also documented (O147/S66; O147/S67; O147/S77; O147/S57), all of which were the result of modern earthworks. Furthermore, eight postholes (O13/S15; O43/S78; O43/S79; O43/S80; O48/S58A; O55/S73; O55/S74; O55/S75) and two smaller hoards (O1/S1; O1/S2) were also found, which were surrounded by ceramic shards.

The below described features (see in Appendix) can be sorted into four larger groups. Their quantity varies considerably between and within the excavated trenches. Among these features the focus will mainly concentrate on the pits as they have provided the vast majority of the find material. The separately documented layer will be discussed together with the pit that consisted of it. The alone standing vessel in trench 5 that was cut half while removing the topsoil, will be sorted into the group of large containers in the typological order and it will not be emphasized.

Besides the pits, postholes are the ones that allow some more space to interpret the daily life of the settlement. The modern-day ditches that cut through trench 3, cannot be used for any scientific analysis. The examination of the hoards are not part of this article, so they are briefly mentioned.

Hoards

Before the excavation, some metal-detector survey took place at the site in 2006 (V. Szabó 2011a, 92). Afore archaeological works has started, the trenches were drawn around the previously found hoards, like a 20×20 m trench (no. 3), which was positioned around the 1st hoard. Other artefacts that belonged to the earlier discovered hoard (O1/S1 and O1/S2) were found in this square. Another scattered hoard was unearthed in the area of the 5th trench and it was documented as the 2nd hoard. An additional hoard turned up in the 3rd trench, which consisted of a small mug with 14 gold rings inside (about the hoards: V. Szabó 2011a; V. Szabó 2011b). This hoard cannot be connected with any features, because there was no trace of a feature. In the territory of the site many stray metal finds were detected and a large amount was uncovered during the excavation, too. In every case, the stray finds were marked with GPS coordinates, which showed a higher concentration on the eastern side of the site.

The hoards found in this area can be linked to the 'Multidepotfundstelle' phenomenon (V. Szabó 2016, 179–180). According to the definition, those hoards can be regarded as such that are closely placed to each other in time and space (Vachta 2012, 180). These similarly dated hoards were located in a well-defined place, in Baks they were lying only a few meters apart in an extensive settlement. The detailed evaluation of the metal artefacts is not the subject of this paper. The ceramic fragments from the features O1/S1 and O1/S2 will be discussed in the typological section.

Ditch sections

The most extensive trench no. 3 was intersected by a modern-day ditch, which is the hole of a still operating gas pipeline. This longitudinal ditch[3] have cut through several Bronze Age pits or even destroyed some parts of them. The affected fillings got mixed, but no find materials fell into the modern ditch. It cut across pit O45/S55, destroyed the edges of pit O41/S51 and O35/S45 and demolished the upper layers of pit O37/S47 and O37/S69 that made it impossible to reconstruct their connections.

Postholes

Eight postholes were documented from the excavated trenches. Six of them were located in the northern part of trench no. 3 that can be sorted into two groups. The remaining two postholes were found in the north-western direction of trench no. 1, next to two storage pits.

Posthole O13/S15 in trench no. 1 was completely empty, while the adjacent O48/S58A with a slightly narrower diameter contained a fine, well burnished cup with inner incised decoration, along with a bird of prey's claw. The various decorated and ritual objects hidden in postholes raise the possibility of the *ritual posthole deposition* phenomenon. The cup belongs to the D.14. subgroup within the typological order, which contains the most finely made drinking vessels. This phenomenon of ritual vessel deposition has been known since the Early Bronze Age and it existed until the Iron Age. Peter Trebsche has studied and interpreted these ritual postholes and their find materials from the territory of Austria (Trebsche 2008, 67–68, Abb. 1; Trebsche 2017, 181–182). In his view, there are three basic conditions which must be met with the term: *ritual posthole deposition* (Trebsche 2008, 69, Abb. 2; Trebsche 2014; Trebsche 2017, 181). First, the object must be placed directly to the bottom of the pit and the pole above. If an object fell into the pit by accident, then its pieces may be scattered with-

in several layers of the filling. The second condition is the completeness, so the vessel can almost completely be restored. The third principle is the arrangement, whether the objects were placed on top of each other or side by side.

In Baks almost an entire cup was discovered in the posthole. In addition, the fragments were located at the bottom of the pit. If we assume that the adjacent posthole O13/S15 may have belonged to the same building, it can be detected that there was a 20 cm difference between the depths of these two holes. It might mean that more space was left under the ritual pole. The documentation did not reveal how the bird of prey's claw and the cup were positioned, but the deposition of these two objects itself can be considered as special. It is likely that only one posthole with ritual importance was emphasized per house (Trebsche 2008, 70; Trebsche 2014, Abb. 4). If so, then possibly one of the corners or sides of a post-structured house was caught in trench no.1, which cannot accurately be outlined as the further postholes are unknown.

There is another type of deposition, when the house is abandoned and the poles are being removed, a closing ritual can take place. To close the 'life-cycle' of the house, meaningful objects could have been placed in the empty hole (Trebsche 2008, 69, Abb. 2). In case of posthole O48/S58A, it was not possible to observe a difference between the filling layers, so nothing could confirm whether this deposition was associated with a founding or a closing ritual.

The postholes uncovered in trench no. 3 can be sorted in two different triple group, based on their size and location. The three larger (O43/S78, O43/S79, O43/S80) with the diameter of 25–30 cm were discovered around the large, round-edged pit O43/S53. None of these postholes consisted of any finds, but the pit in the middle contained the largest amounts of fragments on the site (433 pcs). Since all three, excavated sides of the pit had a deep posthole in the middle, it is possible that a simple constructed, roofed structure could stand here once. It cannot exactly be called a house, because its area is too small and only three (or perhaps four) postholes would not be able to hold a heavy roof, but it may have been a small workshop or a place for household industry. Since it has been transformed into a storage pit and the floor level was not noticeable, its exact function is unknown.

In the immediate vicinity of the above described object, another group of three postholes (O55/S73, O55/S74, O55/S75) was found with narrower, 20–25 cm diameters. A semicircle can be drawn around the postholes that raises the question of what these thinner poles could have belonged to. The two outermost holes lied two meters apart, while the one in the middle was half a meter off their line. A very shallow pit was found next to them, which was only 10 cm deep and did not contain finds. No burnt spots were detectable around the postholes or in the directly adjacent area, so it is unlikely that a large hearth or fireplace could have stand here. Although it cannot be ruled out completely, as the site was exposed to intense ploughing for a long time, which destroyed the surfaces of all features, leaving only the postholes behind. At Poroszló-Aponhát a circular fireplace with similar dimensions (Patay 1976, 197) was found. It had a 10 cm high plateau, which was followed by a 10–15 cm thick burned layer. However, no postholes that surrounded the hearths were discovered in Poroszló, so probably this explanation may be excluded. Another possible interpretation is that these thinner postholes could form the edge of some sort of livestock enclosure. The scientific analysis of the collected soil samples may help to clarify the function in the future.

Pits

This group is represented by 66 pits (Fig. 2). The size, extent, depth and the amount of finds found in the pits are rather diverse. A total of three pit-complexes were discovered in the trenches. In trench no. 1, two pit-complexes were found (no. 18 and 19), which were located directly next to one another. Pit-complex no. 40 was unearthed in trench no. 3. These pit-complexes were formed by the superposition of several pits.

Most of the pits have beehive shaped walls (67%), although in some cases straight, vertical and terraced walls can also be observed. Sometimes only half or three quarter of the pits were excavated (27%), because part of them fell under the section walls of the trenches. A very few, five pits did not contain any find material (7%).

The pits were categorised by the amounts of find materials found in them. The ones with less than 50 fragments formed the group of small volume pits. The ones with 50 to 150 fragments are in the group of medium density pits. Over 150 pieces it is high, while over 250 fragments it is a very high quantity within the pits. Analyzing the find material by the means of mathematical average calculations (Fig. 3), it can be noticed that most of the pits are roughly below the central value line, while in some cases there is an extremely high density of finds. All five pits with most

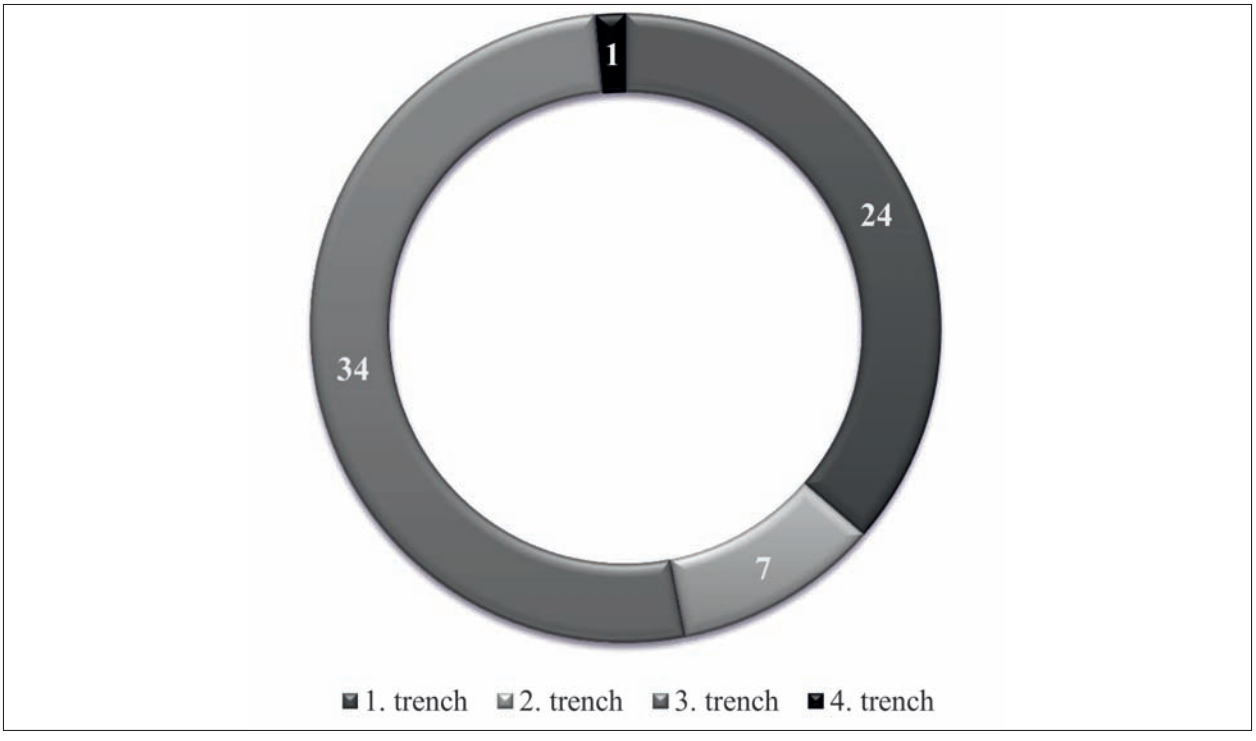

Fig. 2 The distribution of pits within trenches
2. kép A feltárt gödrök szelvényenkénti megoszlása

of the fragments were discovered in trench no. 3.

Besides, pits also contained animal bones, stone and bone tools, charred grain seeds and special clay objects. In some pits a larger amount of daub pieces were also found, which suggested that these may be related to a crisis horizon. However, during the comparison of section drawings, it turned out that only 10 pits had a distinctive daub layer and their arrangements also contain some important information. Through a more in-depth study of the layers, multiple interpretations could be outlined and it can be concluded that the life-cycle of the settlement was rather complex.

Trench no. 1

24 pits were discovered in *trench no. 1* and 17 out of them were beehive shaped, while the rest had vertical walls. The vast majority of pits can be characterized by loose fillings. Usually grey-brown and light brown sandy humus layers were alternating. At the bottom of the two intersecting pit-complexes, always a dark brown loose humus layer was covered with the above mentioned lighter layers. Except two storage pits, concave shaped layers were noticeable, which may indicate that they were left open for a longer period of time. In three cases, the wall of the pit was collapsed due to poor stability as it can be observed on the section drawings. The filling of the deeper, lone standing pits consisted of three to four layers, while the shallow pits have the same thickness, but only a single layer. It suggests a relative uniformity and periodic filling processes at definite intervals (Schiffer 1996, 64–66; Borisov 2010, Fig. 2). The layers had the same distribution of ceramic fragments, daub pieces and animal bones.[4] Only two pits had a heavily mixed layer with lots of daub. This layer in pit O23/S25 was probably the result of a minor burning accident. By contrast, the layer of pit O26/S31 consisted of a much larger amount that can indicate a more severe fire. Apart from the pieces, which carried some information, about 30 kg of daub was discarded because of their small sizes. This amount rather gives the impression that something has burned down. On the other hand, the arrangement of the layers suggest that the refuse from the burning was deliberately cleaned up into an open pit and after it was accumulated, people tried to cover and level the surface of the pit. The find material from this pit was not burnt, so it was not affected by the fire and it lied probably in the humus layer. Originally the lone standing pits could have been storage-pits and after they were less suitable for storing, the waste around the house was put into them.

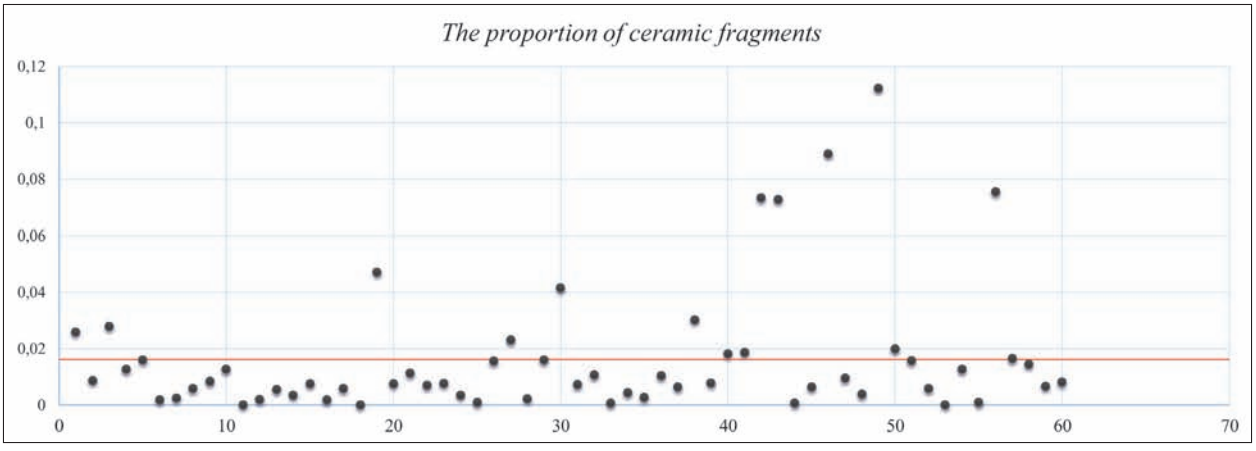

Fig. 3 The proportion of ceramic fragments
3. kép A kerámiák mennyiségi megoszlása a gödrökben

The filling layers of two pits were convex-shaped, which could mean that they were loaded at once. Both of them continued in the section wall of the trench, so they were partially excavated. One of them was pit O10/S12, which did not include any exceptional ceramic piece, so the layers may have been the final results of an extensive cleaning.

However, the other pit (O20/S22) was a more special one (Fig. 4). It stood out from the basic storage and waste pits because of its lowest layer. The ceramic material in it was also quite different. The artefacts of the bottom layer were documented on a separate number (O20/S34). On top of the fragments of several large storage vessels, an almost complete skeleton of a young deer was placed. After the analysis of animal bones,[5] it turned out that almost every bone of a red deer were found in the pit, though the pit was not fully excavated. The skeleton was not placed in anatomical order and the skull and antler was much more fragmented, unlike the better preserved body parts (Biller 2018, 9). One of the lumbar vertebrae had a deep cut, while one blade-bone or scapula was burned. Based on these, it is most likely that the deer was consumed, since the cut marks prove meat processing and the burnt bone suggests cooking. According to the ossification of the limbs and the size of recent animals, this deer could have been younger than 2 years old, which could mean 57–94 kg of consumable meat (Biller 2018, 9). After restoration, it turned out that the fragments under the skeleton belonged to six separate, large storage vessels. In order to find additional ceramic pieces, the side wall of the trench was further excavated. If a connection is assumed between the large storage vessels and the deer, perhaps some kind of ritual or feast related act could have been behind these finds. Wild animals were usually consumed on special occasions, as opposed to the easily accessible domestic animals, these animals first must have been hunted down by collective efforts (Speth–Scott 2008). There are several ethnographic examples of hunting in small groups, but for consumption the participation of more people was needed. István Vörös calculated with half a kilogram of meat as a daily portion, when he examined the finds from the Polgár-Csőszhalom tell (Vörös 1987, 28; Kalla–Raczky–V. Szabó 2013, 22–23). If this quantity is reflected back to the assumed weight of the deer, then up to 114–188 people could have taken part in such an event. Moreover, the six large storage vessels[6] could contain more than 100 litres of liquid[7], which could also satisfy the intake of many individuals. Since Baks is a rather large settlement, this number is not necessarily exceptional. If a non-ritual consumption was behind these finds, still a feast or a meal other than the everyday one can be suspected. The remains of consumption was covered with a uniform humus layer, on top of which a further mixed layer was found. The deliberate burying can be traced by the convex-shaped formation of the la-yers, which means that the pit was not filled up by natural processes (Aerts 2016, Tab. 1).

Trench no. 2

Only 7 pits were found in it, although this may be because of the small size of the trench or due to its location within the site. Five pits were beehive shaped, while two had straight walls. Pit O5/S6 was very shallow with a small diameter. Its filling was homogeneous humus without find material. In addi-

tion, the much larger pit O3/S4 did not contain any finds as well. The ashy humus layer of its filling did not have a lot of charcoal pieces, therefore it is likely to be the waste of a firing process, in which the organic material was sufficiently burned. Pit O6/S7 was also large with straight walls. It intersected the adjacent pit O7/S8. These pits had similar layers, so their filling up process was somewhat related. The lower part was grey-brown humus, which could have been filled up naturally based on its concave shape. The daub layer in the middle was followed by a humus filling, which was divided by two thin lines of charcoal with organic elements, covered by another daub layer. The alternation of layers suggests some kind of cyclic order (Schiffer 1996, 65), where the burnt non-organic and the less well-burned organic levels were changing. A similar arrangement can be detected in pit O2/S3. Thin layers of charcoal were situated in the middle of the pit and with its concave shape it can be assumed that some kind of burnt organic waste was occasionally swept into the pit during the process of its natural filling up (Aerts 2016, 25–26). Pit O4/S5 had a sharp beehive shaped wall, but its bottom was broken by a cascading deeper pit. Like the previous ones, almost the entire filling was homogeneous humus, which was interrupted by 3 thin, ashy layers around the centre of the pit. Based on the position of the layers, it is likely that the remains of organic waste was burned and swept into the pit in a very short period of time.

Trench no. 3

It was the largest, therefore it contained most of the pits and had the biggest pit-complexes. A total of 34 pits were discovered, 21 of which had beehive shaped walls. Two pits were not completely excavated (O39/S49 and O44/S54), so there is no information besides their location. One pit (O48/S58B) contained the finds of the tumulus culture, without any finds that could be connected to the Gáva pottery style, so it is not part of the analysis. In three pits, no ceramic finds were discovered. The shallowest pits were just a few cm deep (O30/S39, O42/S52). They were filled with homogeneous, inseparable layers. The medium-sized pits (O27/S36, O28/S37, O32/S42, O34/S44, O38/S48, O46/S56) usually consisted of 3 or 4 thicker layers, which

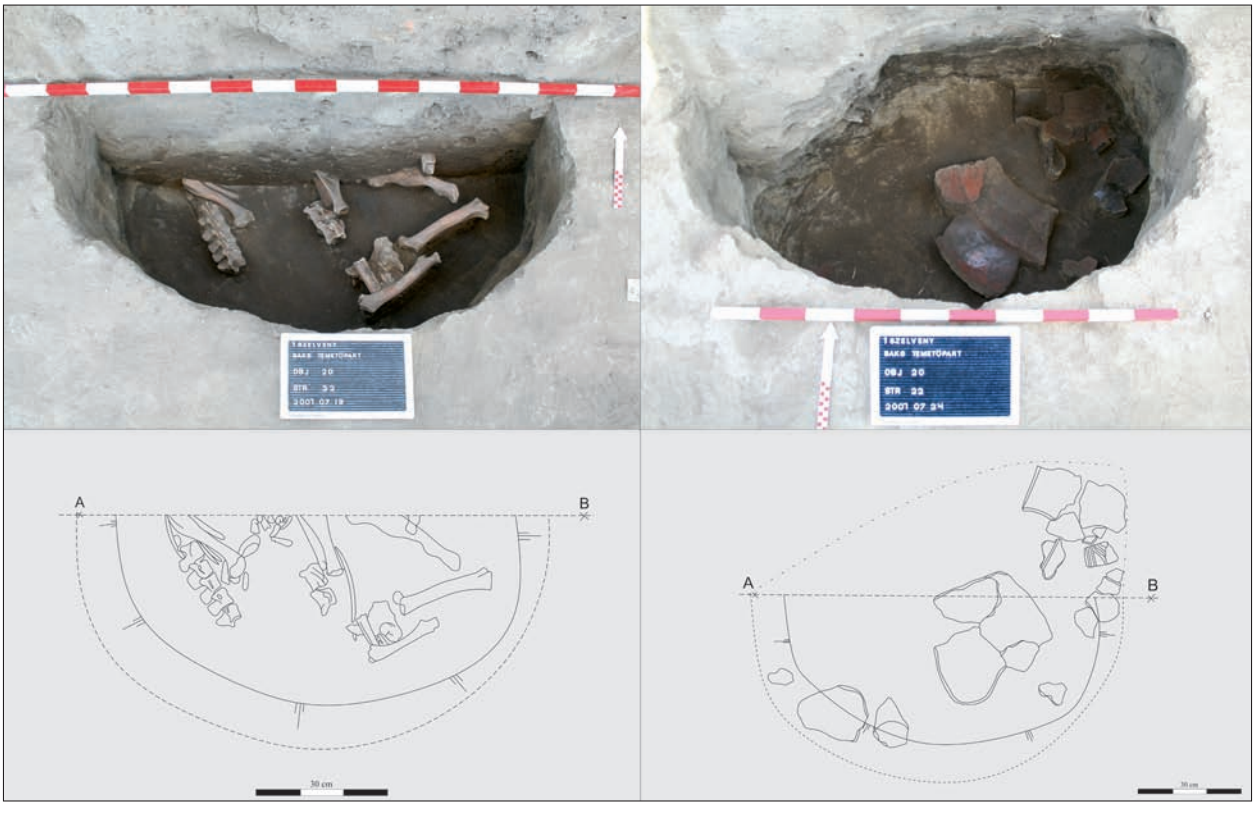

Fig. 4 Pit O20/S22: Fragments of several large storage vessels and the remains of a deer (Photo by Gábor V. Szabó)
4. kép A O20/S22-as gödör: Több nagyméretű tárolóedény töredéke és egy szarvas csontmaradványai (V. Szabó Gábor fotói)

varied between natural or man-made fillings. Pits may indicate if they were open for a longer period of time, as in some cases a significant part of the side wall collapsed, frequently at the bottom of the pit, but sometimes in the middle, i.e. the pit could have remained open for a while after the first loading phase. Pit O33/S43 can be emphasised, as its layers were sloping, thus suggesting that it was filled up from one side.

Pit-complexes are not simply different because of their intersections, but their layers are much more complex, too. Pit O54/S71 had most of the layers, which was one of four closely established pits (O53/S70, O54/S71, O54/S72, O56/S76). Its layers formed a certain pattern or sequence that suggests some kind of repetition. A daub layer lied at the bottom of the pit, above which a thin natural fill could be observed, followed by light brown humus. A thin daub, a grey-brown, a light brown humus and a thin charcoal layer were alternating. This stratification was repeated, assuming cyclicality. It can also mean some kind of specific periodic cleaning or settlement landscaping work (Schiffer 1996, 64–66). Charcoal layers may indicate an organic material firing process, maybe the clearance of plant parts in spring or autumn. Daub layers could also mean season related settlement cleaning works, but in this case with a larger amount of non-organic elements. If the layers were repeating within a given period, then the pit shows a rather fast filling up. Pit O7/S8 had similar layers, where the daub layers were followed by humus with rich organic elements. Pit O54/S72 lied right next to pit O54/S71. It had also a frequently changing layer sequence, which can be compared to the stratigraphy of pit O45/S55. Furthermore, it can be observed by pits O54/S71 and O54/S72 that part of their side walls were collapsed, so after shaping them, they could have been opened for a certain period of time.

Pit-complex no. 40 consists of a dense row of pits dug together. These pits had a slightly different filling with thin sand patches here and there. The layers were roughly similar in thickness and varied evenly. There was only in pit O40/S61 a rather thin charcoal layer, as a result of a one-time burning of some organic waste. In many cases, the layers are concave, so they could have been opened for a long time.

Five more pits can be emphasized, which were covered with a very thick daub layer, thus it may be connected to the burning of a house or part of a building. In addition, these pits were very close to each other (O37/S47, O37/S69, O31/S40, O31/S41, O32/S42). If a house was indeed burned down because of an accident, it would probably be cleared away into the nearest pits, restoring the destroyed part of the settlement as quickly as possible. Another assumption could be that simply a fire-related working process took place, maybe the burning of some non-organic waste. This large amount of daub suggests that it was a very active cleaning or landscaping work.

Trench no. 4

It contained only a single beehive shaped pit with a completely homogeneous, non-stratified humus filling. It was probably filled up immediately after shaping it, since no collapsed parts could be observed.

Characteristics of the pits

Where activity was more intense, logically more garbage was produced and consequently more frequent cleaning was required, resulting more layers and faster filling up (Schiffer 1996, 65). Besides the regular cleaning works, the phenomenon of ritual purification is also known from ethnographic examples (Kobayashi 1974; Ekholm 1984; Schiffer 1996, 65–66). This is less conceivable in Baks, as the stratification, the composition of finds and the small number of plain daub layers, are not supporting this idea. Nothing refers to any deliberate or ritual activity or cleaning by fire, as it can be noted in the Early and Middle Bronze Age (Szeverényi 2011, 215–217).

Michael B. Schiffer has classified the filling layers of pits and other features into C- and N-transformations, i.e. cultural and non-cultural factors (Schiffer 1996). These two appear simultaneously by many pits and they are very difficult to separate, but they create the layers together (Aerts 2016, 22). The layers are the imprints of the last phases of various processes, but it cannot be reconstructed, what happened to the pit before that state. Pits are constantly affected by nature as well as by human activities (Wallace et al. 1992, 3). In Baks, the worst damage was caused by modern deep ploughing, which destroyed the upper layers of the site, thus the chance of discovering floor levels, shallow postholes or other anomalies. In addition to these, some further digging has occurred in the era of the former pits in prehistoric times, which also affected positions. In some extent animals, like voles and other rodents has also bedded themselves into the layers, however it hardly affected the stratigraphic sequence of pits.

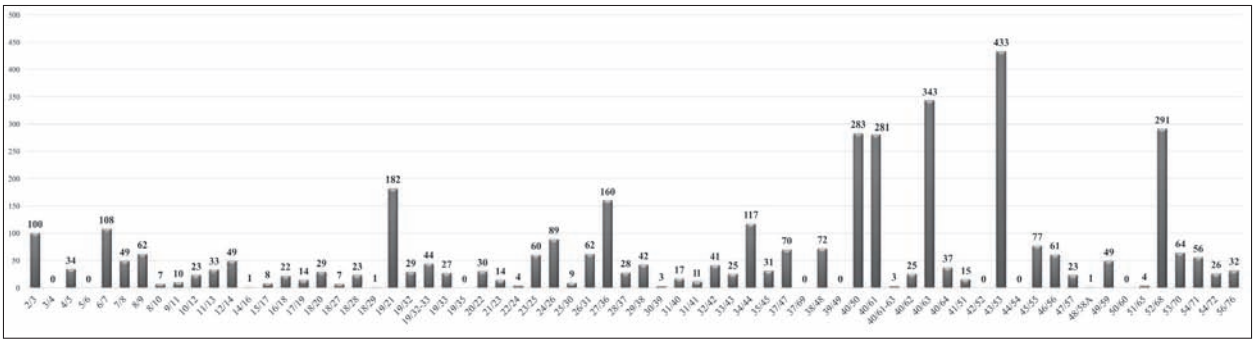

Fig. 5 The distribution of ceramic fragments within the pits
5. kép A kerámiatöredékek eloszlása gödrönként

Typology

Thousands of pottery fragments were found during excavation (Fig. 5). After pre-selection, a total of 3851 ceramic pieces of various sizes, spindle-whorls and loom weights got into the Móra Ferenc Museum, which were registered on 1322 inventory numbers (2008.5.1.–2008.5.1330.). The following typology was compiled specifically for the site, on the basis of verifiable and restorable ceramics. While creating the following groups, the data of other site analyses were also used (e.g. Kemenczei 1984; Vasiliev–Aldea–Ciugudean 1991; V. Szabó 2002; Pankau 2004), based on which a simple and traceable system was outlined. The fine subgroups were categorised within five main groups. These major groups were drafted mainly by the sizes of the vessels and by their perceived functions. The first group includes all the large storage vessels (A1–A9) with vast dimensions. The second group contains all types of bowls (B1–B9). The finds of the third group are the jars and deep bowls (C1–C9) that are of medium size compared to other vessel types. This group was the most difficult to categorize, because in this case no exact functions can be connected to the objects. The fourth group includes all the so-called drinking vessels, which consists of mugs and the cups (D1–D16). Pots or cooking utensils were sorted to the fifth group (E1–E4). Because there were a lot of small fragments, the subgroups of 'other ceramic fragments' were created at the end of each main group. In this, all the indefinite pieces were sorted that could only be characterized by wall thickness, colour or in fortunate cases, some trace of usage to distinct them between bowls, cups or other pottery types.

The objects were grouped primarily on the basis of their formal features, since decorations can appear on several type of ceramics, regardless of their form. In addition, on one ceramic multiple types of decorations can occur, in various combinations.

Large storage vessels

A.1. Oval shape vessel with two handles (Fig. 6; Fig. 34, 16)

The rim was broken, so it cannot be reconstructed with certainty. Its neck is curved in, therefore it may had an outcurving rim. Its body is oval-shaped. In the middle of the vessel's belly, two rather thick, round-sectioned handles were placed. Only one piece could be reconstructed from the site, but due to its unique form it was subdivided into a separate subgroup. Its outer surface and colour is very similar to the pots, but the temper contains finer elements. Yellow coloured.

A similar piece was found in Tiszacsege-Sóskás (V. Szabó 2002, 12, 4. ábra X.25, 116. kép 2, 119. kép 2; V. Szabó 2004a, 103, 3. kép 2, 6. kép 2), which according to the description of G. V. Szabó, was better crafted and burned black, and it was completely undecorated. This type can be dated to the period of the Pre-Gáva-ceramic style, i.e. to the Rei. Br D–HaA1.[8] There are formal variations at other sites that are slightly different.[9]

A.2. Storage vessel with slightly outcurving rim, curved body and conical bottom (Fig. 6; Fig. 30, 5)

Its rim and neck hardly separates. The upper part of the vessel is quite wide. Its neck, shoulder and belly line has a solid curvature, but under the belly a conical shape goes down to the bottom. Just one example was found from this type of vessel that could carefully be reconstructed. Due to its large size (53 cm high) and lack of usage trace, it can be assumed that it has functioned as a storage jar. It was nicely finished with crushed ceramic and sand temper. Its outer surface was originally black, polished and burnis-

hed. Four wide knobs were hanging from the four sides of the vessel's belly line.

Hardly any similar vessels are known from other sides. It is presumed that parallels were made in different sites, but it is almost impossible to prove, since we should know at least one complete intersection to compare them. There are fragments with similarly wide rim diameter and straight curve, but they are broken on the neck, so they cannot be considered as parallels (e.g. Pankau 2004, Taf. 6, 6 /97/, Taf. 10, 7 /147/).

A.3. Compressed globular-shaped vessel with straight rim and slightly curved neck (Fig. 6; Fig. 30, 13)

This slightly cylindrical necked, globular-shaped vessel forms a separate subgroup itself, as another straight-rimmed vessel could not have been reconstructed from the site. Despite its simple shape and its modest decoration with two small knobs, it is a very well executed vessel. It was tempered with crushed ceramic and sand, its surface was polished on both sides, and the outer side was burnished, too. Its brown colour became a little spotted by a subsequent heat effect.

This form could be found at other sites too, though with some differences, as each parallel have two small handles on their neck. These handles are missing on this piece from Baks. It was decorated with two barely visible knobs and its body is more globular. The pieces with handles can be traced back to the previous phases of the Bronze Age. They spread among both the tumulus and the urnfield cultures to the west of the Danube, while on the Great Hungarian Plain they are noticeable since the Rei. Br C period (V. Szabó 2002, 17). This form is known from the sites of the Pre- and Proto-Gáva-ceramic styles, in Jánoshida (V. Szabó 2002, 17, XXVI.A.1; 29. kép 14) and Polgár M3-29 site (V. Szabó 2002, 84. kép 6). The straight necked form was found in Kaba-Bitózug (V. Szabó 2002, 181. kép 1) dated to the Gáva-ceramic style. It is also common in distant sites, such as in Basarabi (Gumă 1993, Pl. X, 2, Pl. LXIII, 5), Bucu-Pochină (Renţa 2008, Fig. 114, 4) and Teleac (Vasiliev–Aldea–Ciugudean 1991, 237, Fig. 41, 1) from Romania and Dalj-Studenac (Šimić 1994, 209, Pl. 7, 1) from Croatia.

A.4. Compressed globular-shaped vessel with outcurving rim and conical neck (Fig. 6; 30, 2–3, 6, 8; Fig. 32, 2–3, 5–6, 10; Fig. 33, 1, 4; Fig. 34, 4–5; Fig. 35, 1)

The most common shape found at the site. Due

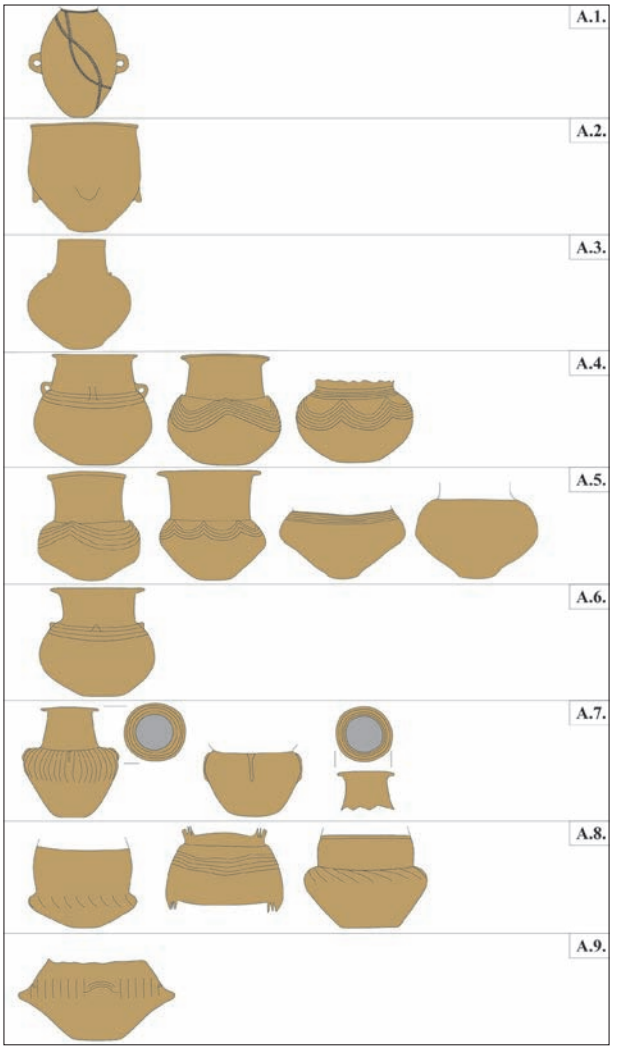

Fig. 6 Typological groups of large storage vessels (A1–A9)
6. kép Nagyméretű tárolóedények formai csoportjai (A1–A9)

to the high degree of fragmentation among the ceramics, it cannot be stated that this was the most widespread form, but 73 pieces of this vessel type was restorable, which is the most among the large storage vessels. The rim is sometimes emphasised with channeled decoration, the conical neck is undecorated and the compressed globular-shaped body has horizontal or garland-shaped channeled ornaments. This form can also have either knobs or handles. The outer surface is always polished and burnished. The outer black colour is intersected by the yellowish colour of the rim, which covers the inside. The internal surface is rarely polished, so the crushed ceramic temper is visible.

This form was found on various sites: e.g.

a heavily burnt piece in Köröm-Kápolna-domb (B. Hellebrandt 2016, 42. kép 3), an example with knobs from Nyíregyháza-Mega-Park site (L. Nagy 2012, 258, 279; Bef. 2625, Taf. 7, 1), in Tiszaladány-Nagyhomokos (V. Szabó 2002, 27. ábra, IV.E.2. 33; 199. feature: 217. kép 4), Poroszló-Aponhát (V. Szabó 2017, 234, 2. kép 3), curved body fragments (Ciugudean 2010, Pl. XIII, 2; Ciugudean 2011, Pl. IX, 2; Ciugudean 2012, 234; House 6. Fig. 6, 2) and a restored piece (Vasiliev–Aldea–Ciugudean 1991, Teleac III. layer: 228; Fig. 32, 5) from Teleac and from Alba Iulia-Recea-Monolit (Ciugudean 2010, Pl. XII, 6–7; Ciugudean 2011, Pl. II, 6–7). According to Gábor V. Szabó, this form was common in the Kyjatice culture (V. Szabó 2002, 46), although in my opinion the Kyjatice type vessels were characterized by a much sharper belly line, e.g. Szajla and Harsány (Kemenczei 1984, Taf. LXXXVI, 8, 15, Taf. LXXXVIII, 6).

A.5. Biconical shaped vessel with outcurving rim and straight neck (Fig. 6; Fig. 30, 4; Fig. 31, 1; Fig. 32, 8, 12; Fig. 33, 2; Fig. 34, 15; Fig. 35, 5, 7–8, 13–14)

The rim can have various shapes from straight to horizontally outcurving. The neck is less curved, rather straight. The body is biconical, but the belly line is not always sharply curved. Knobs that are pushed from the inside onto the shoulder of the vessel can often be observed, which can easily be distinguished from the other knob types. 40 ceramic fragments can be classified into this formal group. The outer surface is polished and burnished, while the inside is less smooth, the crushed ceramic pieces are noticeable in the temper.

This vessel type can frequently be found on sites of similar period. This form is also known from the period of the Pre- and Proto-Gáva-ceramic styles, but then it was characterized by a more pronounced shoulder and a less biconical body (V. Szabó 2002, 45, 25. ábra III.B.27, 57, 39, 45 and III.C.32).[10] This type is present in Biharkeresztes-Láncos-major (V. Szabó 2002, 134. kép 3, 136. kép 1, 3), Hódmezővásárhely-Kopáncs XI. dűlő (V. Szabó 1996, 86, 31. kép 1; V. Szabó 2002, 25. ábra III.B.39), Poroszló-Aponhát (V. Szabó 2002, 209. kép 3), Pócspetri (Kalli 2012, 173, 5. t. 6), Tiszabura-Nagyganajos-hát (Király 2012, 116, 132, P9; A.1./9. grave/), Tiszavasvári (Kemenczei 1984, Taf. CXXXII.1; V. Szabó 2002, 25. ábra III.B.57). In addition to the Hungarian sites, similar pieces can be observed in Alba-Iulia-Monolit (Ciugudean 2009, Taf. IX, 7), Grănicesţi (László 1994, Fig. 25, 1), Porumbenii Mari-Parte cetăţii (Nagy–Körösfői 2009, 62–63, 3. t. 1, 4. t. 1), Teleac (III. layer; Vasiliev–Aldea–Ciugudean 1991, Fig. 32, 3, 9; I. layer; Uhnér et al. 2017, Fig. 6, 5) and Somotor (Paulík 1968, 23, Obr. 7, 3; Demeterová 1986, Tab. V, 8). It is a common type during the HaB1 period.

A.6. Compressed globular-shaped vessel with outcurving rim and straight neck (Fig. 6; Fig. 30, 1, 7; Fig. 31, 2, 8–9; Fig. 32, 4, 7; Fig. 33, 5–6; Fig. 34, 1–3, 6–10)

It is primarily distinguishable from type A.4. by its straight neck. It has a sharper, almost right-angled arc, resulting a larger space between the neck and the shoulder. The other difference of this subgroup are the knobs, which instead of being pressed out from the inside, were applied directly on the outer surface of the shoulder. 40 fragments were sorted into this group. Its outer black surface is polished and burnished. It is often decorated with horizontal or garland-shaped channeled ornament. Its internal surface is yellow and rough.

This type of vessel can be regarded as a variant of the A.4. form. They probably occurred on every site, but because of fragmentation, only a few straight-necked parallels could have been found. In addition to the examples for group A.4, some pieces are known from Hódmezővásárhely-Gorzsa, Cukormajor (V. Szabó 1996, 23. kép 4), Hódmezővásárhely-Kopáncs XI. dűlő (V. Szabó 1996, 31. kép 2), Sâncrăieni (Paulík 1968, 23, Obr. 7, 4) and Teleac (Ciugudean 2009, Taf. I, 5; Vasiliev–Aldea–Ciugudean 1991, Fig. 29, 6, 19).

A.7. Compressed globular-shaped vessel, with outcurving rim, conical neck and bottom (Fig. 6; Fig. 30, 9–12; Fig. 31, 5, 7; Fig. 32, 1, 9, 11; Fig. 33, 3; Fig. 34, 11, 14; Fig. 35, 3, 11)

Its rim and neck is similar to type A.4, however the rim is frequently decorated with channeled lines. The rounded, protruding part of the vessel is positioned directly under the shoulder and the belly line is somewhat in one with the lower, conical part. This subgroup was outlined by 23 ceramic fragments. Its outer surface is polished and burnished, but brown shades appear too, so black is not exclusive. Some pieces are decorated with vertically channeled lines, some are ornamented with smaller appliqué ribs.

This type is quite common at other sites, like in Poroszló-Aponhát (Patay 1976, 195, Abb. 2, 2; V. Szabó 2002, 209. kép 2), Tiszaladány-Nagy-

homokos site no. 199 (V. Szabó 2002, 26. ábra IV.C.32–33, 218. kép 1; V. Szabó 2017, 15. kép 5), a rather burnt piece at Köröm-Kápolna-domb (B. Hellebrandt 2016, 42. kép 1), Sanislău-Cserepes (Kacsó 2008, 64, Pl. 3, 2–3), Nyíregyháza-Mega-Park site (L. Nagy 2012, 274, 279, Bef. 793; Taf. 2.1. and Bef. 2625; Taf. 7.A.2), Porumbenii Mari-Parte cetăţii (Nagy–Körösfői 2009, 62, 3. t. 2) and Teleac (Vasiliev–Aldea–Ciugudean 1991, 225, 228, Fig. 29, 2, Fig. 32, 1, 5, 7). The developed form can be detected during the HaB1 phase, but its antecedent form existed during the period of the Proto-Gáva-ceramic style, i.e. since the HaA1 period, as it can be observed at the Nyíregyháza-Mega-Park site (L. Nagy 2012; L. Nagy 2015; V. Szabó 2017).

A.8. Composite-shaped vessel with oval upper part, conical bottom and protruding belly line (Fig. 6; Fig. 31, 3, 6; Fig. 34, 13; Fig. 35, 2, 4, 6, 9–10, 12)

One of the most typical Gáva-ceramic forms. It was not possible to reconstruct the entire rim by the fragments, but from the shape of the neck an outcurving rim can be assumed. The characteristic protrusion and the oval-shaped, elongated neck running into it makes the fragments easy to recognize. In each case the belly line is channeled or decorated with wrapped turban rim, while the elongated neck is often decorated with horizontal or irregular lines. Only 24 fragments could be sorted into this subgroup. The outer surface is polished and burnished, their inside is less developed just like the previous types. Even in fragmented state, this form is rather easy to identify, because of its individual curve. Similar pieces were discovered in Biharkeresztes-Láncos major (V. Szabó 2002, 24. ábra II.27, 135. kép 1–2; V. Szabó 2017, 5. kép 2–3), Bodrogkeresztúr (Paulík 1968, Obr. 3, 4; Kemenczei 1984, Taf. CXXXIII, 14; V. Szabó 2002, 24. ábra II.36), Gyoma 133. site (Kemenczei–Genito 1990, Fig. 4, 1, Fig. 5, 1; Vicze 1996; V. Szabó 2002, 24. ábra II.38), Kaba-Bitózug (V. Szabó 2002, 24. ábra II.29, 174. kép 1–2, 175. kép 1–5), Nyírbogát (Kemenczei 1984, Taf. CXXX, 10; V. Szabó 2002, 24. ábra II.47), Polgár M3-1 site (V. Szabó 2002, 24. ábra II.31, 194. kép 2, 195. kép 7, 199. kép 7), Pócspetri (Kalli 2012, 169, 1. t. 5, 8), Porumbenii Mari-Parte cetăţii (Nagy–Körösfői 2009, 62, 3. t. 3), Somotor (Furmánek–Veliačik–Vladár 1999, 97, Abb. 46, 13), Taktabáj (Kemenczei 1984, Taf. CLX, 1, Taf. CLXI, 14; V. Szabó 2002, 24. ábra II.56), Tiszaladány-Nagyhomokos (V. Szabó 2002, 24. ábra II.33, 219. kép 2; V. Szabó 2017, 5. kép 1), Teleac (Vasiliev–Aldea–Ciugudean 1991, II. layer: 237, Fig. 41, 7; III. layer: 227, Fig. 31, 13) and in almost all HaB1 period sites.

The antecedent of the form was already present at the time of the Pre- and Proto-Gáva-ceramic style (V. Szabó 2002, 45, IV.I.2. type).

A.9. Biconical shaped vessel with pressed-out knobs (Fig. 6; Fig. 31, 4)

In general, one of the most common types of the Gáva-ceramic style. However, only four fragments could have been definitely categorized into this group. Their upper parts were missing, but it was possible to reconstruct the outcurving rim and curved neck based on other examples. On the belly line some vertically incised bundle of lines can be observed, along with the typical knobs that were pressed out from the inside. The knobs were also highlighted with parallel grooved decorations. Like the previous storage vessels, the surface is black, polished and burnished, but less smooth inside. It is characteristic to the pieces found in Baks that the knobs are only slightly pointing upwards, they are more horizontal.

There are parallels from Köröm (Kemenczei 1984, 350, Taf. CXL.1), Prügy (Kemenczei 1984, 365, Taf. CLV, 16), Borša (Demeterová 1986, 119, Tab. II, 4), Teleac (Ciugudean 2011, 99; II. layer: Pl. XII, 2) and Mediaş (Pankau 2004, Taf. 13, 2 /180./, Taf. 17, 9 /236./; stray find: Taf. 31, 5 /425./). This form was typical in the HaB1 period, but they may have existed in the previous period, as well (V. Szabó 2002, 46).

Bowls

B.1. Conical bowl with straight rim (Fig. 7)

One of the most basic bowl forms, however, it is not the most common at this site. From the straight rim to the flat bottom, this type has a simple, slightly curved body. The bottom of some pieces are somewhat raised, inward bulging. Their outer surface is polished, but not burnished and they were burnt brown, light brown or dark grey. Rarely, it is burnished inside, in which case the internal surface is black. 42 fragments were sorted to this subgroup.

It is a widespread form in every settlement that can be dated to the HaB1 period, as well as it is a common element of the find material of the surrounding cultures (V. Szabó 2002, 33. ábra XX. type).[11] It appears among others, in Biharkeresztes-Láncos major (V. Szabó 2002, 133. kép 3, 5), Doboz-Faluhely (V. Szabó 2002, 148. kép 2–5, 167. kép 1–4, 171. kép 5–6, 10), Hódmezővásár-

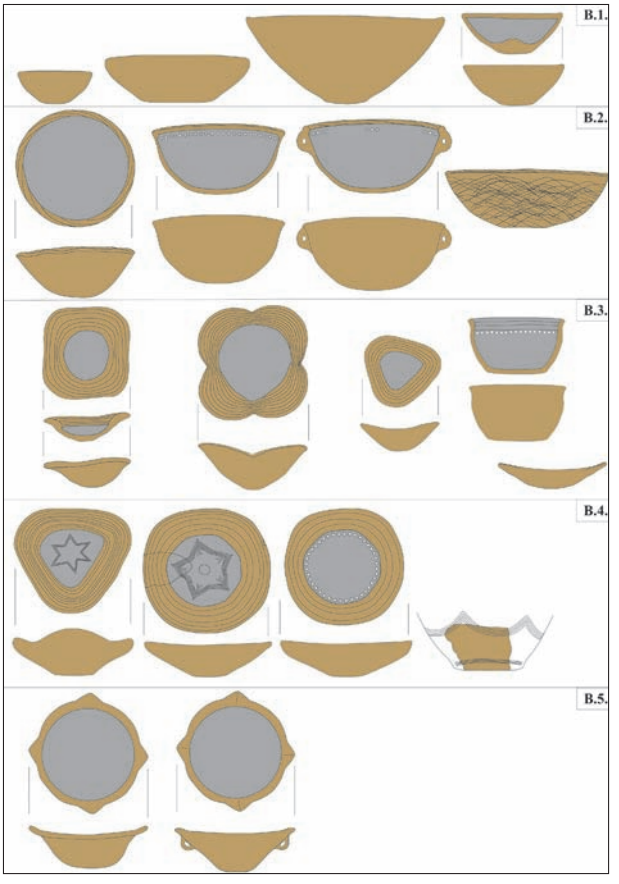

Fig. 7 Typological order of bowls. Part I. (B1–B5)
7. kép Tálak tipológiai sorrendje I. (B1–B5)

hely-Szakálhát (V. Szabó 1996, 34. kép 4, 38. kép 3–4), Polgár M3-1 site (V. Szabó 2002, 198. kép 4, 7, 195. kép 4, 200. kép 2), Pócspetri (Kalli 2012, 6. t. 2–3, 5–6), Tiszaladány-Nagyhomokos (V. Szabó 2002, 217. kép 3), Tiszasüly (V. Szabó 2002, 224. kép 6), Vencsellő-Kastélykert (Dani 1999, VI. t. 3a–b). It was not only typical in this period, but it has also existed during the earlier phases of the Bronze Age and it was still produced throughout the Early Iron Age.[12]

B.2. Bowl with wrapped turban rim and slightly curved body (Fig. 7; Fig. 36, 4, 6, 10)

One of the most easily recognizable bowl type. Unlike type B.7, the rim is straight or sometimes slightly outcurving. A total of 453 ceramic pieces was classified into this group. Because of the many fragments, the type was easily determined. The outer surface is usually brown or dark grey and polished. The temper contained crushed ceramic and sand. The inside is mainly black and also burnished. Some vessels have handles and sometimes it is decorated with impressed dots or dotted lines inside.

Similar vessels were found in many Hungarian sites. Without completeness, it is known from Biharkeresztes-Láncos-major (V. Szabó 2002, 128. kép 4, 8–9, 137. kép 5), Doboz-Faluhely (V. Szabó 2002, 152. kép 2–5), Hódmezővásárhely-Kopáncs XI. dűlő (V. Szabó 1996, 29. kép 8), Hódmezővásárhely-Solt-Palé (V. Szabó 1996, 40. kép 4–5, 41. kép 9), Poroszló-Aponhát (Patay 1976, Abb. 2.9), Tiszaladány-Nagyhomokos (V. Szabó 2002, 222. kép 3–4; V. Szabó 2017, 15. kép 4), Tiszabura-Nagy-ganajos-hát (Király 2012, P7, 5). It is also widespread in the neighbouring countries, e.g. Culciu Mare-Zöldmező (Kacsó 2008, Pl. 1, 1–2.), Mediaş (Pankau 2004, Taf. 8, 1 /107/, 2 /108/, 8 /114/), Somotorská hora (Demeterová 1986, Tab. IV, 3, 5–6.), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 30, 4, Fig 34, 3–10), Vlaha-Pad (Nagy–Gogâltan 2012, Taf. 17, 7–8; HaB2–HaB3). The variant with incurving rim was more dominant in the earlier periods. In the HaB1 period, pieces with straight rim are also known. This form probably occurs in the later periods, as well.

B.3. Bowl with outcurving, channeled decorated rim and curved body (Fig. 7; Fig. 36, 9)

These bowls with channeled decorations are one of the most characteristic forms of the Gáva pottery style. Their rims are outcurving, the body curved and the bottom slightly rounded. A total of 264 ceramic pieces were sorted into this subgroup. The outer surface is typically polished, but not burnished, grey or brown coloured. The inside is richly decorated, black and nicely burnished. The shape of the rim is usualy-ly round, but sometimes it is pressed in on various sides, so the rim can be four-lobed, square or triangular-shaped. The channeled decoration consists of five to six rows at least, but additional lines can also appear. The bottom can sometimes be raised inwards and the inner incised decoration is frequent, too. Thus the exact shape of the bowl is often unknown, but the curving of the channeled rim are visible, that is why subgroups B.3 and B.4 were separated.

This type can be observed on many sites, for example Baks-Csontospart (V. Szabó 1996, 22. kép 8), Biharkeresztes-Láncos major (V. Szabó 2002, 127. kép 1, 140. kép 1–2, 4–5, 143. kép 5), Köröm (Kemenczei 1984, Taf. CXXXVII, 9, Taf. CXXXVIII, 16), Köröm-Kápolna-domb (B. Hellebrandt 2016, 47. kép 7), Poroszló-Aponhát (Patay 1976, Abb. 2, 6, 8; V. Szabó 2002, 212. kép 1–2; V. Szabó 2017, 2. kép 11–12), Prügy (Kemenczei 1984, Taf. CXLVIII, 16–17, Taf. CXLIX, 1–2, Taf.

CL, 15), Tiszaladány-Nagyhomokos (V. Szabó 2002, 217. kép 1) and further in Alba Iulia (Lascu 2012, Pl. VI, 5–6), Culciu Mare-Zöldmező (Kacsó 2008, Pl. 2.1), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 36, 5), Vlaha-Pad (Nagy–Gogâltan 2012, Taf. 17, 9; HaB2–HaB3) and Somotorká hora (Demeterová 1986, Tab. VII, 6). These bowls with channeled decorations are not typical of the Pre- and Proto-Gáva-ceramic style, so this type can be regarded as a developed form of the classical Gáva pottery style and can be dated to the HaB1 period.

B.4. Bowl with straight rim, channeled and incised decoration (Fig. 7; Fig. 36, 1)

Unlike the previous subtype, these fragments has slightly upcurving or sometimes vertical rim. Only 22 pieces were classified into this group, so it can also be considered as a variant of subgroup B.3. The rim is usually round or triangular. The outer surface is polished, grey or brown. The inside is black and burnished. In addition to the channeled decoration on the rim, the bowls were ornamented with incised or punctate decoration on their inner surfaces. Because of the high degree of fragmentation, only a few pieces could be sorted to this group.

There are similar pieces to this straight-rimmed subtype in Kaba-Bitózug (V. Szabó 2002, 177. kép 2), Köröm (Kemenczei 1984, Taf. CXXXVIII, 18, Taf. CXL, 7), Prügy (Kemenczei 1984, Taf. XLVII, 6), Tiszabura-Nagy-ganajos-hát (Király 2012, P7, 7), Tiszasüly (V. Szabó 2002, 223. kép 1, 9–10), several pieces in Pócspetri (Kalli 2012, 1. t. 1, 4; 2. t. 7–9) and Cicău (Ciugudean 2011, Pl. VII, 3). Since this group is a variant of the previous subgroup, the antecedent is similarly unknown and they can also be dated to the HaB1 period.

B.5. Bowl with horizontal rim divided by four knobs (Fig. 7; Fig. 36, 2)

It is difficult to classify these fragments, except when the typical knob on the edge of the rim can be observed. The rim is horizontally outcurving and either the knob was formed from the rim on the four sides of the bowl or the knob was applicated to the rim. Sometimes a line is visible on the top of the knobs, highlighting them. The body of the vessel is slightly curved or conical. In addition to the knobs, sometimes handles on both sides can be observed, too. Only 11 pieces were reconstructable. The outer surface is greyish-brown and polished. The inner surface and the upper part of the rim with the knobs are black and sometimes burnished.

This form has antecedents, although some differences can be detected. According to Gábor V. Szabó, the earliest appearance in the Carpathian Basin was in the Rei. Br B1 period and it became a common type in the whole Central and Southeastern European regions (V. Szabó 2002, 14). Most pieces can be found in the Rei. Br B and Br C periods during the time of the tumulus culture of the Great Hungarian Plain and later the undecorated, simpler versions will last until the Rei. Br D and HaA1 periods, but in smaller numbers (V. Szabó 2002, 14). After the period of the Pre- and Proto-Gáva-ceramic style, Gábor V. Szabó considers that this type does not exist any longer. Several pieces are known from the Rei. Br D–HaA1 phase; e.g. Battonya-Georgievicstanya (Bondár et al. 1998, 21. kép 8; V. Szabó 2002, 2. kép 18), Debrecen (Poroszlai 1984, X. t. 1–3; V. Szabó 2004a, 12. kép 26–29), Jánoshida (V. Szabó 2002, 24. kép 2, 26. kép 6–7), Polgár M3-29 site (V. Szabó 2002, 61. kép 4, 65. kép 5–6; V. Szabó 2004a, 8. kép 9), Nagykálló-Telekoldal (Kemenczei 1982, Abb. 9, 4, 14), while it becomes very rare during the classical Gáva pottery style; e.g. Debrecen-Nyulas (Kemenczei 1984, Taf. CXXVI, 2), Köröm (Kemenczei 1984, Taf. CXLI, 19, Taf. CXLIII, 9–10).

B.6. Bowl with incurving rim and pierced knobs (Fig. 8; Fig. 36, 7)

Four knobs were placed on the edge of this incurving-rimmed bowl, which were vertically punctured. The body of the vessel is curved, the bottom is rounded. Only two fragments could undoubtedly be classified into this group. There is no difference between the outer and inner surface, as it is entirely black and perhaps polished. The punctured knobs are raising the possibility of an alternative function, maybe they could have been hanged.

Bowls with inverted rim are particularly common during the LBA. First they appeared by the tumulus culture of the Great Hungarian Plain, but this form became widespread during the period of the Pre- and Proto-Gáva pottery style (V. Szabó 2002, 14). It was frequently produced through the classical Gáva-ceramic style. Small handles were often added to these bowls, but they were usualy placed under the rim or around the neck and horizontally pierced. There are only a few examples for vertical piercing. Some fragments were already discovered in Baks-Temetőpart (V. Szabó 1996, 13. kép 20) during field survey and some pieces were also found in the area of the Basarabi culture with more emphasized knobs, e.g. Sviniţa (Gumă 1993, Pl. LXXXIV, 16).

B.7. Bowl with incurving and wrapped turban rim (Fig. 8; Fig. 36, 5, 8)

Unlike type B.2, the rim of this type is incurving, sometimes very firmly. Besides wrapped turban decoration on the rim, wavy decoration could also be observed on some pieces. These bowls can have handles and knobs under the rim and impressed dotted lines on the inner surface. It can also be considered as a very common type, as 179 fragments were sorted into this subgroup. The outer surface is greyish-brown, polished and rarely decorated with brushing. The inner surface is more emphasized, polished, black and sometimes burnished.

As it was mentioned by subgroup B.6, bowls with incurving rim were widespread since the period of the Pre- and Proto-Gáva pottery style (V. Szabó 2002, 14) and they remained very common during the HaB1. Similar bowls were discovered in almost every Gáva-ceramic style sites, e.g. Biharkeresztes-Láncos-major (V. Szabó 2002, 128. kép 1–3, 5–7, 9–10, 129. kép 1–4, 133. kép 1–2, 4–5), Doboz-Faluhely (V. Szabó 2002, 147. kép 1–3), Köröm-Kápolna-domb (B. Hellebrandt 2016, 51. kép 3–9), Polgár M3-1 site (V. Szabó 2002, 195. kép 1–5), Poroszló-Aponhát (V. Szabó 2002, 212. kép 5–6), Tiszaladány-Nagyhomokos (V. Szabó 2002, 215. kép 8–10), Prügy (Kemenczei 1984, Taf. CLI, 1, Taf. CL, 1, 12, 14, 18), Mediaş (Pankau 2004, Taf. 7, 3–6 /103–106/), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 35, 2–22), Vlaha-Pad (Nagy–Gogâltan 2012, Taf. 17, 11).

B.8. Compressed globular-shaped bowl with curved neck (Fig. 8; Fig. 36, 3)

This subgroup was outlined around a special piece. The rim has broken off, but it can be assumed from the curved neck that it possibly had an outcurving rim. The body of the vessel is compressed globular-shaped, but under the belly line it is conical. If the rim is raised, it can be interpreted as a deep bowl. Unlike the previous types, this black ceramic was polished and burnished on the outside. In addition to the upward pointing knobs, a total of 4 parallel impressed dotted line decorates the external surface.

Although no similar piece was found in Baks, some examples are noticeable in other sites. Formal parallels without dotted lines (without completeness): Köröm (Kemenczei 1984, Taf. CXLIV, 2), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 37, 7; Ciugudean 2011, Pl. X, 1). This compressed globular-shaped, outcurving rimmed form was already widespread during the Rei. Br D–HaA1 period,

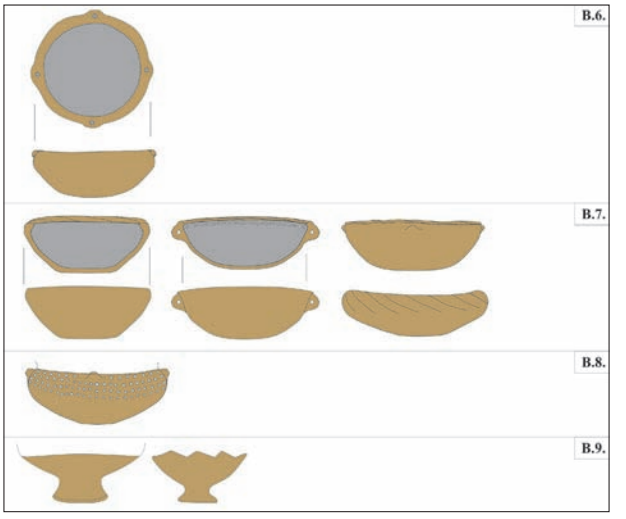

Fig. 8 Typological order of bowls. Part II. (B6–B9)
8. kép Tálak tipológiai sorrendje II. (B6–B9)

e.g. in Szentes-Nagyhegy (V. Szabó 1996, 8. kép 4–5), Deszk-F (V. Szabó 1996, 46. kép 10), Igrici (B. Hellebrandt 1990, 3. kép 1), in both the Great Hungarian Plain and Transdanubia (V. Szabó 2002, 15), which remained common during the HaB1 period. The special feature of this piece from Baks is the dotted line decoration.

B.9. Stemmed bowl (Fig. 8)

A total of 12 pieces could be sorted into this subgroup. Their internal and external surface is polished, but not burnished. Their colour is grey and brown with some black, burnt marks. These pieces are undecorated, however it does not rule out that the missing upper parts were decorated.

The simpler stemmed bowls with conical body were quite widespread throughout the LBA (V. Szabó 2002, 18, 50). Some examples from the Rei. Br D–HaA1 period: Gyoma-Kádár tanya (Jankovich–Makkay–Szőke 1989; V. Szabó 2002, 17. kép 8), Taktabáj (Kemenczei 1984, Taf. CLVIII, 15, Taf. CLIX, 19, Taf. CLX, 11, 17, Taf. CLXI, 3), Tápé-Kemeneshát (V. Szabó 2002, 103. kép 11), Opovo, Beli Breg (Bukvić 2000, Tab. 10, 1). Examples that can be dated to HaA2–HaB1: Doboz-Faluhely (V. Szabó 2002, 167. kép 8), Kaba-Bitózug (V. Szabó 2002, 185. kép 6), Köröm-Kápolna-domb (B. Hellebrandt 2016, 49. kép 3–5, 7), Mediaş (Pankau 2004, Taf. 29, 16 /400/–17 /401/), Poroszló-Aponhát (Patay 1976, Abb. 2, 7), Pócspetri (Kalli 2012, 6. t. 7), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 42, 1–4), Vencsellő-Kastélykert (Dani 1999, IV. t. 2). Since no complete section is

known from Baks, stemmed bowls cannot be sorted into finer subgroups and their periodization is not certain, either.

Jars and deep bowls

C.1. Biconical vessel with outcurving rim and handles (Fig. 9; Fig. 37, 1–8, 11–12)

Biconical jar or deep bowl with slightly outcurving rim, inverted neck and rounded belly. Usually two handles were on the neck. It is a rather common and exceptionally well produced type. 76 fragments were classified into this subgroup. Its outer black surface is polished and burnished. Its interior is yellow and this colour intersects the outer black colour on the rim, thus making the vessel gradient. This form has also undecorated pieces, but it is more common that the neck or the shoulder is decorated with horizontal or garland-shaped bundles of 4–5 lines. The more advanced pieces are decorated with two separate garland-shaped bundles of lines and with similar shaped dotted lines in between.

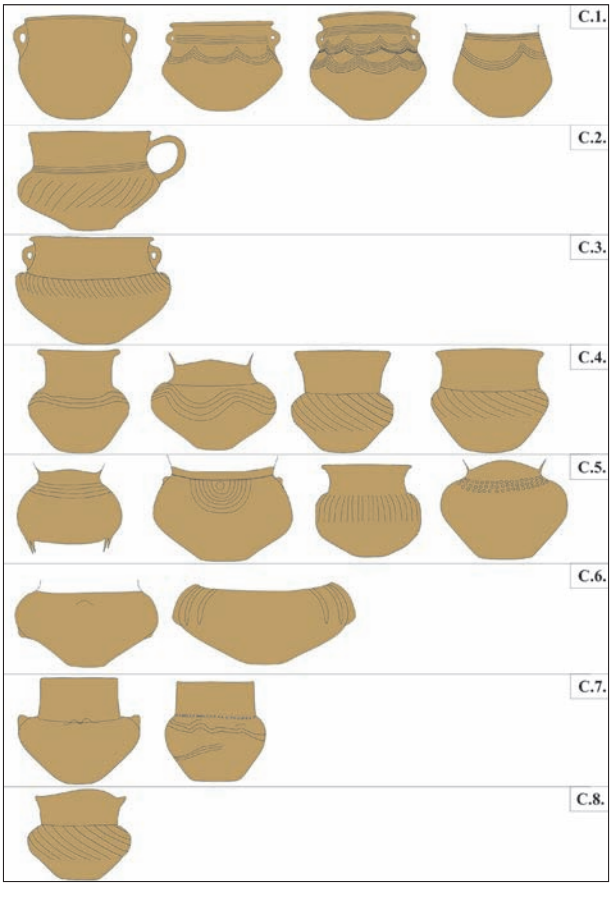

Fig. 9 Typological order of jars and deep bowls. Part I. (C1–C8)
9. kép Korsók és mélytálak tipológiai sorrendje I. (C1–C8)

Analogous examples from the Rei. Br D–HaA1 period were found in Gyoma-Kádár tanya (Jankovich–Makkay–Szőke 1989; V. Szabó 2002, 17. kép 4), Hódmezővásárhely IV. Téglagyár (V. Szabó 1996, 22. kép 9) and Tápé-Kemeshát (V. Szabó 2002, 109. kép 8). From the HaA2–HaB1 period, parallel pieces were discovered in Biharkeresztes (V. Szabó 2002, 138. kép 9–11), Debrecen-Nyulas (Kemenczei 1984, Taf. CXXVI, 12), Polgár M3-1 site (V. Szabó 2002, 198. kép 5, 7), Poroszló-Aponhát (V. Szabó 2017, 2. kép 4), Cicău (Ciugudean 2011, Pl. VII, 1), Porumbenii Mari-Parte cetăţii (Nagy–Köröspői 2009, 4. t. 3) and Teleac (Ciugudean 2009, Taf. I, 2; Uhnér et al. 2017, Fig. 7, 6). This form is also known in the Trandanubian region with moderate variations from the tumulus and urnfield cultures (V. Szabó 2002, 17). In the Great Hungarian Plain its forerunner first appeared during the Rei. Br C period (V. Szabó 2002, 17, 50. type XXIV) and the developed version became one of the most characteristic element of the classical Gáva-ceramic style.

C.2. Jar with cylindrical rim, rounded belly line and handles (Fig. 9; Fig. 38, 6)

Compressed globular-shaped jar with straight rim, slightly inverted neck, rounded belly and conical bottom. Its handle is running from the neck to the belly line. This subgroup was based on an almost complete vessel. Its external surface is black and it may have been burnished, which is slightly visible. Under its neck a horizontal, incised bundle of lines can be detected, while the belly is diagonally grooved.

Similar form only occurs in a few cases. The pieces from Alsóberecki (Kemenczei 1984, Taf. CXXXIV, 2) and Tiszatardos (Kemenczei 1984, Taf. CXXXIV, 15) can be dated to Rei. Br D–HaA1 period, so the antecedent form could have appeared during the Pre- and Proto-Gáva-ceramic style. From the HaA2–HaB1 period only a single parallel was found from Nyíregyháza-Bujtos (Kemenczei 1984, Taf. CXXX, 15). Raised handles above the rim are more common (V. Szabó 2002, 49), so this piece from Baks slightly differs.

C.3. Outcurving rimmed, conical-bottomed vessel with bulging shoulder (Fig. 9; Fig. 38, 4)

Under its rim a rather high neck characterizes this vessel. Under the bulging shoulder its body is conical. There are two small handles on the two sides of the neck. This subgroup contains six ceramic

fragments. The shoulder and belly line has diagonal channeled decoration. Its outer surface is black, polished and also burnished, while its internal side is yellow and less smooth. The diameter of the rim is rather wide, so it can be categorized as a deep bowl.

The antecedent of this form had a shorter neck during the period of the Pre- and Proto-Gáva-ceramic styles, e.g. Battonya-Holecska tanya (Sz. Kállay 1986, 2. kép 1), Mezőkovácsháza (Kemenczei 1984, Taf. CXXV, 5). During the classical Gáva pottery style the version without handles are more common in Poroszló-Aponhát (Patay 1976, Abb. 2, 4; V. Szabó 2002, 210. kép 1), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 29, 9; Ciugudean 2012, Fig. 6, 4) and Porumbenii Mari-Parte cetăţii (Nagy–Körösfői 2009, 4. t. 2). It is not a common form.

C.4. Conical vessel with outcurving rim and rounded carination (Fig. 9; Fig. 37, 9; Fig. 38, 5)

The rim may vary from outcurving to horizontal. The neck is slightly curved and high, the carination is rounded and the bottom is conical. A total of 39 fragments were reconstructed and categorized into this subgroup. The outer surface is black, polished and burnished. The black colour is usually intersected by the internal yellow colour under the rim or on the neck. The most common decoration is fluting, which can be vertical, horizontal, diagonal or even wavy.

This ceramic form was also found in Poroszló-Aponhát (V. Szabó 2017, 2. kép 5, 7), Vencsellő-Kastélykert (Dani 1999, VII. t. 1b, VIII. t. 3b), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 32, 8, Fig. 37, 8; Ciugudean 2010, Pl. XIII, 3–4) and some stray pieces were found in Szabolcs County (Kemenczei 1984, Taf. CXXXII, 16). It can be observed before the HaA2–HaB1 period, although just a few find can be mentioned as antecedents, e.g. Paszab (Kemenczei 1984, Taf. CXXXII, 16).

C.5. Compressed globular-shaped vessel with outcurving rim (Fig. 9; Fig. 37, 10; Fig. 39, 1, 7)

It had an outcurving rim as the inverted neck suggests, however only a few rim fragment is known. Compared to the previous form, the neck is slightly shorter. The body is compressed globular-shaped, the lower part is conical. 24 ceramic pieces could be sorted to this subgroup. Similarly to the above mentioned, the exterior surface is more emphasised, black, polished and burnished, while the internal surface is yellow. Its decoration can be various with horizontal or wavy grooved ornament, dotted lines or knobs with semi-circular fluting.

Similar vessels can be observed in Vencsellő-Kastélykert (Dani 1999, VI. t. 2), Culciu Mare-Zöldmező (Kacsó 2012, Pl. 1, 4), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 30, 9, Fig. 31, 14) and some stray pieces from Szabolcs County (Kemenczei 1984, Taf. CXXXII, 15). There are some antecedents in the Rei. Br D–HaA1 period, e.g. Csongrád-Sertéstelep (V. Szabó 2002, 13. kép 1), Jánoshida (V. Szabó 2002, 29. kép 7–10, 34. kép 15), Szentes-Belsőecser (V. Szabó 2002, 87. kép 10), but their body is much more compressed (V. Szabó 2002, 13).

C.6. Biconical vessel with rounded carination (Fig. 9; Fig. 38, 1, 3; Fig. 39, 9)

The characteristic carination classifies the following 11 fragments into a separate subgroup. Their rim and neck are missing, but in a few cases the fragment of the slightly inverted neck remained. Their carination is rounded and their body is biconical. As the previous forms this type is also black, polished and burnished. The inner surface is yellow. They are usually decorated with appliqué ribs and knobs, instead of channeled or grooved decoration.

Parallels can be found in Pócspetri (Kalli 2012, 3. t. 4) and Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig 29, 15). Its antecedent form with less rounded carination was probably widespread during the Rei. Br D–HaA1 period, e.g. Jánoshida (V. Szabó 2002, 24. kép 18–19), Tarcal (Kemenczei 1984, Taf. CXXXIV, 5), Nyírbogdány (Kemenczei 1984, Taf. CXXX, 11), Nyíribrony (Kemenczei 1984, Taf. CXXIX, 9). The form could have been originated from the earlier phases of the Bronze Age.

C.7. Vessel with straight rim, rounded carination and conical bottom (Fig. 9; Fig. 38, 7; Fig. 39, 6)

It differs from the other jars and deep bowls with its straight rim and neck. The rounded carination is followed by a conical lower part. Only seven pieces were clearly distinguishable. This jar is also black, polished and burnished on the outside. Brown pieces can also be found, which were not always burnished. Its decoration can be various, such as knobs, impressed dotted lines or even brushed decoration.

The parallels of this subtype can be found only on a few sites e.g. Polgár M3-1 site (V. Szabó 2002, 198. kép 8). This pottery with straight rim and neck can be detected in the previous periods as well, like in Gyoma-Kádár tanya (Jankovich–Makkay–Szőke 1989; V. Szabó 2002, 17. kép 6) or Polgár M3-29 site (V. Szabó 2002, 76. kép 9). This form is more common in the earlier phases, mostly during

the Rei. Br C period in the Piliny and tumulus cultures, as several large storage vessels and jars have this kind of rim and neck shape, e.g. Gelej-Kanális dűlő (Kemenczei 1984, Taf. XXXI–XXXIV; Kemenczei 1989b, Abb. 8, 4).

C.8. Vessel with wavy rim, rounded carination and conical lower part (Fig. 9; Fig. 38, 2; Fig. 39, 4)

A characteristic feature of the Gáva-ceramic style is the wavy rim. This form can be regarded as a transition between the lobed rim (C.9. type) and the regular rims. The neck is slightly curved, the carination is rounded and the lower part of the vessel is conical. 17 fragments could be sorted into this group. As most of the jars and deep bowls, the outer surface of this vessel is also black, polished and burnished. The inside is yellow and polished. Its decoration is less diverse than type C.9. Sometimes it is undecorated or diagonally grooved.

Similar rim design can be detected in Biharkeresztes (V. Szabó 2002, 139. kép 2), Doboz (V. Szabó 2002, 159. kép 12–13), Somotorská hora (Demeterová 1986, Tab. V, 5), Lechinţa de Mureş (Paulík 1968, Obr. 6, 4) and Mediaş (Paulík 1968, Obr. 6, 7). This form appears in numerous sites during the HaA2–HaB1 period. It has an antecedent during the Pre- and Proto-Gáva-ceramic styles (V. Szabó 2002, 17, 50), although only a few example can be mentioned, e.g. Nagyhalász (Kemenczei 1984, Taf. CXXIX, 8), Mezőcsát, Pásty domb (Kemenczei 1984, Taf. CXXXIII, 16) and Polgár M3-29 site (V. Szabó 2002, 77. kép 1).

C.9. Conical vessel with outcurving, lobed rim and rounded carination (Fig. 10; Fig. 38, 8–9; Fig. 39, 2–3, 5, 8)

This subgroup is the easiest to identify. The rim is pressed in three or four times, which creates a distinctive, lobed rim. The neck is straight, the carination is rounded and the lower part is conical. The rim, the carination and the decorations clearly sort the fragments to this group. A total of 165 pieces were subdivided into this group. Unlike the previous forms, these vessels are typically yellow, brown or red coloured, so they could have been exposed to another firing method. They are rarely burnished, although it may have been affected by abrasion. Their decoration can be incised, channeled or brushed combined with knobs or plastic appliqué.

This is one of the most characteristic forms of the Gáva-ceramic type. These fragments can be found in every find materials of all similarly dated sites. Parallels without completeness: Biharkeresztes-Láncos major (V. Szabó 2002, 132. kép 1–7, 139. kép 1, 3–5), Debrecen-Nyulas (Kemenczei 1984, Taf. CXXVI, 1, 5, 10), Doboz-Faluhely (V. Szabó 2002, 159. kép 1–10), Gávavencsellő (Kemenczei 1984, Taf. CXXXII, 4, 11), Kaba-Bitózug (V. Szabó 2002, 180. kép), Tiszaladány-Nagyhomokos (V. Szabó 2002, 221. kép 2), Poroszló-Aponhát (Kemenczei 1984, Taf. CXXVII, 3, Taf. CXXVIII, 2, 6, 8–11), Pócspetri (Kalli 2012, 3. t. 2–6, 5. t. 1), Vencsellő-Kastélykert (Dani 1999, I. t. 2a–b; VII. t. 1a–b, 2a–b), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 30, 13, Fig. 33, 15), Somotorská hora (Demeterová 1986, Tab. V, 9, Tab. VI, 19). This shape does not have any direct antecedent, but it may be related to subgroup C.8.

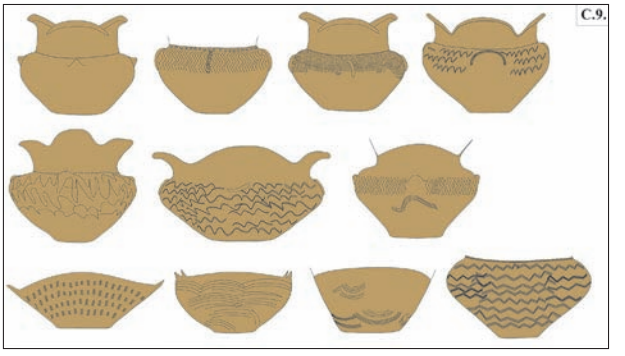

Fig. 10 Typological order of jars and deep bowls. Part II. (C9)
10. kép Korsók és mélytálak tipológiai sorrendje II. (C9)

Mugs and cups

D.1. Conical shaped cup (Fig. 11; Fig. 41, 1–2, 5, 7; Fig. 42, 1–2)

One of the simplest forms, though only 10 fragments were found. It has straight rim and conical shape. Some pieces have handles under the rim that runs into the carination. They are of medium quality. The vessels are well burnt, grey-brown coloured without burnish. The outer surface of a vessel was decorated with a garland shaped bundle of lines. The conical cups have also versions with raised handles in this period, but this is not noticeable on these fragments, however it cannot be ruled out that such pieces existed.

Vessels of similar shape can be found on almost all Gáva-ceramic style sites. Pieces to be dated to HaA2–HaB1: Debrecen-Nyulas (Kemenczei 1984, Taf. CXXV, 6), Kaba-Bitózug (V. Szabó 2002, 184. kép 1, 4), Polgár M3-1 site (V. Szabó 2002, 191. kép 6), Pócspetri (Kalli 2012, 6. t. 1), Taktabáj (Kemenczei 1984, Taf. CLVIII, 18, Taf. CLIX,

Fig. 11 Typological groups of cups and mugs. Part I. (D1–D9)
11. kép Csészék és bögrék típuscsoportjai I. (D1–D9)

11, 15, Taf. CLX, 5, Taf. CLXI, 8, 11), Tiszatardos (Kemenczei 1984, Taf. CXXXIV, 16), Tiszaeszlár (Kemenczei 1984, Taf. CXXXI, 25), Szeged-Öthalom (Kemenczei 1984, Taf. CXXV, 7), Borša (Demeterová 1986, Tab. I, 4), Mediaş (Pankau 2004, Taf. 29, 19), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 38, 9–10), Somotorská hora (Demeterová 1986, Tab. IV, 2).

The antecedent of this form can be observed in the earlier Rei. Br D–HaA1 period, e.g. Igrici (B. Hellebrandt 1990, 8. kép 1–4; V. Szabó 2002, 19. kép 23–26), Battonya-Georgievics tanya (Bondár et al. 1998, 23. kép 2; V. Szabó 2002, 2. kép 16) and in the previous phases of the Bronze Age, too. This simple form occurred throughout the entire Bronze Age and was widespread in Central and South-East Europe (V. Szabó 2002, 17, 50).

D.2. Cup with straight rim and sharp carination (Fig. 11; Fig. 43, 2)

This subgroup includes a single pottery, but it is worth to discuss separately because of its sharp carination. The straight rim and neck is followed by a sharp belly line, while its conical lower part runs into a rounded bottom. There is no trace of burnish. It is grey-brown coloured with three vertically incised lines on the outer surface.

There is no parallel to this form in the literature, which assumes that this piece may be a local shape or possibly a variant of another cup type. It may have been planned as a profiled type, but eventually it was completed with a straight rim and neck. Further research may later provide a parallel to this subtype.

D.3. Mug with straight rim, curved body and handle (Fig. 11; Fig. 41, 3–4, 8, 10; Fig. 42, 1–8)

These mugs have curved body under the straight rim. The handle runs from the rim below the belly line. A total of 11 fragments can be classified into this subgroup. Its outer surface is usually grey-brown coloured without burnish, while the internal surface is black, polished and burnished. Neither plastic rib decoration nor incised patterns characterize the fragments from Baks.

Like type D.1, this form is also easy to shape and one of the most common mug. Their presence can be detected throughout the Bronze Age, so they cannot be used for exact periodization. Similar mugs can be observed at several HaA2–HaB1 sites, e.g. Tiszabura-Nagy-ganajos-hát (Király 2012, P7, 1), Poroszló-Aponhát (Patay 1976, Abb. 2, 11), Vencsellő-Kastélykert (Dani 1999, IV. t. 1a), Alba Iulia (Lascu 2012, Pl. III, 11), Borša (Demeterová 1986, Tab. I, 9), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 38, 1, 10).

D.4. Compressed globular-shaped mug (Fig. 11; Fig. 40, 4, 7, 9; Fig. 41, 4, 6; Fig. 42, 10; Fig. 44, 9)

One of the most produced form of mugs. It has straight or slightly outcurving rim and compressed globular-shape. If a handle is attached to the vessel, it starts under the rim, from the neck and runs to the belly line. Not all pieces are equipped

with handles. 58 ceramic fragments belong to this subgroup. It is grey-brown coloured and polished on the outside. It is black and burnished on the internal surface, however burnish is sometimes worn or completely missing.

This form can be found on almost every site dated to the Gáva-ceramic style. Parallels without completeness: Biharkeresztes-Láncos major (V. Szabó 2002, 133. kép 8), Köröm (Kemenczei 1984, Taf. CXLV, 10), Prügy (Kemenczei 1984, Taf. CLV, 7), Szentes-Szentlászló (V. Szabó 1996, 7. kép 8), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 29, 3), Porumbenii Mari-Parte cetăţii (Nagy–Körösfői 2009, 7. t. 4) and a southern example: Valea Timişului (Gumă 1993, Pl. IV, 1). Just like the previous type, it is also quite common during several phases of the LBA, so it is not useful for dating.

D.5. Hemispherical mug with raised handle (Fig. 11; Fig. 43, 5; Fig. 44, 8)

Hemispherical mugs with inverted rim, raised band handle and rounded bottom. It is quite rare within the find material, only 2 fragments were found. Its inner and external surface is similarly polished, grey-brown coloured, but not burnished.

As parallels to the subtype, there are several pieces that can be dated to the classical Gáva-ceramic style, e.g. Ároktő (Kemenczei 1984, Taf. CXXXIII, 12), Doboz-Faluhely (V. Szabó 2002, 151. kép 8), Plešany (Demeterová 1986, Tab. III, 7), Somotorská hora (Demeterová 1986, Tab. V, 1), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 38, 8). The form had an antecedent shape during the period of the Pre- and Proto-Gáva pottery styles (V. Szabó 2002, 50), so this mug type occurred in the Rei. Br D–HaA1 phase, too, e.g. Hódmezővásárhely-Solt-Palé (V. Szabó 1996, 37. kép 8).

D.6. Compressed globular-shaped mug with outcurving rim (Fig. 11; Fig. 42, 12; Fig. 43, 11)

The mug's outcurving rim and inverted neck is followed by the compressed globular-shaped body until its rounded bottom. The attached handle runs from the neck line under the belly line. From the previously described D.3 and D.4 cups, this form is distinguished by the outcurving rim and curved neck. The group has a total of six fragments. Both its outer and inner surfaces are similar to the previous mug. Its yellowish surface is polished but not burnished.

Similar forms can be found in the period of the Pre- and Proto-Gáva-ceramic styles, for example, in Nyíregyháza-Oros, Mega Park (L. Nagy 2015, III. t. 10) or Hódmezővásárhely, IV. Téglagyár (V. Szabó 1996, 22. kép 11). This type continues during the HaA2–HaB1 period, e.g. Biharkeresztes-Láncos major (V. Szabó 2002, 131. kép 5, 133. kép 6, 138. kép 12–13, 16), Szentes-Nagyhegy (V. Szabó 1996, 8. kép 7) and Romaneşti (Gumă 1993, Pl. VI, 3).

D.7. Globular-shaped cup with slightly outcurving rim and raised handle (Fig. 11; Fig. 42, 11)

The nearly globular body is broken by the slightly outcurving shape of the rim. The handle is attached to the rim and runs into the belly line and its upper one-third is raised over the rim. Only two ceramic fragments can be classified in this subgroup. The entire surface of the cup is yellowish, polished but there is no trace of burnish. A special feature of the fragments is the irregular dotted line decoration of different sized impressed dots.

There is hardly any parallel from the period of the classical Gáva-ceramic style. This form is more widespread during the Br D–HaA1 period, on the sites of the Pre- and Proto-Gáva-ceramic styles and the western urnfield culture (V. Szabó 2002, 15), e.g. Csongrád-Sertéstelep (V. Szabó 2002, 11. kép 3), Petea-Csengersima (Marta 2009, Pl. 9, 9, Pl. 54, 4–5). Some undecorated pieces appear already during the Piliny culture, too (e.g. Muhi-Princ tanya: Kemenczei 1965, 2. kép 25). There was no analogy to the decoration of the pieces from Baks.

D.8. Biconical shaped cup with outcurving rim (Fig. 11; Fig. 43, 3)

The outcurving rim is followed by the biconical shape with rounded carination, closed by the rounded bottom. This type may have had handles, although the two fragments that could be sorted into this group had no traces of handles. The exterior and interior surfaces are similarly manufactured, dark grey coloured, but on the basis of their broken parts they may have been black originally. They are polished, probably burnished, however it is not visible now. Its carination is decorated with an imcised dotted line of different sized dots.

Similar shaped pieces can be traced back in the Piliny culture, when it was one of the most common cup forms (Kemenczei 1965, 14; V. Szabó 2002, 16). They are rarely found on the sites of the Gáva-ceramic style. There is hardly any parallel in the HaA2–HaB1 period, e.g. Augustin (Costea et al. 2006; Ciugudean 2010, Pl. XVI, 8; Ciugudean 2011, Pl. I, 8). From the Rei. Br D–HaA1 period e.g. Petea-Csengersima (Marta 2009, Pl. 54, 3).

D.9. Cup with outcurving rim and rounded carination (Fig. 11; Fig. 40, 8; Fig. 42, 9)

There is a slightly elongated neck under the outcurving rim, below which the rounded shape can be observed. A handle with round cross section starts from the upper part of the neck and runs into the belly line. Only three fragments were sorted to this subgroup. They are dark grey coloured and rough on the surface. It is somewhat polished and might have been burnished, too. Its decoration is similar to the jar C.1. with incised bundle of horizontal lines on the neck and garland shaped bundle of lines on the body.

It was not possible to observe parallel pieces with such decoration at other sites. These small cups might have been the imitations of the similarly decorated jars. Maybe based on the poorly executed pieces these fragments might have been the work of a beginner or a less experienced potter.

D.10. Biconical shaped cup with straight rim and curved neck (Fig. 12; Fig. 43, 1)

A rather atypical cup with a straight rim, a slightly curved neck and biconical body. The carination is not completely rounded, so the bottom and the top of the cup are very firmly angled. A handle starts from the rim and runs to the belly line, which is a little raised over the rim. Only a single fragment was found on the site, but it is different from the other types to such an extent that it was sorted into a separate subgroup. It is dark yellow, reddish on the outside and black on both the broken sections and on the internal surface, polished, but not burnished and undecorated.

Ceramic with similar formal features can be observed in Petea-Csengersima (Marta 2009, Pl. 15, 10), although this piece was dated to the Rei. Br D–HaA1 period. Since there are no parallel pieces on the surrounding sites that can be dated to the same phase and only a single piece can be reconstructed from Baks, it can be interpreted as a local type or as a randomly manufactured vessel.

D.11. Biconical cup with outcurving rim and rounded carination (Fig. 12; Fig. 40, 6; Fig. 43, 4, 6)

Unlike the previous one, the rim of this type is somewhat outcurving, the neck is followed by a biconical shaped body, but the carination is always rounded. In addition, the handles that starts from the rim and runs into the belly line are raised over the rim to a greater extent. The group consists of five pieces. Their surfaces are polished, the outer surface is rarely, but the inner surface is in some cases burnished. The carination of some pieces is decorated with vertical channeled lines. One fragment is decorated on the neck with incised, garland shaped bundle of lines.

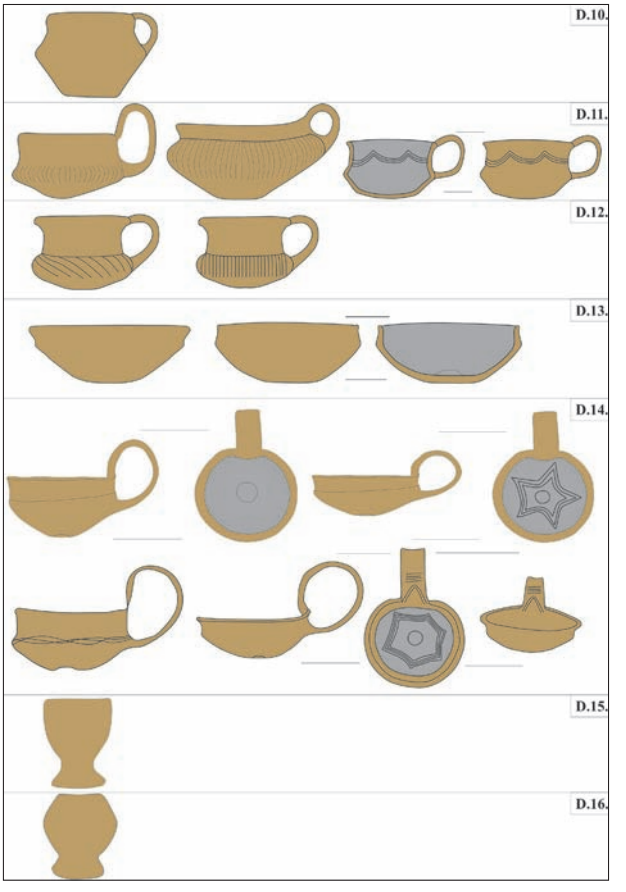

Fig. 12 Typological groups of cups and mugs. Part II. (D10–D16)
12. kép Csészék és bögrék típuscsoportjai II. (D10–D16)

Pieces that resemble the subtype have appeared in Köröm (Kemenczei 1984, Taf. CXLV, 11), Muhi (Kemenczei 1984, Taf. CXXXIII, 18), Vlaha Pad (Nagy–Gogâltan 2012, Taf. 17, 6) and Jastrabie nad Topiou site (Demeterová 1986, Tab. III, 2). These biconical shaped cups have already appeared in the Rei. Br D–HaA1 period and lived on during the classical Gáva period. There are several versions based on the position of the carination.

D.12. Compressed globular-shaped cup with outcurving rim and high neck (Fig. 12; Fig. 43, 8; Fig. 44, 6–7)

A standard shape, which differs with its small size compared to other types. There is a slightly elongated neck below the outcurving rim. The belly

is strongly compressed globular-shaped, the carination is rounded. A handle starts from the rim and runs into the belly line and it is a little raised above the rim. Six ceramic fragments can be classified in this group. Their colour is usually light brown or grey, but some pieces are black. Their polished surfaces were probably burnished, too. The carination is always decorated with dense, diagonal or vertical fluting.

Similar small cups can be found in Köröm (Kemenczei 1984, Taf. CXLI, 4), Prügy (Kemenczei 1984, Taf. CLI, 12) and also in Berea XII. Berei Szőlő (Kacsó 2008, Pl. 5, 14; Kacsó 2012, Pl. 5, 14). These small cups can only be detected at a few sites and they seem not to be present on the former Rei. Br D–HaA1 sites.

D.13. Conical mug with profiled neck (Fig. 12; Fig. 40, 2, 10)

Highly fragmented pieces, so it is uncertain whether they had handles or not. This group contains six pieces, which were separated based on the outcurving rim and profiled shape. They are quite similar to the type D.14, but their necks are shorter and they have wider rim diameters. They are grey coloured and polished on the outside, without decorations. The internal surface is black and burnished and their bottom is slightly raised. They were sorted to the mugs and cups based on their size and wall thickness, instead of to the group of bowls.

Because the subgroup is uncertain, it is difficult to find parallels, but similar fragments can be observed in Alsóberecki (Kemenczei 1984, Taf. CXXXIII, 7), Biharkeresztes-Láncos major (V. Szabó 2002, 138. kép 3), Köröm-Kápolna-halom (B. Hellebrandt 2016, 48. kép 5), Petea-Csengersima (Marta 2009, Pl. 14, 9) and Teleac (Ciugudean 2012, Fig. 3, 3). The conical body shape already existed in the Rei. Br D–HaA1 period (V. Szabó 2002, 15), thus, this form encompassed a larger time interval.

D.14. Profiled mug with outcurving rim and raised handle (Fig. 12; Fig. 40, 5; Fig. 43, 7, 9–10, 12–13; Fig. 44, 1–5, 10–11)

The most exceptionally crafted and decorated pieces. The typical cups of the classical Gáva-ceramic style. Under the outcurving rim, the neck is slightly inverted, the carination is rounded and the bottom is always raised, by pushing the bottom upwards. Their strap handles are always raised high above their rims. A rather common type, since 62 fragments were added to this group. The outer side is polished, grey or dark grey coloured. The inner side of the cups was more emphasised, as they are black coloured and burnished. Incised decoration is rather frequent, which usually have a star shape. The outer surface is rarely highlighted, but sometimes wrapped turban ornament appears on the carination.

This subtype can be found on almost all sites of the Gáva-ceramic style, e.g. Biharkeresztes-Láncos major (V. Szabó 2002, 138. kép 1–2, 4–5), Debrecen-Nyulas (Kemenczei 1984, Taf. CXXXV, 9–10), Kaba-Bitózug (V. Szabó 2002, 184. kép 3), Tiszakeszi-Tatárdomb (Kemenczei 1984, Taf. CXXXIV, 8–10, 13), Tiszasüly (V. Szabó 2002, 223. kép 12), Rakamaz (Kemenczei 1984, Taf. CXXXI, 13), Tiszabura-Nagy-ganajos-hát (Király 2012, P9, 3), Alba Iulia (Lascu 2012, Pl. IV, 1–5), Alba Iulia-Monolit (Ciugudean 2009, Taf. IX, 1–4). It is widespread during the urnfield culture from the second half of the Re. Br D period (V. Szabó 2002, 16). It becomes common in the Great Hungarian Plain, and in the eastern and southern territories, in the HaA2–HaB1 period. The difference between the two types is that the younger pieces are flatter (V. Szabó 2002, 49).

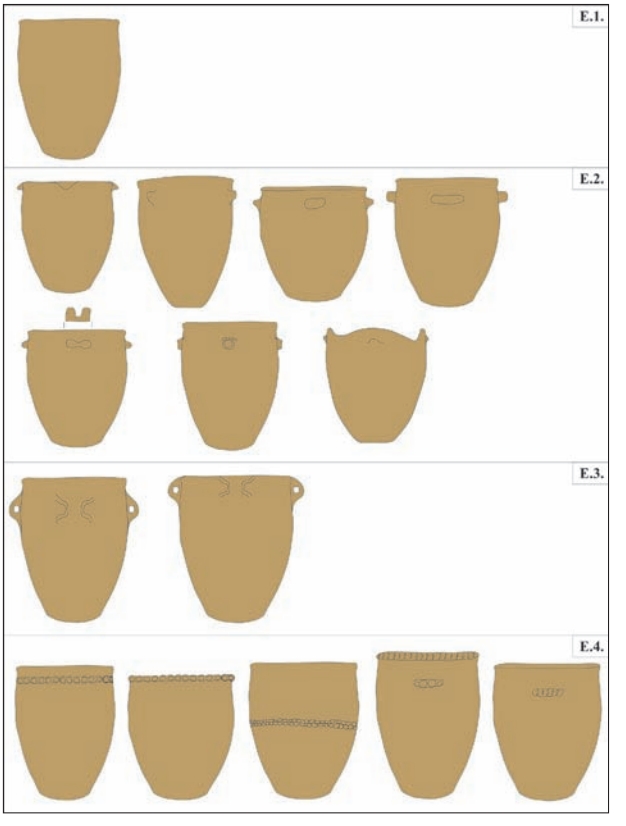

Fig. 13 Formal types of pots (E1–E4)
13. kép Fazekak formai típusai (E1–E4)

D.15. Stemmed cup with straight rim and conical shape (Fig. 12; Fig. 41, 11)

Only a few stemmed cups were at the site, nonetheless they can be divided into two subgroups. A total of six fragments can be sorted to this group that have straight rim, curved side and stemmed bottom. Their inner and external surfaces are similarly polished, but there is no trace of burnish. The grey-brown colour is typical on the entire surface. No decoration can be observed on any of the fragments.

Comparable vessels could not be observed at other sites from the similar period. Stemmed drinking vessels have already appeared in the Rei. Br C period in the western territories and they were produced with some changes until the HaA1 (V. Szabó 2002, 18). Those examples, however, seem to be more developed, while the pieces from Baks are less well-manufactured. The clay had worse temper quality and their surfaces was not smoothly polished, so they are probably not related to the former pieces from the western areas.

D.16. Stemmed cup with incurving rim and compressed globular-shape (Fig. 12; Fig. 41, 9)

Only a single piece represents this subgroup, which is almost complete. This cup has a slightly incurving rim and compressed globular-shape, along with a medium sized stemmed bottom. Its colour and surface treatment is the same as cup group D.15. Undecorated. There is no known parallel to this type, so this is probably a locally produced piece.

Pots

E.1. Undecorated pots (Fig. 13; Fig. 45, 2, 8; Fig. 46, 2, 7–8; Fig. 49, 1–12; Fig. 50, 8, 11–12; Fig. 51, 1–3, 5, 11)

This group contains all the simple pots, which does not have any handles, knobs, plastic or impressed decorations. Certainly, some fragments were questionably listed here, even though the larger fragments were sorted into the group, which precluded the possibility of any decorations. A total of 132 fragments were added to this group. It was mostly tempered with crushed ceramics, sometimes with rather large pieces and some sand. Their surfaces can have different colours from yellow to brown, sometimes grey. Occasionally, a clay layer was applied on their surfaces by hand, which was flattened by fingers.

This simple form can be found in almost all sites, although in many cases the pieces are very fragmented, so we do not know exactly to what extent they are present. Pots do not have any periodization significance because they exist throughout the entire Bronze Age and have very similar qualities.

E.2. Pots with knobs (Fig. 13; Fig. 45, 1, 3–7; Fig. 46, 1, 3–6; Fig. 47, 1–10; Fig. 48, 1–2, 4–9, 12; Fig. 50, 3)

The most common form. The pots are decorated with various knobs, sometimes on the rim, but more often on the neck. The knobs may be upward or downward positioned, round, pointed, elongated or even double knobs. The rim is usually straight, but there are some examples for wavy shaped rims, too. A total of 188 fragments were sorted in this group. Like the previous subgroup, the temper was crushed ceramic. Colours may vary between yellow, grey, brown and they usually have burnt marks because of usage.

There are many parallels to the knobbed pots and a large number at each site. Similarly to the previous subgroup, these pots do not date the sites, as they are too common during the Bronze Age. Dimensional variability can be observed, which may be related to various cooking functions.

E.3. Pots with handles (Fig. 13; Fig. 48, 10)

Less common form, though other pieces could be included, if their handle fragments would have been found. The position of the handles vary, as they either start from the rim and runs to the neckline or the entire handle is on the neck. There are only 12 fragments in this group. Their colours are usually yellowish-brown, their surface is smoothed, but the crushed ceramic temper is often visible.

Parallels with handles are rare. This pot version with handles does not help in dating, as its general form is widespread throughout the Bronze Age.

E.4. Pots with pinched or finger-tip impressed decoration (Fig. 13; Fig. 48, 3; Fig. 50, 1–2, 4–7, 9–10; Fig. 51, 4, 6–10)

This group can really be the subgroup of decorated pots, as the handles and knobs could be functional, while the impressed and pinched ornaments serve purely aesthetic purposes. 28 pieces can be sorted into this subgroup. The clay appliqué that were decorated with finger or nail impressions are usually placed on the rim or on the neck. In one case, a clay rib can be observed on the body that was impressed by fingers from two directions. Pinched decoration can also be detected on the rim. In addition, the knobs could also be decorated by either nail or finger impressions. They are yel-

lowish-brown, sometimes grey coloured.

Decorated pots are common. They are present in similar proportion from the previous Rei. Br D–HaA1 period e.g. Csongrád-Sertéstelep (V. Szabó 2002, 9. kép 15, 10. kép 17), Jánoshida (V. Szabó 2002, 28. kép 2), Mezőcsát-Hörcsögös (V. Szabó 2002, 43. kép 1–3), Polgár M3-29 site (V. Szabó 2002, 67. kép 1–4, 68. kép 1–2, 74. kép 1) and in the HaA2–HaB1 classical Gáva sites e.g. Köröm (Kemenczei 1984, Taf. CXXXV, 3, Taf. CXXXVI, 12, Taf. CXXXVII, 17, Taf. CXL, 16) and Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 33, 5).

Imported ceramics

Only two small ceramic fragments were found at the site, however not from documented context, but as stray finds during field survey.[13] One of them is a slightly outcurving rim with incised and stamped decoration on its inner surface, which may have belonged to a bowl (Fig. 14, 1). Three triangle patterns can be observed, filled with dense diagonal lines. In addition, there is a line of horizontal S-motifs connected to each other. The second piece is an inverted neck fragment (Fig. 14, 2), and since the rim and the entire body of the vessel is missing, the exact form cannot be reconstructed. Some incised decoration can be detected on the neck, which is built up by two horizontal rows, filled with dense lines, under which a triangular ornament can be observed, also filled with dense diagonal lines. The surfaces of these ceramics are polished and they could have been burnished, too. They are dark grey or dark brown and tempered with sand. No sign of secondary burning was visible. The above described decorations with joint S-motifs and incised triangle patterns are not characteristic of the Gáva-ceramic style, so they can be interpreted as imported ceramics. These decorations are specific for the southern Gornea-Kalakača culture between the HaA2 and HaB2 periods (Medović 1988; Teržan–Karavanić 2013, 846) in the area of today's Serbia and southwestern Romania. Similar decorations can be found on the naming site, e.g. Kalakača (Medović 1981, Taf. IV, 3), Kovin, Grad and Vašica, Gradina am Bosut (Medović 1981, Taf. V, 3, 7). These imported ceramics also occur on other Hungarian sites, e.g. Biharkeresztes-Láncos-major (V. Szabó 2002, 126. kép 1, 42. ábra 1; V. Szabó 2017, 6. kép 1), Kaba-Bitózug (V. Szabó 2002, 185. kép 9–8, 42. ábra 2–3), Hódmezővásárhely-Gorzsa (V. Szabó 1996, 15–16, 23. kép 4, 54. kép 2), Hódmezővásárhely-Solt-Palé (V. Szabó 1996, 41. kép 6–7). The pieces from Baks are stray finds, so it is difficult to date them precisely or to assign a separate settlement period to them.[14] It is likely that these vessels could arrive to the site by exchange or gift through southern connections (V. Szabó 2011a, 96–97). It can be stated for the entire HaB1 period that a complex and significant connection system appeared in the Great Hungarian Plain from the southern, south-eastern and eas-

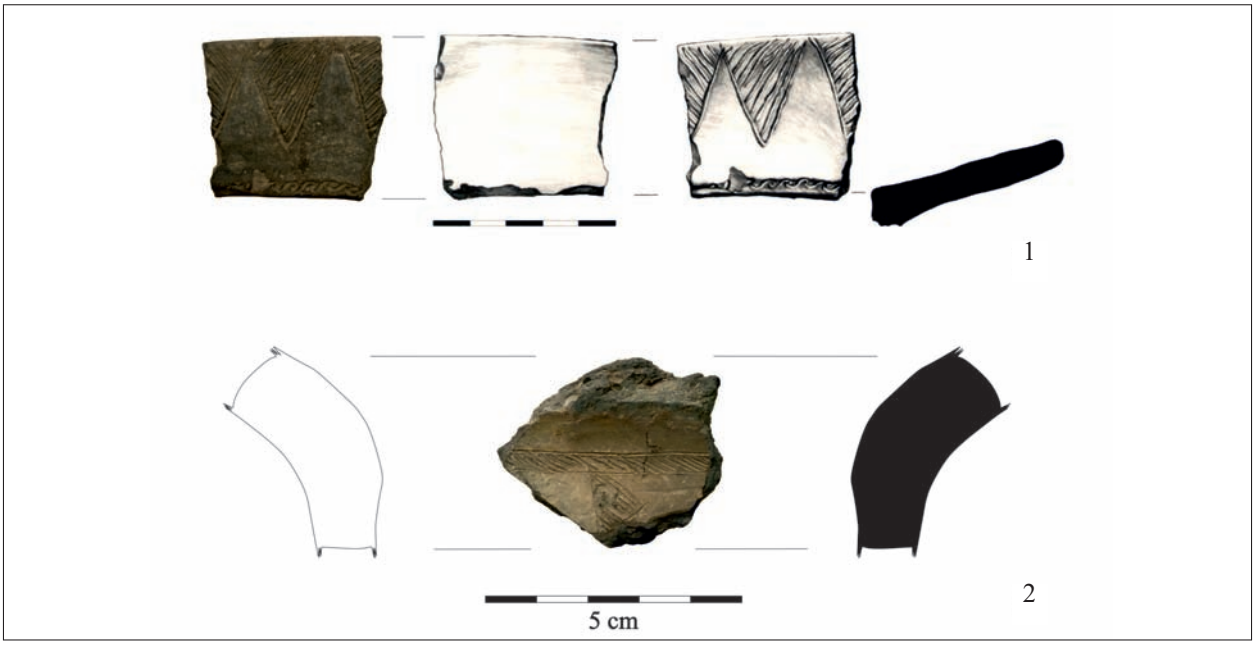

Fig. 14 Fragments of imported ceramics (Drawing by Katalin Sebők; V. Szabó 2011a, 11. kép 4)
14. kép Import kerámiák töredékei (Sebők Katalin rajza; V. Szabó 2011a, 11. kép 4)

tern directions (V. Szabó 2017, 237). The stamped ceramic-style complex can be observed in a rather large area, from the Iron Gates to the Danube Delta, as far as to Moldavia (Romanian: Moldova) and up to the Middle-Dniester region (Gornea-Kalakača-, Ostrov-, Insula Banului-, Babadag-, Pšeničevo-, Cozia-Sacharna-, Černoles cultures; HaB1, HaB2 and HaB3 periods) (Hänsel 1976, 18–212; Gumă 1995, 112–115; Pare 1999, 408–413; Kašuba 2006, 214–215; Metzner-Nebelsick 2010, 138–141, Fig. 5a; Ailincăi 2016; V. Szabó 2017, 237). The above mentioned ceramic fragments are the evidences that Baks was somehow connected to this large ceramic style complex.

Other clay objects

F.1. Conical-shaped lids (Fig. 15; Fig. 52, 1–3)

Only five fragments were classified into this subgroup based on their perceived function. Each piece is conical-shaped, either rounded or knobbed on the top. The five fragments can be divided into subgroups. Two pieces to F.1.a, which have a completely smooth surface with no decorations and they are grey-brown coloured. The F.1.b. lid has outcurving rim, which is pierced on its four sides. It is reddish-brown on the outside and dark grey on the inside. The external surface is polished. It may have been burnished, too. The F.1.c. type is de most decorated with a yellow coloured inner surface, while its outer side is black and it was probably burnished. On the black surface a star-shaped decoration can be observed, which was made up from a bundle of incised lines. It had two or four pierced holes on its slightly outcurving rim. The F.1.d. lid is the smallest and the only piece with a knob. The top of its knob was cut horizontally and its side is curved. It is grey and undecorated.

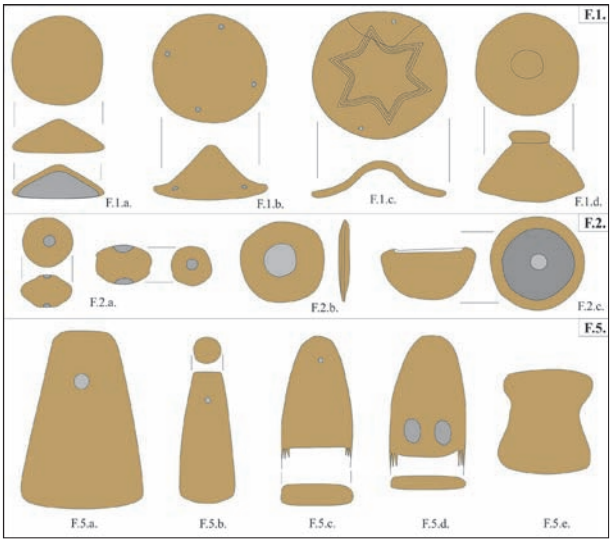

Fig. 15 Additional clay objects (F.1. lids; F.2. spindle-whorls; F.5. loom weights)
15. kép Egyéb agyag tárgyak (F.1. fedők; F.2. orsógombok; F.5. szövőszék nehezékek)

Lids are quite difficult to reconstruct as they can easily be mistaken for a rim fragment, so there are only a few parallel examples that can certainly be interpreted as lids. Plain pieces e.g. Kiszombor (V. Szabó 1996, 49. kép 6; HaA2–HaB1), Sarkadkeresztúr-Csapháti-legelő (Jankovits 2004, Abb. 4, 2; Rei. Br D–HaA1). Pieces with knobs e.g. Prügy (Kemenczei 1984, Taf. CXLX, 15), Vencsellő-Kastélykert (Dani 1999, III. t. 3), Petea-Csengersima (Marta 2009, Pl. 7, 3), Porumbenii Mari-Parte cetăţii (Székely 1966, Pl. VI, 23). Lids are known from the period of the Pre- and Proto-Gáva-ceramic styles (V. Szabó 2002, 50), which are nicely manufactured, decorated and knobs were often attached to their tops (V. Szabó 2002, 15. ábra XXXII). The lid from Baks with the incised bundle of lines is an exceptionally beautiful piece. Some pieces with knobs have already appeared in the Kyjatice culture, e.g. Kyjatice (Furmánek–Veliačik–Vladár 1999, Abb. 45, 5).

F.2. Spindle-whorls (Fig. 15; Fig. 52, 4–7)

Eighth spindle-whorls were found at the site. One of them has a different shape, thus its function is questionable. One piece was a stray find. Based on their shape they can be further subdivided into finer groups. The F.2.a. pieces are the traditional compressed globular-shaped spindle-whorls. They are yellowish-grey in colour. They are not the most elaborated pieces (four pcs without any decoration). The F.2.b. group contains a flat, round-shaped object, which has a hole in the middle and its body becomes thinner towards its outer edges. Its colour is the same as the other spindle-whorls and since it is unlikely to be an application of a vessel, it could possibly be an object for textile production. The third, F.2.c. group consists of three pieces that have a concave cross-section. All three are grey coloured. While one of them is undecorated, the two other pieces have a small rim, which in one case is decorated with nail impressions, whereas the other has wrapped turban rim.

Most parallels can be observed for type F.2.a, which is not surprising as they had an important role in the everyday life and their functionality was more

significant than the aesthetic. From the Rei. Br D–HaA1 period: Polgár M3-29 site (V. Szabó 2002, 77. kép 11), Tápé-Kemeneshát (V. Szabó 2002, 101. kép 5). Examples from the HaA2–HaB1: Doboz-Faluhely (V. Szabó 2002, 158. kép 1, 4), Grăniceşti (László 1994, Fig. 12, 4, 6), Köröm (Kemenczei 1984, Taf. CXLII, 3), Poroszló-Aponhát (Patay 1976, Abb. 4, 4), Prügy (Kemenczei 1984, Taf. CLI, 18), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 25, 11) and from the HaB2–HaB3: Vlaha-Pad (Nagy–Gogâltan 2012, Taf. 15, 5, Taf. 17, 14). There are less parallels for group F.2.b, e.g. Doboz-Faluhely (V. Szabó 2002, 158. kép 6), Hódmezővásárhely-Solt-Palé (V. Szabó 1996, 39. kép 11), Prügy (Kemenczei 1984, Taf. CLI, 4, Taf. CLVI, 11, Taf. CLVII, 17, 21). In addition, similar pieces were already found in Baks-Temetőpart during field survey (V. Szabó 1996, 21. kép 17–18). The decorated F.2.c. type appears only in a few cases at the sites of the Gáva-ceramic style, e.g. Polgár M3-29 site (V. Szabó 2002, 77. kép 10; Rei. Br D–HaA1), Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 25, 12; HaA2–HaB1). Spindle-whorls are less useful to date sites, however type F.2.c. can be emphasised as it appears on the western side of the Carpathian Basin, on the sites of the urnfield culture.[15]

F.3. Knob with concentric channeled decoration

This type of knob is one of the most typical of the large storage vessels from the Gáva pottery style, which form is almost entirely absent from the site. This fragment is the only known piece that have been discovered. Like the other vessels, it was probably black, but later it burnt and lost its burnish.

This knob could also have belonged to a large storage vessel with an outcurving rim, conical or straight neck, a protruding, but rounded carination and conical lower part, which is very common at other sites. Since the knob stands quite out of the body, it breaks down quickly, so it is often the only piece observable in the find material. Parallel pieces were found among others in Gávavencsellő (Kemenczei 1984, Taf. CXXIX, 1), Nagyhalász-Telektanya (Kemenczei 1984, Taf. CXXIX, 16), Nagykálló-Telekoldal (Kemenczei 1982, Abb. 10, 2, 6; Proto-Gáva period), Prügy (Kemenczei 1984, Taf. CXLIX, 10, Taf. CLV, 16), Dorolţ (Marta 2010, Pl. 3, 11–12), Teleac (Ciugudean 2010, Pl. XIV, 4–5; 2012, Fig. 8, 4–5), Borša (Demeterová 1986, Tab. II, 4) and Barca (Demeterová 1986, Tab. II, 5). Because this form was also common in the HaA1 period at Lăpuş (Kacsó 2001, Abb. 11, 14–16, 20) and Berveni (Németi 1990, Fig. 6, 1), this type probably existed during the period of the Pre- and Proto-Gáva until the classical Gáva pottery style, i.e. to the HaB1 (V. Szabó 2002, 46).

F.4. Tube shaped, round and hexagonal cross sectioned pieces of clay

Very small ceramic fragments and clay pieces that were rolled in tube shape with unknown function. A total of seven unidentifiable fragments were found, all of which are yellow-brown coloured and unburnished. Two clay pieces are tube-shaped without breakage and firing. One option could be that they were used for a more subtle handwork as a weight, but it could have been a simple toy for children, too. It might also have been formed by a child to practice with clay. No exact function can be connected to them. The other fragments are equally small, hexagonal cross sectioned with one or two fracture surfaces. These clay fragments are not precisely reconstructable, therefore it is pointless to find parallels.

F.5. Loom weights (Fig. 15; Fig. 52, 8–17)

56 loom weights were found at the site, which can be divided into five subgroups based on their form and size (Fig. 16). The most common is *F.5.a*, of which 47 fragments were found in the pits. This type has a simple conical form, which is pierced on its upper 3–4 cm. Most of them are rather fragmented, but they could have been up to 20–30 cm high based on the better preserved pieces. They are yellow sometimes with red patches. On three pieces, decorations or signs could be observed. On the top of a weight an impressed, double dotted line is visible around the edge (O27/S36 – 2008.5.2627; Fig. 52, 15) and on top of the other two, cord impressed decoration (two intersecting lines: O7/S8 – 2008.5.2610; single line: O51/S65 – 2008.5.2653).

These simple conical loom weights are the most common in this period. They were found in Biharkeresztes (V. Szabó 2002, 141. kép 9), Grăniceşti (László 1994, Fig. 11, 1–6), Gura Cămpulni (Pankau 2004, Taf. 42, 6–7), Köröm (B. Hellebrandt 2016, 62. kép 6–8), Vlaha–Pad (Nagy–Gogâltan 2012, Taf. 17, 13; HaB2–HaB3), and Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 26, 1–2). It is a general type throughout the LBA, so it is not useful for periodization.

Type *F.5.b.* is the version of the previous one. It is much smaller, both in height and diameter, from which a finer weaving technique can be presumed. A smaller loom or finer yarn probably needed less weight. On the other hand, the number of yarn used

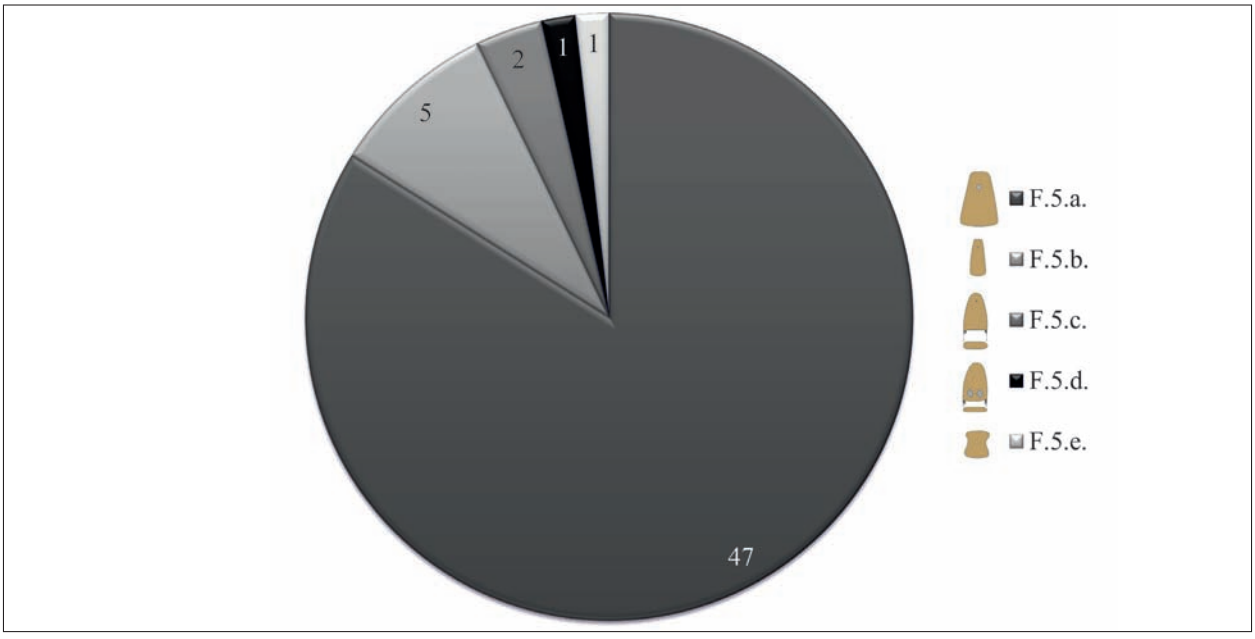

Fig. 16 Distribution of loom weight types
16. kép Szövőszéknehezékek formai megoszlása

for weaving was also determined by the size and shape of the weight (Grömer 2016, 113, Fig. 61). Similar, about 10 cm high weights were found in Biharkeresztes (V. Szabó 2002, 141. kép 10) and Teleac (Vasiliev–Aldea–Ciugudean 1991, Fig. 25, 9–10).

Types *F.5.c.* and *F.5.d.* are unfortunately broken, so their exact size is unknown. They have flat cross sections. The first one was pierced by a single small hole, while the other has two larger holes on the upper third. Currently, no parallels are know. In terms of their function, they could have been weights for some finer weaving technique.

A single piece represents type *F.5.e*, which has hourglass shape and 9.4 cm height. These simple, undecorated pieces were common throughout the LBA and they lived on in the Iron Age, too. It can be assumed that these pieces also functioned as weights for yarns on the looms (Grömer 2016, 106, Fig. 56). Similar pieces were found in Köröm (B. Hellebrandt 2016, 58. kép 4), Nagykálló (Kemenczei 1982, Abb. 5.7) and Petea-Csengersima (Marta 2009, Pl. 4, 9). Early Iron Age pieces are from Bad Fischau, Austria (Grömer 2016, Fig. 40). This form existed during both the Rei. Br D–HaA1 and the HaA2–HaB1 period.

F.6. Ceramic 'tokens'

The term 'token' (Fig. 17) already gives these disc-shaped ceramic pieces a hypothetical function. A total of 14 pieces were found. Their sizes are different, the smallest is 2.4 cm and the largest is 6.3 cm, while most of them have a diameter of 3–4 cm. In each case they were cut out of ceramic vessels, which is visible on their fracture surfaces, along with the polished or burnished surfaces of the potteries. None of the pieces are marked or decorated, but they are made of ceramics with different colours on the inside and outside. It is hard to interpret exactly how they were used. In some cases, these discs were pierced in the middle so they could have been used as spindle-whorls (Grömer 2016, 83). But the pieces without holes are more likely the parts of some early games. They have been found in large numbers from several sites in Western Hungary, e.g. there were hundreds of pieces with similar size in the area of Szent Vid in Velem (Ilon 2013, 74, XXXVII. t. 884) and some in Sajószentpéter (Kemenczei 1984, Taf. XCIV, 20–21; Kyjatice culture). In Várvölgy, Nagyláz-hegy analogous disks were found and Róbert Müller interpreted them as toys,[16] too (Müller 2007, 11–12). No pieces were published so far from the settlements of the Gáva culture in Hungary. These finds are rarely mentioned from the Romanian sites, e.g. Şimleu Silvaniei (Sana 2010, 15). Four pieces were also found in the vessel hoard from Igrici with roughly the same size as those described above (B. Hellebrandt 1990, 104).[17] Therefore, they do not only occur in settlement material, but in ritual context, as well.

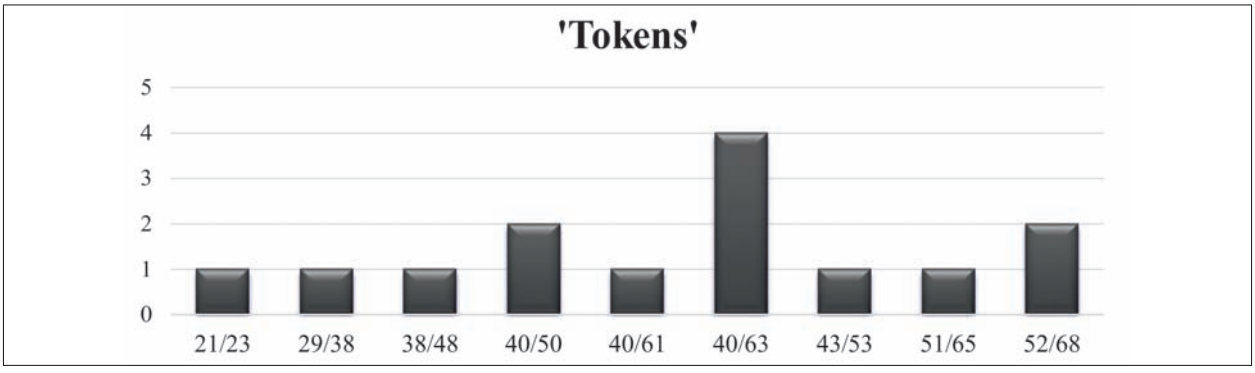

Fig. 17 Distribution of 'tokens' in pits
17. kép "Zsetonok" mennyiségi megoszlása a gödrökben

Special clay objects

There are several special objects that were found in Baks. More than 40 fragments were reconstructed as different zoomorphic figurines. Besides, complete or broken parts of sun disk-models, clay human hand models, an anthropomorphic figurine, a wagon part and some wheel models, along with some clay spoons were identified. A few miniature vessels were also discovered, which are more or less the perfect copies of the original ceramics. This find material is so diverse and complex that it will be discussed in a separate article, which is intended to happen in the near future.

Functional analysis of vessel types

The ceramics found in Baks were in a rather fragmented state. Only 56% of the ceramic material could be identified and subdivided into typological subgroups (Fig. 18). The five main groups were distinguished in different proportions. The 85% of the undoubtedly reconstructable bowl fragments were easily divided into subgroups, while only 27% of the large storage vessels could be certainly characterized. Of course, these data are also influenced by the size of the fragments. While a smaller bowl fragment is easier to identify based on its curves, a similar sized fragment of a large storage vessel raises much more questions. About 52% of the jars were recognizable by form, while 67% of the cups. In many cases only the bottom or a smaller body fragment was preserved from the pots, so 43% of them could definitely be sorted into subgroups. The loom weights and spindle-whorls represent only 1.6% of the find material.

An exceptionally large amount of the different bowl types were found on the site, which were obviously for eating or serving. It is not surprising that regular use required more bowls. If the food was consumed from bowls (Kalla–Raczky–V. Szabó 2013, 27), they had to be available for all members of the community or even several pieces for each person.

Pots were the second most common ceramic type, which were also exposed to high usage. Moreover, as they had to withstand constant heat effects, these vessels were easily fractured or broken. Based on ethnographic observations, an average pot could be used for only a few months and it was rarely used to cook for more than a year, therefore they were frequently changed (Skibo 2013, 3).

The group of large storage vessels was the third most produced ceramic type, which raises several questions about the eating and drinking habits of the population living in the settlement. Since the vast majority of these vessels are nicely shaped, polished, burnished and variably decorated, it is unlikely that they were used simply to store grain. There is the possibility that they may have contained liquids, including alcoholic beverages, besides storing or serving certain types of food. It was the most difficult to produce, due to its large dimensions. They could easily collapse during forming or crack while firing, therefore, it could have been a challenge for even an experienced potter to build these huge vessels (Rice 1987, 124–128).

The group of jars and deep bowls are the fourth most common ceramic types. Their fine workmanship, thin wall thickness and decorations make it unlikely that they were used for cooking. They were rather kept for serving or storing smaller amounts of food (Kalla–Raczky–V. Szabó 2013, 26).

On the assumption that some of the large containers could be associated with the storage of alcoholic or other beverages, it is interesting why such a small amount of cups were found on the site. However, this may be due to the fact that not everyone in the

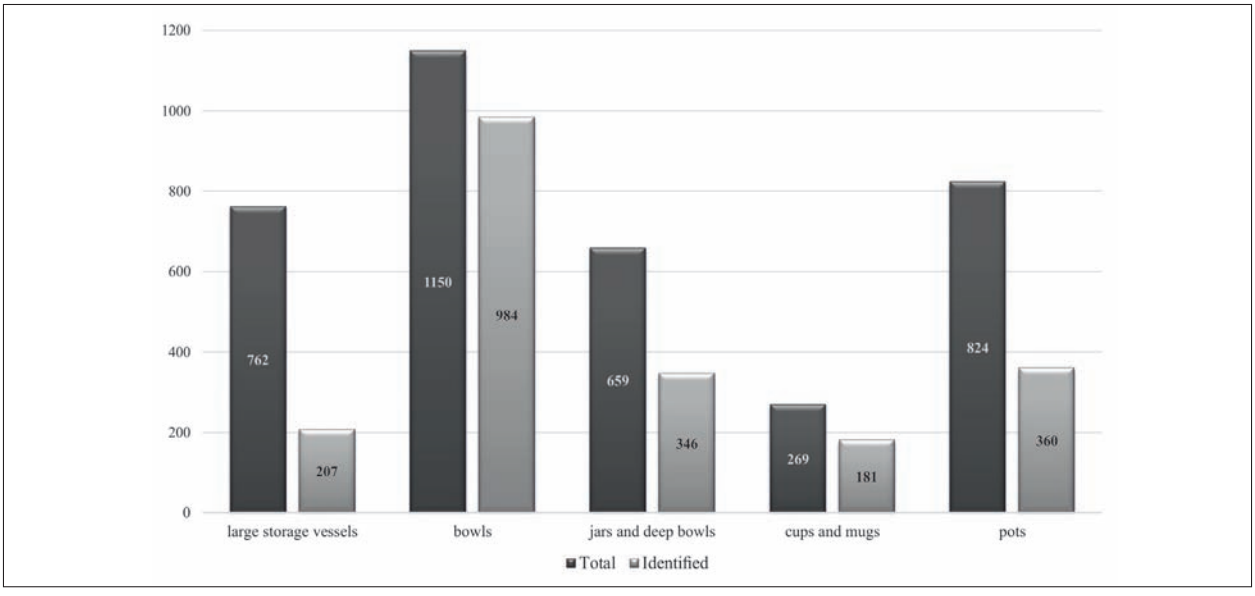

Fig. 18 The total amount of ceramic fragments in the five main typological groups and the volume of identifiable pieces
18. kép Az öt fő típuscsoport összes kerámiatöredékének mennyisége és az ebből pontosan meghatározható töredékek darabszáma

community could have benefited from these drinks. Ethnographic examples also illustrate that these beverages were either consumed on special occasions or just by a certain group of people (van Gennep 2007, 91–126; Kalla–Raczky–V. Szabó 2013, 25–26). Thus, it is possible that cups were only produced in a restricted number for the community.

Another proof for the exceptional use is an almost complete cup that were found in posthole O48/S58A (trench no. 1). This phenomenon can be interpreted as a posthole deposition, or an offering afore the start of construction of a particular house. Maybe before a house was built or in other cases after leaving and dismantling a building (Trebsche 2008, 69), one of the drinking vessel was offered during some sort of ritual event. This phenomenon is described in more details by the analysis of postholes.

The treatment of cups and large storage vessels in a special way and the pottery depositions serve as evidences for their ritual background, which was quite widespread in the Rei. Br D–HaA1 period (V. Szabó 2004a, 81; Váczi 2016, 187–188). Probably during such a drinking ritual, a smaller group may have been founded or an existing one strengthened itself within the community (Schauer 1996, 362–363; V. Szabó 2004a, 87–93; Kalla–Raczky–V. Szabó 2013, 28–29). These buried sets have multiple combinations.[18] Unfortunately, the remains of food and beverage did not survive, which were at the centre of such rituals.[19] Nevertheless, the deposition of sets itself suggests that the ceramics were used for rituals, after which they were permanently withdrawn from the profane world (Schauer 1996, 408–410; V. Szabó 2004a, 87; Kavur 2011, 86; Kalla–Raczky–V. Szabó 2013, 25–27).

The function of the vessels is not necessarily clear. In archaeological analyses, ceramics are mainly grouped by their formal features or decorations. Three different measurements can be separated, which can primarily determine functions. The first is the orifice of the pots compared to the size of the body, the other is the full diameter of the mouth, while the third is the capacity of the vessel (Smith 1985, 305; Skibo 2013, 30). In addition a finer division was suggested by Marion Smith and James Skibo, who connected each formal feature with the contents or function of the vessels (Smith 1985, 305; Skibo 2013, 30–31). According to this, during formation the orifice of the mouth reflects on the subsequent contents and the curving of the rim determines whether liquid or solid food was put into them. Furthermore, the orifice is inversely proportional to the storage time as the mouth must allow access to the food during storage, so there should be at least enough space for a hand. The narrow rims were shaped to store or transport liquids.[20] The main functions, such as cooking, storage or serving are divided between the five main formal groups. It should be noted that there is interoperability between the functionalities. It is usual in everyday life that a vessel,

which have originally been used for something else, was suddenly taken for storage (Skibo 2013, 5). Though cross-use could not always be the case, since a thin-walled jar would break during cooking or a cup does not have such a large capacity, etc. Yet, a vessel that is not suitable for carrying liquid or cooking can still be used for storage.

Their daily functions can also be determined from the traces of usage. The three most common features are food and beverage residues on the inner or the outer surfaces of the ceramics, soot- or charred spots and various wear marks (Rice 1987, 201–211; Skibo 2013, 5). Sometimes these marks can be absent. A good example is the rice cooking technique observed in the Kalinga community, where people cover the wall of ceramic pots with thin leaves to prevent the rice from sticking (Skibo 1992, 68; Skibo 2013, 82, Fig. 3.17). However, this prevents the formation of traces that could be archaeologically interpreted, too. In addition, the temperature[21] and the types of food also affects the marks.

Rarely, heavily burnt, blistered and deformed vessels can be observed within the finds. They may have accidentally fallen into the fire, as no other burning traces could be detected in their surroundings and between the layers of the pit. Smaller or larger soot patches are much more common. They could be noticed on almost every pot, thus these vessels were subjected to a high degree of usage and they were only replaced if a crack or fracture occurred. Further burnt marks were visible on other ceramic types, particularly on large storage vessels. They were not caused by cooking, because the fire did not touch the bottom, just left some pale yellow-red patches on its sides. It is difficult to reconstruct how the flame reached them, but it could have been caused by an open-fire, as the colours suggest oxidation firing (Rice 1987, 344–345). It is not clear from ethnographic examples, how exactly the marks developed. Maybe the vessels were too close to the fire during a meal or feast or they simply fell into the fire.

The cracked or broken ceramics were not necessarily thrown into the garbage pits immediately, but they were often recycled (Skibo 2013, 5; Vuković 2015, 118). Some of the considerably used vessels were placed into the graves.[22] Either because in the everyday life they could no longer fulfil their functions or it could have some sort of emotional reasons, if it was close to the deceased. It is certain that used vessels often became funerary equipments with visible wear marks on them.[23]

Broken fragments can also be used during ceramic production. For example ethnographic observations showed that large pieces with entire side walls can function as supports while shaping a new vessel (Schiffer 1996, 31, Fig. 3.1).[24] They fix the sides of the ceramic to prevent the new vessel from breaking or collapsing during manufacture.

Based on the ceramics of Baks-Temetőpart, two recycling methods can be distinguished. One is the cut-out, 3 to 4 cm large, round-shaped discs or 'tokens' that may have been the parts of some sort of game. The other is more widely used as crushed temper material (Schiffer 1996, 30; Vuković 2015, 118). The grinding of vessel fragments was not only the most obvious choice to recycle, but it made the clay durable while processing. The pieces were crushed in various degrees, depending on the type of vessels. Bowls, jars or cups with a thinner wall were mixed with ceramic powder, while larger storage vessels were required to get a stronger and more massive sidewall (Michelaki 2006, 10–11). Besides stability, crushed ceramic temper made the vessels more resistant to heat. Since this material has already been burned once, it cannot burn away during firing. Furthermore, it does not make the wall of the vessel porous and it does not cause any cracks on the body (Michelaki 2006, 10). In Baks, all ceramic types were tempered with crushed ceramics and sand.

Chronological and spatial interpretation of ceramics

Research method – Correspondence analysis

The large amount of ceramic fragments on this site makes the use of computer analytical methods necessary. Archaeology has adopted several type of statistical methods (Drennan 2009; Siklósi 2013, 51–53), from which correspondence analysis will be applied here. The advantage of it over other methods is that it searches for a structure behind the given database, based on the average similarities between units or types (Siklósi 2013, 52). It can display groups or continuity within the data, but it also shows if there is no structure at all. One of the negative factors is that outliers are highly distorting or obscuring the results, thus they should be excluded (Drennan 2009, 20; Baxter–Cool 2010, 222). The input data is listed by two main components on the two axes of the chart. The most stable result is when the points are arranged in a parabolic shape (Šabatová 2010, 113). This analysis may be carried out by two major computer programs, one is '*R'* (Baxter–Cool 2010) and the other is *'Past'*. In this paper the latter will be employed.

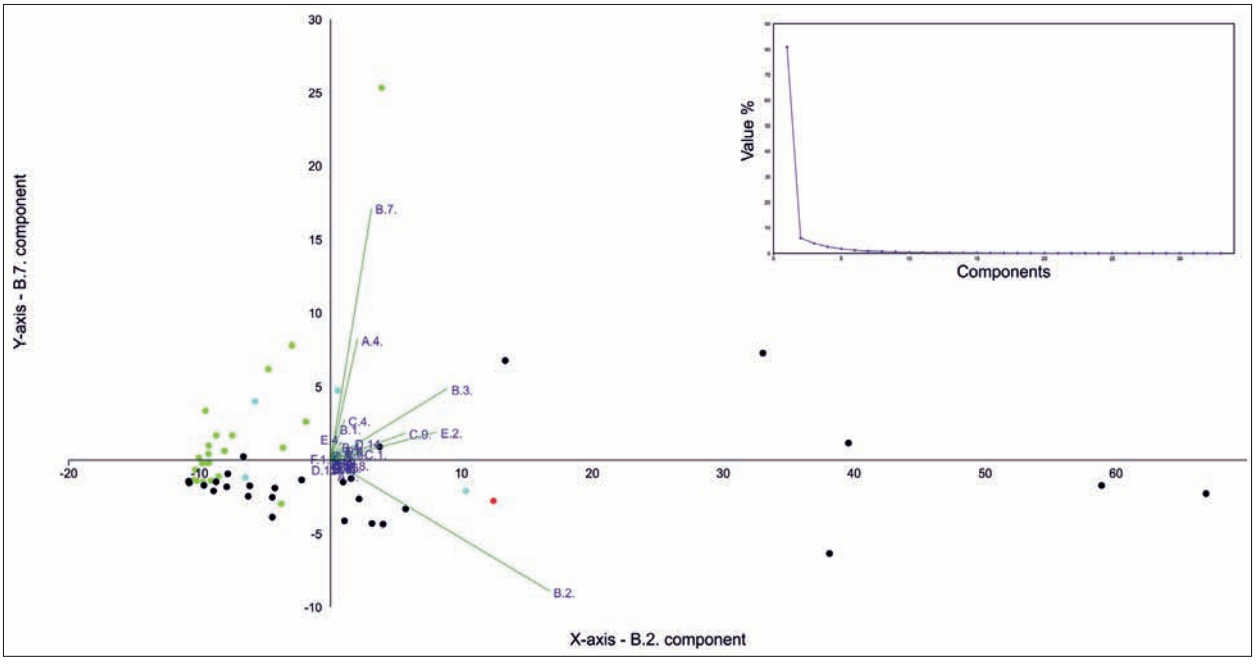

Fig. 19 The distribution of components by the correspondence analysis (with the main components highlighted)
19. kép A korrespondencia analízis komponenseinek megoszlása (a fő komponensek kiemelésével)

Results of pottery examination

All definable ceramic fragments found in Baks–Temetőpart were listed in a table, in which the pieces were divided according to pit numbers and typological groups, as outlined above. This made it easier, to which form in what quantity and in which excavated trench was the most widespread. The table was examined by correspondence analysis. Both shapes and decorations were shown in separate figures. After several different data runs, two well separable groups (Fig. 21) were observed among the ceramics and pits. Based on these, a hypothetical interpretation can be outlined.

There are two types of data on the diagram, one signifies the ceramic types (dark blue dots), while the other marks the pits. Two ceramic concentrations can be divided on the Y-axis, in which each ceramic type is represented, such as large storage vessels, jars, bowls and cups. The two densities are similarly distributed on the X-axis. The program used two common bowl types as main components (Fig. 19)[25] and arranged the other forms around these. It used a total of 33 components. The percentage of the principal component is very high, after which a large percentage drop is visible. From the 3rd component, the difference between the factors is small. The other displayed data relates to the distribution of pits. The pits of each trench were marked by different colours (green – trench no. 1; light blue – trench no. 2; black – trench no. 3; red – trench no. 4). The scattering of the pits is similar to the forms, i.e. they are arranged in two groups. It is noticeable that the pits of the first trench are grouped on the left side of the figure, while the pits of the third trench are on the right with an overlapping in the middle. The few pits of trench no. 2 and no. 4 are in the middle. The pits were divided based on the forms and quantities of the ceramics. It can be observed that the groups of pits are related to the positions of the excavated trenches.[26]

The two concentrations show either a spatial or perhaps a temporal difference between the find materials, or both. By examining the two ceramic groups, it can be perceived that each of the main functional types (storage vessels, bowls, cups, jars) can be found on both sides of the axis. Consequently, two ceramic sets can be outlined (Fig. 22). The typological forms of these two sets are illustrated in a table to show their extent in time, based on their parallels and antecedents (Fig. 20).

In comparison, the groups outlined by the correspondence analysis coincide with the assemblages that can be determined by typology. This would mean a slightly older group, in which the ceramic forms were already widespread in the previous Rei. Br D–HaA1 period and their formal antecedents can be traced back to even earlier periods. The other set

of vessels contains the forms that are characteristic for the classical Gáva pottery style, i.e. the forms that were developed during the HaA2–HaB1 period. This chronological difference, of course, does not mean a sharp line between the two sets, but the co-existence, overlapping and continuity of the two groups. It is not a change between periods, but rather a reflection of inner development on this site.

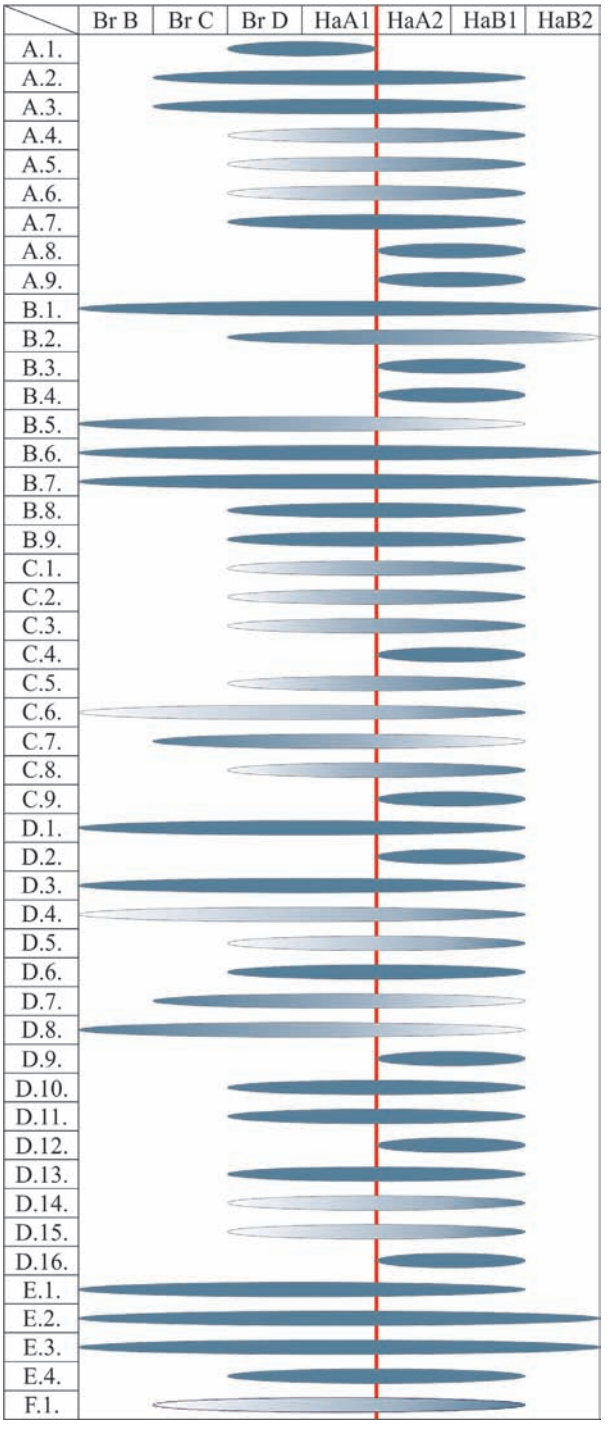

Fig. 20 The chronological distribution of ceramic types based on their parallels and formal antecedents
20. kép A kerámiatípusok kronológiai szóródása párhuzamaik és formai előzményeik alapján

Some territorial distribution can also be assumed, as the sets of ceramic forms and the two pit groups correspond to each other. This suggests that the ceramic types found in the third trench are more typical of the classical Gáva-ceramic style, while the material of the first trench contains the forms that have some kind of antecedents in the earlier periods.

These two hypothetic chronological groups are based on a total of 2078 identified pieces, thus it is possible that these two ceramic sets are indeed correct.

Most of the large storage vessel types can be classified to the first set. The bowl types that can be derived from previous LBA pottery forms[27], but are still present in Baks can also be sorted to the first group. This includes type B.5, which is more widespread during the Pre- and Proto-Gáva period. The conical bowls can also be added here. The jar and deep bowl forms with compressed-globular, globular and biconical shape, along with some channeled or appliqué rib decorations became part of the first set. Their antecedents can also be observed in earlier periods. The simpler cup forms, which were produced over several periods belong to the first set.

Type A.8., the classical large storage vessel with the oval upper part and protruding carination belongs to the second set. The typical B.3. and B.4. bowl types, which have channeled decoration and sometimes incised patterns on the inside were developed during the period of the Gáva-ceramic style and they are one of the leading forms of this set. This group includes the stemmed bowls, too. The finely produced C.1. deep bowls with specific decorations[28] and the jars with wavy or lobed rims were developed in the classical Gáva-ceramic period, as well. The decorated cups with highly raised handles and inner incised decorations along with the stemmed cups can be classified here. The second set includes the lid with characteristic incised, star-shaped decoration, however lids have known antecedents. The division of pots between the two sets is uncertain.

If the sets are linked to the distribution of the pits, it appears that the vessels of the second set tend to densify toward the third trench, while the first set points to the direction of the first trench. If a chronological difference existed between the two sets and it would have a connection with the pits, then a certain spatial movement could be assumed on the site.

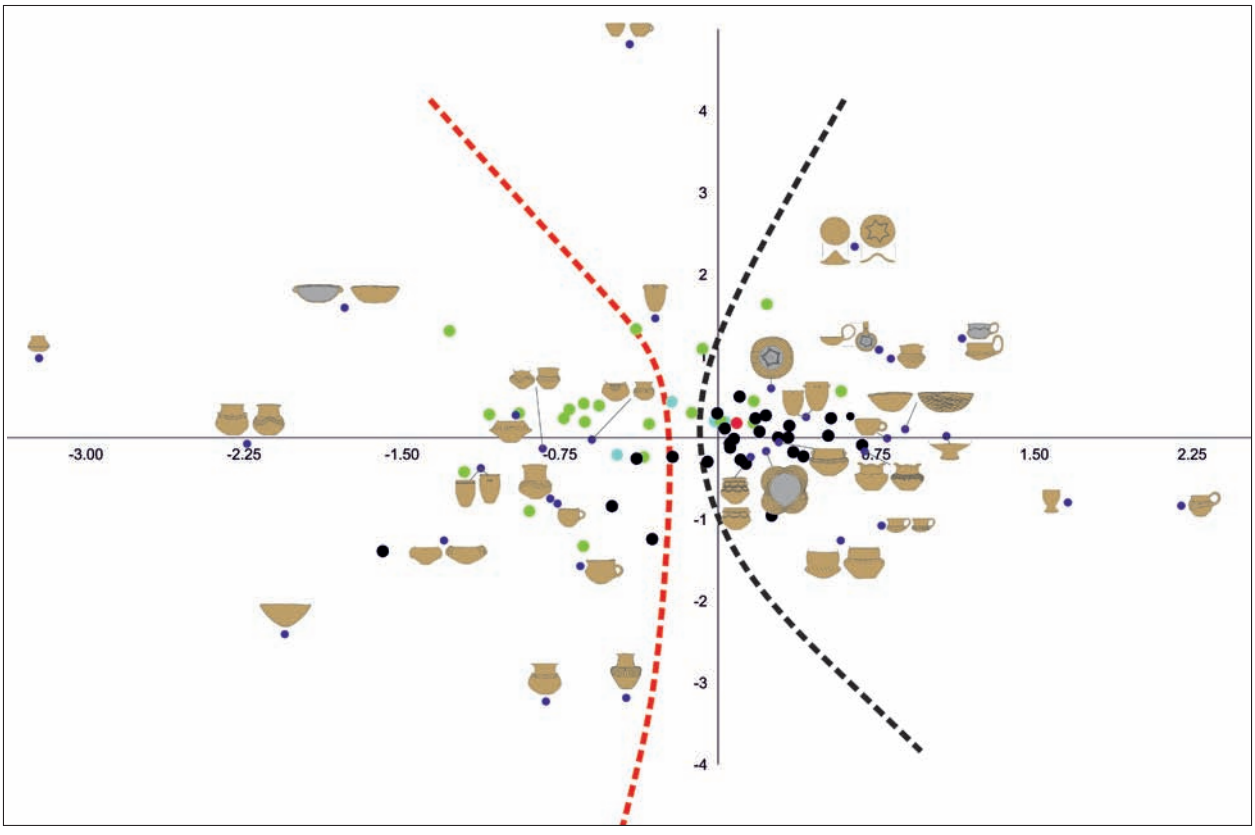

Fig. 21 The results of the correspondence analysis. Beside the two outlined ceramic sets, the densification of pits can also be observed (vessel types – *dark blue*; trench no.1 – *green*; trench no. 2 – *light blue*; trench no. 3 – *black*; trench no. 4 – *red*)

21. kép A korrespondencia analízis által szétválasztott két edénykészlet és a gödrök csoportosulása (edénytípusok – *sötétkék*; 1. szelvény – *zöld*; 2. szelvény – *világoskék*; 3. szelvény – *fekete*; 4. szelvény – *piros*)

In theory, the settlement may have expanded from the southern parts to the north.

The above mentioned hypothesis was based on a certain amount of excavated material, which is a rather small section of the complete extent of the settlement. By investigating the site on a larger surface or using and evaluating more find materials, further results might contradict or strengthen these interpretations in the future.

The division of the classical Gáva-ceramic style and the chronological separation of formal groups were previously described by several researchers (Smirnova 1976; Kemenczei 1984; Vasiliev–Aldea–Ciugudean 1991; Pankau 2004). First Amália Mozsolics and Tibor Kemenczei tried to outline a chronological division of the find materials in Hungary, mainly by ceramic forms. Later Gábor V. Szabó has dealt with a more detailed description of the pottery styles, as well as with the separation of the Pre- and Proto-Gáva-ceramic styles (V. Szabó 2017). Probably the above described division does not mean two separate periods, but rather a change in style or a development process during the lifecycle of this settlement.

Interpretation of the settlement

The material of the four trenches provides some insight into the life of the LBA Baks-Temetőpart. The 650 m^2 excavated area is a rather small section of the settlement's complete extent. Therefore, these results should be refined in future research.[29]

The results of this article was based on a large amount of ceramic fragments (3851 pcs), which was divided into five main groups and a total of 47 typological units based on their formal characters.

The types were inserted into a chronological framework by their parallels, suggesting that the site can be dated to the classical Gáva-ceramic style (HaA2–HaB1). The application of correspondence analysis allowed the separation of two finer phases within this period.

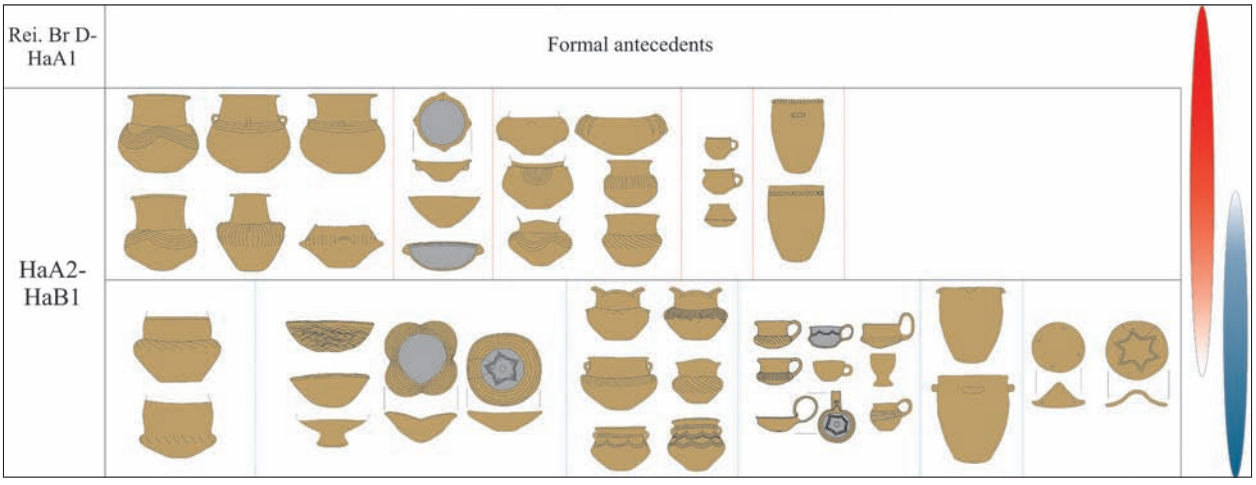

Fig. 22 The two delineated ceramic sets by correspondence analysis
22. kép A korrespondencia analízis alapján körvonalazható két edénykészlet

As a result, it is likely that a transition between the ceramic types can be assumed during the existence of the settlement. It means that the potteries with formal antecedents were still regularly produced by the local communities along with the forms that appeared during the classical Gáva-ceramic style. The two ceramic sets are overlapping, consequently both could be present at the same time. The quantitative distribution of five typological groups within the pits supported the results of the correspondence analysis (Fig. 23–27). Correspondence analysis has also structured the pits into two larger groups. Their distribution represents two different territorial groups.

Besides the ceramic fragments, other clay objects such as spindle-whorls, loom weights, 'tokens' and lids, as well as special clay objects were discovered. Loom weights appeared in such a large quantity that their scattering was worth discussing. 21 fragments out of the 55 pieces were found in the 40th pit complex in the third trench. This number is probably corresponding with the size of the trench and the amount of pits, but it may even indicate that textile production could have taken place in a nearby house.

The evaluation of the pits may help to interpret the work processes in the settlement. Previously, there was a possibility of a 'crisis horizon' or a major fire. Based on the analysis of the layers and the daub material, which was cleared away into several surrounding pits, the burning of a single house or part of it seems to be probable. Daub layers did not appear in every pit and even if they were visible, they were much thinner than what could indicate an extensive destruction horizon (Masek 2015). In addition, the ceramic material does not show intense presence of blistered, burnt or deformed vessels. There are ceramic fragments with smaller secondarily burnt marks, but these pieces were often broken before being exposed to the fire, which can be observed on the two-coloured ceramics. This phenomenon can be explained by waste burning. The consistent alternation of the stratification of some pits is more noteworthy, which suggests a cyclic process. This may be a periodic cleaning or landscaping work that often involves the burning of organic waste, thus creating charcoal layers (Schiffer 1996).

Besides workflows, there is evidence of the community's ritual life. In addition to the many special clay figurines, a ritual deposition was also present in a posthole. It could reflect on a symbolic act that preceded the building of the house. Furthermore, there are indications of feasting events for strengthening the community. Such events supposed to involve more than 100 people (Vörös 1987, 28; Kalla–Raczky–V. Szabó 2013, 22–23) based on the amount of quality eating and drinking vessels and on the consumed meat.

Modern deep ploughing has made it difficult to examine the excavated surface, as the shallow postholes and floor levels were completely destroyed. Therefore the location of houses can only be speculated. The southwestern part of the third trench was rather empty, without the sign of any pits on the surface. This may suggest a house location, although it is not supported by postholes or a hearth. The other uncertain house can be linked to the posthole deposition in the first trench, if the idea is accepted that such an offering can be connected to a house (Trebsche 2008, 67–70). If these two hypothetical houses are outlined, then a larger pit complex and several

disjoint pits can be connected to the households. In other fortunate cases houses could be observed, which can be classified to the Gáva-ceramic style. For example in Căuaş-Sighetiu in Romania (Kienlin et al. 2012), where magnetometer measurements have shown the arrangement of houses. It could have been a much unified, well-established settlement, based on a specific system. The houses stood in rows close to each other, in a NE-SW direction. Poroszló-Aponhát could have been a similarly arranged settlement structure with the same house orientation (V. Szabó 2004b, 143, 9–10. kép; V. Szabó 2017, 250). Unfortunately, in case of Baks the orientation cannot be reconstructed. It varies from site to site, how the community have chosen to lay out their houses. On the basis of currently available information, I would not go into such an interpretation.[30]

The previous Rei. Br D–HaA1 period was characterized by smaller or larger fortified settlements, of which 40 examples are currently known (Czukor et al. 2017; V. Szabó 2017, 248). This type of fortified settlements are rarely connected with the Gáva-ceramic style. During the HaA2–HaB1 period they are especially widespread in the North Hungarian Mountains and in Transylvania, for example Tállya-Óvár (V. Szabó 2016, 191–193, Abb. 26–27), Căuaş-Sighetiu (Kienlin et al. 2012). Large settlements controlling a smaller meso-region, which are characterized by intense find materials such as Baks-Temetőpart and Poroszló-Aponhát and the many hundreds of smaller sites are much more common in this period.[31] Moreover, a middle sized settlement type can also be outlined, which is also quite intense in finds, such as Biharkeresztes (V. Szabó 2004b, 143–144, 6. kép), Berettyóújfalu-Herpály (Füzesi et al. 2015, 228–229). In case of Baks, the question arose, why it was located on the right bank of the Tisza unlike all the other settlements from the HaA2–HaB1 period (V. Szabó 2011a, 104–105). This may have been due to strategic and topographical reasons. The area around the site is a very low-lying region, from which Baks stands out to a certain extent, ensuring the flood-free position. On the other hand, the Tisza could provide for the main route for interactions, which had to be strategically protected and controlled (V. Szabó 2017, 250).

It can be stated that the settlements of the Gáva-ceramic style have rarely moved away from water resources. About 76.6% of the settlements lied only 50–500 meters away from the waterfronts (Bóka 2012a, 25). This is also true for Baks, as the Tisza was much closer to the site before the river regulation that resulted a rather wet, swampy area. This wetland was possibly utilized by the former community, as a large number of water birds and the bones of several fish species were found during excavation (Biller 2018). It can be assumed that the vegetation has been exploited for food, house construction and for making special goods (e.g. baskets).[32]

In contrast to large-scale excavations, it is not possible to outline well-distinguishable households in Baks-Temetőpart (Fábián–Csippán 2011), since small trenches do not provide enough information. The classical household has many definitions, which can only be identified by features and artefacts. A definable household would be a specific place for the basic activities of everyday life in a certain period (Fábián–Csippán 2011, 131). The arrangement of pits and the correspondence analysis, as well as the finds found in the trenches are densifying in 2 groups. It may indicate 2 households with probably some time difference.

In Baks, no significant chronological division could be observed. It could be inhabited during the HaA2–HaB1 period based on the ceramics, although some iron objects that were found during metal-detector surveys suggest continuation towards to the Early Iron Age (Ha B2–Ha B3) (V. Szabó 2011a, 102, 1. táblázat; V. Szabó 2017, 14. kép). So far in Teleac, three chronological phases could be distinguished based on layers and finds (Vasiliev–Aldea–Ciugudean 1991, Fig. 46). It will probably be the task of future research to verify the finer transitions between the earlier and later periods in Baks.

Finally, the connection system of Baks-Temetőpart points to the south-southeast direction. The formal and decorative elements of the classical Gáva-ceramic style are mainly related to the forms in the Great Hungarian Plain and Transylvanian, but some stylistic features could have been taken from the ceramic styles of other regions. The frequent decoration with impressed dots or dotted lines can be an influence from the southern territories (e.g. Gumă 1993, Pl. XXXIII), but it is also very common in the Kyjatice culture (Kemenczei 1984, Taf. VIII–IX), nevertheless it is less characteristic to the Gáva pottery style. The two imported ceramic pieces also strengthen the southern connections and they show interactions with the Gornea-Kalakača culture (Przybyła 2009, 116–118).

Conclusions

The four excavated trenches at Baks-Temetőpart have provided a quite massive amount and a very diverse collection of material, which further strengthe-

ned the assumption that this mega-site is not merely one of the largest in the region, but it is also one of the most intense of settlements. The ceramic fragments, which gave the subject of my thesis and this publication, were examined with the traditional typological method and with a modern approach in archaeology. Based on the results, two households can hypothetically outlined. The household in the first trench can be characterized by a somewhat earlier phase in the ceramic spectrum, while the other household in the third trench has a slightly younger set of potteries. This division, based on the find material is not a sharp shift between periods, but rather a finer transition within the HaA2–HaB1 phase. Since the total 650 m^2 of the excavated area gives us only a small insight into the past life of the settlement, future research may still shade the above sketched picture.

Acknowledgments

First of all, I would like to express my gratitude to my supervisor, Dr. Gábor V. Szabó, who entrusted me with this exceptional material and helped my work. Moreover, I am most grateful to Dr. András Füzesi, without whom I would not have succeeded with the new analytical methods. Furthermore, I would like to thank to Dr. Gábor Váczi for his suggestions and guidelines.

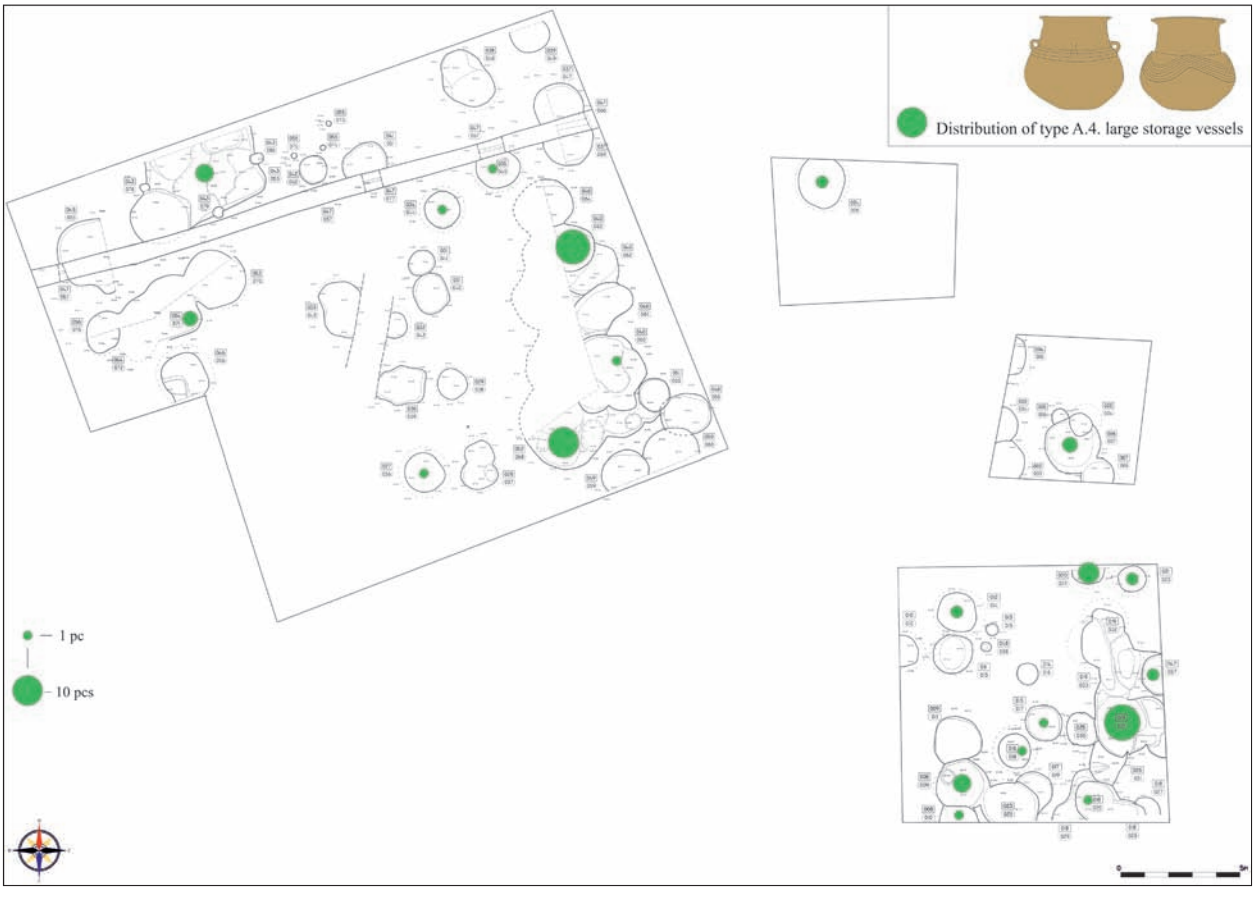

Fig. 23 Spread of type A.4. large storage vessels within the site (the trenches were farther located in reality)
23. kép Az A.4.-es típusú nagyméretű tárolóedény elterjedése a lelőhelyen belül (a szelvények a valóságban nagyobb távolságra vannak egymástól)

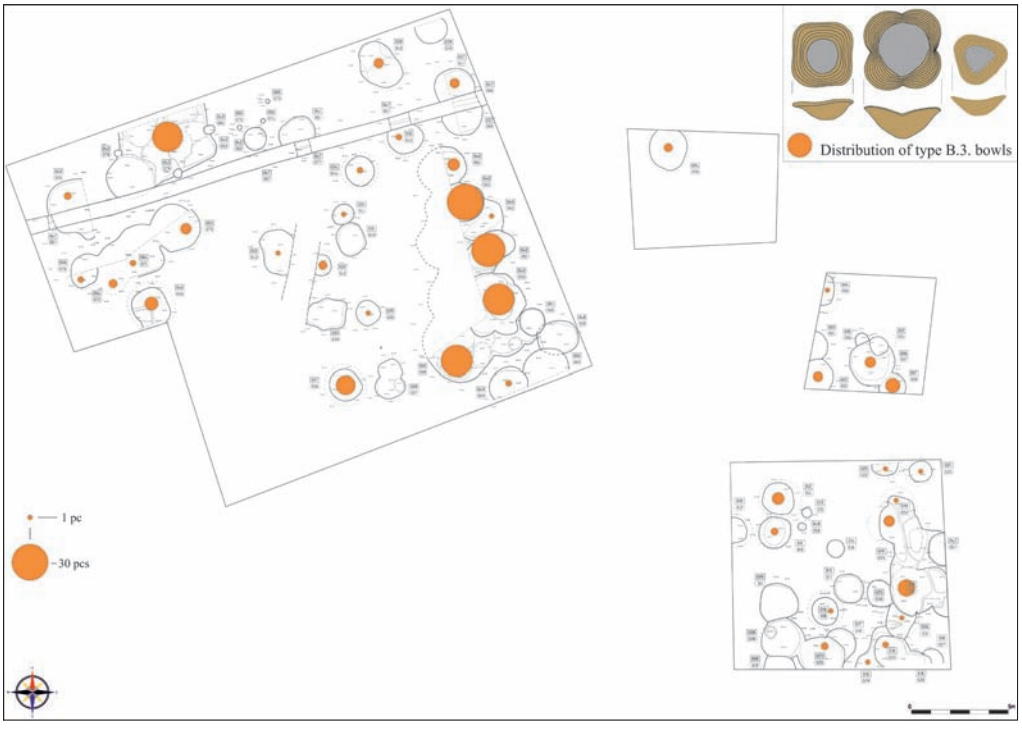

Fig. 24 Spread of type B.3. bowls within the site (the trenches were farther located in reality)
24. kép A B.3.-as típusú tálak elterjedése a lelőhelyen belül
(a szelvények a valóságban nagyobb távolságra vannak egymástól)

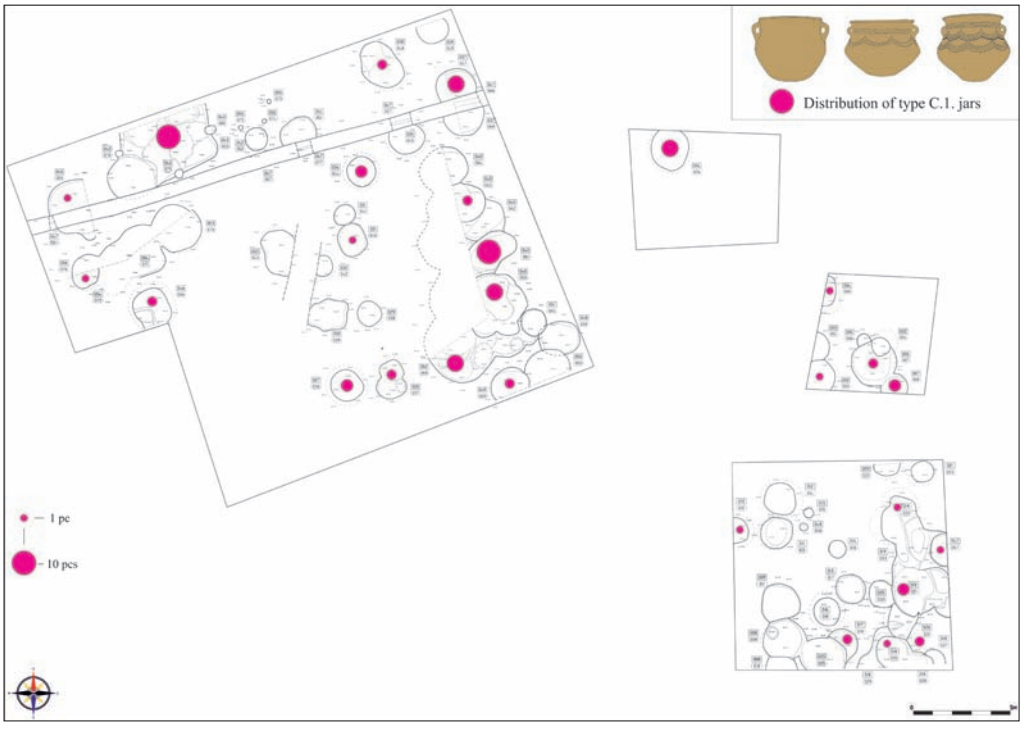

Fig. 25 Spread of type C.1. jars within the site (the trenches were farther located in reality)
25. kép A C.1.-es típusú korsók elterjedése a lelőhelyen belül
(a szelvények a valóságban nagyobb távolságra vannak egymástól)

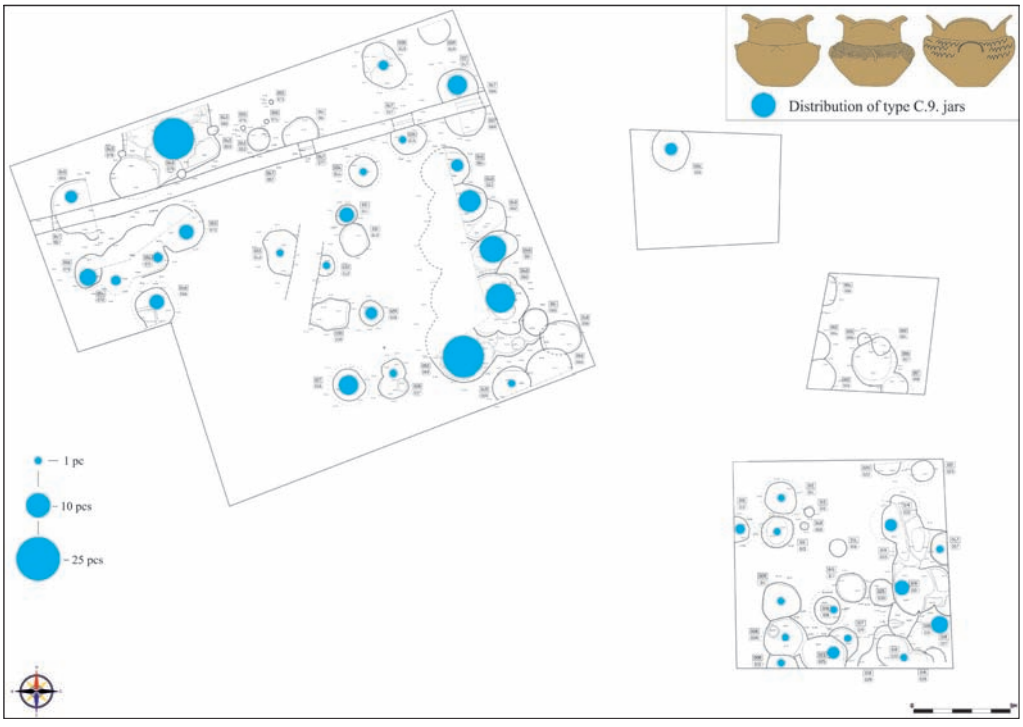

Fig. 26 Spread of type C.9. jars within the site (the trenches were farther located in reality)
26. kép A C.9.-es típusú korsók elterjedése a lelőhelyen belül
(a szelvények a valóságban nagyobb távolságra vannak egymástól)

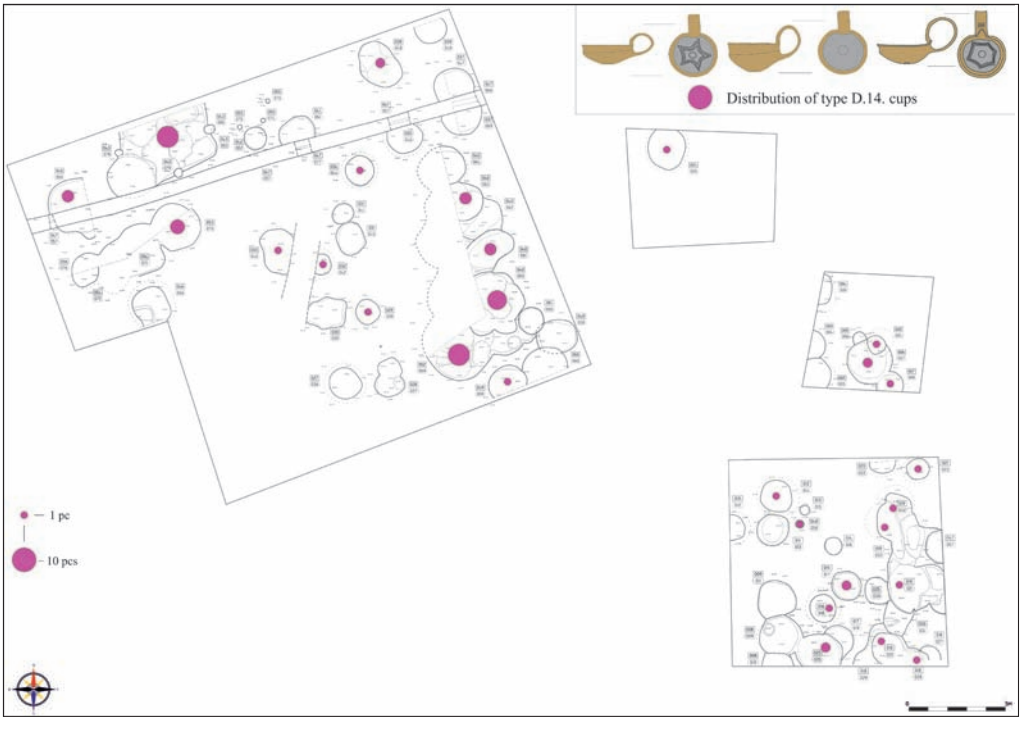

Fig. 27 Spread of type D.14. cups within the site (the trenches were farther located in reality)
27. kép A D.14.-es csészetípus elterjedése a lelőhelyen belül
(a szelvények a valóságban nagyobb távolságra vannak egymástól)

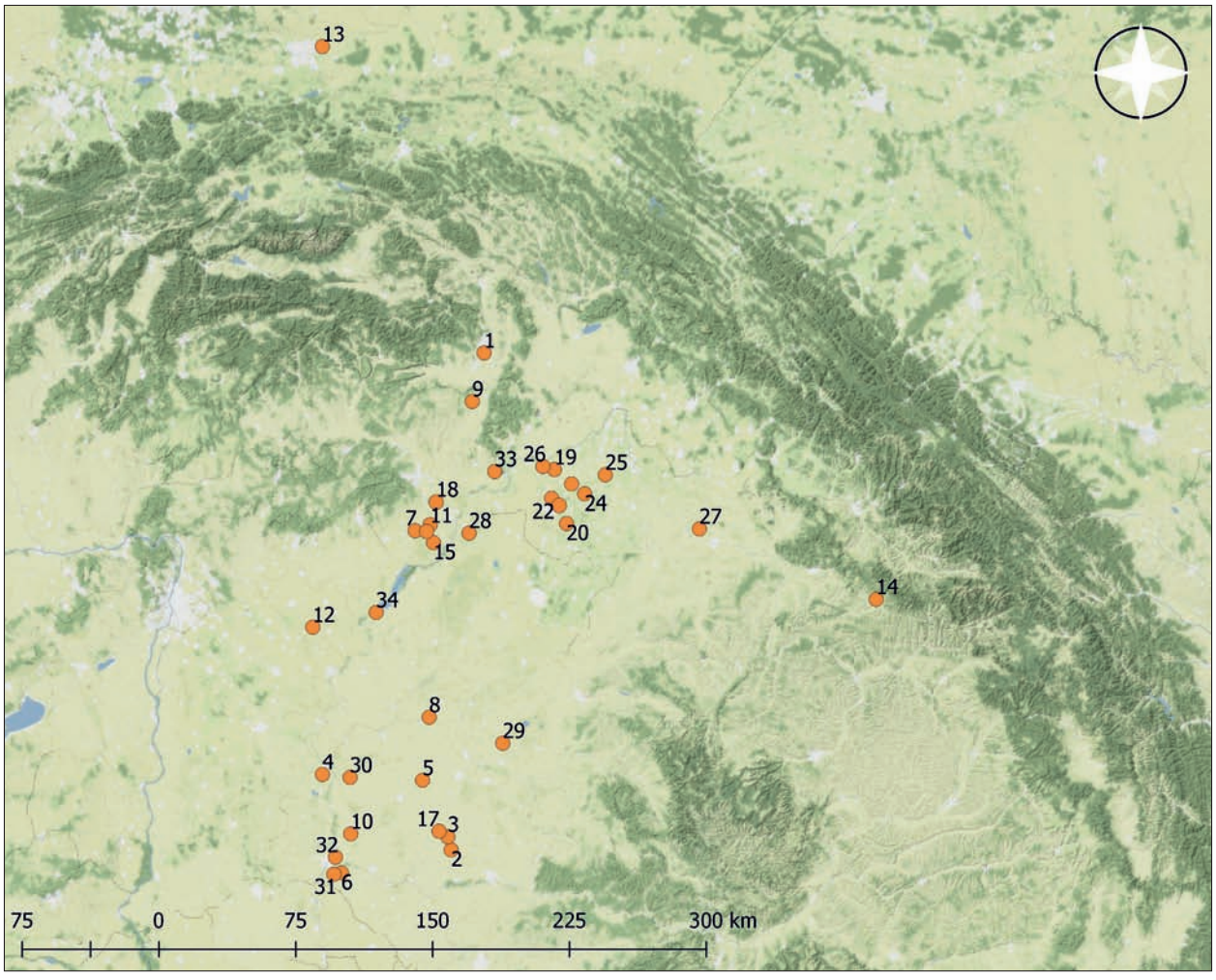

Fig. 28 The sites from the Rei. Br D–HaA1 period that were mentioned in this article
28. kép A cikkben szereplő lelőhelyek a Rei. BD–HaA1-es időszakból
(1: Bárca, 2: Battyonya-Georgievics-tanya, 3: Battonya-Holecska-tanya, 4: Csongrád-Sertéstelep, 5: Csorva, 6: Deszk-F, 7: Gelej-Kanális-dűlő, 8: Gyoma-Kádár-tanya, 9: Hernádvécse, 10: Hódmezővásárhely IV. Téglagyár, 11: Igrici-Zombori tanya, 12: Jánoshida, 13: Kraków-Nowa Huta, 14: Lăpuş, 15: Mezőcsát-Hörcsögös, 16: Mezőcsát-Pásty domb, 17: Mezőkovácsháza, 18: Muhi-Princ-tanya, 19: Nagyhalász, 20: Nagykálló-Telekoldal, 21: Nyírbogdány, 22: Nyíregyháza-Mega-Park, 23: Nyíregyháza-Oros, 24: Nyíribrony, 25: Nyírkarász-Gyulaháza, 26: Paszab, 27: Petea-Csengersima, 28: Polgár /M3/29/, 29: Sarkadkeresztúr-Csapháti-legelő, 30: Szentes-Nagyhegy, 31: Szőreg-C, 32: Tápé-Kemeneshát, 33: Tarcal, 34: Tiszabura-Nagy-ganajos-hát)

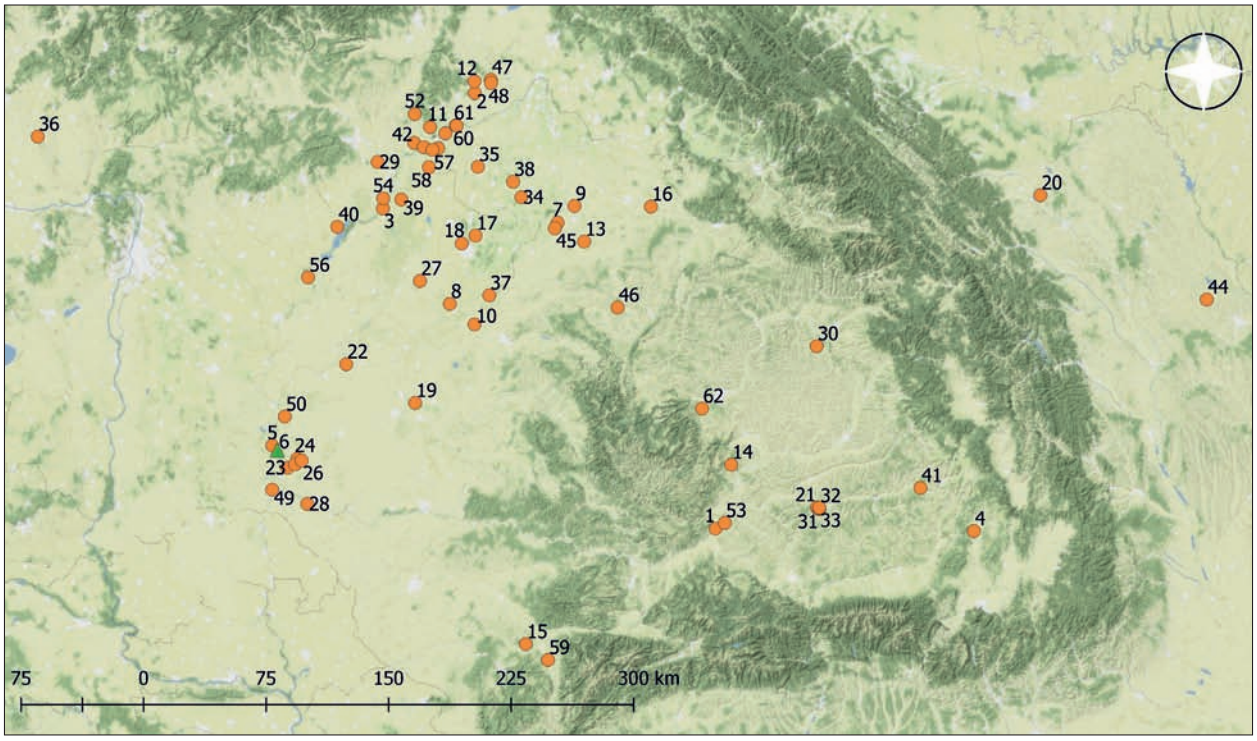

Fig. 29 The sites from the HaA2–HaB1 period that were mentioned in this article
29. kép A cikkben szereplő lelőhelyek a Rei. HaA2–HaB1–es időszakból
(1: Alba Iulia Recea /Monolit/, 2: Alsóberecki, 3: Ároktő, 4: Augustin-Tipia, 5: Babadag, 6: Baks-Csontospart, 7: Baks-Temetőpart, 8: Berea, 9: Berettyóújfalu-Papp-zug, 10: Berveni, 11: Biharkeresztes-Láncos-major, 12: Bodrogkeresztúr, 13: Borša, 14: Căuaş-Sighetiu, 15: Cicău, 16: Cornuţel, 17: Culciu Mare, 18: Debrecen-Dombostanya, 19: Debrecen-Nyulas, 20: Doboz-Faluhely, 21: Grăniceşti, 22: Gura Câmpului, 23: Gyoma 133. site, 24: Hódmezővásárhely-Kopáncs, 25: Hódmezővásárhely-Rárós, 26: Hódmezővásárhely-Solt-Palé, 27: Hódmezővásárhely-Szakálhát, 28: Kaba-Bitózug, 29: Kiszombor, 30: Köröm-Kápolna-domb, 31: Lechinţa de Mureş, 32: Mediaş-Cetate, 33: Mediaş-Str. După Zid, 34: Mediaş-Str. Târnavei, 36: Nyírbogát, 37: Nyíregyháza-Bujtos, 38: Plešany, 39: Pocsaj, 40: Pócspetri-Nyírjes-felső-Erdőszél, 41: Polgár-Király-érpart /M3/1/, 42: Poroszló-Aponhát, 43: Porumbenii Mari, 44: Prügy, 45: Rakamaz, 46: Romaneşti, 47: Sanislău-Livadă, 48: Simleu, 49: Somotor, 50: Somotorská hora, 51: Szeged-Öthalom, 52: Szentes-Szentlászló, 53:, Taktabáj, 54: Tállya-Óvár, 55: Teleac, 56: Tiszakeszi-Tatárdomb, 57: Tiszaladány-Nagyhomokos, 58: Tiszasüly, 59: Tiszatardos, 60: Tiszavasvári, 61: Valea Timişului 62: Vencsellő 63: Vencsellő-Kastélykert 64: Vlaha-Pad)

Appendix – Description of features

O1/S1 (hoard – Trench 3): First a socketed axe with a Y-shaped rib was discovered. Eastward from it, a pile of some ceramic shards were lying, next to which a ribbed ring was found broken in two pieces. Some 25 cm west of the axe, a further bronze tool lied. The axe was at the bottom of the ploughing, approximately 40–50 cm deep. Directly below it, a lighter-coloured, undisturbed humus layer was observed, that could still belong to the ploughing. Completely excavated feature.

O1/S2 (hoard – Trench 3): This hoard has consisted of a smaller socketed chisel and two small-sized ingots. The objects lied 1.1–1.2 m east of the previously described hoard. The bronze artefacts were found in the lowermost layer of the ploughing, 10–15 cm apart. Completely excavated feature, from which no ceramic material was detected.

O2/S3 (pit – Trench 2): Round, beehive shaped pit, which continued in the western and southern section wall and because of this, it is not completely excavated. Its filling was loose, grey and ashy with clay and charcoal particles as well as daub pieces. On the bottom of the pit the pieces of a large vessel with outward-bending rim were found. Diam.: 145×160 cm; D.: 105 cm.[33]

O3/S4 (pit – Trench 2): Similarly in shape to the previous feature, this medium-sized, beehive shaped pit with round opening was located right next to the O2/S3 pit. The western part of the pit also fell under the section wall, so it was not completely excavated. It was filled with loose, grey humus mixed with black ashy patches and daub pieces. It did not contain any ceramic material. Diam.: 140×90 cm; D.: 35 cm.

O4/S5 (pit – Trench 2): Round, beehive shaped pit. Since it was found in the north-western part of the second trench and half of the pit fell under the section wall, it was not entirely excavated. On the northern part, a 30 cm deep hole was detected. The top third of the soil was loose, grey and ashy, with lines of charcoal. Further down, the filling became less loose, an ashy clay layer continued that was mixed with daub pieces. A small amount of ceramic material was found in the pit. Diam.: 160×60 cm; D.: 86 cm.

O5/S6 (pit – Trench 2): A smaller, oval-shaped, shallow pit with sloping walls. The filling was dark brown, sandy humus with some daub particles. There was no ceramic material in the fully excavated pit. Diam.: 66×55 cm; D.: 5 cm.

O6/S7 (pit – Trench 2): Round, trough-bottomed pit with curved walls. It was filled with loose, grey and ashy soil, with a larger amount of daub and large pieces of burnt clay with plant imprints. The O22/S24 pit bordered the northern part of this pit, being probably older. A moderate amount of ceramic material as well as three animal figurines were found in the completely excavated pit. Diam.: 230×200 cm; D.: 70 cm.

O7/S8 (pit – Trench 2): Round pit. Only partially excavated, since one side fell below the section wall. The eastern part is beehive shaped. The filling was loose, ashy soil mixed with clay pieces. From the pit a medium amount of ceramic material was recovered. Diam.: 100×150 cm; D.: 90 cm.

O8/S9 (pit – Trench 1): Round pit. The western part was beehive shaped, while the eastern wall was vertical. In its northwest corner a small, round hole was dug in with sloping walls. It was filled with grey-brown humus mixed with sand, charcoal and daub. A medium amount of ceramic shards were found in the pit. Completely excavated. Diam.: 195 cm; D.: 60 cm.

O8/S10 (pit – Trench 1): Round, beehive shaped pit, which was only partially excavated, as a part of it continued under the southern section wall. It was filled up with grey-brown sandy humus mixed with daub and ceramic fragments. Underneath, a black layer was observed with charcoal pieces. A very small amount of ceramic shards were recovered from this pit. Diam.: 150 cm; D.: 90 cm.

O9/S11 (pit – Trench 1): Round, shallow pit with vertical walls. It was completely excavated. The filling was loose, brown-grey humus mixed with some daub. A small amount of ceramics was recovered from this pit. Diam.: 190 cm; D.: 40 cm.

O10/S12 (pit – Trench 1): Round, beehive shaped pit. Only partially excavated, as a section of the pit continued under the western section wall. It was filled up with loose, ashy humus mixed with clay spots and daub pieces. A small amount of ceramics was found in the pit. Diam.: 130 cm; D.: 140 cm.

O11/S13 (pit – Trench 1): Round, beehive shaped pit with a curved bottom. The wall of the pit was right next to pit O9/S11, but their intersection was too narrow, therefore the exact relationship could not be determined. It was mostly filled up with grey-brown sandy humus mixed with daub, yellow sand concentrates and charcoal. A small amount of ceramic fragments were found in the pit along with animal skeletons and a quite large number of clay figurines (17 pieces). Diam.: 155 cm; D.: 75 cm.

O12/S14 (pit – Trench 1): Round, beehive shaped pit, not completely excavated. It was filled with grey-brown sandy humus mixed with ash, sand concentrates and daub pieces. A small amount of ceramics was found in the pit. This pit also held a larger sum of clay figurines, 9 pieces. Diam.: 180 cm; D.: 80 cm.

O13/S15 (posthole – Trench 1): Completely excavated, round posthole with sloping walls. Its eastern side was over dug by 5 cm. It was filled with grey-brown sandy humus mixed with daub and yellow sand concentrates. It did not contain any finds. Diam.: 50 cm; D.: 20 cm.

O14/S16 (pit – Trench 1): Round, shallow, small-sized pit with vertical walls. Completely excavated. Its filling was dark brown, sandy humus with yellow sand concentrates and daub pieces. Only a single ceramic piece was found in it. Diam.: 90 cm; D.: 25 cm.

O15/S17 (pit – Trench 1): Round, concave-bottomed pit with slightly sloping walls. Completely excavated. It was filled with loose, grey-brown humus mixed with daub and charcoal. A small amount of ceramics was found in the pit. Diam.: 160 cm; D.: 25–35 cm.

O16/S18 (pit – Trench 1): Completely excavated, round, beehive shaped pit. It was filled with grey, ashy humus mixed with daub pieces and larger lumps of clay. In the lower third the filling is more compact and greyish brown. Only a small amount of ceramics was found here. Diam.: 120 cm; D.: 75 cm.

O17/S19 (pit – Trench 1): Round pit with vertical walls, completely excavated. One third of it was destroyed by the younger O23/S25 pit. It was filled with grey-brown humus mixed with daub pieces. Only a few ceramic pieces were recovered from it. Diam.: 140×80 cm.

O18/S20 (pit – Trench 1): The bottom part of a pit, which was round and probably beehive shaped, however many younger pits cut through it (O18/S28; O18/S29; O26/S31). Completely excavated. It was filled up by the fillings of the other pits. Only a small amount of finds can be linked to this pit. Diam.: 170 cm; D.: 90 cm.

O18/S27 (pit – Trench 1): Partially excavated, small, round, beehive shaped pit. Its larger part lied beneath the southern section wall, and a small section was intersected by pit O18/S28. It was filled with dark brown sandy humus mixed with daub pieces and ash. A very low amount of ceramic was found in it. Diam.: 60×70 cm.

O18/S28 (pit – Trench 1): Round pit with slightly sloping walls, which cuts through the older pits O18/S20 and O18/S27. The larger part of this pit also fell under the southern section wall. It was filled with grey-brown humus sand mixed with daub pieces and sand concentrates. Partially excavated. Only a few pieces of finds were found in it. Diam.: 150 cm; D.: 95 cm.

O18/S29 (pit – Trench 1): Also a partially excavated, round, slightly concave-bottomed pit. It cuts through the older O18/S20 pit. The larger part of it continues under the southern section wall. It was filled up with loose, grey-brown humus mixed with daub. Only a single piece of ceramic was found in this pit. Diam.: 130 cm; D.: 30 cm.

O19/S21 (pit – Trench 1): Large, fully excavated, roughly round, beehive shaped pit with a flat bottom. The younger O19/S33 pit cuts through this pit, while this one cuts through the older O25/S30 pit. The connection with the O26/S31 pit is not clear yet. It has a grey-brown humus sand filling mixed with a large amount of daub, sand concentrates and charcoal. It contained a very large amount of ceramics. Diam.: 170×190 cm; D.: 120 cm.

O19/S32 (pit – Trench 1): Round, large, beehive shaped pit, fully excavated. The younger O19/S33 pit cuts through this. It was filled with dark brown sandy humus mixed with sandy patches and daub pieces. A small amount of ceramics were found in it. Diam.: 180 cm; D.: 120 cm.

O19/S33 (pit – Trench 1): Beehive shaped, round pit. The southern side has slightly sloping walls at the bottom. It cuts through two older pits (O19/S21, O19/S32). It had a very loose, grey-brown ashy humus filling with daub pieces and charcoal. There was a large amount of charred grain seeds and other plant residues in the layer of 60–70 cm depth. A medium amount of finds were found here. Diam.: 120×70 cm.

O19/S35 (pit – Trench 1): Completely excavated, beehive shaped pit. Its contour was not visible on the ground, it was later detected in the section wall, while excavating the O19/S21 pit. It was most likely the younger one, dug into pit O19/S21. It had a light grey, loose, ashy filling mixed with clay patches and daub pieces. The find material was not separated, so no finds can be linked to this pit. Diam.: 150 cm; D.: 55 cm.

O20/S22 (pit – Trench 1): Round, beehive shaped pit. Partially excavated, as half of it continues under the northern section wall. It had a homogeneous, grey-brown, loose filling with sand patches and daub pieces. 8–10 cm above the bottom, the body parts of an animal skeleton was found, under which the fragments of some large vessels were discovered. The large vessels and the surrounding filling was documented on different stratigraphic numbers (O20/S34). Besides, only a small amount of ceramics and two clay figurines were found. Diam.: 130 cm; D.: 60 cm (up to the skeleton).

O20/S34 (layer – Trench 1): The bottom 5–10 cm of the pit O20/S22, which contained some large vessel fragments underneath. The filling, similarly as above, was grey-brown humus sand. Completely excavated. D.: 105 cm.

O21/S23 (pit – Trench 1): Round, beehive shaped pit, completely excavated. Its filling was rather compact, brown humus mixed with clay, daub and charcoal pieces. Only a few ceramic finds and a clay figurine were found. Diam.: 110 cm; D.: 80 cm.

O22/S24 (pit – Trench 2): Completely excavated, round, beehive shaped pit. The contour was not visible on the ground. It was later detected while excavating the bottom part of pit O6/S7. Its filling was very loose mixed with red, burnt daub pieces and grey ash. The lower 15 cm was more compact grey clay with some charcoal pieces. No photos or section drawings were made during excavation. A few ceramic pieces were found here. Diam.: 90 cm; D.: 135 cm (from the bottom of pit O6/S7: 60 cm).

O23/S25 (pit – Trench 1): Round, slightly beehive shaped pit. It was not fully excavated, as one quarter fell below the southern section wall. Its filling was mostly dark brown sandy humus, with daub and ceramic pieces.

On the bottom of its north-western part a typical wide-rimmed bowl was lying with some other fragments. Diam.: 195 cm; D.: 80 cm.

O24/S26 (pit – Trench 4): Round pit with vertical walls on the top and slightly beehive shaped on the lower part. Its filling was loose, ashy, mixed with daub pieces. Fully excavated. The upper part could have collapsed even before the pit was filled up. A 50 cm wide test trench was applied to find the edges of the pit, in the east-west direction. It contained a medium amount of ceramics and a clay figurine. Diam.: 175×200 cm; D.: 75 cm.

O25/S30 (pit – Trench 1): Completely excavated, round, beehive shaped pit. Its filling was loose, grey and ashy mixed with brown humus patches and daub pieces. The younger pit O18/S20 cuts this through. A very small amount of ceramics and a clay figurine were found in it. Diam.: 110 cm; D.: 40 cm.

O26/S31 (pit – Trench 1): Round, beehive shaped, completely excavated pit. It was filled with red-brown sandy humus, mixed with daub pieces and charcoal, while below a grey-brown humus was detected. The connection with pit O19/S21 next to it, is unknown. In its western part a 25 cm deep hole was observed. A medium amount of ceramics were found in it. Diam.: 150 cm; D.: 70 cm.

O27/S36 (pit – Trench 3): Beehive shaped, round, flat-bottomed pit. Fully excavated. The upper filling was loose and ashy mixed with daub pieces and charcoal. The lower part was more compact mixed with daub. An extremely large amount of ceramics were found in it. Diam.: 155 cm; D.: 140 cm.

O28/S37 (pit – Trench 3): Elongated, medium deep pit, completely excavated. The northern part is strongly beehive shaped with a flat bottom. In the middle of the southern side a small round hole was preserved. The top of the filling was loose, dark brown sandy humus, mixed with daub, ash and charcoal. Its lower part was more compact, brown mixed with daub concentrates. A small amount of ceramics were found in it. Diam.: 230 cm; D.: 36 cm (south), 96 cm (north).

O29/S38 (pit – Trench 3): Small, medium deep, round pit with slightly beehive shaped walls and flat bottom. Completely excavated. It was filled up with loose, grey humus sand mixed with ash, charcoal and daub pieces. A medium amount of ceramics were discovered in it, along with a clay figurine. Diam.: 93 cm; D.: 56 cm.

O30/S39 (pit – Trench 3): Completely excavated, shallow, oval pit with vertical walls. The gas pipeline that cuts through the entire trench, intersects the western part of this pit. The filling was loose, grey and ashy. Only a few ceramic pieces were found in this pit. Diam.: 160×120×160 cm; D.: 15 cm.

O31/S40 (pit – Trench 3): A rather shallow, round pit with slightly sloping walls and bottom. Completely excavated. A similar pit (O31/S41) lays next to it that can be dated to the same period. The top of the filling was red humus strongly mixed with daub. The lower filling was grey-brown humus sand mixed with daub concentrates and yellow sand patches. A small amount of ceramics were found in it. Diam.: 150 cm; D.: 25 cm.

O31/S41 (pit – Trench 3): Shallow, round pit with slightly sloping walls and bottom. It was right next to the O31/S40 pit. Completely excavated. It was similarly filled as the above mentioned pit. A very few ceramic pieces were found in it. Diam.: 110 cm; D.: 25 cm.

O32/S42 (pit – Trench 3): Round, beehive shaped pit with a flat bottom. It was partially excavated as the gas pipeline destroyed its western part. It was filled with red sandy humus containing a lot of daub pieces on the top, while a grey-brown humus sand lied below, mixed with daub, yellow sand concentrates and charcoal. Only a few ceramic pieces were found in it, however it contained 9 clay figurines. Diam.: 80 cm; D.: 150 cm.

O33/S43 (pit – Trench 3): Oval or octagonal double pit with a straight contour. Its northern side was beehive shaped. On the south-eastern side it was intersected by the pipeline, so it was partially excavated. Its filling was mostly grey-brown, compact humus, mixed with ash, charcoal and daub. A small amount of ceramics were discovered in it. Diam.: 230×150 cm; D.: 110 cm.

O34/S44 (pit – Trench 3): Completely excavated, round, beehive shaped, deep pit. The upper third of its filling was loose, greyish brown humus sand mixed with a large amount of daub and charcoal. The lower two thirds was more compact with dark brown sandy humus mixed with yellow sand patches and charcoal pieces. A larger amount of ceramics and an extremely high number of clay figurines (12 pieces) were found in it. Diam.: 130 cm; D.: 120 cm.

O35/S45 (pit – Trench 3): Round, beehive shaped, fully excavated pit. It was marginally intersected by the pipeline on the northern side. Its filling was grey-brown, loose humus, which became more compact and brown downward. It was mixed with a lot of daub, yellow sand patches and charcoal pieces. A small amount of ceramics were found in it. Diam.: 220 cm; D.: 170 cm.

O36/S46 (pit – Trench 3): Completely excavated feature, which was later cancelled. The few pottery found around it was added to the finds of the pit next to it.

O37/S47 (pit – Trench 3): Round, slightly beehive shaped, deep pit. Partially excavated on its eastern part. The younger O37/S69 pit can be connected to it. On the top its filling was loose, ashy humus with daub and charcoal pieces. On the bottom it was more compact mixed with some daub, clay and dark brown patches. A medium amount of ceramics were found in it, along with 3 clay figurines. Diam.: 250 cm; D.: 145 cm.

O37/S69 (pit – Trench 3): Beehive shaped, round pit. Only partially excavated, excluding the eastern side. It is

older than pit O37/S47. The top two third is a more compact, yellow clay layer with daub pieces mixed with grey ashy lines. The bottom part was grey-brown humus with ash patches and daub. No find material was found in this pit. Diam.: 260 cm; D.: 140 cm.

O38/S48 (pit – Trench 3): Large, beehive shaped, deep pit with a sloping wall on the south side of the bottom. The northern side was irregular and elongated and some part of it continued under the section wall. It is partially excavated. The top of the filling was ashy dark brown humus sand with lines of daub pieces, while the lower part was light brown and strongly mixed. A medium amount of ceramics and a clay figurine were found in it. Diam.: 280 cm (up to the section wall); D.: 140 cm (south) 110 cm (north).

O39/S49 (pit – Trench 3): This pit was not excavated, so we have no further information about its content or extension.

O40/S50 (pit – Trench 3): Oval, probably beehive shaped pit. Its western side fell below the section wall. It was partially excavated. It connected with three other features, but their exact connection is not clear (O40/S61; O51/S65; O52/S68). It was filled up with grey-brown, loose, ashy humus mixed with clay patches, daub pieces and charcoal. An extremely high amount of ceramics and a clay figurine were found in it. Diam.: 310 cm; D.: 145 cm.

O40/S61 (pit – Trench 3): Another partially uncovered pit from the 40th pit complex. Kidney-shaped with vertical walls and the bottom was somewhat terraced. Its western part fell under the section wall, so it was partly excavated. Its exact connection with pit O40/S50 and O40/S62 cannot be determined. The fillings stratigraphic sequence was rather complex. Grey-brown and light brown sandy humus layers were alternating mixed with ash, daub and clay patches. A charcoal layer stood out. A large amount of ceramics were found in it. Diam.: 210×160 cm; D.: 220 cm.

O40/S62 (pit – Trench 3): This fully excavated pit was also part of the 40th pit complex. Beehive shaped pit with concave bottom. Its connection with pit O40/S61 is not clear, but it is older than pit O40/S63. It was similarly filled as the previous pits. It contained only a few ceramic fragments. Diam.: 165 cm; D.: 150 cm.

O40/S63 (pit – Trench 3): Round, beehive shaped pit with flat bottom. It is part of the 40th pit complex. It was only outlined at the lower 35–40 cm. Pit O40/S62 is older, while pit O40/S64 is younger than this. The upper two-third of its filling was loose, mixed with daub pieces and ashy fragments. The lower third was dark, compact humus with large clay pieces. This pit contained one of the largest amount of ceramic fragments and a single piece of clay figurine. Diam.: 170 cm; D.: 150 cm.

O40/S64 (pit – Trench 3): Pit with round top, flat bottom and beehive shape. Completely excavated. Pit O40/S63 is older than this. It is part of the 40th pit complex. The top of the filling was loose, mixed with daub, while the lower filling was dark brown humus, mixed with ashy patches and clay pieces that was poor in finds. The pit contained a medium amount of finds and a clay figurine. Diam.: 150 cm; D.: 130 cm.

O41/S51 (pit – Trench 3): Oval, shallow pit with vertical walls. Completely excavated. It was partially destroyed by the gas pipeline. Its filling was loose, grey-brown humus sand, mixed with ash and daub concentrates. A very small amount of ceramics were found in it. Diam.: 160×95 cm; D.: 15 cm.

O42/S52 (pit – Trench 3): Round, shallow pit. Its western side was not completely excavated. Its filling was grey-brown humus sand, mixed with a large amount of daub, yellow sand patches and charcoal pieces. There were no ceramic fragments in this pit. Diam.: 125 cm; D.: 10 cm.

O43/S53 (pit – Trench 3): Deep, rectangular pit with rounded corners and vertical walls. Its bottom had many round and amorphous holes. In the middle of each side postholes were detected (O43/S78; O43/S79; O43/S80). The northern side fell under the section wall, so it was not completely excavated. The south-western edge of the pit was over excavated, since it was hard to separate from the filling. The filling contained mostly grey-brown sandy humus mixed with a large amount of ashes, daub and sand patches. A charcoal layer could be highlighted as well. A huge amount of pottery was found in it, almost 10% of the entire find material from the excavation. It also contained a piece of clay figurine. Diam.: 260×420 cm; D.: 100–140 cm.

O43/S78 (posthole – Trench 3): Completely excavated posthole, which cuts the western side of pit O43/S53. Semi-circular sectioned. There was no find material in it. Diam.: 25×30 cm; D.: 50 cm.

O43/S79 (posthole – Trench 3): Posthole dug into the southern side of pit O43/S53. Its bottom was on the same level as the bottom of the pit. Fully excavated. No find material was found in it. Diam.: 25×30 cm; D.: 120 cm.

O43/S80 (posthole – Trench 3): Oval posthole that intersected the eastern side of pit O43/S53. Completely excavated, but no find material was found in it. Diam.: 30 cm; D.: 73 cm.

O44/S54 (pit – Trench 3): An unexcavated pit on the north-western side of the third trench. There is no information about its extent, shape or find material.

O45/S55 (pit – Trench 3): Large, round pit with flat bottom, vertical walls and beehive shaped eastern side. Completely excavated. It was intersected by the modern pipeline. The top of the filling was grey, loose humus mixed with ash and daub pieces and some black, charcoal layers. The lower layer was more compact, grey-brown humus sand, mixed with a large amount of daub pieces. A medium amount of ceramic fragments were found in it. Diam.: 360 cm; D.: 125 cm.

O46/S56 (pit – Trench 3): Beehive shaped, round pit.

Completely excavated. It was located quite close to the section wall, where the edge of another pit was detected at the bottom. Also at the bottom the southern side is 40 cm higher then the northern, which suggests that the pit was not fully dug into the soil. Its filling was light grey-brown humus sand mixed with daub pieces and yellow sandy patches. A medium amount of ceramics and a single piece of clay figurine were found in it. Diam.: 130 cm; D.: 110–145 cm.

O47/S57 (pit – Trench 1): Round pit with sloping walls on its remaining side. Partly excavated. One side fell under the section wall of the first trench's eastern side. Pit O19/S33 is younger next to it. Its filling was grey-brown sandy humus with a few daub and sand patches. A small amount of ceramics were found in it. Diam.: 120 cm; D.: 65 cm.

O48/S58A (posthole – Trench 1): Round posthole with funnelling shape towards the bottom. Fully excavated. Its filling was grey, loose sandy humus. Some ceramic pieces and a claw that presumably belonged to a bird of prey was found in it. Diam.: 40 cm; D.: 40 cm.

O48/S58B (pit – Trench 3): Round pit with vertical walls, which gradually deepened on one side. The top of the filling was brown sandy humus. The middle contained a dark brown loose layer mixed with ceramics, animal bones, daub and charcoal pieces. The lower layer was grey-brown humus sand, mixed with more daub pieces, yellow clay patches and charcoal. Unlike the other features, this pit consisted of the finds of the tumulus culture. Diam.: 180×150 cm.

O49/S59 (pit – Trench 3): Partially excavated, round pit with vertical walls and flat bottom. Half of the pit fell below the southern side of section wall. Its connection to pit O50/S60 is not certain. Its filling consist of 2 layers that are mixed with daub pieces and yellow clay patches. The upper layer was grey-brown humus sand, and the lower was light brown, sand mixed with humus. A medium amount of pottery fragments were found in it. Diam.: 200 cm; D.: 65 cm.

O50/S60 (pit – Trench 3): This round pit had a slightly beehive shaped wall and flat bottom. Completely excavated. Pit O48/S58B is older, and its connection with pit O49/S59 is not known. A collapsed, light brown humus sand layer can be separated from the dark brown sandy humus filling, which was mixed with yellow clay patches and daub pieces. No find material was in this pit. Diam.: 185 cm; D.: 75 cm.

O51/S65 (pit – Trench 3): Round pit with vertical walls and flat bottom. It intersected the 40th pit complex. Fully excavated. The closely situated pit O48/S58B was older. It was filled with grey-brown sandy humus. There were no ceramic fragments in the pit, but 2 clay figurines were found. Diam.: 150 cm; D.: 120 cm.

O52/S68 (pit – Trench 3): Completely excavated, round pit. It had terraced walls in concentric circles towards the bottom and it contained a smaller, concave pit at the bottom. The adjacent pit O40/S50 was older. Its filling had several layers: dark brown, black and grey-brown layers were alternating. Its loose filling was mixed with daub, clay patches and charcoal. A very large amount of ceramics and a clay figurine were found in it. Diam.: 340 cm; D.: 120 cm.

O53/S70 (pit – Trench 3): Round, beehive shaped pit with flat bottom. Partially excavated. Pit O54/S71 was contemporaneous with it. The top of its filling was loose, ashy, grey humus, while its lower part was more compact, light brown sandy humus mixed with daub and clay pieces. A medium amount of ceramic fragments were found in it. Diam.: 160 cm; D.: 155 cm.

O54/S71 (pit – Trench 3): Beehive shaped, round pit with flat bottom. A part of it continues in the section wall, so it was partly excavated. The adjacent pit O53/S70 was contemporaneous with it. Its filling was multi-layered, on the top loose, ashy humus with daub pieces, and on the lower part a more compact, brown humus mixed with daub. A medium amount of ceramic fragments were found in it. Diam.: 180 cm; D.: 160 cm.

O54/S72 (pit – Trench 3): Round, beehive shaped pit with flat bottom. It lied next to pit O54/S71. It was partially excavated. Its filling was the same as the adjacent pit described above. Only a few ceramic fragments were discovered in it. Diam.: 140×130 cm (the excavated part).

O55/S73 (posthole – Trench 3): Completely excavated, round posthole with a U-shape cross-section. It was filled with grey-brown humus sand, mixed with yellow clay patches, daub pieces and charcoal. Its periodization is unknown, since no finds were found in it. Diam.: 25 cm; D.: 26 cm.

O55/S74 (posthole – Trench 3): Round posthole with U-shape cross-section. Completely excavated. Its filling was grey-brown humus sand mixed with a large amount of daub, yellow sand patches and charcoal pieces. It could not be dated since no find material was found in it. Diam.: 23 cm; D.: 17 cm.

O55/S75 (posthole – Trench 3): Round posthole with U-shape cross-section. Fully excavated. Its grey-brown filling was mixed with daub, charcoal and yellow sand patches. In the absence of finds, its dating is unknown. Diam.: 20 cm; D.: 18 cm.

O56/S76 (pit – Trench 3): Beehive shaped, round pit, with slightly convex bottom that continues upwards on its western part. It was partially excavated. The adjacent pit O54/S72 was younger. Its filling was alternating between light brown, grey-brown and dark brown layers. These layers were mixed with clay and daub pieces. A small amount of ceramic fragments were found in it. Diam.: 130×70 cm.

O57/S81 (vessel – Trench 5): While removing the top-

soil from the fifth trench, the bucket of the excavator machine has cut this alone standing medium-sized container at about its carination. There were no traces of any feature outline or any indication of digging-in around the vessel. Completely excavated. Diam.: 40 cm; D.: 7 cm.

O147/S57 (ditch part – Trench 3): V-shape cross-sectioned ditch with east-west direction. Completely excavated. It was filled with grey sandy humus, which contained a large amount of daub pieces and yellow sand patches. It is a modern feature, which was mixed with the filling of the adjacent prehistoric pits during its development. Diam.: 90 cm; D.: 40 cm.

O147/S66 (ditch part – Trench 3): V-shape cross-sectioned ditch. Completely excavated. Modern-day feature. Its filling was dark brown humus with yellow sand patches and daub fragments. Diam.: 110 cm; D.: 50 cm.

O147/S67 (ditch part – Trench 3): Modern-day, V-shape cross-sectioned ditch. Partially excavated. It was filled with dark humus mixed with clay patches. It was mixed with the filling of the adjacent pit. Diam.: 90 cm; D.: 85 cm.

O147/S77 (ditch part – Trench 3): V-shape cross-sectioned ditch. Fully excavated. Its filling was dark humus mixed with daub pieces and grey ashy patches. This modern-day ditch intersected pit O41/S51. Diam.: 90 cm; D.: 70 cm.

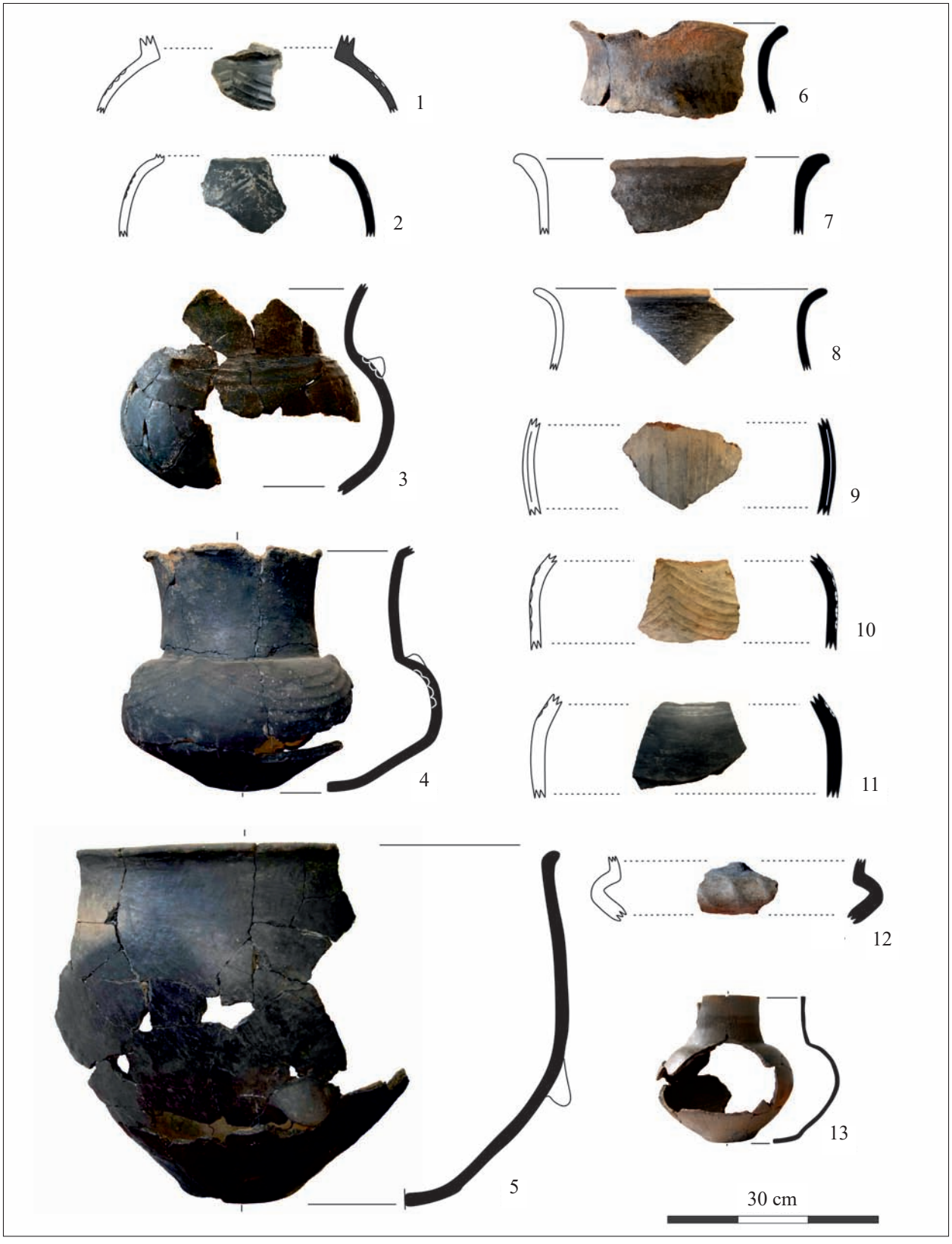

Fig. 30 Large storage vessels. 2, 3, 6, 8: Type A.4; 4: Type A.5; 1, 7: Type A.6; 9–11, 12: Type A.7
30. kép Nagyméretű tárolóedények. 2, 3, 6, 8: A.4. típus; 4: A.5. típus; 1, 7: A.6. típus; 9–11, 12: A.7. típus

Fig. 31 Large storage vessels. 1: Type A.5; 2, 8, 9: Type A.6; 5, 7: Type A.7; 3, 6: Type A.8; 4: Type A.9
31. kép Nagyméretű tárolóedények. 1: A.5. típus; 2, 8, 9: A.6. típus; 5, 7: A.7. típus; 3, 6: A.8. típus; 4: A.9. típus

Fig. 32 Large storage vessels. 2–3, 5–6, 10: Type A.4; 8–12: Type A.5; 4, 7: Type A.6; 1, 9, 11: Type A.7
32. kép Nagyméretű tárolóedények. 2–3, 5–6, 10: A.4. típus; 8–12: A.5. típus; 4, 7: A.6. típus; 1, 9, 11: A.7. típus

Fig. 33 Large storage vessels. 1, 4: Type A.4; 2: Type A.5; 5–6: Type A.6; 3: Type A.7
33. kép Nagyméretű tárolóedények. 1, 4: A.4. típus; 2: A.5. típus; 5–6: A.6. típus; 3: A.7. típus

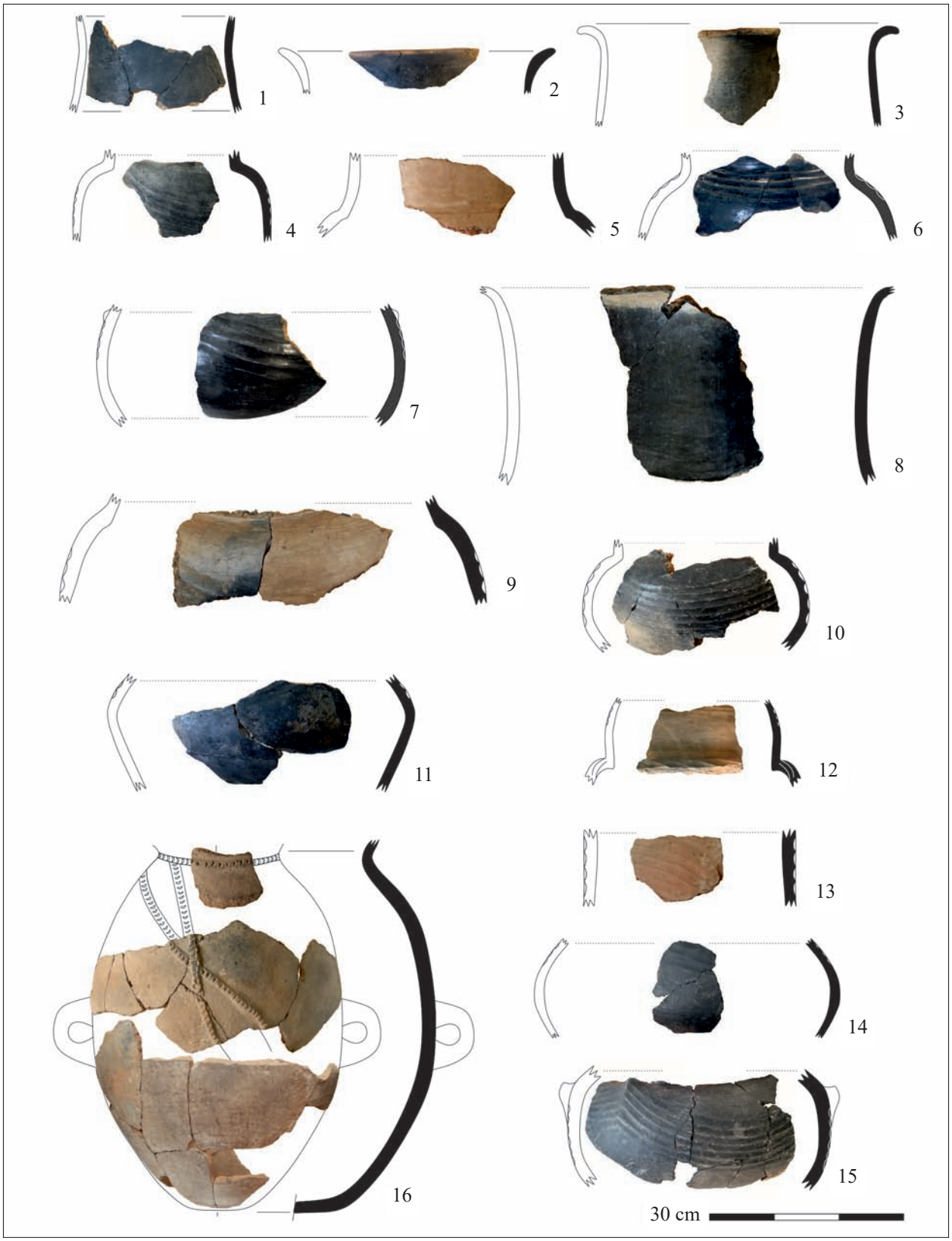

Fig. 34 Large storage vessels. 1–3, 6–10: Type A.6; 4–5: Type A.4; 11, 14: Type A.7; 13: Type A.8; 15: Type A.5
34. kép Nagyméretű tárolóedények. 1–3, 6–10: A.6. típus; 4–5: A.4. típus; 11, 14: A.7. típus; 13: A.8. típus; 15: A.5. típus

Fig. 35 Large storage vessels. 1: Type A.4; 2, 4, 6, 9–10, 12: Type A.8; 3, 11: Type A.7; 5, 7–8, 13–14; Type A.5
35. kép Nagyméretű tárolóedények. 1: A.4. típus; 2, 4, 6, 9–10, 12: A.8. típus; 3, 11: A.7. típus; 5, 7–8, 13–14: A.5. típus

Fig. 36 Bowls. 1: Type B.4; 2: Type B.5; 3: Type B.8; 4, 6, 10: Type B.2; 5, 8: Type B.7; 7: Type B.6; 9: Type B.3
36. kép Tálak. 1: B.4. típus; 2: B.5. típus; 3: B.8. típus; 4, 6, 10: B.2. típus; 5, 8: B.7. típus; 7: B.6. típus; 9: B.3. típus

Fig. 37 Jars and deep bowls. 1–8, 11–12: Type C.1; 9: Type C.4; 10: Type C.5
37. kép Korsók és mélytálak. 1–8, 11–12: C.1. típus; 9: C.4. típus; 10: C.5. típus

Fig. 38 Jars and deep bowls. 1, 3: Type C.6; 2: Type C.8; 4: Type C.3; 5: Type C.4; 6: Type C.2; 7: Type C.7; 8–9: Type C.9

38. kép Korsók és mélytálak. 1, 3: C.6 típus; 2: C.8 típus; 4: C.3 típus; 5: C.4 típus; 6: C.2 típus; 7: C.7 típus; 8–9: C.9 típus

Fig. 39 Jars and deep bowls. 1, 7: Type C.5; 2–3, 5, 8: Type C.9; 4: Type C.8; 6: Type C.7; 9: Type C.6
39. kép Korsók és mélytálak. 1, 7: C.5 típus; 2–3, 5, 8: C.9 típus; 4: C.8 típus; 6: C.7 típus; 9: C.6 típus

Fig. 40 Cups and mugs. 1, 3: Type D.3; 2, 10: Type D.13; 4, 7, 9: Type D.4; 5: Type D.14; 6: Type D.11; 8: Type D.9
40. kép Csészék és bögrék. 1, 3: D.3 típus; 2, 10: D.13 típus; 4, 7, 9: D.4 típus; 5: D.14 típus; 6: D.11 típus; 8: D.9 típus

Fig. 41 Cups and mugs. 1–2, 5, 7: Type D.1; 3, 8, 10: Type D.3; 4, 6: Type D.4; 9: Type D.16; 11: Type D.15
41. kép Csészék és bögrék. 1–2, 5, 7: D.1 típus; 3, 8, 10: D.3 típus; 4, 6: D.4 típus; 9: D.16 típus; 11: D.15 típus

Fig. 42 Cups and mugs. 1–8: Type D.3; 10: Type D.4; 12: Type D.6; 11: Type D.7; 9: Type D.9
42. kép Csészék és bögrék. 1–8: D.3 típus; 10: D.4 típus; 12: D.6 típus; 11: D.7 típus; 9: D.9 típus

Fig. 43 Cups and mugs. 1: Type D.10; 2: Type D.2; 3: Type D.8; 4, 6: Type D.11; 5: Type D.5; 7, 9–10, 12–13: Type D.14; 8: Type D.12; 11: Type D.6

43. kép Csészék és bögrék. 1: D.10 típus; 2: D.2 típus; 3: D.8 típus; 4, 6: D.11 típus; 5: D.5 típus; 7, 9–10, 12–13: D.14 típus; 8: D.12 típus; 11: D.6 típus

Fig. 44 Cups and mugs. 1–5: Type D.14; 6–7: Type D.12; 8: Type D.5; 9: Type D.4
44. kép Csészék és bögrék. 1–5: D.14 típus; 6–7: D.12 típus; 8: D.5 típus; 9: D.4 típus

Fig. 45 Pots and cooking vessels. 1, 3–7: Type E.2; 2, 8: Type E.1
45. kép Fazekak és főzőedények. 1, 3–7: E.2 típus; 2, 8: E.1 típus

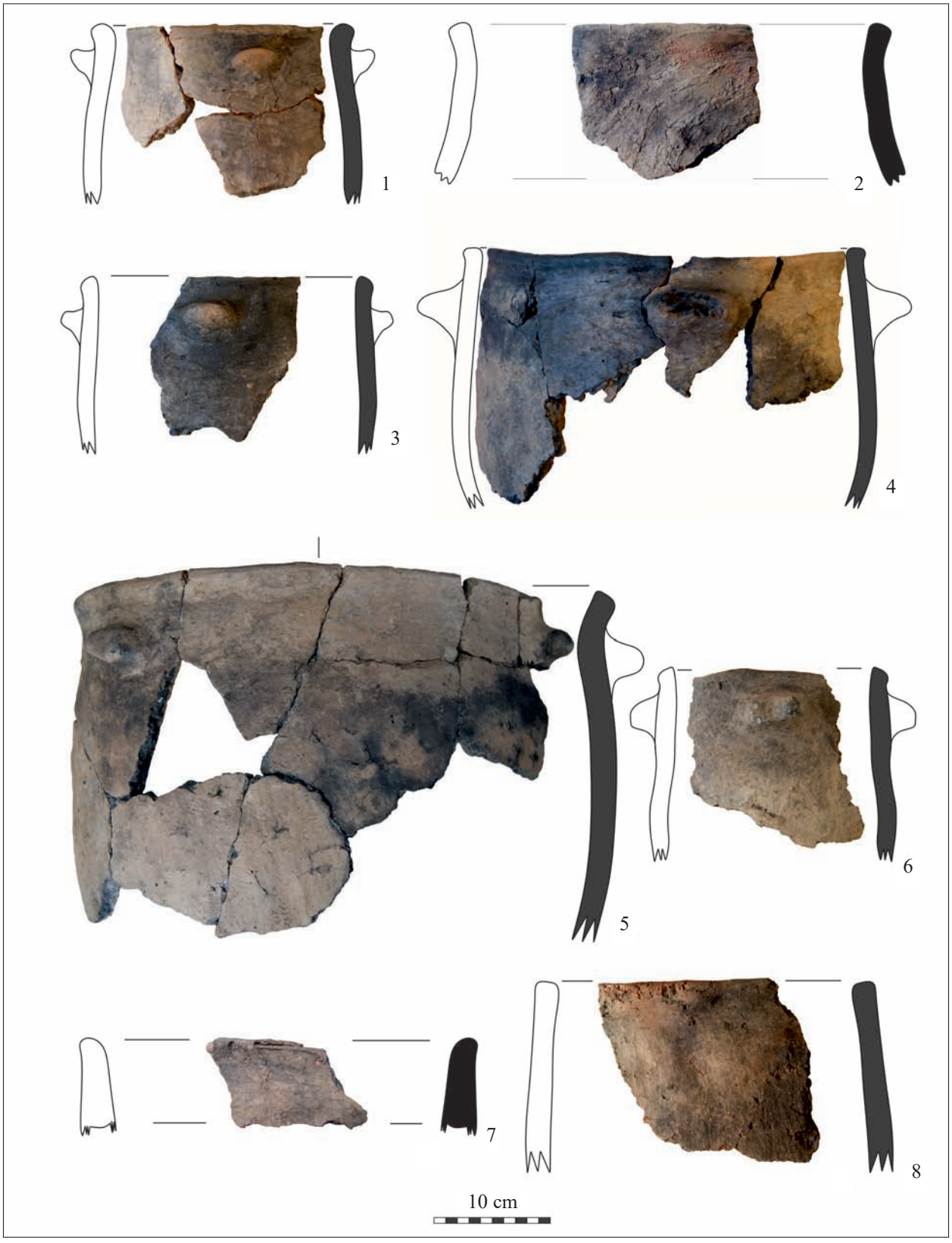

Fig. 46 Pots and cooking vessels. 1, 3–6: Type E.2; 2, 7–8: Type E.1
46. kép Fazekak és főzőedények. 1, 3–6: E.2 típus; 2, 7–8: E.1 típus

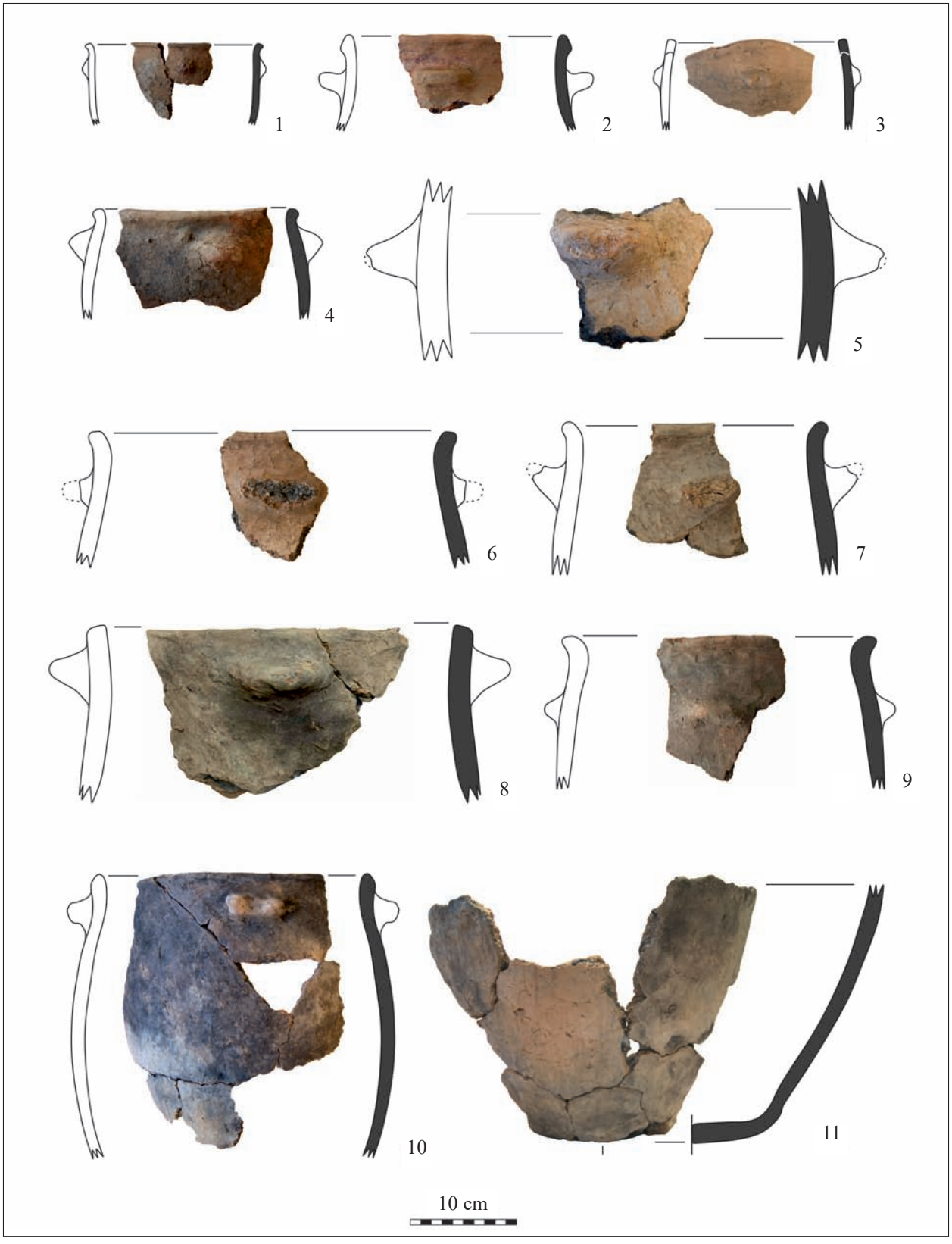

Fig. 47 Pots and cooking vessels. 1–10: Type E.2
47. kép Fazekak és főzőedények. 1–10: E.2. típus

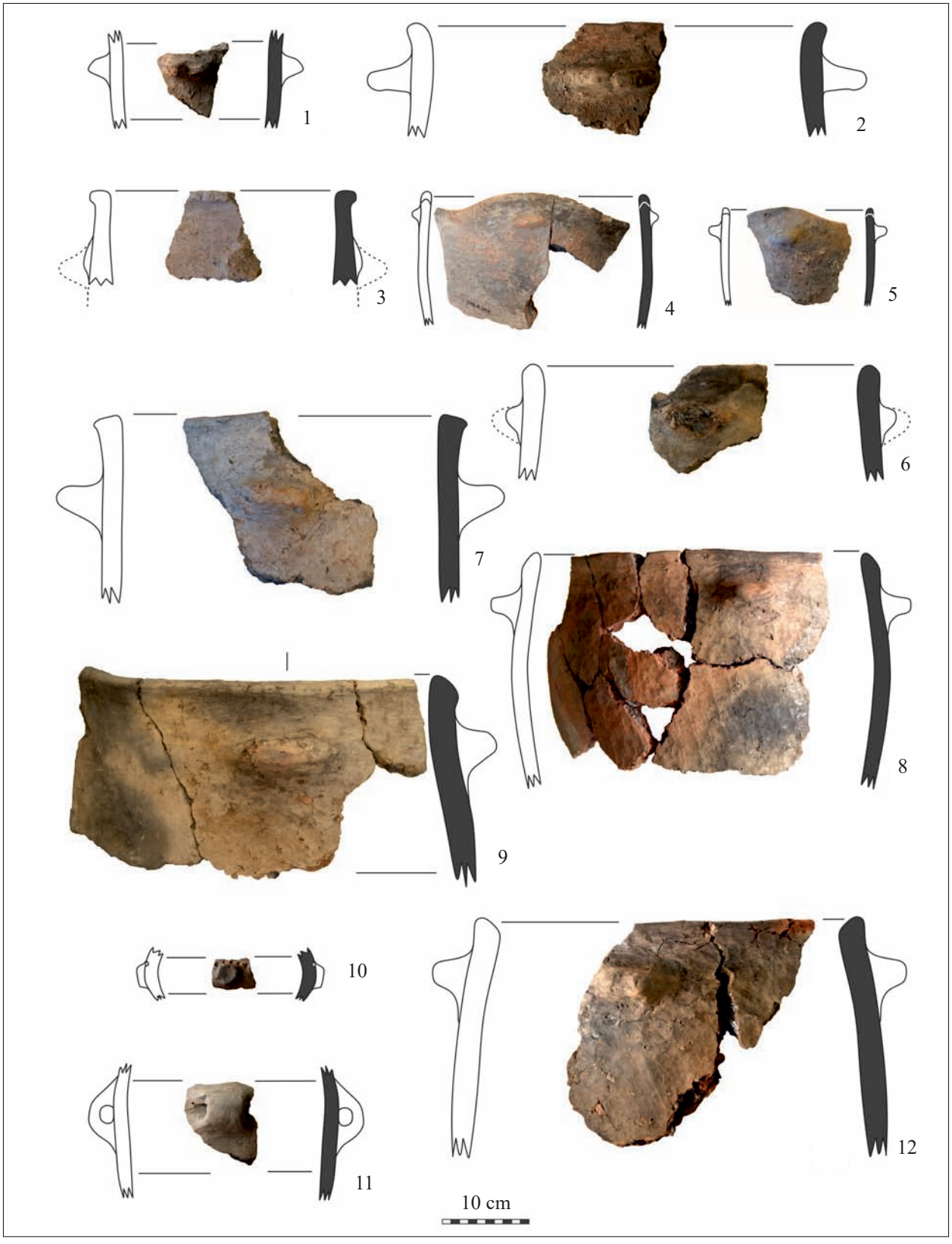

Fig. 48 Pots and cooking vessels. 1–2, 4–9, 12: Type E.2; 3: Type E.4; 10: Type E.3
48. kép Fazekak és főzőedények. 1–2, 4–9, 12: E.2 típus; 3: E.4 típus; 10: E.3 típus

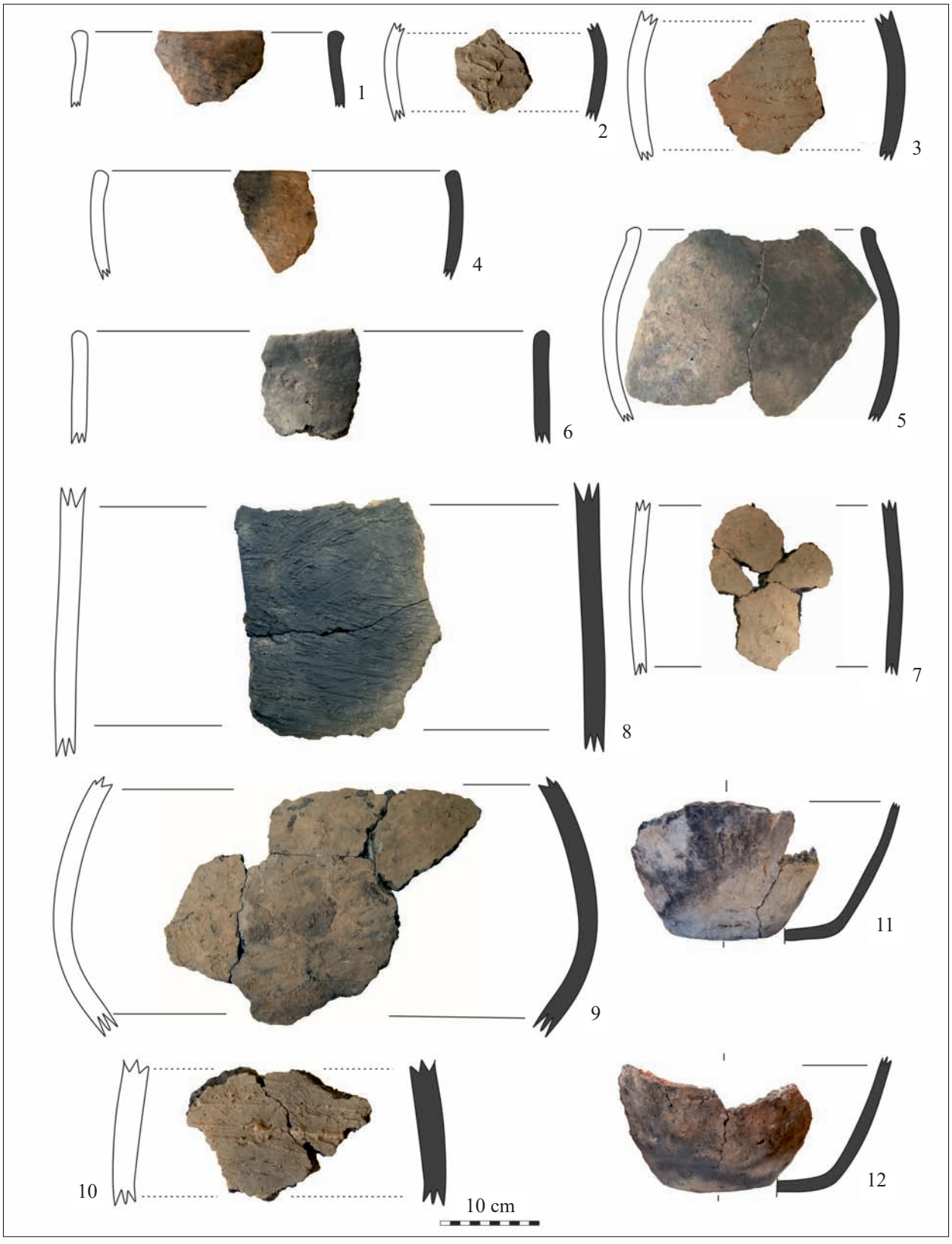

Fig. 49 Pots and cooking vessels. 1–12: Type E.1
49. kép Fazekak és főzőedények. 1–12: E.1 típus

Fig. 50 Pots and cooking vessels. 1–2, 4–7, 9–10: Type E.4; 3: Type E.2; 8, 11–12: Type E.1
50. kép Fazekak és főzőedények. 1–2, 4–7, 9–10: E.4 típus; 3: E.2 típus; 8, 11–12: E.1 típus

Fig. 51 Pots and cooking vessels. 1–3, 5, 11: Type E.1; 4, 6–10: Type E.4
51. kép Fazekak és főzőedények. 1–3, 5, 11: E.1. típus; 4, 6–10: E.4. típus

Fig. 52 Other clay objects. 1–3: lids; 4–7: spindle-whorls; 8–17: loom weights
52. kép Egyéb agyagtárgyak. 1–3: fedők; 4–7: orsógombok; 8–17: szövőszék nehezékek

Notes

1 Other sites: Baks-Csontospart 3–4–5 (Farkas 1995, 18–20; V. Szabó 1996, 14).
2 For the description of features, I used the excavation document: Baks-Temetőpart, Description of Stratigraphic Units, 2007.
3 One of the intersections of the ditch got the number O47/S57 in the documentation, which is also the number of a storage pit. To prevent any confusion I have changed all the feature numbers that belonged to this ditch to O147, which makes it easier to separate the modern-day and the prehistoric features. The 4 intersections of the ditch are: O147/57, O147/66, O147/67, O147/77.
4 There are no data about the exact distribution of ceramic fragments within layers, so they are not comparable. The packaging of finds happened by pits.
5 The analysis of the animal bones was carried out by Anna Zsófia Biller. I have used the manuscript version of her research results (In the following: Biller 2018).
6 From the unexcavated part of the pit, more vessel fragments can be assumed.
7 It is difficult to reconstruct the exact capacity of the vessels, since some of them are highly fragmented. If we calculate with 50 cm tall and 45 cm wide dishes, which were probably not filled up until the rim (only to a height of 35 cm), then a vessel could hold over 60 litres. This could mean 360 litres of liquid in case of six vessels with similar dimensions.
8 As a single parallel, he mentions a piece found at the Kraków-Nowa Huta site (Bazielich 1984, Ris. 6; Bazielich 1986, Abb. 6), which shows connection the Pre-Gáva and Proto-Gáva-ceramic styles (V. Szabó 2002, 12). This example from Poland is somewhat wider and its body is less elongated (e.g. Przybyła 2009, 302–303, 313–314, Fig. 87.1).
9 Szőreg C (Kemenczei 1984, Taf. CXXIV.11; V. Szabó 1996, 51. kép 3; V. Szabó 2002, 4. ábra X.20, 89. kép 3), as well as Szentes-Belsőecser I (V. Szabó 2002, 4. ábra X.18, 86. kép 1).
10 Unlike the division of Gábor V. Szabó, I treat his two subgroups as one, because the only difference is the slightly broader body, within the same form (V. Szabó 2002, 45).
11 e.g. Piliny culture: Litke (Kemenczei 1984, Taf. X. 17, 22); Kyjatice culture: Szajla (Kemenczei 1984, Taf. LXXI.15; Taf. LXXIII.16); Rei. Br D–HaA1: Igrici-Zombori tanya (B. Hellebrandt 1990, 9. kép 4); Nagykálló-Telekoldal (Kemenczei 1982, Abb. 9.6), Hódmezővásárhely-Solt-Palé (V. Szabó 1996, 40. kép 6–8, 44. kép 7), Taktabáj (Kemenczei 1984, Taf. CLIX.5, 10, 16–17).
12 e.g. Füzesabony-Öregdomb (Kemenczei 1989a, 5. ábra 6).
13 Dr. Gábor V. Szabó's personal communication.
14 If the fragments would have belonged to the later Basarab culture of the HaC1 period, it would significantly postpone the dating of the site. According to Gábor V. Szabó, if the pieces *„could be parts of this circle, then we could count with an independent find horizon, similarly to the site of Teleac from Transylvania"* (Ciugudean 2009, 69–70; V. Szabó 2011a, 97). This is not a decisive question based on so few and such small fragment, but it could be considered as an option.
15 The pieces found at the Austrian sites were collected by Karina Grömer. She organised them into typological tables. (Štolcová-Belanová–Grömer 2010, Fig. 3.4; Grömer 2016, Fig. 39). Helena Březinová and Renáta Přichystalová worked with the pieces that were found in the Czech Republic (Marek–Kostelníková 1998, Obr. 14–17; Březinová–Přichystalová 2014, Tab. 4–5).
16 There are much more evidence about board games in the Middle East, because those discs are more decorated and boards are often discovered, too (See Parlett 1999, 63; Becker 2007; Finkel 2007).
17 Though this find material was dated to the Rei. Br D–HaA1 period, and it is not classical Gáva.
18 Three distinct groups can be separated based on the functionality of the vessels: 1) Large and medium storage and serving vessels, which can be observed both during the period of the Pre- and Proto-Gáva and the classical Gáva ceramics styles; 2) A single, nicely decorated, large storage vessel was deposited, which is frequent in the HaA2–HaB1 period; 3) A large set of drinking and eating utensils, along with some large storage or serving vessels. It always consists of the best quality pots and they are only widespread during the Pre- and Proto-Gáva-ceramic styles (Stapel 1999, 109; V. Szabó 2004a, 86–87).
19 Various micro- and macro-archaeobotanical, as well as lipid studies were proved to be useful in detecting alcohol or other dairy product residues (Evershed–Dudd 2002; McGovern 2009; McGovern–Hall–Mirzoian 2013).
20 In addition, the potter had to take into account more efficiency factors while shaping the ceramics, of which functions should the vessel serve, e.g. accessibility, stability, transportability, capacity, heat and thermal shock efficiency (Skibo 2013, 31–36, Tab. 2.1).
21 If the vessel reaches 400ºC heat, no soot is formed on its wall, although this is a very high heat effect and it is probably rare during cooking (Skibo 2013, 92).
22 From the previous periods, used vessels were often found in graves that were not new and personally designed for the deceased. Among the tumulus

culture, for example: Jobbágyi-Hosszú-dűlő (Fülöp–Váczi 2014).

23 We know almost nothing about the funerary practices of the Gáva-ceramic style, since there are not many graves that can be dated to this period so far. For the burials of the Gáva period, see Király 2011; Király 2012; Király 2013.

24 Philippine women use recycled storage vessels at different stages of production and drying.

25 The two main components are the bowl types B.2. and B.7.

26 The pits in the first trench were in a group on the diagram and they were located in the southernmost part of the site, while the third trench was located in the northernmost part of the site and its pits were also forming a group.

27 e.g. The B.1. and B.7. bowl types already have formal antecedents since the tumulus and Kyjatice culture.

28 The form has antecedents during the Pre- and Proto-Gáva-ceramic styles, but the garland-patterned pieces will be the characteristic vessels of the classical Gáva style.

29 Based on personal communication, the trenches were drawn around the most intense ceramic concentrations.

30 According to Emília Pásztor the NE-SW position was typical at the time of the Gáva-ceramic style, although this assumption was based only on three sites. The arrangement could have been influenced by natural factors, like the number of sunny hours, wind direction, but by human determination or rarely symbolic factors, too (Pásztor 2011, 202–214).

31 In the area of Békés County, Gergely Bóka has collected the sites from this period and he observed a rather dense settlement distribution (Bóka 2012a; Bóka 2012b; Bóka 2013).

32 The evaluation of soil samples, daub and archaeobotanical samples may provide more information in the future.

33 Abbreviations: Diam.: Diameter; D.: Depth.

BIBLIOGRAPHY

Aerts, Sander E. I.
2016 *Detecting Cultural Formation Processes Through Artropod Assemblages. A conceptual model for urban Archaeological waste-/Cesspits*. In: Langbroek, M.–Nieuwenkamp, R.–Peeters, D.–Reidsma, F.–Vlaskamp, R. (eds.), INTER–SECTION. Innovative Approaches by Junior Archaeologists 2. Leiden, 22–28.

Ailincăi, Sorin-Cristian
2016 *Analysis and interpretation of Babadag culture pottery decorating style*. In: Zanoci, A.–Kaiser, E.–Kashuba, M.–Izbitser, E.–Băt, M. (eds.), Mensch, Kultur und Geselschaft von der Kupferzeit bis zur frühen Eisenzeit im nördlichen Eurasien. Beiträge zu Ehren zum 60. Geburtstag von Eugen Sava. Tyragetia International I. Chişinău, 319–336.

B. Hellebrandt Magdolna
1990 *Az igrici kerámiadepot. – Der Gefässverwahrfund von Igrici*. Communicationes Archaeologicae Hungariae, 93–111.
2016 *A Gáva–kultúra települése Köröm–Kápolna–Dombon. – A settlement of the Gáva Culture on Köröm-Kápolna-domb*. A Herman Ottó Múzeum Évkönyve 55, 11–124.

Bader, Tiberius
2012 *Bemerkungen* über *die Gáva Kultur. Geschichte und Stand der Forschung. Ein Überblick*. In: Marta, L. (ed.), The Gáva Culture in the Tisa Plain and Transylvania. – Die Gáva–Kultur in der Theisebene und Siebenburgen. Symposium in Satu Mare 17–18 June/Juni 2011. Satu Mare, 7–22.

Baxter, Michael J.–Cool, Hilary E. M.
2010 *Correspondance analysis for archaeologists: an educational account.* Archeologia e Calcolari 21, 211–228.

Bazielich, Maria
1984 *Elementy Kultury Gáva w Rejonie Krakowa-Nowej Huty. – Elements of the Gáva Culture in the area of Cracow-Nowa Huta*. Archeologia Polski 29 Z.2, 317–349.

1986 *Die in Kraków gefundenen Elemente der Gáva-Kultur als Beitrag zu Forschungen über Kontakte Kleinpolens mit der Ostslowakei*. In: Choprovsky, B. (red.), Urzeitliche und frühhistorische Besiedlung der Ostslowakei in Bezug zu den Nachbargebieten. Nitra, 145–150.

Becker, Andrea
2007 *The Royal Game of Ur*. London.

Biller Anna Zsófia
2018 *Baks-Temetőpart régészeti* állattani *kiértékelés*. Manuscript.

Bóka, Gergely
2012a *Changes in the Settlement History of the Late Bronze and Iron Age Körös Region. Hydrology, Reliefs and Settlements*. In: Marta, L. (ed.), The Gáva Culture in the Tisa Plain and Transylvania. Die Gáva-Kultur in der Theisebene und Siebenbürgen. Symposium in Satu Mare 17–18 June/Juni 2011. Satu Mare, 23–33.

2012b *Településtörténeti változások a Körös-vidéken a késő bronzkorban és a vaskorban. Vízrajz, térszínek és települések*. In: Kreiter, A.–Pető, Á.–Tugya, B. (szerk.), Környezet–Ember–Kultúra. A természettudományok és a régészet párbeszéde. Budapest, 57–67.

2013 *Településtörténeti változások a Körös vidéken a késő bronzkorban* és *vaskorban. II. Paleoökológiai elemzés. Talajtípusok* és *településrendszer*. In: Marta, L. (ed.), Peregrinări Arheologice între Estul si Vestul Europei. Studii în Onoarea lui Tiberiu Bader la Aniversarea de 75 de Ani. Satu Mare. Studii şi Comunicări 29/1, 269–311.

Bondár Mária–D. Matuz Edit–Szabó J. József
1998 *Rézkori és bronzkori településnyomok Battonya határában. – Kupfer- und bronzezeitliche Siedlungsspuren in der Gemarkung von Battonya*. A Móra Ferenc Múzeum Évkönyve – Studia Archaeologica 4, 7–53.

Borisov, Alexander V.
2010 *Natural processes in the infilling of foundation pits of medieval buildings* (summary). Rossijskaja Arheologija 3, 119–129.

Březinová, Helena–Přichystalová, Renáta
2014 *Úvahy o textilní výrobě na Pohansku na základě analýzy nálezů textilních fragmentů a předmětů souvisejících se spřádáním a tkaním. – An Examination of Textile Production at Pohansko on the Basis of an Analysis of Textile Fragments and Artefacts Connected with Spinning and Weaving*. Památky Archeologické 105, 155–214.

Bukvić, Ľubomír
2000 *Kanelovana keramika Gáva kompleksa u Banatu*. Novi Sad.

Ciugudean, Horia
2009 *Bemerkungen zur Chronologie der Befestigten Siedlung von Teleac*. Analele Banatului, Arheologie–Istorie 17, 65–94.

2010 *The Late Bronze Age in Transylvania (With primary focus on the central and Southern areas)*. In: Marta, L. (hrsg.), Amurgul Mileniului II A. Chr. în Câmpia Tisei si Transilvania. – Das Ende des 2. Jahrtausendes v. Chr. auf der Theiß–Ebene und Siebenbürgen. Simpozion Satu Mare 18–19 iulie 2008. Satu Mare, 157–202.

2011 *Periodizarea Culturii Gáva în Transilvania* în *Lumina Noilor Cercetări*. Apulum. Acta Musei Apulensis: Series Archaeologica et Anthropologica 48, 69–102.

2012 *The chronology of the Gáva culture in Transylvania. – Chronologia kultury Gava w Siedmiogrodzie*. In: Blajer, W. (ed.), Peregrinationes archaeologicae in Asia et Europa Joanni Chochorowski dedicatae. Instytut Archeologii Uniwersytetu Jagiellońskiego. Kraków, 229–244.

Costea, Florea–Bălos, Angelica–Savu, Lucica–Ardevan, Radu–Ursuţiu, Adrian–Şoneriu, Ioan–El Susi, Georgeta–Ciută, Beatrice–Ştefan, Călin Dan–Duţescu M. M.
2006 *Augustin-Tipia Ormenisului, judetul Brasov*. Monografie arheologica (I). Brasov.
Czukor Péter–Priskin Anna–Szalontai Csaba–Szeverényi Vajk
2017 *Késő bronzkori földvárak a Dél-Alföldön. – Late Bronze Age fortified settlements in the southern Great Pannonian Plain*. In: V. Szabó G.–Bálint M.–Váczi G. (szerk.), A második hajdúböszörményi szitula és kapcsolatrendszere. – The second situla of Hajdúböszörmény and its relations. Studia Oppidorum Haidonicalium 13. Budapest/Hajdúböszörmény, 211–230.
Dani János
1999 *A Gáva-kultúra urnatemetője Vencsellő-Kastélykert lelőhelyről. – Das Urnengräberfeld der Gáva-Kultur vom Fundort Vencsellő-Schlosspark*. A Nyíregyházi Jósa András Múzeum Évkönyve 41, 109–136.
Demeterová, Soňa
1986 *Počiatky Gávskej Kultúry na Východnom Slovensku. – Die Anfänge der Gáva-Kultur in der Slowakei*. Slovenská Archeológia 34, 97–131.
Dövényi Zoltán
2010 *Magyarország kistájainak katasztere*. MTA Földrajztudományi Kutatóintézet, Budapest.
Drennan, Robert D.
2009 *Statistics for Archaeologists. A Common Sense Approach*. Second Edition. New York.
Ekholm, Susanna. M.
1984 *When refuse isn't garbage. Mesoamerican end-of-cycle ceremonial refuse*. Paper presented at the 49th Annual Meeting of the Society for American Archaeology. Portland.
Evershed, Richard P.–Dudd, Stephanie N.
2002 *Identification of animal fats via compound specific d13C values of individual fatty acids: assessments of results for reference fats and lipid extracts of archaeological pottery vessels*. Documenta Prehistorica 29, 73–96.
Fábián Szilvia–Csippán Péter
2011 *Hajléktalan badeniek? Háztartások lokalizációjának lehetőségei Balatonkeresztúr-Réti-dűlő késő rézkori lelőhelyén. – Homeless Badern people? The possibilities of the localization of household on a Late Copper Age site at Balatonkeresztúr-Réti-dűlő*. Ősrégészeti Levelek/Prehistoric Newsletter 13, 128–162.
Farkas Csilla
1995 *Baks község régészeti topográfiája* és *településtörténete*. Thesis. József Attila Univeristy. Szeged.
Finkel, Irving L. (ed.)
2007 *Ancient Board Games in Perspective: Papers from the 1990 British Museum colloquium with additional contributions*. London.
Furmánek, Václav–Veliačik, Ladislav–Vladár, Jozef
1999 *Die Bronzezeit im Slowakischen Raum*. Prähistorische Archäologie in Südosteuropa 15. Rahden/Westf.
Fülöp, Kristóf–Váczi, Gábor
2014 *Preliminary report on the excavation of a new Late Bronze Age cemetery from Jobbágyi (North Hungary)*. Dissertationes Archaeologicae ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae 3/2, 413–422.
Füzesi, András–Bartus, Dávid–Fülöp, Kristóf–Juhász, Lajos–Rupnik, László–Siklósi, Zsuzsanna–V. Szabó, Gábor–Szilágyi, Márton–Váczi, Gábor
2015 *Preliminary report on the field surveys and excavations in the vicinity of*

Berettyóújfalu. Dissertationes Archaeologicae ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae 3/3, 223–240.

Grömer, Karina
2016 *The Art of Prehistoric Textile Making. The development of craft traditions and clothing in Central Europe*. Vienna.

Gumă, Marian
1993 *Civilizatia Primei Epoci a Fierului in Sud-Vestul Romaniei. – Die Zivilisation der Älteren Eisenzeit in Südwest Rumänien*. Bibliotheca Thracologica 4. Bucuresti.
1995 *The end of the Bronze Age and the beginning of the Early Iron Age in South-western Romania, western Serbia and north-western Bulgaria. A short rewiew*. Thraco-Dacica 16, 99–137.

Hänsel, Bernhard
1976 *Beiträge zur regionalen und chronologischen Gliederung der älteren Hallstattzeit an der unteren Donau*. Beiträge zur ur- und frühgeschichtlichen Archäologie des Mittelmeer-Kulturraumes 16–17. Bonn.

Ilon Gábor
2013 *Gyűjtő a velemi Szent Vid-hegy lábánál. Vezető Kern István magángyűjteményében. – Sammler am Fusse des St. Veit Berges bei Velem*. *Führer in der Privatsammlung von István Kern.* Pannonkör füzetek 4. Kőszeg.

Jankovich B. Dénes–Makkay János–Szőke Béla Miklós
1989 *Békés megye régészeti topográfiája. A szarvasi járás IV/2.* Magyarország régészeti topográfiája 8. Budapest.

Jankovits, Katalin
2004 *Ein Hausrest der Proto-Gáva Kultur in Sarkadkeresztúr-Csapháti-Weide (Komitat Békés).* Communicationes Archaeologicae Hungariae, 65–77.

Kacsó, Carol
2001 *Zur chronologischen und kulturrellen Stellung des Hügelgräberfeldes von Lăpuş*. In: Kacsó, C. (hrsg.), Der nordkarpatiscbe Raum in der Bronzezeit. Symposium Baia Mare, 7.–10. Oktober 1998. Bibliotheca Marmatia 1. Baia Mare, 231–278.
2008 *Contribuţii la Cunoaşterea Bronzului Târziu din Nord-Vestul Transilvaniei. Cercetările de la Culciu Mare. – Beiträge zur Kenntnis der Spätbronzezeit im Nordwesten Transsilvaniens. Die Ausgrabungen von Culciu Mare*. Acta Musei Porolissensis 30, 53–66.
2012 *Contributions to knowledge of the Late Bronze Age in north-western Transylvania. Researches from Culciu Mare*. In: Marta, L. (ed.), The Gáva Culture in the Tisa Plain and Transylvania. Die Gáva-Kultur in der Theissebene und Siebenburgen. Symposium in Satu Mare 17–18 June/Juni 2011. Satu Mare, 159–168.

Kalla Gábor–Raczky Pál–V. Szabó Gábor
2013 *Ünnep és lakoma a régészetben és az írásos forrásokban. Az őskori Európa és Mezopotámia példái alapján*. In: Déri B. (szerk.), Convivium. Az Eötvös Loránd Tudományegyetem Bölcsészettudományi Karán 2012. November 6–7-én tartott vallástudományi konferencia előadásai. ΑΓΙΟΝ Könyvek 2, Budapest, 11–46.

Kalli András
2012 *Késő bronzkori településrészlet Pócspetri határában. – The Late Bronze Age settlement in the vicinity of Pócspetri*. In: Szabó Á.–Masek Zs. (szerk.), Ante viam stratam. A Magyar Nemzeti Múzeum megelőző feltárásai Kántorjánosi és Pócspetri határában az M3 autópálya nyírségi nyomvonalán. Budapest, 159–178.

Kašuba, Maya
2006 *Fibeln mit Bügelknoten in der Moldau und Anmerkungen zum ägäischen Einfluss im 10.-9. Jahrhundert v. Chr.* Prähistorische Zeitschrift 81, 213–235.

Kavur, Boris
2011 *This is who we do it. The pottery depot from Sodolek as an external memory storage device.* In: Gutjahr, Ch.–Tiefengraber, G. (hrsg.), Beiträge zur Mittel- und Spätbronzezeit sowie zur Urnenfelderzeit am Rande der Südostalpen. International Archäologie. Arbeitsgemeinschaft Symposium Tagung Kongress 15, 81–88.

Kemenczei, Tibor
1965 *A pilinyi kultúra tagolása. – Ein Beitrag zur Frage der Gliederung der Pilinyer Kultur*. Archaeologiai Értesítő 92, 3–26.
1982 *Die Siedlungsfunde der Gáva-kultur aus Nagykálló. – A gávai kultúra telepleletei Nagykállóról*. Folia Archaeologica 33, 73–95.
1984 *Die Spätbronzezeit Nordostungarns*. Archaeologia Hungarica 51. Budapest.
1989a *Koravaskori sírleletek az Alföldről az Őskori Gyűjteményből. – Grabfunde der Früheisenzeit von der Tiefebene inder Prehistorischen Sammlung*. Folia Archaeologica 40, 55–73.
1989b *Bemerkungen zur Chronologie der spätbronzezeitlichen Grabfunde im Donau–Theiß Zwischenstromgebiet*. Communicationes Archaeologicae Hungariae 1989, 73–96.

Kemenczei, Tibor–Genito, Bruno
1990 *The Late Bronze Age Vessels from Gyoma 133. S. E. Hungary*. Communicationes Archaeologicae Hungariae, 113–125.

Kienlin, Tobias L.–Marta, Liviu–Schramm, Patric–Rung, Eugen
2012 *Results of the geophysical survey in the swamp fortification of the Gáva culture at Căuaş-Sighetiu in the Ier Valley, North-Western Romania*. In: Marta, L. (ed.), The Gáva Culture in the Tisa Plain and Transylvania. Die Gáva-Kultur in der Theissebene und Siebenburgen. Symposium in Satu Mare 17–18 June/Juni 2011. Satu Mare, 83–99.

Király, Ágnes
2011 *A Gáva-kultúra temetkezései az Alföldön*. MA Thesis. ELTE University, Institute of Archaeological Sciences. Budapest.
2012 *A biritual cemetery of the Gáva culture in the Middle Tisza Region and some further notes on the burial customs of the LBA–EIA in Eastern Hungary*. In: Marta, L. (ed.), The Gáva Culture in the Tisa Plain and Transylvania. Die Gáva-Kultur in der Theissebene und Siebenburgen. Symposium in Satu Mare 17–18 June/Juni 2011. Satu Mare, 109–132.
2013 *Újabb adatok az alföldi Gáva-kultúra temetkezéseinek problémájához: birituális temető Tiszabura-Nagy Ganajos-háton*. Tisicum. A Jász–Nagykun–Szolnok Megyei Múzeumok Évkönyve 22, 31–64.

Kobayashi, Tatsuo
1974 *Behavioral patterns reflected in pottery remains – the Jomon period.* In: Chard, Ch. S.–McClellan, C. (eds), Festschrift Issue in Honour of Chester S. Chard. Arctic Anthropology 11. Supplement 163–170.

L. Nagy, Márta
2012 *Neue Beiträge zu spätbronzezeitlichen Gefäßdeponierungssitten im Oberen Theißgebiet*. In: Marta, L. (ed.), The Gáva Culture in the Tisa Plain and Transylvania. Die Gáva-Kultur in der Theisebene und Siebenburgen. Symposium in Satu Mare 17–18 June/Juni 2011. Satu Mare, 255–280.
2015 *Egy késő bronzkori településszerkezetének bemutatása Nyíregyháza-Oros, Mega Park lelőhelyről (Előzetes jelentés). – The structure of a Late Bronze Age settlement from the site of Nyíregyháza-Oros, Mega Park. Preliminary report*. A Nyíregyházi Jósa András Múzeum Évkönyve 57, 71–85.

Lascu, Ilie
2012 *A pit with depositions of cups from the first period of the Iron Age from Alba Iulia*. In: Marta, L. (ed.), The Gáva Culture in the Tisa Plain and Transylvania. Die Gáva-Kultur in der Theisebene und Siebenburgen. Symposium in Satu Mare 17–18 June/Juni 2011. Satu Mare, 135–148.

László, Attila
1994 *Inceputurile epocii fierului la Est de Carpati. Culturile Gáva–Holihrady şi Corlateni–Chisinau pe tritoriul Moldovei. – Die Anfänge der Eisenzeit im Ostkarpatenraum. Die Gáva–Holihrady- und Corlateni–Chisinau-Kultur im Gebiet der Moldau*. Bibliotheca Thracologica 6. Bucureşti.

Marek, Otto–Kostelníková, Marie
1998 *Die Spinnwirtel aus Mikulčice*. In: Poláček, L. (hrsg.), Studien zum Burgwall von Mikulčice 3. Brno, 171–326.

Marta, Liviu
2009 *The Late Bronze Age settlements of Petea-Csengersima*. Satu Mare.
2010 *Lăpuş II – Gáva I Discoveries in the Plain of Satu Mare*. In: Marta, L. (ed.), Amurgul mileniului a Chr. în cămpia Tisei şi Transilvania. – Das Ende des 2. Jahrtausendes v. Chr. auf der Theiss–Ebene und Siebenbürgen. Satu Mare. Studii şi Comunicări 26/1, 317–328.

Masek Zsófia
2015 *„Barbárok?" – A Rákóczifalvi késő szarmata–hun kori pusztulási horizont értékelése*. In: Türk A.–Balogh Cs.–Major B. (szerk.), Hadak útján XXIV. A népvándorláskor fiatal kutatóinak XXIV. konferenciája Esztergom, 2014. november 4–6. 1. kötet. Studia ad Archaeologiam Pazmaniensia 3.1. Budapest/Esztergom, 407–446.

McGovern, Patrick Edward
2009 *Uncorking the Past: The Quest for Wine, Beer, and Other Alcoholic Beverages*. California.

McGovern, Patrick Edward–Hall, Gretchen R.–Mirzoian, Armen
2013 *A biomolecular archaeological approach to 'Nordic grog.'* Danish Journal of Archaeology 2013/2, 112–131.

Medović, Predrag
1981 *Die Geschichte der Forschungstätigkeit und die relativ chronologische Lage der alteisenzeitlichen Siedlungen in der Wojwodina*. In: Medović, P.–Tasić, N.–Todorović, J. (hrsg.), Die ältere Eisenzeit in der Wojwodina und ihre Verbindungen mit anderen donauländischen und benachbarten Gebieten. – Starije gvozdeno doba Vojvodine i njegove veze sa drugim podunavskim i susednim oblastima. Actes – Materijali 19. Novi Sad, 13–41.
1988 *Kalakača. Naselje ranog gvozdenog doba*. Posebna izdanja – Monographien 10. Novi Sad.

Metzner-Nebelsick, Carola
2010 *Aspects of mobility and migration in the eastern Carpathian Basin and adjacent areas in the early Iron Age (10th–7th centuries BC).* In: Dzięgielewski, K.–Przybyła, M. S–Gawlik, A. (eds), Migration in Bronze and Early Iron Age Europe. Prace Archeologiczne 63. Kraków, 121–151.

Michelaki, Kostalena
2006 *Household Ceramic Economies. Production and consumption of household ceramics among the Maros villagers of Bronze Age Hungary*. British Archaeological Reports – International Series 1503. Oxford.

Müller Róbert
2007 *Késő bronzkori magaslati település kutatása Várvölgy, Nagyláz-hegyen (2003–2006). – Investigation of a hill settlement from the Late Bronze Age at Várvölgy, Nagyláz-hegy (2003–2006).* Régészeti Kutatások Magyarországon – Archaeological Investigations in Hungary 2006, 5–26.

Nagy, József Gábor–Gogâltan, Florin
2012 *Die früheisenzeitliche Siedlung aus Vlaha-Pad, Kreis Cluj. I. Das Siedlungwesen*. In: Marta, L. (ed.), The Gáva Culture in the Tisa Plain and Transylvania. Die Gáva-Kultur in der Theisebene und Siebenburgen. Symposium in Satu Mare 17–18 June/Juni 2011. Satu Mare, 35–64.

Nagy, József-Gábor–Körösfői, Zsolt
2009 *Koravaskori tároló gödör a Nagygalambfalva-Várfele (Hargita Megye) lelőhelyről. – O groapă menajeră din situl de la Porumbenii Mari-Parte cetăţii (judeţul Hargita)*. In: Körösfői, Zs. (szerk.), Kutatások a Nagy-Küküllő felső folyása mentén. Molnár István Múzeum Kiadványai 1. Székelykeresztúr, 43–72.

Németi, János
1990 *Contribuţii la cunoaşterea sfirşitului epoci bronzului din nordvestul României. – Beiträge zur Erforschung der Spätbronzezeit in Nordwestrumanien.* Studii şi Cercetări de Istorie Veche 41, 19–54.

Pankau, Claudia
2004 *Die älterhallstattzeitliche Keramik aus Mediaş/Siebenbürgen*. Universitätsforschungen zur Prähistorischen Archäologie 109. Bonn.

Pare, Christopher
1999 *Beiträge zum Übergang von der Bronze- zur Eisenzeit in Mitteleuropa. Teil. I. Grundzüge der Chronologie im östlichen Mitteleuropa (11.–8 Jh. v. Chr.)*. Jahrbuch des Römisch–Germanischen Zentralmuseums 45/1, 293–433.

Parlett, David
1999 *The Oxford History of Board Games*. Oxford.

Pásztor Emília
2011 *Bronzkori házak tájolása a Kárpát-medencében*. Ősrégészeti Levelek/Prehistoric Newsletter 13, 202–214.

Patay, Pál
1976 *Vorbericht über die Ausgrabungen zu Poroszló-Aponhát*. Folia Archaeologica 27, 193–203.

Paulík, Jozef
1968 *K Problematike Východného Slovenska v Mladšej dobe Bronzovej. – Zur Problematik der Ostslowakei in der jüngeren Bronzezeit*. Zbornik Slovenského Národného Muzea. História 62/8, 3–43.

Poroszlai Ildikó
1984 *Későbronzkori edény-depot lelet Debrecenből. – Gefäss-Depot aus der Spätbronzezeit, ein Fund aus Debrecen*. A Debreceni Déri Múzeum Évkönyve 63, 75–99.

Przybyła, Marcin S.
2009 *Intercultural contacts in the Western Carpathian area at the turn of the 2nd and 1st millenia BC*. Warszawa.

Renţa, Elena
2008 *Prima Epocă a Fierului pe Cursul Râului Ialomiţa. – First Iron Age on the Ialomiţa Valley*. Târgovişte.

Rice, Prudence M.
1987 *Pottery analysis: A sourcebook*. Chicago.

Šabatová, Klara
2010 *Möglichkeiten der statistischen Methoden bei der Auswertung eines bronzezeitlichen Fundorts (Přáslavice, Mähren, Tschechische Republik)*. In: Horejs, B.–Jung, R.–Pavúk, P. (eds.), Analysing Pottery. Processing – Classification – Publication. Studia Archaeologica et Mediaevalia 10. Bratislava, 99–120.

Sana, Daniel Vasile
2010 *Early Iron Age in Simleu Depression and Surrounding Areas. Gáva Type Discoveries*. PhD Thesis (abstract). "1 Decembrie 1918" University, Alba Iulia. Alba Iulia.

Schauer, Peter
1996 *„Tongeschirrsätze als Kontinuum urnenfelderzeitlichen Grabbrauches in Süddeutschland"*. In: Kovács, T. (hrsg.), Studien zur Metallindustrie im Karpatenbecken und den benachbarten Regionen. Festschrift für Amália Mozsolics zum 85. Geburtstag. Budapest, 361–377.

Schiffer, Michael Brian
1996 *Formation processes of the archaeological record*. Salt Lake City.

Siklósi, Zsuzsanna
2013 *Traces of Social Inequality during the Late Neolithic in the Eastern Carpathian Basin*. Dissertationes Pannonicae ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae Budapestinensis provenientes Ser. IV/3. Budapest.

Šimić, Jasna
1994 *Early Hallstatt horizon in north-eastern Slavonia*. In: Ciugudean, H.–Boroffka, N. (eds), The Early Hallstatt Period (1200–700 B.C.) in South-Eastern Europe. Proceedings of the International Symposium from Alba Iulia (10–12 June, 1993). Bibliotheca Musei Apulensis 1. Alba Iulia.

Skibo, James M.
1992 *Pottery function: A use-alteration perspective*. New York.
2013 *Understanding Pottery Function – Manuals in Archaeological Method, Theory and Technique*. New York.

Smirnova, Galina Ivanovna
1976 *Гавско-голиградский круг памятников Восточно–Карпатского бассейа*. Arheologičeskij Sbornik Gosudarstvennogo Ermitaža 17, 18–34.

Smith, Marion F.
1985 *Toward an economic interpretation of ceramics: Relating vessel size and shape to use*. In: Nelson, B. A. (ed.), Decoding prehistoric ceramics. Carbondale, 254–309.

Speth, John D.–Scott, Susan L.
2008 *Horticulture and large-mammal hunting: the role of resource depletion and the constraints of time and labor*. In: Kent, S. (ed.), Farmers as hunters. The implications of sedentism. Cambridge.

Stapel, Andrea
1999 *Bronzezeitliche Deponierungen im Siedlungsbereich*. Tübinger Schriften zur Ur- und Frühgeschichtlichen Archäologie 3. München–Berlin.

Štolcová-Belanová, Tereza–Grömer, Karina
2010 *Loom-weights, Spindles and Textiles. – Textile Production in Central Europe from the Bronze Age to the Iron Age*. In: Andersson Strand, E. B.–Margarita Gleba, M.–Mannering, U.–Munkholt, Ch.–Ringgard, M. (eds), North European Symposium for Archaeological Textiles 10. Oxford, 9–20.

Sz. Kállay Ágota
1986 *Későbronzkori edénydepot Battonya határában. – Spätbronzezeitliches Gefäßdepot in der Umgebung von Battonya*. Archaeologiai Értesítő 113, 159–165.

Székely, Zoltán
1966 *Asezari din prima virsta a fierului in Sud-Estul Transilvaniei*. Brasov.

Szeverényi Vajk
2011 *Bronzkori „háztűznéző": szándékos házégetés és anyagi metaforák a Kárpát-medence kora és középső bronzkorában. – Deliberate houase-burning and material metaphors in the Early and Middle Bronze Age of the Carpathian Basin*. Őrségészeti Levelek/Prehistoric Newsletter 13, 215–232.

Teržan, Biba–Karavanić, Snježana
2013 *The Western Balkans in the Bronze Age. Settlements and their Social Implications*. In: Fokkens, H.–Harding, A. (eds), The Oxford Handbook of the European Bronze Age. Oxford, 839–849.

Trebsche, Peter
2008 *Rituale beim Hausbau während der Spätbronze- und Eisenzeit – Zur Aussagekraft und Interpretation von Deponierungen in Pfostenlöchern*. In: Eggl, Ch.–Trebsche, P.–Balzer, I.–Fries–Knoblach, J.–Koch, J. K.–Nortmann, H.–Wiethold, J. (hrsg.), Ritus und Religion in der Eisenzeit. Beiträge zur Sitzung der AG Eisenzeit während der Jahrestagung des Mittel- und Ostdeutschen Verbandes für Altertumsforschung e. V. in Halle an der Saale 2007. Beiträge zur Ur– und Frühgeschichte Mitteleuropas 49, 67–78.
2014 *Zufall oder Absicht: Funde aus Pfostengruben*. In: Husty, L.–Irlinger, W.–Pechtl, J. (hrsg.), „…und es hat doch was gebracht!". Festschrift für Karl Schmotz zum 65. Geburtstag. Internationale Archäologie – Studia Honoraria 35, 297–308.
2017 *15 von 1494 Pfostenlöchern! Ein mittelbronzezeitlicher Hausgrundriss mit Keramikdeponierung aus Mitterretzbach*. In: Pieler, F.–Trebsche, P. (hrsg.), Beiträge zum Tag der Niederösterreichischen Landesarchäologie 2017. Festschrift für Ernst Lauermann. Asparn/Zaya, 171–185.
Uhnér, Claes–Hansen, Svend–Ciugudean, Horia–Bălan, Gabriel–Burlacu-Timofte, Raluca
2017 *Structura* şi *demografia aşezării de la Teleac: o fortificaţie din Transilvania de la sfârşitul epocii bronzului–începutul epocii fierului. – Settlement Structure and Demography in Teleac: a Late Bronze Age–Early Iron Age Hillfort in Transylvania*. Apulum. Acta Musei Apulensis: Series Archaeologica et Anthropologica 54, 167–201.
V. Szabó, Gábor
1996 *A Csorva-csoport és a Gáva-kultúra kutatásának problémái néhány Csongrád megyei leletegyüttes alapján. – Forschungsprobleme der Csorva-Gruppe und der Gáva-Kultur aufgrund einiger Fundverbände aus dem Komitat Csongrád*. A Móra Ferenc Múzeum Évkönyve – Studia Archaeologica 2, 9–52.
1999 *A bronzkor Csongrád megyében*. Múzeumi Füzetek Csongrád 2, 51–117.
2002 *Tanulmányok az Alföld késő bronzkori történetéhez. A proto-Gáva-periódus és a Gáva-kultúra időszakának emlékei a Tisza-vidéken*. PhD Thesis. ELTE University, Institute of Archaeological Sciences. Budapest.
2004a *A tiszacsegei edénydepó. Újabb adatok a Tisza-vidéki késő bronzkori edénydeponálás szokásához. – Das Gefäßdepot von Tiszacsege. Neue Angaben zur Sitte der spätbronzezeitlichen Gefäßdeponierung in der Theißgegend*. A Móra Ferenc Múzeum Évkönyve – Studia Archaeologica 10, 81–113.
2004b *Ház, település* és *településszerkezet a késő bronzkori (Rei. Bz. D, HA, HB periódus) Tisza-vidéken. – Houses, Settlements, and Settlement Structures in the Tisza Region of the Late Bronze Age (Periods BD, HA, HB)*. In: Nagy, E. Gy.–Hajdú Zs.–Dani J. (szerk.), ΜΩΜΟΣ II. *Őskoros* kutatok II. *összejövetelének* konferenciakötete. Debrecen, 137–170.
2011a *Ahol a bronz terem.... Előzetes jelentés a baks-temetőparti késő bronzkori lelőhelyen végzett fémkereső műszeres kutatásokról. – Wo die Bronze liegt... Vorlaufiger Bericht zu Gelandeuntersuchungen mit Metallsonden am spätbronzezeitlichen Fundort Baks-Temetőpart*. A Móra Ferenc Múzeum Évkönyve – Studia Archaeologica 12, 91–126.
2011b *Spätbronzezeitliche Bronzehortfunde im Siedlungskontext – Neue Forschungsergebnisse aus Ostungarn*. In: Berecki, S.–Németh, R. E.–Rezi, B. (eds), Bronze Age Rites and Rituals in the Carpathian Basin. Proceedings of the International Colloquium from Targu Mureş 8–10 October 2010. Targu Mureş, 335–356.
2016 *Hortfunde und Siedlungen. Neue Fakten zum Kontext der spätbronzezeitlichen Deponierungen in Ungarn*. In: Hansen, S.–Neumann D.–Vachta D. (eds), Raum, Gabe und Erinnerung. Weihgaben und Heiligtümer in prähisto-

rischen und antiken Gesellschaften. Berlin Studies of the Ancient World 38, 165–209.

2017 *A Gáva-kerámiastílus kora. Az Alföld a hajdúböszörményi szitulák földbekerülésének időszakában. – The age of the Gáva pottery style. The Great Hungarian Plain in the time of the burying of the Hajdúböszörmény situlae*. In: V. Szabó, G.–Bálint, M.–Váczi, G. (eds), A második hajdúböszörményi szitula és kapcsolatrendszere. – The second situla of Hajdúböszörmény and its relations. Studia Oppidorum Haidonicalium 13. Budapest/Hajdúböszörmény, 231–278.

Vachta, Tilmann

2012 *Multidepotfundstelle in Böhmen*. In: Hansen, S.–Neumann, D.–Vachta, T. (eds), Hort und Raum. Aktuelle Forschungen zu bronzezeitlichen Deponierungen in Mitteleuropa. Topoi. Berlin Studies of the Ancient World 10. Berlin/Boston, 179–197.

Váczi Gábor

2016 *Deponált díszedények Tiszabura késő bronzkori településén. – Deposited decorative vessels at the Late Bronze Age settlement of Tiszabura*. Tisicum. A Jász–Nagykun–Szolnok Megyei Múzeumok Évkönyve 25, 185–192.

van Gennep Arnold

2007 *Átmeneti rítusok.* Translated by Vargyas, Z. Budapest.

Vasiliev, Valentin–Aldea, Ioan Al.–Ciugudean, Horia

1991 *Civilizaţia dacică timpurie în aria Intracarpatică a României. Conţributii arheologice: Aşezarea fortificată de la Teleac. – Le centre d'habitat fortifie de Teleac. (Departement d'Alba) Contributions a la connaissanance de la premiere epoque du fer dans l'aire intracarpatique de Roumanie*. Cluj–Napoca.

Vicze, Magdolna

1996 *The Prehistoric settlement at the site of Gyoma 133*. In: Bökönyi, S. (ed.), Cultural and landscape changes in South-East Hungary II. Prehistoric, Roman Barbarian and Late Avar Settlement at Gyoma 133. Budapest, 27–49.

Vörös, István

1987 *The Bow as Weapon of Hunting in the Neolithic*. Communicationes Archaeologicae Hungariae, 25–30.

Vuković, Jasna

2015 *Secondary use, reuse and recycling of ceramic vessels: evidence from Late Neolithic Vinča*. Archaica/Архаика 2015/3, 111–126.

Wallace, Henry. D.–Craig, Douglas B.–Elson, Mark D.–Stark, Miriam T.–Heidke, James M.

1992 *The Interpretation of Archaeological Context: The Role of Formation Process Studies in Prehistoric Research*. In: Elson, M. D.–Craig, D. B. (eds), The Rye Creek Project: Archaeology in the Upper Tonto Basin: Vol. 2. Artifact and Specific Analyses. Tucson, 3–16.

BAKS-TEMETŐPART.
EGY „MEGA-TELEPÜLÉS” ELEMZÉSE A GÁVA KERÁMIASTÍLUS IDŐSZAKÁBÓL

Összefoglalás

A Baks-Temetőparton feltárt négy szelvény nagy mennyiségű és sokrétű leletanyagot tartalmazott, ami tovább erősítette azt a feltevést, miszerint nem csupán a régió egyik legnagyobb, de az egyik legintenzívebb településével is számolhatunk. Ez a 650 m^2-es terület a település teljes kiterjedésének csupán egy kis szelete.

A nagyszámú kerámiaanyag mellett (3851 db), orsógombok, agyagnehezékek, speciális agyagtárgyak, állatcsontok, csont- és kőeszközök, őrlőkövek és fémleletek kerültek feltárásra. A cikk tárgyát a kerámiatöredékek szolgáltatták, melyeket öt főcsoporton belül, 47 finomabb tipológiai alcsoportba soroltam a formai jegyek alapján. A típusok párhuzamai és előzményei alapján a települést a HaA2–HaB1-es periódusra, vagyis a klasszikus Gáva időszakra lehetett keltezni. A lelőhelyen végzett fémkeresőműszeres terepi kutatások során talált bronz és vastárgyak alapján a telep továbbélése később is feltételezhető (Lásd V. Szabó 2011a, 102; V. Szabó 2017, 14. kép). A telep kerámiaanyagán belül, korrespondencia analízis segítségével, két finomabb fázist és edénykészletet sikerült elkülöníteni. A telep fennállása során így valószínűleg egy átmenet feltételezhető a kerámiatípusok között; vagyis az előző időszak kerámiaművességének jegyeit hordozó, de a Gáva-kultúrkör által továbbra is rendszeresen készített edények és a tisztán a klasszikus Gáva-kerámiastílus idején kialakult formák között. Ez a két készlet átfedésben van egymással, tehát valószínűleg mindkettő jelen lehetett ugyanabban az időben (22. kép).

A gödrök vizsgálata a településen folyó munkafolyamatok értelmezésében nyújthat segítséget. A feltárás során felmerült a „krízishorizont” vagy nagyobb tűzzel járó baleset lehetősége. A paticsrétegek vizsgálata alapján viszont valószínűleg csak egy ház vagy házrészlet leégése következhetett be, melynek hulladékát több környező gödörbe próbálták eltakarítani. Némely gödörben sokkal figyelemre méltóbb a rétegződés egyenletes váltakozása, valamiféle ciklikus munkafolyamatot sejtetve. Ez lehet bizonyos időközönként végzett takarítási vagy teleprendezési munka, mely során gyakran szerves hulladékot égettek, aminek következtében faszenes rétegek jöttek létre.

A munkafolyamatok mellett a közösség rituális életére is van bizonyíték a településről. A sok speciális agyagfigurán kívül megfigyelhető, hogy szimbolikus cselekmények előzték meg a nagyobb erőfeszítéseket igénylő vállalkozásokat, így a ház építése előtt alapárkos áldozatot mutattak be egy cölöplyukba. Emellett a lakosság tagjait összekovácsoló ünnepi alkalmakra, lakomára is van példa, melyen feltételezhetően 100-nál több fő vehetett részt.

A korrespondencia analízis a gödröket is két nagyobb csoportba rendszerezte, mely alapján az 1. és 3. szelvény gödrei és ezzel kerámiai, némiképp elkülönülnek. Az 1. szelvény gödreiben nagyobb számmal megfigyelhetőek a korábbi fázisba sorolható edénykészlet darabjai, míg a 3. szelvényben nagyobb mennyiségben foghatók meg a fiatalabb edénykészlet darabjai, ez két különböző területi csoportosulást jelenthet.

A modern mélynyomásos szántás megnehezíti a feltárt felület vizsgálatát, hiszen a sekélyebben fekvő cölöplyukakat, a járó- és padlószinteket teljesen megsemmisítette, így a házak helyei csak hipotetikusan sejthetőek. A 3. szelvény délnyugati része meglehetősen üres, ami talán egy házhelyre enged következtetni, habár ezt se cölöphely, se tűzhely nem támasztja alá. A másik feltételes ház az 1. szelvény alapárkos áldozatához kapcsolható, amennyiben elfogadjuk a felvetést, mely szerint házanként egy ilyen áldozattal lehet számolni (Trebsche 2008, 67–70). Amennyiben ezt a két feltételes házat gondolatban felrajzoljuk, akkor egy-egy nagyobb gödörkomplexumot, valamint több különálló gödröt is a háztartásokhoz sorolhatunk.

A romániai Căuaş-Sighetiu/Érkávás-Sziget lelőhelyen sikerült már a Gáva-kultúrához sorolható házakat megfigyelni magnetométeres vizsgálatok során (Kienlin et al. 2012). Egy szabályos elrendeződésű, rendkívül egységes, meghatározott rendszer alapján kialakított telep képe tárul elénk. A házak ilyen típusú, szorosan egymás mellett, északkelet–délnyugati tájolás szerint sorakozására Poroszló-Aponháton is találhatunk példát. Sajnos Baks esetében ez nem rekonstruálható.

A megelőző Rei. BD–HaA1-es időszakban jellemzőek voltak az erődített telepek. A HaA2–HaB1-es periódusban, főként az Északi-középhegységben, illetve az erdélyi régióban foghatók meg, de sokkal jellegzetesebbé válnak az olyan egy-egy mezorégiót felügyelő, nagy kiterjedésű és intenzív leletanyaggal jellemezhető települések,

mint Baks-Temetőpart. A baksi telep kapcsán felmerült a kérdés, hogy miért a Tisza jobb partján helyezkedik el, ellentétben az összes többi Gáva-kerámiastílus időszakára sorolható településsel. A lelőhely környezete igen alacsonyan fekvő régió, melyből Baks némiképp kiemelkedik, ezzel biztosítva az árvízmentességet. Másrészt a kora-beli cserekereskedelmi és kapcsolatrendszerek egyik fő útvonala a Tisza lehetett, melynek csomópontjait stratégiailag védeni, ellenőrizni kellett.

Baks-Temetőpart kapcsolatrendszere a kerámiaanyag alapján déli, délkeleti irányba mutat. A klasszikus Gáva-kerámiastílus formai és díszítésbeli elemei főként az alföldi és az erdélyi formákkal rokoníthatóak, de néhány stíluselem más régiókból épülhetett be a kerámiaművességébe. A pontozással vagy pontsorokkal való gyakori díszítés a déli területek hatása lehet, de gyakori díszítőelem a Kyjatice kultúrában is, mindenesetre a Gáva-stílusra kevésbé jellemző. A két darab import kerámia (14. kép) is a déli kapcsolatokat erősíti és a Gornea-Kalakača-kultúrával mutat összeköttetést (Przybyła 2009, 116–118).

Kósa P.
Eötvös Loránd University
Institute of Archaeological Sciences
H-1088, Budapest, Múzeum krt. 4/B.
kosa.polett@gmail.com