

DISSERTATIONES ARCHAEOLOGICAE

ex Instituto Archaeologico

Universitatis de Rolando Eötvös nominatae



DissArch

Ser. 3. No. 10. | 2022

Dissertationes Archaeologicae
ex Instituto Archaeologico
Universitatis de Rolando Eötvös nominatae

Ser. 3. No. 10.

Editor-in-chief
Dávid BARTUS

Editorial board

László BARTOSIEWICZ (Stockholm University, Stockholm, Sweden)
Ondřej CHVOJKA (University of South Bohemia, České Budějovice, Czech Republic)
Zoltán CZAJLIK (Eötvös Loránd University, Budapest, Hungary)
Miroslava DAŇOVÁ (University of Trnava, Trnava, Slovakia)
Mario GAVRANOVIĆ (Austrian Archaeological Institute AAS, Vienna, Austria)
Hajnalka HEROLD (University of Exeter, Exeter, United Kingdom)
†Klára KUZMOVÁ (University of Trnava, Trnava, Slovakia)
Tomáš KÖNIG (Comenius University, Bratislava, Slovakia)
Tina MILAVEC (University of Ljubljana, Ljubljana, Slovenia)
Gábor V. SZABÓ (Eötvös Loránd University, Budapest, Hungary)
Tivadar VIDA (Eötvös Loránd University, Budapest, Hungary)

Technical editor
Gábor VÁCZI

Proofreading
Katalin SEBŐK

Cover picture
Péter KOMKA

Available online at <http://ojs.elte.hu/dissarch>

Contact: dissarch@btk.elte.hu

ISSN 2064-4574 (online)

Publisher

László BORHY

© ELTE Eötvös Loránd University, Institute of Archaeological Sciences

© Authors



PKP
PUBLIC
KNOWLEDGE
PROJECT



DOAJ

ERIH PLUS
EUROPEAN REFERENCE INDEX FOR THE
HUMANITIES AND SOCIAL SCIENCES

Budapest 2023

CONTENTS

ARTICLES

Norbert FARAGÓ – Attila PÉNTEK – Gábor ILON 5

The Vámoscsalád-Kavicsbánya Site (Vas County): Preliminary Results of the Evaluation of the Lithic Assemblage

Ádám Artúr NYÍRÓ – Balázs HOLL – Gábor V. SZABÓ 29

Rescue Excavation in Aggtelek-Baradla Cave in 2019

Máté MERVER 47

Cereals from the Late Bronze Age Fortified Settlement of Tállya-Óvár

János Gábor TARBAY 63

A Late Bronze Age ‘Hoard’ and Metal Stray Finds from Tiszalök-Rázompusztá (Szabolcs-Szatmár-Bereg County, Hungary): Artefacts from the Protected Private Collection of László Teleki

Polett KÓSA 93

Special Ceramic Figurines from the Late Bronze Age Settlement of Baks-Temetőpart

Linda DOBOSI – László BORHY 129

The Legionary Tillery of Brigetio and the Late Roman Watchtower at Kurucdomb: The 1934–1935 Excavation of István Paulovics at Komárom/Szőny-Kurucdomb with a Catalogue of the Brick Stamps

Dávid BARTUS – László BORHY – Kata DÉVAI – Linda DOBOSI – Csilla SÁRÓ – Nikoletta SEY – Emese SZÁMADÓ 193

Twenty-five Years of Excavations in Brigetio at the Site Komárom/Szőny-Vásártér

Adrián MELYKÓ 247

A Late Medieval House in Mosonmagyaróvár: Archaeological and Architectural Research of the Cselley House

FIELD REPORTS

Gábor V. SZABÓ – Marcell BARCSI – Péter BÍRÓ – Károly TANKÓ – Gábor VÁCZI – Péter MOGYORÓS 277

Investigations of an Early Iron Age Siege: Preliminary Report on the Archaeological Research Carried out at Dédestapolcsány-Verebce-bérc between 2020 and 2022

Boyan TOTEV – Varbin VARBANOV – Svetlana TODOROVA – Lajos JUHÁSZ – Bence SIMON 301

Caron limen / Portus Caria: Ancient Port and Fort on the Black Sea Coast at Cape of Shabla

Dávid BARTUS – László BORHY – Gabriella GÁTFALVI-DELBÓ – Kata DÉVAI – Linda DOBOSI –
Lajos JUHÁSZ – Barbara HAJDU – Zita KIS – Anna Andrea NAGY – Csilla SÁRÓ – Nikoletta SEY –
Bence SIMON – Emese SZÁMADÓ 317

Excavation at Brigetio, Komárom/Szőny-Vásártér in 2016: The Find Material

Dávid BARTUS – Melinda SZABÓ – Szilvia JOHÁCZI – Lajos JUHÁSZ – Bence SIMON –
László BORHY – Emese SZÁMADÓ 355

Short Report on the Excavations in the Legionary Fortress of Brigetio in 2021–2022:
The Legionary Bath

THESIS REVIEW ARTICLES

Gábor MESTERHÁZY 369

Archaeological GIS Modelling and Spatial Analysis in the Vicinity of Polgár
from the Neolithic to Middle Ages

Melinda SZABÓ 387

The Social Background of Trade and Commerce in Pannonia

Dániel PÓPITY 401

Avar and Árpáadian Age Populations along the Maros River: Settlement History Research
in the Hungarian Part of the Maros Valley

Katalin Boglárka BOGNÁR 421

Yellow Pottery in the Late Avar Period

Rescue Excavation in Aggtelek-Baradla Cave in 2019

Ádám Artúr NYÍRŐ 

Archaeology Doctoral Programme, Doctoral School of History,
Eötvös Loránd University, Hungary
nyartur87@gmail.com

Balázs HOLL 

National Archaeological Institute, Hungarian National Museum, Hungary
holl.balazs@mnm.hu

Gábor V. SZABÓ 

Institute of Archaeological Sciences, Eötvös Loránd University, Hungary
vasagab@gmail.com

Received 2 February 2023 | Accepted 12 March 2023 | Published 31 March 2023

Abstract: The team of the Institute of Archaeological Sciences of the Eötvös Loránd University conducted a rescue excavation in the Baradla Cave in 2019. The work concentrated in a passage leading to a less-researched branch of the cave (the so-called *Róka-ág* [Fox Branch]) and one of the lesser rooms named *Biológiai labor* (Biological Laboratory). The passage towards the low and narrow *Róka-ág* was used for millennia, as attested by the objects from various historical periods and the stakeholes, probably related to former wooden walkways, discovered there. We unearthed an intact Neolithic culture layer preserved by a travertine (calc-sinter) deposit in *Biológiai labor*, while the metal detector survey carried out in the cave simultaneously with the excavations yielded Late Bronze and Early Iron Age, as well as medieval metal objects. The most significant discovery of our metal detector specialists was a Middle Bronze Age depot of decorative bronze clothing accessories. The recovered findings and observed features confirmed that the internal spaces of the Baradla Cave served as venues for ritual activity in the Neolithic and the Bronze Age.

Keywords: cave, Middle Neolithic, Bükk culture, Middle Bronze Age, Late Bronze Age, bronze depot, ritual spaces

Introduction

In order to make the place suitable for medical utilisation, the Aggtelek National Park Directorate started a development project including regrading and walkway reconstruction works inside the Baradla Cave near Aggtelek in the spring of 2019. The Directorate and the Speleological Institute commissioned the Institute of Archaeological Sciences of the Eötvös Loránd University (ELTE) to conduct the necessary preliminary archaeological research as part of the project. The rescue excavations were carried out in three major phases between 29 April and 17 May, 14 June, and 8–9 July, respectively.

The excavations took place in the *Róka-ág*, a side branch of the Aggtelek section of the cave, and at its entrance (Fig. 1). The works affected an area of 70 by 1.2 metres along the *Róka-ág* from the

Teknősbéka-terem (Turtle Room) to the entrance and the almost entire surface of the *Biológiai labor*, a chamber used earlier for speleo-biological experiments.

Simultaneously with the excavations, we surveyed all excavation areas and their wider surroundings with metal detectors. The metal detector survey was conducted as part of a research campaign in the cave,¹ started by archaeologists from the Institute of Archaeological Sciences ELTE in 2015–2016, which also continued parallel with the development-led excavations in other parts of the cave. The findspot coordinates of all metal findings were meticulously recorded and mapped, together with the characteristics of their place of discovery.²

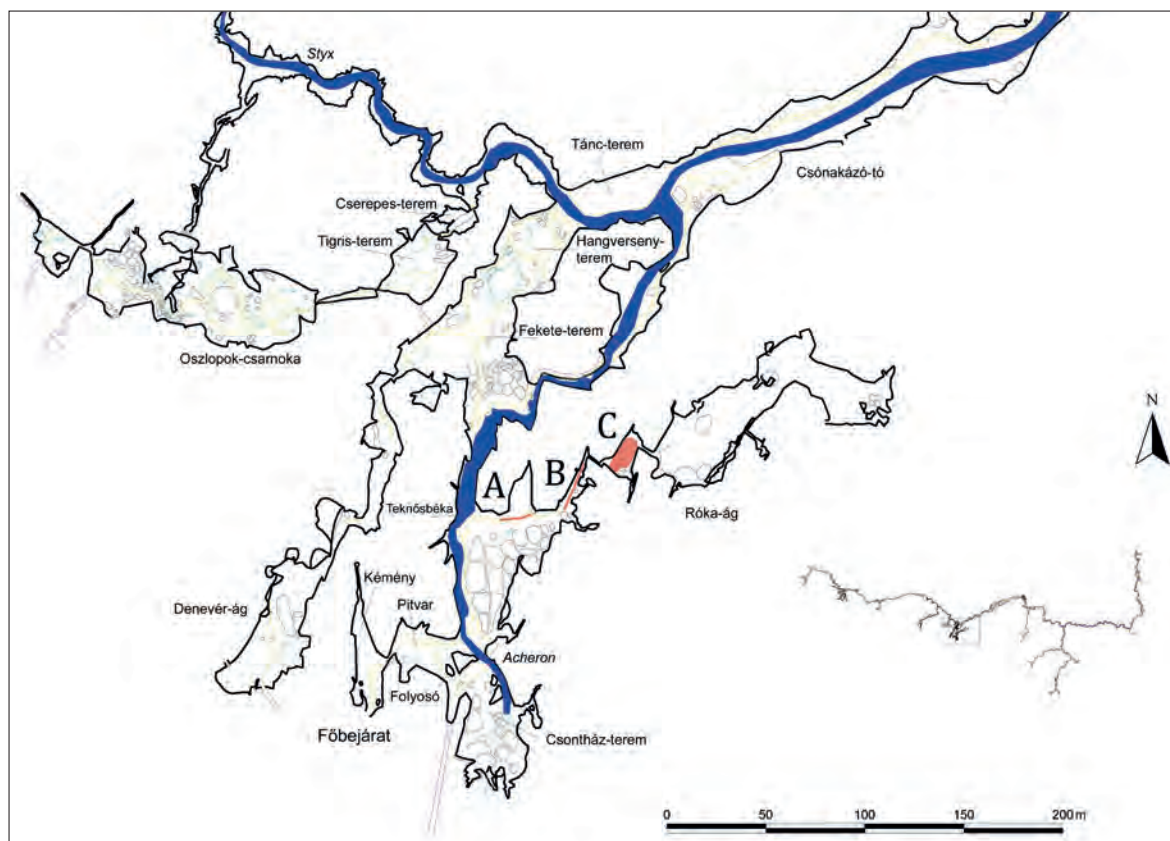


Fig. 1. Survey map of the Aggtelek section of the Baradla Cave. A – *Teknősbéka-terem*, B – *Róka-ág*, Corridor, C – *Biológiai labor*

The topographic setting of the excavation area

The excavation area in the *Róka-ág* could be reached from the surface through both natural entrances of the cave: the path through the *Főbejárat* (Main Entrance) is shorter, while the one through the *Denevérági-bejárat* (Bat Branch Entrance) is longer. To shed light on the spatial characteristics of the research in 2019, in this paper, we describe the first, shorter route in detail.

1 V. SZABÓ 2019, 46–53.

2 This paper only provides a preliminary evaluation of the results of the 2019 research campaign. Currently, Gizella Kovács made a detailed evaluation of the Neolithic record of the site (an extended summary of which will be published in the next issue of this journal), while Ádám Artúr Nyíró and Gábor V. Szabó are working with the Bronze Age find material and Máté Mervel is processing the archaeobotanical samples.

After the main entrance (*Főbejárat*), one first has to go through the room called *Kémény* (Chimney); after that, the next room, *Pitvar* (Courtyard), can be reached through a passage by descending on the side of a steep rubble slope. At the end of the *Pitvar*, the passage's height declines sharply, the ceiling becomes very low, and one has to bend strongly to go on. The path continues in the bed of the *Acheron-patak* (Acheron Stream); the stream flows on the left side of the passage, while the path leads through the stony-clay right side, nowadays covered with a concrete walkway, lined with a wall of vast broken-down rocks, until the *Teknősbéka-terem*. The rock wall turns there towards the *Róka-ág* on the right.

Archaeological findings have been collected from two very diverse zones in the *Teknősbéka-terem*. The first one is a lower area with a flat stony-clay surface that slightly raises toward the *Róka-ág*, while the other is a higher surface surrounding the lower zone from the south (towards the main entrance) and the south (towards the *Róka-ág*). The lower zone is connected to a side-chamber in the north, at the entrance of which Gábor Rezi Kató and Balázs Holl discovered a perhaps Middle Neolithic fireplace in 2001.³

The floor of the zone where the *Teknősbéka-terem* and the *Róka-ág* meet consists of large boulders broken off from the ceiling of the chamber; to reach the *Róka-ág*, one has to overcome a height difference of 2–3 metres. The passageway in the *Róka-ág* is narrower than the ones before but higher, just high enough to walk upright.⁴ The lower part of this 30-metre-long straight passage is about 2–4 metres wide, narrowing down at chest height to 1–0.3 metres. The straight section ends in a right-angle turn towards the right, continuing in a 10-metre-long artificial corridor created by explosions in the early 20th century that ends in the *Biológiai labor*, a room of about 20×8 m. Based on early sources on the cave, until the end of the 19th century the artificially transformed section was a hard-to-pass one where one could only crawl or walk on all fours.⁵



Fig. 2. The “Big Rock” in the centre of the *Biológiai-terem* viewed from the entrance of the room

3 HOLL 2007, 272; REZI KATÓ 2003, 133.

4 As a result of reconstruction and regrading works, the walking level today is approximately 0.5–1 metre lower than the original.

5 VASS 1831, 12; SCHMIDL 1857, 33.

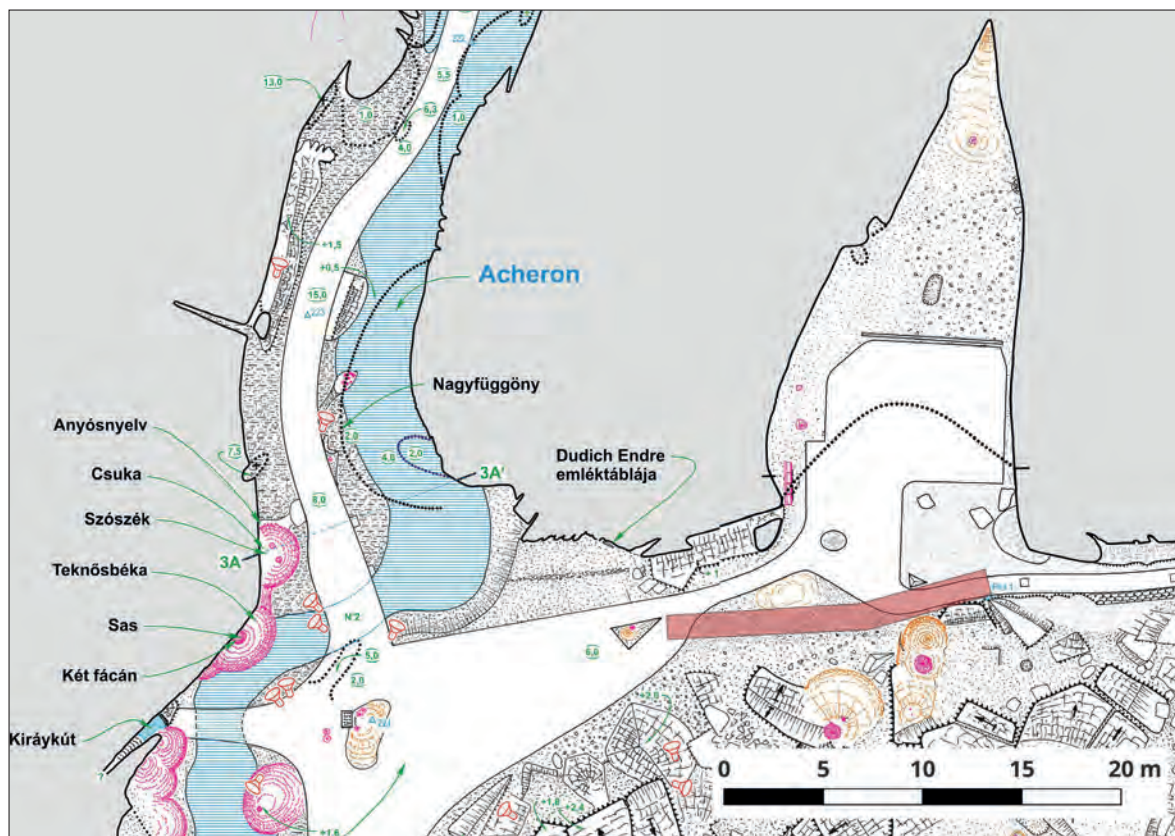


Fig. 3. The *Teknősbéka-terem* on the survey map of the Aggtelek section of the Baradla Cave



Fig. 4. Trench at the *Róka-ág*-side entrance of the *Teknősbéka-terem*

After the narrow passageway, the *Biológiai terem* can be reached through a 5-metre-long, winding passage. The southern part of the room, right after the entrance, is full of drip-stones, and a row of large boulders stretches toward the right wall of the chamber. As the drapes covering the rock surfaces of the northern and southern walls continue here, most of them are covered with flowstone that sometimes forms small basins. The largest of all is the “Big Rock” (as we call it) in the centre of the room. This vast boulder is supported at three points, and the instability makes the sight quite mystical (Fig. 2). The northern part of the room can be reached by climbing some artificial stairs after the entrance and following the walkway that runs left of the Big Rock. Almost the entire floor of the room’s northern part is covered by a concrete layer, save for a 4-metre-wide area in the northernmost part. Parallel with the concrete walkway, a clay slope emerges along the western wall of the room from the entrance to the concrete floor (that starts right after the Big Rock) in the northern zone. The solutional passage of the *Róka-ág*—the bed of a cave stream—continues in the north-eastern corner of the room towards an exceptionally large room with monumental formations at the end of the branch.

Excavation results 1: The *Teknősbéka-terem*

The diverse morphological characteristics of the lower and higher areas in this room, described above, necessitated diverse excavation methods (Fig. 3). It was very challenging to unearth anything by hand in the lower stony-clay soil. We opened a trench of 16×1 m there in the path of the future walkway (Fig. 4). The culture layer in this area was only a few centimetres thick, and it was covered at points during previous regrading works with a layer of rubble. The electric cables running along the middle of the trench made our work even more difficult.

In the trench, the culture layer was observed between 3–8 metres,⁶ on top of a flowstone layer, while pottery sherds and animal bones were discovered above and between rocks of diverse sizes



Fig. 5. Trapezoidal polished stone axe from under the travertine layer in the *Biológiai-labor* and obsidian blade core from the trench in the *Teknősbéka-terem* (photo by Péter Komka)



Fig. 6. The passage of the *Róka-ág*, Corridor on the survey map of the Aggtelek section of the Baradla Cave

6 “Point zero”, the origo of the documentation grid was positioned at the end of the trench closest to the main entrance.



Fig. 7. The trench along the passage of the *Róka-ág*



Fig. 8. Pottery cluster in the passage of the *Róka-ág*



Fig. 9. Pottery and animal bone cluster in the passage of the *Róka-ág*

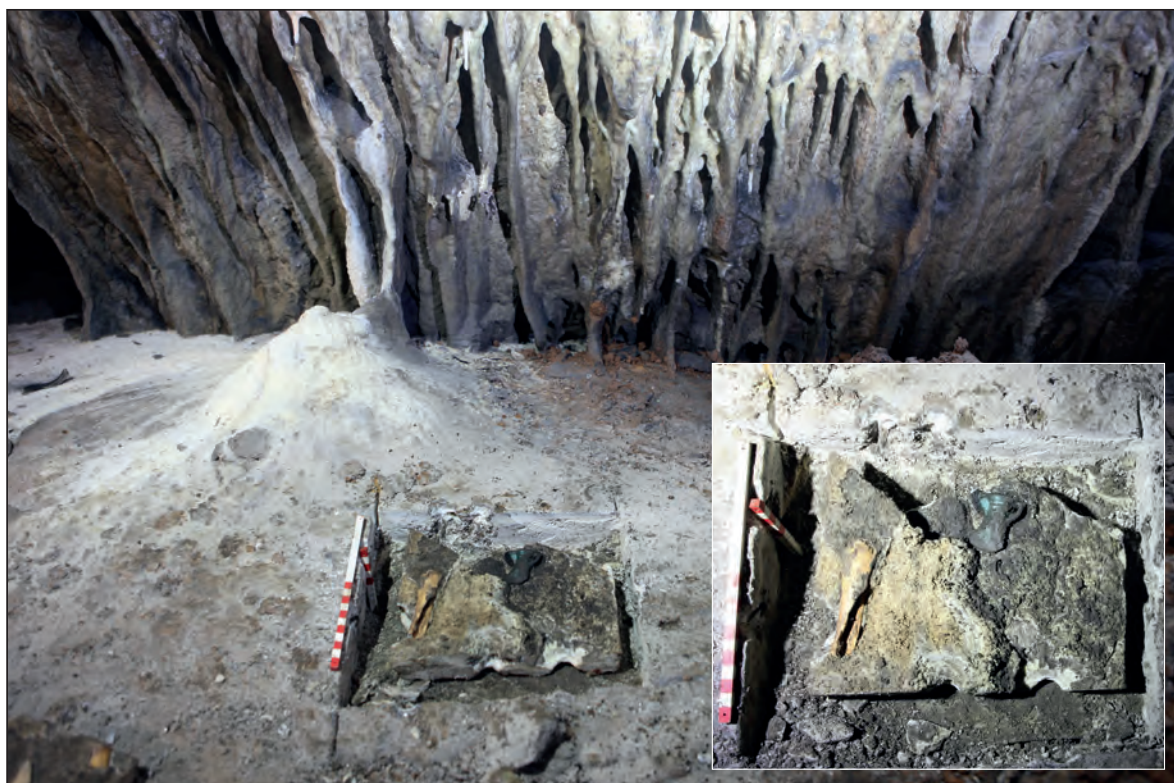


Fig. 10. Bronze socketed axe from amongst flowstone layers in the approach passage of the *Róka-ág*

right on the red cave clay floor elsewhere. These were probably in a secondary position, brought there during previous regrading works when the uneven stony cave floor was levelled at points by filling the depressions with a mixture of rubble and clay, thus covering the culture layer and mixing up the find material. The find material comprised Middle Neolithic and Late Bronze Age pottery sherds in abundance and perhaps also an Early Bronze Age Corded Ware vessel fragment. One of the most outstanding findings of the campaign, an obsidian core, was found in the first metre of the trench, while an Árpáadian Age silver finger ring was recovered from its infill at 12 metres. We could also observe the traces of previous grading in the last two metres: large rocks had been exploded there, and the rubble seems to have been used to level the uneven floor (Fig. 5).

The last ten metres of the trench stretched among breakdown boulders. The findings here were scattered between and under the rocks, *in situ* on the original “surface” of the room. Their density was higher compared to the previous section. Most findings in this area were also Neolithic and Late Bronze Age potsherds and animal bones; besides, we also found some animal skulls and human bones. All human bones were scatter finds, probably in a secondary position – the morphological characteristics of the area have been working towards their dislocation, as the remains placed on top of the boulders having decayed, the bones rolled down on every side.

Excavation results 2: approach passage to the *Róka-ág*⁷

The concrete layer of the walkway running along the passage⁸ was set right on the archaeological culture layer (Fig. 6). After removing it, the 2–15 cm thick culture layer atop a red-yellow stony-clay soil deposit of the cave stream became visible immediately (Fig. 7). The culture layer had no distinguishable sub-layers; the Neolithic and Bronze Age findings were all recovered from the same heavily downtrodden soil layer. The density of findings was the highest at the cave entrance and gradually decreased inwards; we did not find any object of archaeological interest in the last ten metres of the passage.⁹

The finds were concentrated in well-distinguishable clusters (Figs 8–9). In the forepart of the passage, we unearthed a small fireplace and a small intact polished stone axe, half on a flowstone layer and half on the red stony clay cave floor. We also found a number of pottery sherds and animal bones in and around the fireplace.

We detected more than 200 stakeholes in the passageway (save for its last ten metres, which lacked not only findings but also features). Only seven metres away from the entrance of the passage, next to the trench, our metal detectorists found a small bronze socketed axe encased in layers of flowstone (Fig. 10).¹⁰

We found the shallow bed the epiphreatic stream¹¹ had cut into the red stony-clay cave floor in the back of the trench. The profile of this part also provided a possible answer to the lack of archaeo-

7 The passage’s floor was excavated in a 30-metre-long and 1.2-metre-wide trench.

8 During the past decades, one could only walk upright along the middle of the passage where the walkway runs today. Consequently, people in the past could only use the passage to get through to some larger chamber. As part of the construction of the new walkway, the walking level was lowered; thus, since July 2019, the floor has been 0.5–1 metre below the original level.

9 We only excavated the path of the future walkway, leaving the layers undisturbed on both sides.

10 The bronze object was removed together with the floodstone layers encasing, both for a future presentation of this unique find context and the analysis of its stratigraphy.

11 NYÁRY 1881, 21.

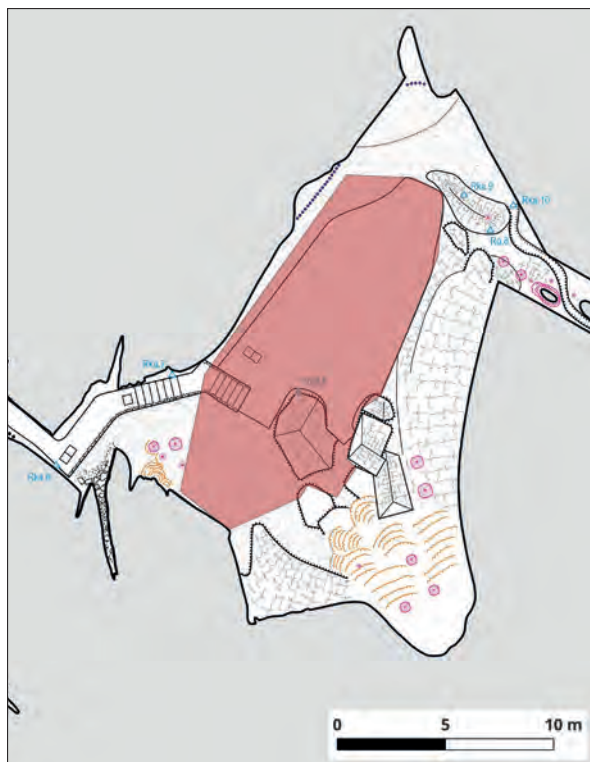


Fig. 11. The *Biológiai labor* on the survey map of the Aggtelek section of the Baradla Cave

logical phenomena in the last ten metres of the passage: the floor under the concrete walkway was levelled in this area by a fill of explosion rubble, while the former culture layer was only present there as a 1–2-cm-thick discontinuous black stripe.

Excavation results 3: *Biológiai labor*

The most extensive research was carried out in this room (Fig. 11). A large part of the cave floor here was covered with a layer of concrete in the early 20th century; thus, at the start of the excavation, the original floor was only visible on a couple of square metres in the northernmost zone of the room. The first constructions were probably preceded by a levelling of the original cave floor when the uneven clay surface was trimmed and levelled using shovels, and the removed parts of the archaeological culture layers and the soil layers beneath them were thrown



Fig. 12. The surface of the travertine layer in the bed of the stream passing through the *Biológiai labor*

into the bed of the cave stream, covering the whole area with a layer of rubble with concrete on top.¹² During the excavation, we found and unearthed the former stream bed, filled in the last century and covered by a concrete walkway, stairs, and artificial floors. After removing the fill, the 10–20 cm thick calc-sinter (travertine) layer with small basins and steps that originally covered the stream bed's surface became visible again (Fig. 12).

The clay slope along the western wall between the entrance and the concrete floor turned out to be the continuation of the cave stream's bed, only the travertine layer was covered there also with clay from other parts of the room. In this section, the bed was filled with clay and a culture layer comprising Neolithic findings under the travertine layer. The thin Neolithic culture layer on top of the clay cave floor on both sides of the stream in the northern part of the room only persisted partially. We could observe it in large, continuous patches on the eastern side of the stream¹³ and

around the Big Rock; however, the layer was, in many cases, covered by a mixture of clay, rubble and dislocated archaeological findings originating from other parts of the room.

The Neolithic culture layer remained mostly intact under the former dark room, a brick building that has vanished without a trace by today; however, it was completely destroyed in the line of its foundation trenches. The findings there were discovered atop a thin flowstone layer divided by tiny shallow basins instead of a clay cave floor.

As the above may already suggest, this excavation area was exceptionally important because of the intact Middle Neolithic culture layer under the travertine deposit, containing almost 7000-year-old



Fig. 13. Neolithic layer in the eastern part of the *Biológiai labor* viewed from the top of the Big Rock

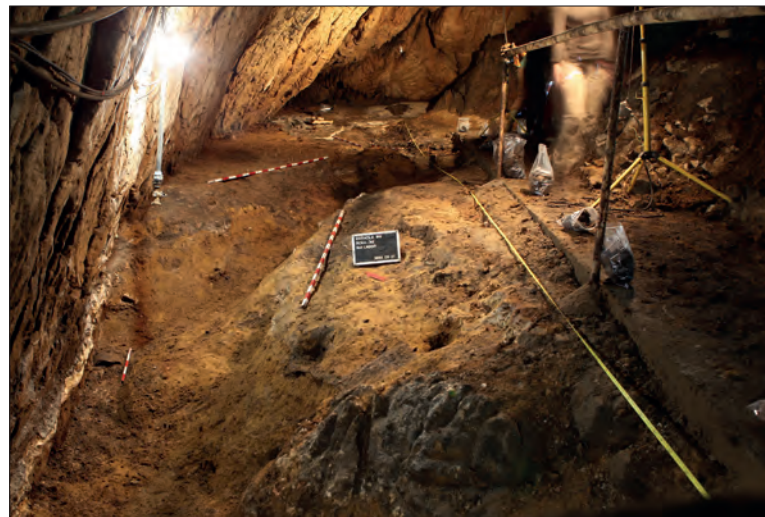


Fig. 14. The bed of the cave stream passing through the *Biológiai labor* after removing the travertine and Neolithic layers

12 The floor was levelled at points with the explosion rubble from the widening of the approach passage to the room.

13 This culture layer was preserved west of the stream bed only at points, in the form of small black patches that contained no find material.

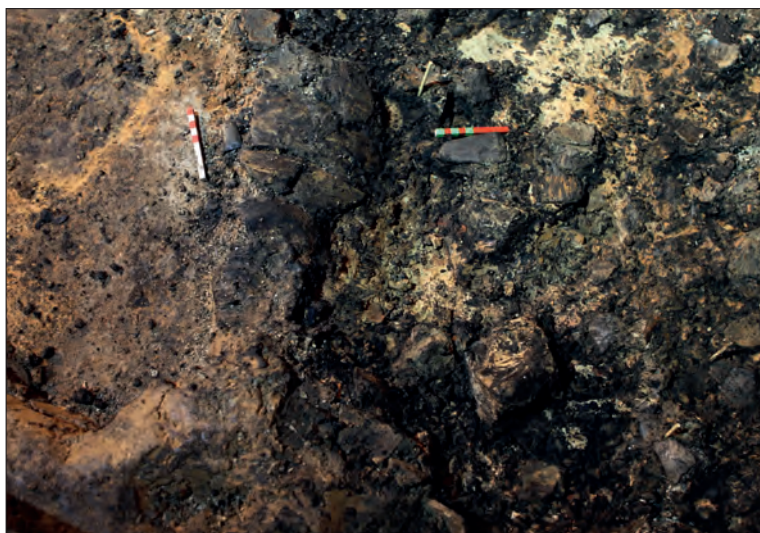


Fig. 15. Polished stone axes found in the northern part of the stream bed, right under the travertine layer



Fig. 16. Neolithic vessels and potsherds in the stream bed at the entrance of the *Biológiai labor*

findings of the Bükk culture. In the second phase of the excavations, we broke through the travertine “shell” everywhere in the trench and exposed the Neolithic culture layer. That this layer only contained Neolithic findings indicates that the travertine “shell” that protected it had formed before the Bronze Age. Unlike in other parts of the cave, the thick calc-sinter layer here preserved completely all traces left behind by the people of the Bükk culture; upon its removal, we felt like breaking off the seal from a “prehistoric bottle” that stored, in this case, findings, features and contexts since the Neolithic. One of the early archaeologists in Hungary, Jenő Nyáry, could have felt the same in 1876 when he discovered archaeological phenomena under a thick flowstone layer; the only difference is that his “shell” was not a calc-sinter layer in a stream bed.¹⁴

We found unusually large quantities of high-quality Middle Neolithic pottery in the excavated area of the *Biológiai-terem*.¹⁵ In the southern and eastern zones

of the room, where the culture layers have been preserved beside the stream bed, the findings concentrated in easily distinguishable clusters (Fig. 13). Several potsherd patches also included obsidian blades and splinters. We also collected vessel fragments of the Bükk culture from around and under the Big Rock, discovered two bone pins by the north-eastern wall of the room, and recovered a completely intact stone trapezoidal axe from beside the former wall of the dark room south of the Big Rock.

The greatest challenge during the excavation was the removal of the infill layer under the travertine “shell” and the unearthing and documentation of the find material it contained (Fig. 14). This homogenous black ashy soil layer, right between the travertine “shell” and the stream bed, contained

14 NYÁRY 1881, 25, 28. Besides, Ferenc Tompa and László Kordos mention archaeological culture layers under dripstone layers in the Baradla Cave; see TOMPA 1929; KORDOS 1976, 37.

15 The recovered Neolithic find material was processed by Gizella Kovács as her MA dissertation, defended in 2022. The paper summarising the results of her work will be published in the next issue of this journal.

potsherds in exceptional quantities; in the northern part of the bed, we even found two perfect polished stone axes and a flint blade between the sherds (Fig. 15).

Besides archaeological findings, we found pieces of soda straw stalactites and a few large dripstone fragments. While the soda straw stalactites probably broke off from the ceiling of the room, large dripstone fragments came from a couple of metres away from their findspots. Thin soda straw stalactites may have broken off naturally, and periodic floodings could move larger dripstone fragments; it cannot be excluded, however, that most dripstones were broken off and displaced by people who used the room in modern times.

At the entrance of the room, where the cross-section of the stream's bed narrows down, large dripstone fragments commingled into a dam-like structure under the travertine layer.¹⁶ Upstream of that, we unearthed a large concentration of collapsed



Fig. 17. Stakeholes in the *Biológiai labor*



Fig. 18. Excavation of Neolithic vessel fragments in a flowstone basin in the north-eastern part of the *Biológiai labor* (photo by Péter Komka)

16 According to our observations, these dripstone fragments probably broke off from the western wall of the room.



Fig. 19. Charcoal drawings on the side of the “Big Rock” in the *Bio-lógiai labor*

Neolithic pottery vessels and potsherds (Fig. 16). These might have been washed away from other parts of the room and deposited there by a major flood wave; it cannot be excluded, however, that the dripstone and vessel remains got into their place of finding as a result of some human activity, for example, a ritual.

We found more than 400 stakeholes sunken into the clay cave floor throughout the room, even in the stream bed (Fig. 17). As all stakeholes in the stream bed started from under the traver-

tine layer, and some outside the bed were covered with Neolithic potsherds, these features could be surely connected with the Neolithic period of the cave. Stakeholes had also been discovered in the Baradla Cave earlier,¹⁷ but this was the first time the observed features were recorded properly and dated accurately. Their function has remained unclear; they perhaps supported a wooden walkway that was reconstructed several times, as such a structure would facilitate considerably walking around on the slippery stream bed and using the room in general. It is also possible that the stakes supported platforms or lesser structures for offerings deposited in the cave.¹⁸

During the research campaign, we excavated not only the areas directly affected by the planned infrastructure development but also higher zones and found the fragments of three or four Middle Neolithic ceramic liquid containers in a small flowstone basin at a relative height of 1–1.5 metres in the south-eastern part of the room. Besides this spectacular find assemblage, we observed several assemblages of Neolithic potsherds in the rifts and gaps between the rocks (Fig. 18).

We also discovered charcoal drawings on the sides of the Big Rock. Gábor Rezi Kató mentioned these earlier,¹⁹ and he also drew our attention to this room. We documented the phenomena thoroughly; while we cannot date these with certainty, they may be of Neolithic origin, just like those in the nearby Domica Cave (Fig. 19).²⁰

We have very little information on who and when used this room after the Neolithic. The bronze spearhead fragment, the only finding from another historical period known from this room thus far, was recovered during the 2019 excavations. Earlier research campaigns had similar results: the 2001–2002 surveys yielded a sizeable Neolithic pottery record but only a single bronze item, a pin.²¹ While we do not know the reason behind the relative lack of Bronze Age artefacts, it is sure that the communities of the period that used the cave also knew of this room because the Late Bronze Age

17 REZI KATÓ 2020, 45–46.

18 Trace of a wooden platform for funerary offerings is known from the Bezdanjača Cave in Croatia; see DRECHSLER-BIŽIĆ 1980, 71–72, T. 1.2.

19 REZI KATÓ 2014, 347.

20 ŠEFČÁKOVÁ 2017.

21 Data was taken from the field diary of the 2001–2002 fieldwalk sessions.

vessel fragments discovered in the forepart of the large hall at the end of the *Róka-ág* indicate that people also passed the *Biológiai labor* regularly at that time.²² If so, they possibly also saw on their way the vessels and vessel fragments deposited by Neolithic people throughout the cave floor.²³

Field observations suggest that the Neolithic pottery record of the cave comprises an unusually high proportion of decorated high-quality prestige vessels, akin to the tendencies reflected by similar records from other parts of the cave.²⁴ All this might support the hypothesis that the internal spaces of the cave served as venues for complex ritual activities during the Neolithic.

Excavation results 4: the metal detector survey

The survey conducted in 2015–2016 proved that, despite being disturbed extensively, the cave may still hide bronze items in considerable quantities. The area surveyed in that campaign yielded a bronze spearhead, bronze nuggets, bronze rings, a complete bronze razor, bracelets, and a small hoard of golden lock rings and conical mounts cut from gold sheets.²⁵

The 2019 metal detector survey, carried out simultaneously with the excavations, resulted in the discovery of 39 scatter finds altogether. Of these, 24 could be dated to the Late Bronze Age, 13 were medieval (mainly Árpáadian Age), and two were Early Iron Age.



Fig. 20. Early Scythian-type trilobite arrowheads from the big chamber at the entrance of the *Denevér-ág*

Late Bronze Age metal findings were recovered from all over the surveyed area. A bronze awl and the upper part fragment of a flanged axe (*Lappenbeil*) with the flanks at the middle of the body were found in the *Pitvar*; two bronze nits, the fragments of two pins with biconical heads, a bronze arrowhead, a smaller and a large bronze button, a bronze tutulus, a biconical bronze bead, a bronze lunula, and the tip fragment of a bronze sickle were discovered in the *Csontház-terem* (Ossary Room); the edge fragment of a bronze axe and a bronze needle fragment were recovered from the *Fekete-terem* (Black Room); a small bronze awl, two bronze needle fragments, and a bronze nugget were found in the breakdown on the floor of the *Teknősbéka-terem* before the entrance to the *Róka-ág*; a small bronze button and a bronze socketed axe lay in the approach passage of the *Róka-ág*; a bronze nit was recovered from the large chamber of the *Róka-ág*; and a bronze needle fragment was found in the large chamber at the entrance of the *Denevér-ág*.

Medieval and early modern metal findings were discovered in the *Pitvar* (a lead bullet), the *Csontház-terem* (a bronze S-terminalled lockring, an iron knife, a bronze coin, a fragment of a silver coin issued by Béla III, and a bronze buckle), the *Fekete-terem* (two lead bullets), and the breakdown on the floor at the *Teknősbéka-terem* before the entrance to the *Róka-ág*, south of the excavation trenches (an iron buckle, two fitting halves of a bronze buckle with inscription, a silver coin of Coloman I, and a silver ring).

22 The lack of Bronze Age objects may be due to the character of the travertine “shell” covering the Neolithic layers: the dams promoted the formation of flat basins that, permanently filled with water, made the cave floor surface unsuitable for long-time utilisation (for example, sitting down).

23 NYÍRÓ 2019, 28.

24 V. SZABÓ 2019, 54.

25 V. SZABÓ 2019, 46–49, Figs 40–42.



Fig. 21. Position of the Middle Bronze Age depot in the *Csontház-terem*



Fig. 22. Removal phases 1 and 22 of the Middle Bronze Age depot in the *Csontház-terem*



Fig. 23. Two object types in the Middle Bronze Age depot discovered in the *Csontház-terem* (photo by Nóra Szilágyi)

Early Iron Age findings were recovered from the foreground of the large chamber at the entrance of the *Denevér-ág*; the two early Scythian-type trilobate arrowheads lay at a distance of only 0.5 metres from each other.²⁶ Nothing but these 7th-century BC findings indicate that the cave was known and used in the Early Iron Age (Fig. 20).

Besides scatter finds, a closed find assemblage of decorative bronze clothing accessories was found in the *Csontház-terem*. This small Bronze Age depot comprised 59 bronze items; it is the fourth metal hoard ever discovered in the Baradla Cave.²⁷ The items were placed into a pit covered by stone slabs in the back corner of a hole between large collapsed rocks (Fig. 21). It contained three types of objects: anchor-shaped bronze pendants, conical discs cut from a bronze sheet and decorated with punched dot rows along the rim, and two rectangular bronze ingots (Fig. 22). The relative position of the bronze discs²⁸ and the pendants²⁹ (Fig. 23) indicated that they were probably sewn on a piece

26 The two arrowheads are characteristic Early Iron Age types from the 7th century BC (HELLMUTH 2010, types IIa and IIc, 57–63, 67–81). For analogies, see V. SZABÓ et al. 2014, 3. kép, 6. kép.

27 For a summary of the Late Bronze Age metal depots discovered in the cave earlier, see V. SZABÓ 2019, 50–52.

28 Previously, similar bronze tutuli were known mainly from the territory of Transdanubia (for a summary, see JANKOVITS 2017, 45–58, Taf. 7. 319–20, Taf. 8–9). Rarely such artefacts also appear in Late Bronze Age find assemblages (e.g., Pátroha: KEMENCZEI 1984, Taf. 73b,7–8).

29 Similar conical discs with a profiled rim and punched decoration were discovered in a depot under the debris of a building in the Middle Bronze Age fortified settlement of Unin-Zámčisko in Western Slovakia (BARTÍK et al. 2019, 43–46, 52–53, Abb. 24, Taf. 15). Further analogies from the Br B1 period are known from a depot from Nitriansky Hrádok (MARKOVÁ 1999, 221, Abb. 4–5) as well as depots from Bodajk and Bölcske (MOZSOLICS 1967, Taf. 29,29–34, Taf. 34,2–3).

of leather and fabric that had been folded before depositing.³⁰ Their analogies date the find assemblage to the Middle Bronze Age (Br A2–B1 period). These are the first metal objects of this period from the cave; Early or Middle Bronze Age human presence was only evidenced before by a few uncertain potsherds. Thus, the depot discovered in the *Csontház-terem* is the first unrefutable proof that people visited the Baradla Cave during the Middle Iron Age.

Summary

The find material recovered in the 2019 research campaign in the cave mainly represented historical periods already registered by earlier research.³¹ Most findings—pottery, as well as obsidian and flint tools—could be assigned to the Middle Neolithic Bükk culture, followed in quantity by the Late Bronze Age record, the greater part of which was metal objects with relatively few potsherds. The number of medieval findings (their majority from the Árpáadian Age) was considerably lower.

We could also detect new historical periods inside the cave: we found a probably Early Bronze Age pottery fragment, a depot certainly from the end of the Middle Bronze Age, and two early Scythian-type arrowheads marking Early Iron Age human presence.

While the trenches also yielded animal bones in abundance, only those recovered from under the travertine layer in the *Biológiai labor* could be dated with certainty. As the few human bones³² were all discovered in a secondary position in disturbed soil layers, their age can only be determined by radiocarbon dating. We have also collected a large amount of soil (about 200 kg) for archaeobotanical samples from the excavated parts of the cave.

The discovery and excavation of an intact Middle Neolithic layer preserved by a travertine “shell” in the *Biológiai labor* is one of the most significant results of the 2019 research campaign. The other is the discovery and documentation of an undisturbed Middle Bronze Age depot in the *Csontház-terem*.

The results of the recent topographic and metal detector surveys and the latest excavations, including the unearthed phenomena, confirm our previous hypothesis that in prehistory, the cave was mainly used for ritual activities.³³

The cleaning and conservation of the find material have already been completed; currently, the analysis of the samples and the evaluation of the record are in progress. We plan to present the final results in the near future and hope that they will contribute significantly to our knowledge of the ways humans used the internal spaces of the cave and carried out ritual activities in the Neolithic and the Bronze Age.

Acknowledgements

The excavation was led by archaeologist Gábor V. Szabó, GIS expert Balázs Holl and archaeologist Ádám Artúr Nyírő. Besides, archaeologists Kristóf Fülöp, András Füzesi, Ferenc Paár, Nóra Szabó and Károly Tankó, metal detector specialist Lajos Sándor, archaeology students Ádám Balázs, Marcell Barcsi, Gizella Kovács, Máté Mervel, Péter Mogyorós, and Eszter Solnay, and speleologists Eszter Szilágyi and Zoltán Szabó participated in the project.

30 The items were laying in rows on top of each other, on opposite sides in each following row; this arrangement indicates that the fabric or piece of clothing on which they were sewn had been folded before depositing. We could not observe organic remains corroded onto the metal objects.

31 NYÁRY 1881; HOLL 2007; REZI KATÓ 2014.

32 For a summary of the human remains discovered in the cave, see REZI KATÓ 2020, 46–48.

33 V. SZABÓ 2019, 58; REZI KATÓ 2020, 54.

The Aggtelek National Park Directorate assisted us in organising and synchronising the fieldwork; we are grateful for their help. We also thank the contractor, Nova-Alpin Ltd., for their considerable help during the excavation.

We owe a special thanks to Kinga Székely for sharing her knowledge about the research and building history of the *Róka-ág* with us at the time of the field research. The text was translated by Katalin Sebők.

References

- BARTÍK, J. – FARKAŠ, Z. – JELÍNEK, P. 2019: Bronzhortfunde aus den Kleinen Karpaten und ihren Vorgebirgsgebieten. In: BAZOVSKÝ, I. – BŘEZINOVÁ G. (eds): *Ľudia a hory – archeologická perspektíva. Interakcie ľudských spoločností horských a podhorských oblastí. Zborník Slovenské Národnej múzeu – Archeológia – Supplementum* 12, Bratislava, 15–102.
- DRECHSLER-BIŽIĆ, R. 1980: Nekropola brončanog doba u pećini Bezdanjaci kod Vrhovina (Das bronzezeitliche Gräberfeld in der Höhe Bezdanjača bei Vrhovine). *Vjesnik Arheoloskog Muzeja u Zagrebu* 12–13, 70–78.
- HOLL, B. 2007: A Baradla-barlang régészeti kutatása (Archaeological Survey of the Baradla Cave). *Archaeologiai Értesítő* 132, 267–288. DOI: [10.1556/ArchErt.132.2007.1.10](https://doi.org/10.1556/ArchErt.132.2007.1.10)
- HELLMUTH, A. 2010: *Bogenschützen des Pontischen Raumes in der Älteren Eisenzeit. Typologische Gliederung, Verbreitung und Chronologie der skythischen Pfeilspitzen*. Universitätsforschungen zur prähistorischen Archäologie 177. Bonn.
- JANKOVITS, K. 2017: *Die bronzezeitlichen Anhänger in Ungarn*. Studia ad Archaeologiam Pazmaniensia 9. Budapest.
- KEMENCZEI, T. 1984: *Die Spätbronzezeit Nordostungarns*. Archaeologia Hungarica 51. Budapest.
- KORDOS, L. 1976: Barlangi őslénytani ásatások és gyűjtések. *Beszámoló a MKBT 1976. évi tevékenységéről*, 34–57.
- MARKOVÁ, K. 1999: Zu den Bernsteinfunden aus Nitriansky Hrádok. In: BÁTORA, J. – PEŠKA, J. (eds): *Aktuelle Probleme der Erforschung der Frühbronzezeit in Böhmen und Mähren und in der Slowakei*. Nitra, 211–229.
- MOZSOLICS, A. 1967: *Bronzefunde des Karpatenbeckens. Depotfundhorizonte von Hajdúsámson und Kosziderpadlás*. Budapest.
- NYÁRY, J. 1881: *Az aggteleki barlang, mint őskori temető*. Budapest.
- NYÍRÓ, Á. A. 2019: *Barlangok késő bronzkori használatának értelmezése a Baradla-barlang tükrében*. MA Thesis, Eötvös Loránd University, Budapest. URL: <https://mandadb.hu/tetel/734168>
- REZI KATÓ, G. 2003: Aggtelek, Baradla-barlang. In: KISFALUDI, J. (ed.): *Régészeti kutatások Magyarországon 2001 – Archaeological Investigations in Hungary 2001*. Budapest, 133.
- REZI KATÓ, G. 2014: A Baradla a történelem előtti időkben. In: GRUBER, P. – GAÁL, L. (eds): *A Baradla-Domica barlangrendszer. A barlang, amely összeköt. Jósvalfő*, 327–354.
- REZI KATÓ, G. 2020: A Baradla-barlang, mint rituális tér (The Baradla Cave as a Ritual Space). In: CSENGERI, P. – KALLI, A. – KIRÁLY, Á. – KOÓS, J. (eds): *ΜΩΜΟΣ IX. A rituálé régészete. Őskoros Kutatók IX. Összejelentések konferenciakötete, Miskolc, 2015. október 14–16*. Dissertationes Archaeologicae – Supplementum 3. Budapest, 43–58. DOI: [10.17204/dissarch.suppl3.43](https://doi.org/10.17204/dissarch.suppl3.43)
- TOMPA, F. 1929: A Nemzeti Múzeum ásatásai az aggteleki Baradla-barlangban. *Magyarság*, 18 December 1929, Vol. 10, no. 288, 6.
- SCHMIDL, A. 1857: *Die Baradla-Höhle bei Aggtelek und die Lednica Eishöhle bei Szilítze im Gömörer Com. Ungarns*. Wien.

- ŠEFČAKOVA, A. 2017: Praveke kresby v jaskyni Domica (Prehistoric Drawings in Domica Cave). *Zborník Slovenského Národného Múzea* 111 – *Archeológia* 27, 15–37.
- VASS, I. 1831: *Az Aggteleki barlang leírása, fekte területével, talprajzolatával és hosszába való átvágásával*. Pest.
- V. SZABÓ, G. 2019: *Bronze Age Treasures in Hungary: The Quest for Buried Weapons, Tools and Jewellery*. Hereditas Archaeologica Hungariae 3. Budapest.
- V. SZABÓ G. – CZAJLIK Z. – REMÉNYI L. 2014: Traces of an Iron Age Armed Conflict: New Topographical Results from the Research into Verebce-bérc at Dédestapolcsány I. *Hungarian Archaeology*, 3/1, 1–9.

© 2023 The Author(s).



This is an open-access article distributed under the terms of the [Creative Commons Attribution-Non Commercial 4.0 International Licence](https://creativecommons.org/licenses/by-nc/4.0/) (CC BY-NC 4.0).