

MUZEUL JUDEȚEAN MUREȘ



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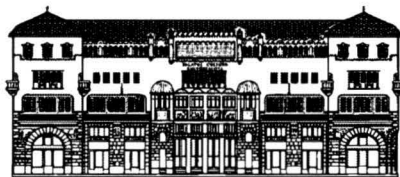
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PRELIMINARY REPORT ON THE AERIAL ARCHAEOLOGICAL SURVEY IN TRANSYLVANIA (2009–2010)

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The topographical method which is based on aerial photography has a history of 90 years in Britain and at least 50 years in some other Western European countries. Its most expressive results, that had an important influence on archaeology, were achieved mostly in regions which have a low relief profile: either plains or smaller hills, where the pastoral farming and the monocultivated grain fields made it possible to intensively study larger areas. Nevertheless, in the last 20 years there were excellent results achieved in mountainous landscapes (ex. in Austria by M. Doneus, in Switzerland by P. Nagy, in Slovenia and Greece by D. Grosman). The principal objective of the present paper is a brief presentation of the first results of our research developed on the experience achieved in Hungary and adopted for Transylvania.

Keywords: aerial photography, topography, Transylvania, earthworks, fortifications, barrows, roads, crop marks

The Institute of Archaeology of the Eötvös Loránd University is engaged in the adoption of the aerial archaeological methods to the Hungarian facilities since 1993. Started as a Hungarian–French cooperation at the beginnings, in the present the project consists of a series of independent research programs, resulting in an archive of about 35,000 photos which refer to more than 1800 new and 500 already known archaeological sites. This is a significant collection in the context of the Carpathian Basin.

In March 2009 a new opportunity emerged for the exploration of new regions, when the Institute of Archaeological Sciences at the Eötvös Loránd University, the Department of Archaeology of the Babeş–Bolyai University in Cluj, the Institute for Archaeology and History of Art at

Cluj of the Romanian Academy of Sciences as well as the Mureş County Museum have joint for cooperation. This treaty has been renewed and amended in March 2011. For the period 2009–2010 the funding of the project was ensured by the grant of the Hungarian Research Funds (OTKA nr. 68824 – earlier: nr. 77325) and the support of the Mureş County Museum.

The preparation of the research project followed the practice developed during the earlier Hungarian–French cooperation. In the early spring period field surveys were made and the topographical data – coordinates, extents, present agricultural activity and the most important bibliography – of the already known sites from Mureş County were collected, as well as the data from Cluj and Covasna counties. All the data were recorded on the digital versions of topographical maps made in the 1940s. The catalogue also included the photos taken at the field walkings which show the present state of the surveyed areas, and which proved to be very useful at the time of the aerial explorations.

The airplane used for the aerial photography was a CTSW type ultra light plane supplied by the Aero Consulting Co. from Deva in both years, and the pilot was Simion Câmpeanu. A Nikon D300 camera with a Nikkor ED 24/70 objective made using nanocrystal technology was used. The coordinates were recorded with a Garmin GPS, directly into the RAW file. The identification of the photos taken from the air was made by László Rupnik, using the references of the Google Earth combined with the World War 2 military survey,¹ and all the data were provisionally stored in a Google Earth layer and Excel files (Pl. 1/1).²

The first surveyed area was the Transylvanian Plain, which is rather unknown from archaeological topographical aspect. After a short time one could observe that not only the territory between the Mureş and the Someş is available for research from the base airport at Târgu Mureş, but a much larger territory with a diameter of 150 km. This area had its extents in the valley of the Mureş at Deva and the Southern Carpathians, in the direction of Cluj at the junction of the Someşul Cald and Someşul Rece rivers, to the north until Gherla–Dej–Reghin, to the east in the Ciuc Basin and along the Olt River to the Bârsa Basin, and to the south in the valley of the Târnave rivers.

The oldest Prehistoric fortress from Mureş County shown in the present report is the Copper Age (Coţofeni culture) and the Early Bronze Age (Schneckenberg culture) site at Şincai–Cetatea Păgânilor (Hu. Mezösámsond–Pogányvár). The photo of the latter was already published (BALÁZS 2010, 16–17). The excavations revealed an intensively build-up area on the terraces of the mount in the Lechinţa stream's valley, unearthing houses of one and two rooms, storage pits, fireplaces and Bronze Age burials (LAZĂR 1977; 1978; BERECKI–BALÁZS 2011). The aerial photo revealed the palisade system, the lower terraces on the eastern and western sides as well as the upper terrace projecting as 'citadel', and the earlier excavation trenches too. It seems to be a new observation, that there are traces of flattened tumuli to the west of the inhabited part of the settlement. The chronology of those structures is not sure so far, because burial mounds are known not just in the Copper Age Coţofeni culture but also in the period of the Early Bronze Age.

The multi-layer settlement at Malnaş Băi–Fövenyestető (Hu. Málnásfürdő, Covasna County), belonging to the Early and Middle Copper Age Ariuşd culture, represents a settlement

1 Magyarország topográfiai térképei a második világháborúban, georeferált (*Topographical maps of Hungary in the WW2, georeferred*) - DVD-ROM, Arcanum Kft.

2 One must mention that the access to the administrative maps was poor making difficult the identification of the sites' proper topographical names.

type that is common in that period. It is very typical that the high, narrow hilltops or plateaus were fortified using the steep hillsides or cliffs as natural protection on three sides and the defensive line consisted of a simple rampart and a ditch in front of it (see, for example, the eponymous site at Ariuşd/Erősd: LÁSZLÓ 1914, 381–386, fig. 3; SZÉKELY 1981, 39–42). The excavations carried out at Malnaş Băi proved that the settlement was also fortified with a second rampart in the outer side of the ditch, and, in a later occupation period, with a palisade (LÁSZLÓ 1993, 35–49, fig. 2–9). The site was also inhabited later by the Wietenberg culture (LÁSZLÓ 2011), but there's no direct evidence of a fortification in the Bronze Age.

A special variant of fortifications was spotted at Şieu Odorhei (Hu. Sajóudvarhely, Bistriţa-Năsăud County) in 2009, where the trenches cut into the plateau were connected with another trench system, which has disappeared by now, but it is still shown by the discolouration of the soil and vegetation. Neither the chronology nor the culture is known to which these structures belonged, and the field surveys had no results in this particular case.³ A similar situation was observed at an unexplored site to the southeast of Zau de Câmpie (Hu. Mezőzáh, Mureş County) in 2009, region where archaeological sites are abundant. The fortification of Şibot (Hu. Alkenyér, Alba County) belongs to a similar 'economical' type, but we could not observe any trench and the palisade limits a longer part of the terrace over the Mureş River.

The fortification of Moreşti (Hu. Malomfalva, Mureş County) dated to several epochs, but mainly to the Migration period (5th–6th century AD) was intensively researched for relatively long period (HOREDT 1979). In fact the settlement was occupied (and sometimes fortified) from the Prehistoric Ages to the Middle Ages. It consists of multiple concentric trenches, and the excavations revealed that the trenches were 8–18 m wide and 4.6–9 m deep. There was also an auxiliary trench on the northern side. The external trench was 1.5 m long and the second concentric one was placed parallel to this in a distance of 300 m. The total length of the second and third trench system was 2 km. The areas between the parallel trenches were inhabited (LAZĂR 1995, 264–266). The trench systems are well indicated by the present surface, while on the cultivated areas new sections of the defensive system could be identified by aerial photography.

The fortified Late Iron Age settlement at Jigodin–*Kisvártető* (Hu. Csíkzsögöd, Harghita County) belongs to another type (MACREA ET AL. 1951). The site was inhabited earlier in the Bronze Age and its 6–8 m wide and 7.5 m high oval fortification line has decayed and today it is visible as a terrace flange only. At this particular settlement it was presumably important, that it was on the top of a larger mount next to the Olt River which allowed the control of the neighbouring areas. A similar strategic position is visible at Racu–*Bogát-tető* (Hu. Csíkrákos, Harghita County) also in the valley of the Olt River (CAVRUC 2000, 214–215). There, the central part of the settlement is supposed to be established in the Iron Age in its present form – it was populated earlier in the period of the Wietenberg culture and the Gáva-Holihradý culture –, but the aerial photos show an external fortification trench, especially on the southern side. This trench seems to be earlier than the terraces and therefore it might be possible that it dates from an earlier period, probably from the Bronze Age or the Early Iron Age. A central terrace placed on a projecting hilltop is rare, but not a unique feature, such structures could be observed at Pintic (Hu. Szászpéntek, Bistriţa-Năsăud County) in 2009 and at Vlaha (Hu. Magyarfenés, Cluj County) in 2010. One has to remark that the settlement structure described above does exist without a central terrace too, like at Sălicea–*Égeres* (Hu. Szelicse) in Cluj County, where the central, Copper

3 Two field surveys were done by Á. Tatár who found fragments of stone artefacts; but a precise dating was not possible.

Age (Coțofeni culture) core of the settlement is surrounded by a circular palisade. There is also a mound on the top of this mount, which makes this site more special.

The totally unique fortification at Racoșul de Sus (Hu. Felsőrákos, Covasna County) was documented in 2010. Its protected area has an elongated form and one or two smaller circular zones. This strange fortification system has to be studied more profoundly, not just for its chronology but also because of its function. The elongated area could have served as a pen for animals (Pl. 1/2).

The aerial research of the burial mounds proved to be very effective. In this part of Transylvania, these structures were not systematically researched; therefore their mapping is still in an initial stage. The geography of the region however makes difficult their identification, since there are a number of geological phenomena similar to the burial mounds. While documenting the already known burial mounds, a number of destroyed such structures around the preserved ones could be also recorded. In some cases unknown or unregistered mound groups could be observed as well. The tumuli from Gherla (Hu. Szamosújvár, Cluj County) were documented, along with the ones from Culpiu (Hu. Mezőkölpény, Mureș County) where the still standing and flattened structures were not investigated till now. In the vicinity of Băndul de Câmpie (Hu. Mezőbánd, Mureș County), a region rich in archaeological sites, a larger number of more or less decayed mounds were observed (Pl. 2/1). At Bezid (Hu. Bözöd, Mureș County) close to the Târnava River, a similar group of tumuli were found (Pl. 2/2) east of the known group of ten mounds in the area called *Asztagos* (LAZĂR 1995, 215). Nearby, south to Crișeni (Hu. Kőrispatak, Harghita County) an extended area with numerous large tumuli was also observed, not investigated till now. Some soil marks found at Luduș (Hu. Marosludas), Dileu Vechi (Hu. Oláhdelő), Șaulia (Hu. Mezősályi, Mureș County) and Vermeș (Hu. Vermes, Bistrița-Năsăud County) might refer to unknown and perished mounds as well. At Bald-*Akasztóhát* (Hu. Báld, Mureș County) some tumuli were photographed, mentioned earlier but never researched by field surveys.

Mounds that are independently standing on mountain ridges were observed in areas which lay far away from each other: at Archiud (Hu. Mezőerked, Bistrița-Năsăud County), east to Ariușd-*Örhegy* (Hu. Erősd, Covasna County), near the Olt River. In this latter case, there are 15 mounds dated presumably to the Early Bronze Age. Their average diameter is 15–18 m with a height of approximately 2 m, and they are scattered along a track of 5 km on one of the Baraolt mounts' ridges. The lesser tumuli with a diameter of 5–8 m and a height of approximately 1 m appear in small groups of 2 or 3 (Pl. 4/1).

The aerial photography took place between 26–28 June 2009 and 8–10 June 2010, in the early summer period. When choosing the dates, we tried to adjust the research to the crop marks of the cereals, but the results were quite diverse due to the different landscape types and the agricultural facilities. On the Transylvanian Plain, the small mounds and river valleys are cultivated in small lots and only a smaller part of the cultivated areas are planted with cereals. Accordingly, we could hardly observe any crop marks while the results of the research were also negatively influenced by the spots resulting from the traditional fertilizing. Despite these, some topographical records delivered outstanding results. It is the case of the Early and Late Iron Age cemetery from Fântânele-*Dealul Iușului* (Hu. Szászújös, Bistrița-Năsăud County) where in the pasture a number of new graves were identified (VAIDA 2004). Until 2011, 31 Late Iron Age and 6 Early Iron Age graves were excavated, but the aerial topography – completed with geophysical survey

– seem to attest that there are more graves on the upper parts of the hilltop (BERECKI 2009, 9–24), just where the excavations from 2011 revealed the Early Iron Age (Scythian?) graves.⁴

Crop marks were totally absent in the valley of the Someș River, in the Ciuc Basin and in the valley of the Olt River, while, the research of the Târnave Rivers' valley as well as the middle and lower part of the Mureș River was fruitful. At Gligorești (Hu. Sósszentmárton, Cluj County) we found the traces of a larger settlement, while at the junction of the Mureș and Ariuș Rivers, near Luncani (Hu. Aranyosgerend, Cluj County), at least 9 sunken-featured buildings and a number of pits were observed (Pl. 3). According to the topographical field surveys, they belong to the Early Migration Period. At Lunca Mureșului (Hu. Székelykocsárd, Alba County) similar structures were found, but in this case their chronological framing is not known. Presumably traces of Prehistoric settlements of smaller extents were found in the valley of the Mureș River in many places: Decea Mureșului (Hu. Marosdécse), Teiuș (Hu. Tövis), Alba Iulia (Hu. Gyulafehérvár), Vinerea (Hu. Felkenyér), Vințul de Jos (Hu. Alvinc), Tărtăria (Hu. Alsótatárlaka) and Luna (Hu. Aranyoslóna). One should mention that the observation conditions were far worse north to Luduș (Hu. Marosludas) in the Mureș valley, due to the properties of soil and the types of cultivation. Traces of habitation in that section of the valley were only found at Batoș (Hu. Bátos) and Cristești (Hu. Maroskeresztúr).

Earlier agricultural cultivation marks (medieval or Early Modern) or the boundaries of plots could be found at many places; the best example was observed at Șăulia (Hu. Mezőszályi, Mureș County). Double ditches which would have belonged to roads were also identified, for example at Lechința (Hu. Maroslekence, Mureș County). A linear structure, possibly a road, found at Pogăceaua (Hu. Mezőpagocsa) is stretching over a distance of 500 m; some other similar patterns were observed at Bandul de Câmpie (Hu. Mezőbánd), Grebenișu de Câmpie (Hu. Mezőgerebenes), Ceuașu de Câmpie (Hu. Mezőcsávás) in 2009 and at Oroiu de Câmpie (Hu. Székelyuraly) and Decea Mureșului (Hu. Marosdécse) in 2010.

Roman buildings appeared in many – mainly known – regions. The *castrum* and its *vicus* could be documented west to Sighișoara (Hu. Segesvár, Mureș County). This particular Roman fortification – although subject of studies since 1847 – is mainly unknown. It seems to be clear that it had no masonry phase, it was protected by a palisade and a double trench, and its buildings were of timber framed construction. Two altars have to be mentioned, as well as the stamped bricks of the *legio XIII Gemina* which indicate that the garrison was formed from the troops stationed at Apulum. The fortification was quite short-lived, built under Hadrianus or Antoninus Pius and apparently abandoned in the time of Marcus Aurelius. After being abandoned, the fortress was replaced by a Roman settlement, houses and workshops were erected there. The cemetery near to the fortification was used for a longer time (LAZĂR 1995, 235–236, with further bibliography). Many current plots cover its area, thus the camp and the *vicus* were partially visible only.

We have observed the negative crop marks of masonry at two already well-researched Roman villages at Cigmău (Hu. Csigmó, Hunedoara County) and Războieni-Cetate (Hu. Székelyföldvár, Alba County). The plan of the camp and settlement at Cigmău–*Germisara* (Pl. 4/2) is nearly completely known due to the recent aerial research of I. A. Oltean and W. S. Hanson (OLTEAN–HANSON 2001, 127–129, fig. 3–4; OLTEAN 2007, 158, fig. 5/29).

4 The authors would like to express their gratitude to Lucian D. Vaida for the friendly communication of these data.

The narrow parcels in Transylvania usually do not allow a full visibility of complex and extensive sites at a given time; therefore the aerial topography has to be made repeatedly, under different conditions (agricultural activity, weather, etc.) in order to reveal more details. In the last case mentioned above, by repeating the flights in 2010, some new buildings could be observed along a diagonal road leading to northeast, just because the type of the cultivation changed after the previous session from 2009. There was a similar situation in the case of the Roman camp and *vicus* at Războieni-Cetate, which's plan is based on aerial photographs (OLTEAN-HANSON 2001, 129–130, fig. 5; OLTEAN 2007, 158–159, fig. 5/30). Due to the favourable conditions in the time of the photography some new parts of the *vicus* became known. Both of the presented examples underline the importance of the systematic and repeated aerial archaeological surveys.

The principal task of the presented new program was to research the Transylvanian regions not investigated by aerial archaeology before, also trying to assess the possibility of a modern topographical survey. The complex geographical situation (mountains, mounts, river valleys) offer different opportunities which need various research methods. In the river valleys, the usual type of cultivation favours relatively large fields of cereals, which is very good for the observation of crop marks. On the hills, the parcels are narrow and often cultivated with other types of crops than cereals, facilitating the observations of soil marks. In the higher pastures of the mountains there is an opportunity to research the relief differences.

According to those experiences, the present multi-institutional project is scheduled for many years. Its first results also reflect the regional possibilities: in the valleys of the Mureş and Târnave rivers, where the crops are mainly cereals, the traces of Roman settlement could be researched; while by researching the soil marks and the pastures in the Transylvanian Plain, the Olt River's valley and the surroundings of Bezid the main results are the identification of tumuli and fortifications.⁵

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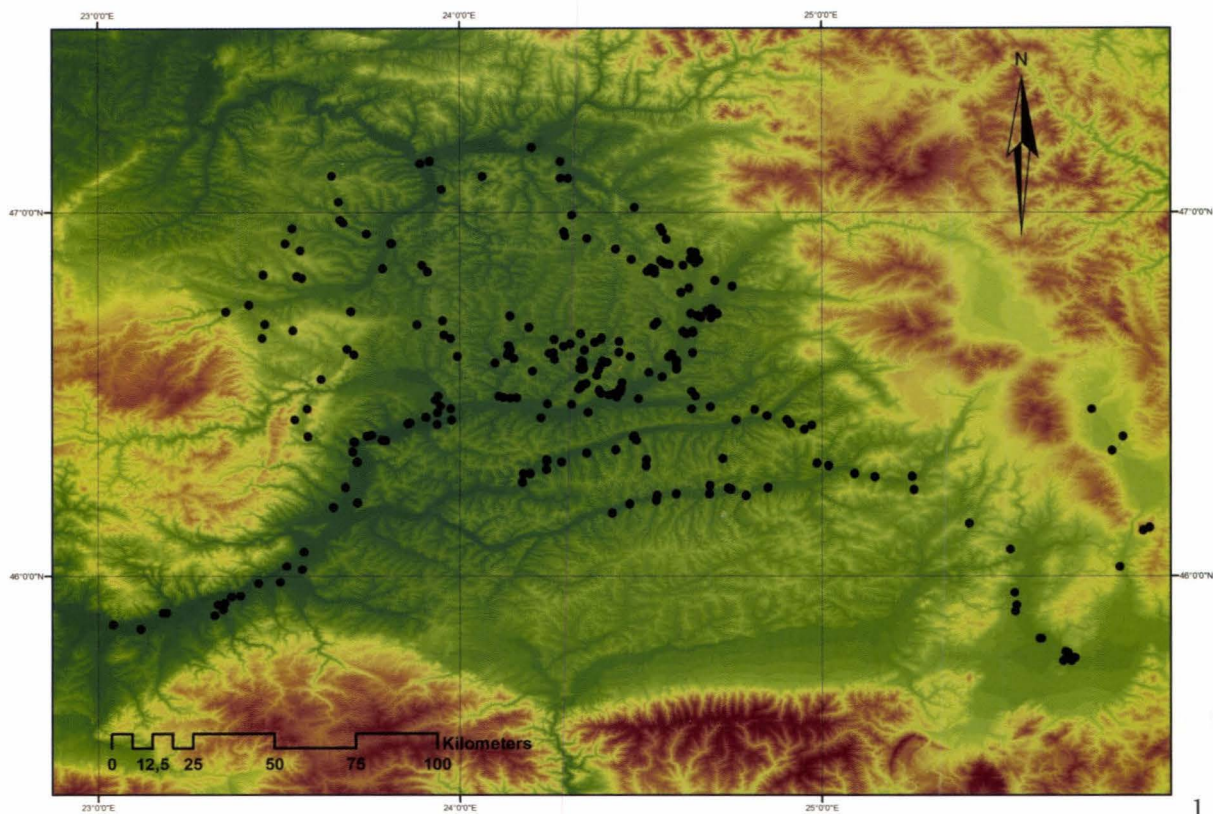
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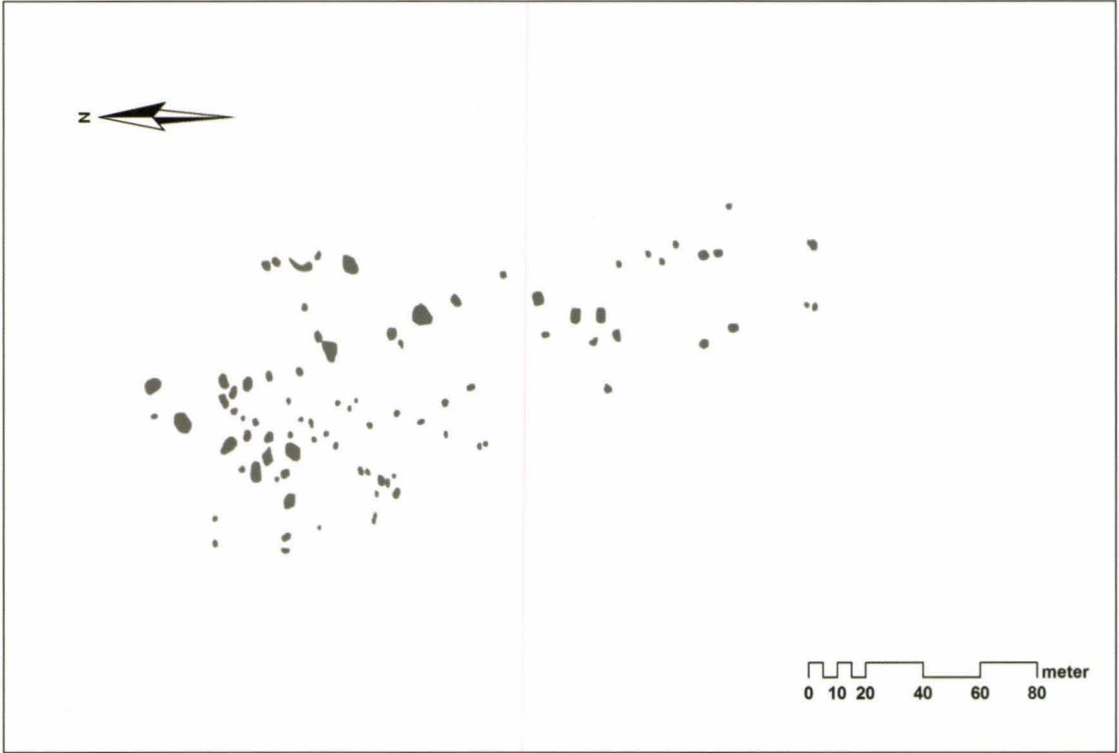


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TWO STATUETTES WITH MOBILE HEADS FROM PETREȘTI–GROAPA GALBENĂ

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Even though the Petrești culture bears the name of the archaeological site of Petrești–Groapa Galbenă / Râpa Galbenă the site itself is a poorly studied one. In order to establish the evolution of the Neolithic and Aeneolithic habitations at Petrești all the references that can be made are to materials excavated a while ago (the last excavation was ending about 50 years ago) and even these materials were insufficiently published. One of the areas lacking proper information is concerning the clay figurines and in this context we found the opportunity to bring into discussion two mobile head statuettes of ‘Thessalic type’ found by chance by Ioan Raica during the 1940s. Both pieces belong to the same type, the only difference being in size. One of the pieces displays a pair of stylized breasts, making it a feminine representation, and it has the arms ending with zoomorphic representations. From a cultural point of view the finds can be attributed to Vinča culture, Vinča C1 phase, documented in this settlement by specific materials, published or within the museum collections. We would also like to state the scarcity of this type of finds in Transylvania, the only known examples being from Turdaș, Alba Iulia–Lumea Nouă and now, Petrești.

Keywords: anthropomorphic figurines, Thessalic type statuettes, Vinča culture, Neolithic

The namesake site of Petrești culture, spread over a rather large area nearby *Groapa Galbenă*, still remains a ‘Cinderella’ of prehistoric archaeology in Romania. Even though, throughout time, there were several field walks and even systematic excavations,¹ the scientists still owe a great debt towards recovering and placing value on the important heritage that was found here.

In this study we aim to bring into discussion two anthropomorphic statuettes that, even though a rather minor find, reveal us a great deal of information on the Neolithic habitation here. Both of them can be attributed to the ‘mobile head’ category, also known as ‘Thessalic type’ figurines. The items are part of a lot that was donated to the Alba Iulia Museum in 1948 by I. Raica (BERCIU–BERCIU 1949, 36, note 17; BERCIU 1968, 20; DĂRĂMUȘ 2009, 391), a former director of the Sebeș Museum and a researcher in the team of D. and I. Berciu during the field walks and excavations conducted in the perimeter of the Petrești settlement. As the recent publication of the

1 For the history of research concerning Neolithic and Early Aeneolithic at Petrești–Groapa Galbenă, see: SCHUSTER 1865; 1867; SCHROLLER 1933, 76, Taf. 21/10–12; 22/8; BERCIU–BERCIU 1946, 27–28, 53–63, 73, fig. 44–48; 50/8–11; 51/8; 52/4; MOGA 1949, 80–81, fig. 1; BERCIU 1961, 87; LAZAROVICI–KALMAR 1982, pl. IV; PAUL 1992, 8, 19, 30, 108–109, 142–143, pl. XXIIa/1; XXV1a/3; XLII/5–7; LI/13; SIMINA 2001, 126, 129; GLIGOR 2008, 293–294. For the most recent Neolithic and Aeneolithic artefacts published from this site, see: BÂSCĂ 2009, 333–335 (drawings) and GLIGOR 2009b, 52–53, pl. I/1–2; II/1–2, the latter of Ariușd type, with a debatable provenance from this site.

materials belonging to the Late Neolithic and Early Aeneolithic habitations from this collection (GLIGOR 2008) has not included these two figurines, we will undertake this mission as follows.

The first artefact is a torso-shaped statuette, of a slightly pyramidal shape, a flat base and oval in section. The arms are arched obliquely and raised up, with the extremities broken off, more so on the right arm. The statuette is pierced longitudinally by a perforation. There are no visible signs of decor or any indications of sex. On the right side of the orifice, in the area of the clavicle, there is a small circular impression. The statuette was carefully modelled, using as temper grainy to fine sand. The firing resulted in an oxidized red colour. Size: height = 4.6 cm; $\varnothing = 1.7 \times 2.3$ cm; arms extension (existing) = 3.6 cm; perforation $\varnothing = 2.5$ mm. National Union Museum of Alba Iulia, inventory no. 1778 (Pl. 1/1).

The second object is a torso-shaped statuette, of slightly pyramidal shape, a flat base, circular in section. The arms, arched obliquely towards the sky, are indicated; the left one is partially missing. In between the arms the item is perforated longitudinally. On the front side there is a schematic representation of right breast, the other one missing due to ancient fragmentation of the piece. The item is made of fine clay and the surface was covered with a thin yellowish-white polished varnish. Size: height = 6.8 cm; maximum $\varnothing = 3 \times 3.3$ cm; arms extension = ca. 6.3 cm; perforation $\varnothing = 2$ mm. National Union Museum of Alba Iulia, inventory no. 1777 (Pl. 1/2).



Fig. 1. The Neolithic and Copper Age site of Petrești-Groapa Galbenă on Google Earth.

The two statuettes belong to a common category of statuettes with mobile heads; typologically they are related, the only differences are in the size, the one displaying the feminine attributes (breasts) being larger.

In Transylvania, the largest number of such items (12) was published from Turdaș, and is part of the Zs. Torma collection (ROSKA 1941, 318, Taf. CXXXVII/1-4; VLASSA 1966, 9-16, pl. A/1-5; B/6-10; C/11-12; COMȘA 1995, 34, fig. 16-17). With the exception of Turdaș, within the Carpathian arch we can see a rather scarce presence for the 'Thessalic type' figurines. These items are rather different than the examples we have from Petrești. Better representations of this

category we find in Banat, the B and C phases of Vinča culture, only within the settlement of Zorlențu Mare being recovered about 130 items, dated to Vinča B2 and C (VLASSA 1966, 16, note 11; LAZAROVICI 1979, 94, pl. XXI/A 1, 3, 4–6, 8–9, C 4, 7–8, 10, D 1–10, E 1–11, F 1–9; XXII/C–G; H 1–12; CULTURA VINČA 1991, 207–208, cat. 146–148; DRAȘOVEAN 1996, pl. XXIX/1–2, 4–15; XXX/1–18.); other finds are signalled at Sălbăgelu Vechi (Vinča C, DRAȘOVEAN 1996, pl. XXV/2–7, 10–11), Jupa South (Vinča C, CULTURA VINČA 1991, 163, cat. 53, s.v. S. A. Luca), Liubcova (LAZAROVICI 1979, pl. XXII/A 16–18; LUCA 1998, fig. 39/1, 6–7; 40/3; 51/2–3; COMȘA 1995, 33, fig. 26/11; 27/4, 6; DRAȘOVEAN 1996, pl. XXI/2–4, 6–8; XXIV/1), Ruginosu (Vinča B2/C, LAZAROVICI 1979, pl. XXII/B 10), Sănandrei (Vinča C, DRAȘOVEAN 1996, pl. XXVI/3–4), Uivar (Vinča C, SCHIER–DRAȘOVEAN 2004, 181, Abb. 21/5). Within the Bucovăț cultural group there are items found in the Parța settlement (LAZAROVICI 1979, pl. XXI/H 2–3). Two such statuettes were found also at Alba Iulia–*Lumea Nouă*, and were attributed to the Foeni cultural group (GLIGOR 2009a, 111, pl. CLI/3 a–d; CLII/7 a–c.), a group that is clearly using this type of representations as was documented by finds in Banat, at Sânmihaiu Român (LUCA 2009, 200, fig. 2/5, 7). North of the Danube we find such items in the well known settlements of Gumelnița, Căscioarele, Sultana (DUMITRESCU 1941, 97–99, 101, fig. 1–2; DUMITRESCU 1960, 245–246, 249–250, 251–253, fig. 1; 2/3; COMȘA 1995, 45, fig. 53/5–6; 55/5–6; ANDREESCU 2002, 48, pl. 3/6A–B; 33/1–4) and Vădastra (MATEESCU 1959, 59, fig. 3/2; VLASSA 1966, 16, note 11; COMȘA 1995, 31, fig. 18/5), belonging to these two Aeneolithic cultures respectively.

The larger representation from Petrești (Pl. 1/2) has analogies among the Turdaș figurines (ROSKA 1941, 318, Taf. CXXXVII/1; VLASSA 1966, 9, 11, pl. A/1, 5; CULTURA VINČA 1991, 206, cat. 148). A difference can be found in the way the arms are arched inwards and outwards, a similar situation being found for the second item (Pl. 1/1); the lower part is more robust and straight, allowing the horizontal placement of the statuettes on a flat surface.

Gh. Lazarovici sees the origin of the mobile head statuettes in the Vinča environment, as early as the B1 phase, with several variants and groups being developed later. Within his proposed typology, the Petrești finds can be seen as belonging to group III, the b₁ variant (cylindrical shaped body, obliquely placed arms ending with animal representations) and they are considered to be specific for the Vinča B2 phase (LAZAROVICI 1979, 94). Here we can certainly place the more massive statuette from Petrești (Pl. 1/2), having numerous similar finds in Banat, at Zorlențu Mare, belonging to Vinča B2 (LAZAROVICI 1979, 97, pl. XXI/C 7, 10, D 1, 7, 4, E 2–4, 9, F 1, 5–6; XXII/E 1; G 4, 12; fig. 38/1–2; DRAȘOVEAN 1996, 63, pl. XXIX/7, 9; XXX/4) and Liubcova (LAZAROVICI 1979, pl. XXII/A 18).² Although it is present in the western area of Vinča culture beginning with the B2 phase, the Neolithic anthropomorphic representations with mobile heads can be attributed, for Transylvania, to the Vinča C1 migration (DRAȘOVEAN 1996, 96; LAZAROVICI–LAZAROVICI 2006, 571). The Alba Iulia–*Lumea Nouă* finds are a proof that, on this chronological level, the Foeni have also used and moved around this type of representations (GLIGOR 2009a, 112).

We also make note, in the case of the two finds from Petrești, the small diameter of the perforation, created either after modelling the clay or during this process, around a wood – or a different organic material – stick. There is no agreement towards the functionality of this type of representations. Some researchers argue that on the upper part of the statuette, different types of mobile head were interchanged, using the perforation and varying according to the worshiped

2 For the statuette associated within the ritual feature with the famous Liubcova statuette, see: LUCA 1998, fig. 51/3 a–c.

divinity. Even though such mobile heads, made of clay or marble,³ were found for the Thessalic group, the hypothesis was not seen as representative for the entire group of mobile head statuettes (DUMITRESCU 1961, 275).

The presence of female attributes (breasts) on one of the figurines (Pl. 1/2) can be linked to similar finds from Turdaş (VLASSA 1966, 11, pl. B/9) and Zorlenţu Mare (COMŞA 1996, fig. 5/6). The other statuette has no distinguishable sexual attributes.

These two previously unpublished statuettes from Petreşti bring out new and important data in relation to the scarce Neolithic and Copper Age plastic representations from this site. We would like to put an emphasis on the fact that only three (!) anthropomorphic figurines were recovered by chance discovery,⁴ two of them attributed to Petreşti culture, one published (PAUL 1969, pl. XII/1a–1c; PAUL 1992, pl. LI/13) and a fragmented one (unpublished), next to another mobile head statuette (item discovered in 1929, ALDEA 1968, 11–13, photo a–b). In regards to the last item in the list we should state that it is not of ‘Thessalic type’ and it does not belong to the Neolithic habitations present at the site, as it was previously published and referenced several times.⁵ The arguments that include this figurine amongst those belonging to Coţofeni I, linked with anthropomorphic figurines of Cernavodă III and Baden A cultures, have been stated by us with a previous occasion (POPA 2009). Therefore the ‘Thessalic type’ representations can be documented at the Neolithic settlement of Petreşti but not by including the statuette published by I. Al. Aldea, as this one is attributed to a much later type.

In the context of the poor stratigraphical data available and given the very complex succession of cultural and chronological habitations, identified from surface finds and excavations at *Groapa Galbenă*, the cultural and chronological frame for these pieces is rather problematic. The finds indicate an intense habitation that we place in the Turdaş II–III–Vinča C1–Foeni horizon,⁶ with representative materials for each cultural manifestation. The mobile head figurines from Petreşti are also stating the value of this site, including for the pre-Petreşti habitations, making it worthy for preservation in front of the rising risk of destruction.⁷

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3 KALICZ 2002, 18, where the author, referring to the mobile head figurines of Baden culture also issued the hypothesis that they could have had both animal and human heads fixed on.

4 To be noticed that anthropomorphic and zoomorphic figurines are completely missing (s.n.) from the materials (kept at Alba Iulia and Sebeş) originating in both excavations carried at Petreşti–*Groapa Galbenă* by D. Berciu in 1943 and 1960–1961. This absence can be attributed to the fact that the special finds were separated by D. Berciu and taken for study to Bucharest, where these items might be at the moment.

5 Later placed in the same period, by ROMAN–NÉMETI 1978, 38, note 6; GLIGOR 2009a, III.

6 For stratigraphical correlations and chronology for the most important Neolithic and Aeneolithic for south-west and southern Transylvania (excluding Petreşti) and the site at Foeni, see: LUCA 2009, 200–202, tab. 1–2. Vinča C type materials were signalled since 1987 (LAZAROVICI 1987, 38, fig. 10/2–3; newly DRAŞOVEAN 1996, 99), same as materials considered to be Foeni (GLIGOR 2008, 309–311, pl. V–XII).

7 Recently the current cemetery has extended its area of burials, another large area being fenced for an extension. We express doubts that anyone will carry out rescue excavations with each burial...

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Fig. 1. The Neolithic and Copper Age site of Petrești–Groapa Galbenă on Google Earth.

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Pl. 1. Petrești–Groapa Galbenă. Statuettes with mobile heads.

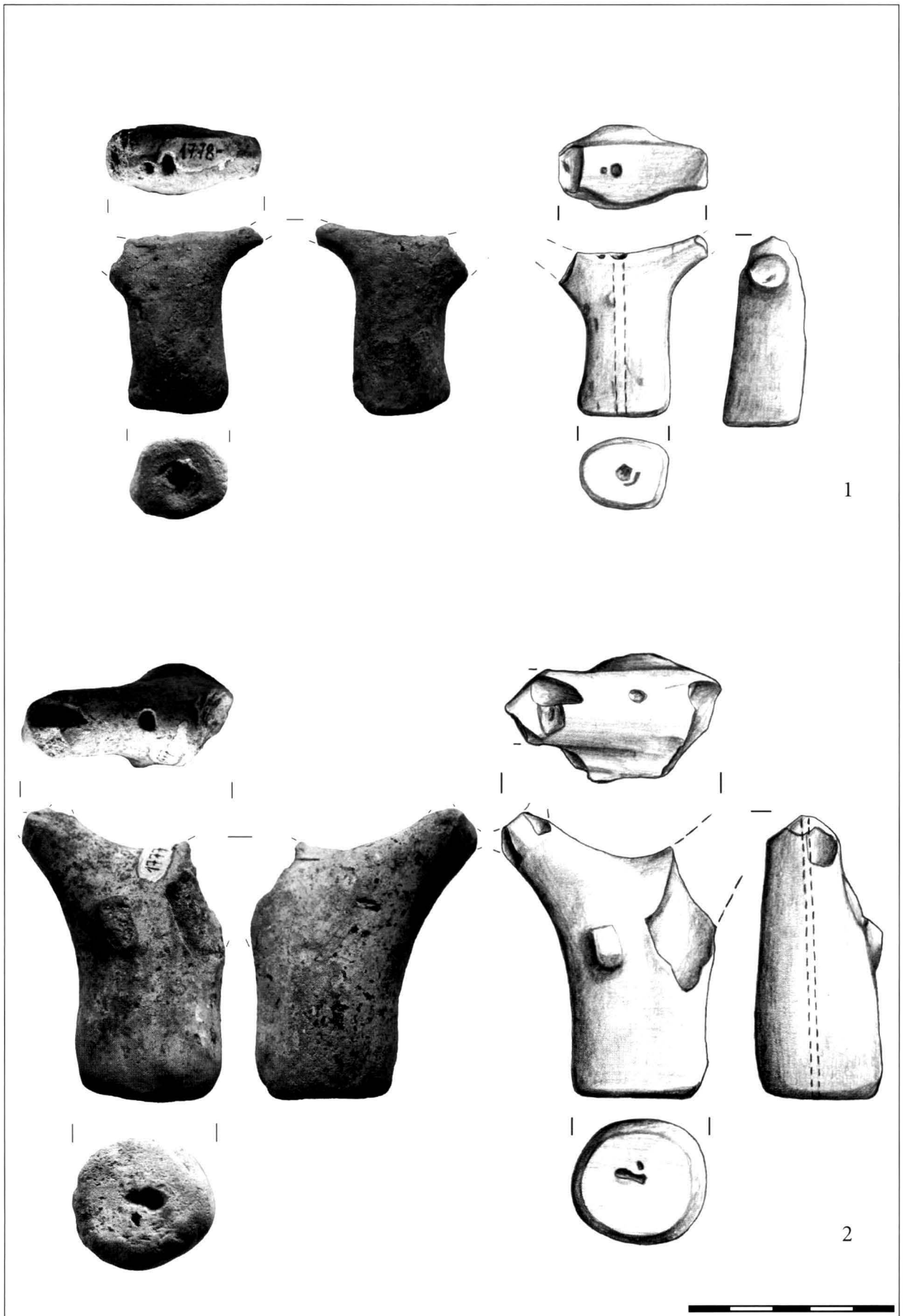


Plate 1. Petrești–Groapa Galbenă. Statuettes with mobile heads.

TEXTILE STRUCTURES AND TECHNIQUES IDENTIFIED IN NEOLITHIC AND COPPER AGE SITES FROM ROMANIA

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Proofs of textile activity for Neolithic and Copper Age were mostly ignored in Romanian archaeology and therefore this territory is still poorly represented on the map of prehistoric textile finds. This is why the current study is focused on cataloguing all the types of textile structures that were identified to this day in Neolithic and Copper Age for the territory of Romania. A careful consideration was given to the main techniques that provided these structures, each with its own succinct presentation. Mostly preserved as textile imprints on pottery, the structures were recovered from about 21 archaeological sites belonging to Neolithic and Copper Age, dated between 5500–3500 BC approximately. Eight types of textile structures were identified and classified in four major technical groups: needle looped, interlinked, twined and woven textiles. Of these, twined and woven textiles are most frequent and they seem to belong to particular and distinct areas of technological knowledge that follow each other from the chronological point of view. Twined textiles are generally roughly done and are dated, with one exception, between the beginning of Middle Neolithic to the Late Neolithic and Early Copper Age (ca. 5500–4500 BC). Opposed to this, weaved textiles are mostly dated in the Middle to Late Copper Age (ca. 4300–3500 BC). Needle looped and interlinked textiles are also of a later date, somewhere between 4500–3500 BC approximately. This varied chronological distribution of the main technological types could provide new clues towards defining the evolution of textile production for the Neolithic and Aeneolithic/Copper Age communities. It also brings new clues into the study of broad usage of textile technology and products, especially since weaving is seen as one of the least known and documented textile techniques for the Neolithic period.

Keywords: archaeological textiles, textile structures, textile technologies, textile imprints, weaving, twining, needle looping, interlinking methods, net-like fabrics, plain weave, warp-faced weave, Neolithic, Copper Age

In the last decades the study of archaeological textiles has seen a remarkable development in Western Europe, revealing the importance that these artefacts had in the lives of the prehistoric people. Although rather timid, the interest for textiles and textile production has started to take shape in Romanian archaeology in the last years. The works of C. Marian and her collaborators, dedicated to textile imprints on pottery belonging to Cucuteni culture (MARIAN 2006; 2008; 2009; MARIAN–ANĂSTĂSOAEI 2007; MARIAN–BIGBAEV 2008; MARIAN–CIOCOIU 2004a; 2004b; 2005; MARIAN *ET AL.* 2004; 2005; 2007; VĂLEANU–MARIAN 2004), and the studies of D. PRISCARU (2009a; 2009b) on Bronze Age textile tools, provide promising data for this area of study.

These studies are not enough to cover the gap of knowledge that is presently displayed for the territory of Romania towards the study of this major 'invisible craft' of prehistoric times.

The almost total lack of actual textile remains (real archaeological textiles)¹ and the scarcity of textile impressions and other forms of textile preservation – like pseudomorphs – must be seen as the main inhibiting cause towards the development of research in prehistoric textiles for Romania. The small number of articles and studies dedicated to textiles and pottery textile imprints before 2004, is a proof of this (GUMĂ 1977; ZAHARIA-CĂDARIU 1979; NICA 1981). In most cases the topic of textile imprints has been treated in short notes and observations within the pottery studies or the chapters dedicated to pottery in archaeological site monographs. Further proofs and finds are probably still awaiting re-discovery within the museum's pottery collections.

In order to provide a basis and an encouragement for future studies we considered necessary to create a short review of textile structures and techniques identified to the present days, with focus on Neolithic and Copper Age finds in Romania.²

Textiles definition

In a strict sense 'textile' refers only to woven cloth, the source of the word coming from the Latin word *texere*, to weave. In a broad sense the term applies to all structures created from perishable materials, with a more or less rigid appearance (ADOVASIO 1996). We chose the definition proposed by E. Barber, a definition that makes a clear distinction between textile and matting/basketry. By textiles the author understands all types of woven and unwoven clothes that are "thin sheets of material made from fibres, which are soft and floppy enough to be used as coverings for people and things" (BARBER 1991, 5). Therefore, even though they can structurally resemble textiles, the products created from more rigid materials do not share the same properties and purposes and they often require special techniques. Compared to textile fibres, rigid or semi-rigid raw materials, like straws or wickers do not require the use of additional tools in the process of creating a finite product, mats, basketry or wickerwork.

In defining textile products we differentiate fabric (structure) and technique. The fabric characterizes the interlacing system, and the technique is depicting the creation process (MÉDARD-SEILER-BALDINGER 2010, 61). The classification of textile creation techniques by A. SEILER-BALDINGER (1991; 1994) shows that, even if the number of structures is limited, the way in which they are obtained is various.³ Towards this the author relates about the 'ambiguous' structures in which the correspondence between a structure and a particular textile technique is hard to define. This applies especially to archaeological textiles that are in most cases just fragmentary (SEILER-BALDINGER 2003, 55–56; MÉDARD-SEILER-BALDINGER 2010, 61). She distinguishes between primary manufacturing processes, i.e. "methods using no or very simple implements" and advanced techniques which "invariably require equipment" (SEILER-BALDINGER 1994, 5). The textiles made by primary techniques comprise a large variety of mesh fabrics and plaiting.

1 Besides textile fragments belonging to a bedspread found at Sucidava-Celei, the Celei group (NICA 1981) we do not have any knowledge of found and published textiles artefacts, to this day.

2 It is possible that the data is incomplete due to the large volume of bibliography and archaeological material that could contain relevant information to our study. In other words the current data is to be considered a stage of research and is opened to future additions.

3 In defining techniques of creating the textile fabrics the author considers that "the fineness and quality of the threads are of secondary importance"; and so the classification can also be applied to fabrics of more rigid materials, such as basketry/wickerwork.

They are often hard to differentiate from textile fabrics created using advanced techniques, like the use of warp and so on. In these cases we have a series of methods that are to be placed between primary and advanced techniques. Weaving is considered to be the most advanced textile technique (SEILER-BALDINGER 1991; 1994).

Prehistoric textiles reveal a wide range of structures, created using both primary and advanced techniques. Within the territory of Romania eight types of textile structures were identified to this day, classified in four major technical groups: needle looped, interlinked, twined and woven textiles. All were identified based on several imprints on pottery and a pseudomorph found in 21 Neolithic and Copper Age settlements in Transylvania and Moldova, dated between 5500–3500 BC (Fig. 10). Unfortunately, for Southern Romania there are no other published proofs of textiles besides the charred bedspread remains found at Sucidava-Celei.

1. Needle looped textiles

According to A. SEILER-BALDINGER (1994, 7) looped fabrics belong to the primary textiles category – next to those produced by linking and knotting – as mesh fabrics that are produced with a single continuous element. There are many ways in which to obtain such textile structures (SEILER-BALDINGER 1991, 11–18, fig. 9–23). Some of them are often found under the term *nålebinding* of Scandinavian origin (BENDER JØRGENSEN 1992, 14; BÖTTCHER 2004); it entails also the terms ‘looped-needle netting’ and ‘knotless netting’ (BENDER JØRGENSEN, 1992, 12; HALD 1950, 458; HALD 1980, 285–310; HARDY 2008, 273; WILD-WALTON-ROGERS 2003, 22–23). More precisely, in E. Hansen’s opinion the term *nålebinding* defines those techniques “where the material is produced in a darning technique, with a needle, and where the thread of the new stitch is passed arbitrarily through at least two unfinished thread-loops of arbitrary size” (HANSEN 1990, 21–27).

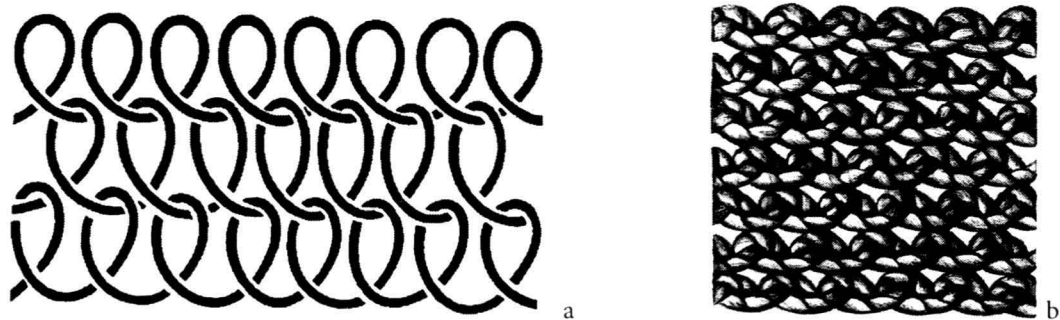


Fig. 1. Simple needle looped structures.

a. Thread configuration of a mesh in simple looping (after SEILER-BALDINGER 1991); b. Drawing of a simple needle looped textile imprint found at Bodești-Frumușica, Cucuteni A (after MARIAN 2009).

There are numerous archaeological finds and ethnographical proofs that needle looping was used for producing various pieces of garments as caps, stockings, mittens, shoes (Hald 1980, 302–310). For prehistory it seems that the more common usage was that of creating fishing nets, as proven by the discoveries from Mesolithic sites of Friesack, Germany, 8th millennium BC (HARDY 2008, 273), Tybrind Vig, Denmark, Ertebøle culture, ca. 4200 BC (BENDER JØRGENSEN 1992, 115, 159, fig. 136; BENDER JØRGENSEN 2003, 54) and the Neolithic sites of Bolkilde, Denmark, Funnel Beaker culture, ca. 4000–3400 BC (BENDER JØRGENSEN 1992, 159; BENDER JØRGENSEN 2003, 54; HARDY 2007, 12), Feldmeilen-Vordelfeld (Switzerland), Horgen layer, ca. 3239–3023 BC (BAZZANELLA ET AL. 2003, 222).

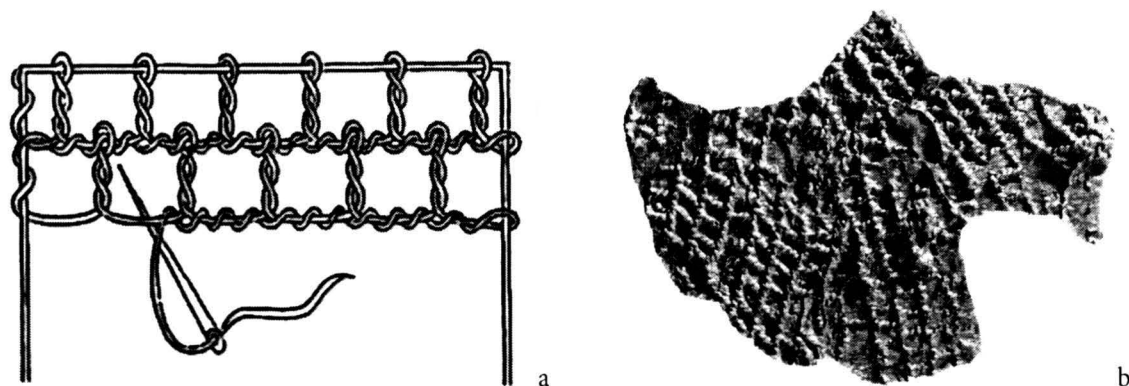


Fig. 2. Twisted looping.

a. Schematic drawing of the multiple twisted looping method (after MARIAN-CIOCOIU 2005); b. Imprint of a twisted looped net-like structure found on a Cucuteni pottery fragment from Truşeşti (after MARIAN 2009).

In Romania, the textiles created by needle looping were identified as imprints only on Cucuteni pottery (ca. 4500–3500 BC) (Table 1/3–6, 23; Fig. 9). Two types of structures were recognized: 1.1. Fabrics made by simple needle looping – dense structure (Table 1/3–6; Fig. 1); and 1.2. Fabrics made by twisted looping – Net-like structure (Table 1/23; Fig. 2).

2. Textiles made by interlinking ('ambiguous' Net-like structure)

From our knowledge there is only one textile imprint of this structure discovered in Romania, at Cucuteni–Cetăţuie (Table 1/7). It was interpreted as a textile fabric made by sprang (MARIAN ET AL. 2004, fig. 1–2; MARIAN 2009, 89, fig. 75). We consider that the production technique is ambiguous because structures of its kind could be created using a less evolved technique, like the linking (interlinking) method.

Simple linking method

Also known as interlinking (COLLINGWOOD 1974, 34), it is a primary method of producing mesh fabrics with a single continuous element (SEILER-BALDINGER 1994, 7). Basically the method consists of linking the newly formed row of meshes at the lowermost point of an existing row of meshes (Fig. 3/a). As in the case of the looping method, the linking can be worked using a needle. The end product is very elastic, and the meshes are elongated and of diamond shape. The structure thus produced resembles closely that created using the hourglass looping technique and its variations (SEILER-BALDINGER 1994, 14–16).

Sprang

Sprang is a word of Scandinavian descent,⁴ generally used today to describe the 'plaiting-on-stretched-threads technique' (COLLINGWOOD 1974, 34). According to A. SEILER-BALDINGER (1994, 48–56) sprang textiles belong to the category of advanced techniques that imply the use of warp, being generally known as 'warp methods'. Sprang is an active warp method. Basically the fabric is produced by interlinking, interlacing or intertwining the parallel threads of the warp that is fixed at both ends. There is no weft used during the working process. Instead several bars or sticks are holding the interlaced threads in position. The fabric is started from the two ends at the same time and growing towards the middle, the interworking being formed as mirror images

4 Romanian *ţesutul în bate*, German *Stäbchenflechtere*, COLLINGWOOD 1974, 249, fig. 65; VUIA 1914; ZAHARIA 2008, 137–138, 235, fig. 154, 267; still practiced today in some villages from the Pădureni region of Transylvania.

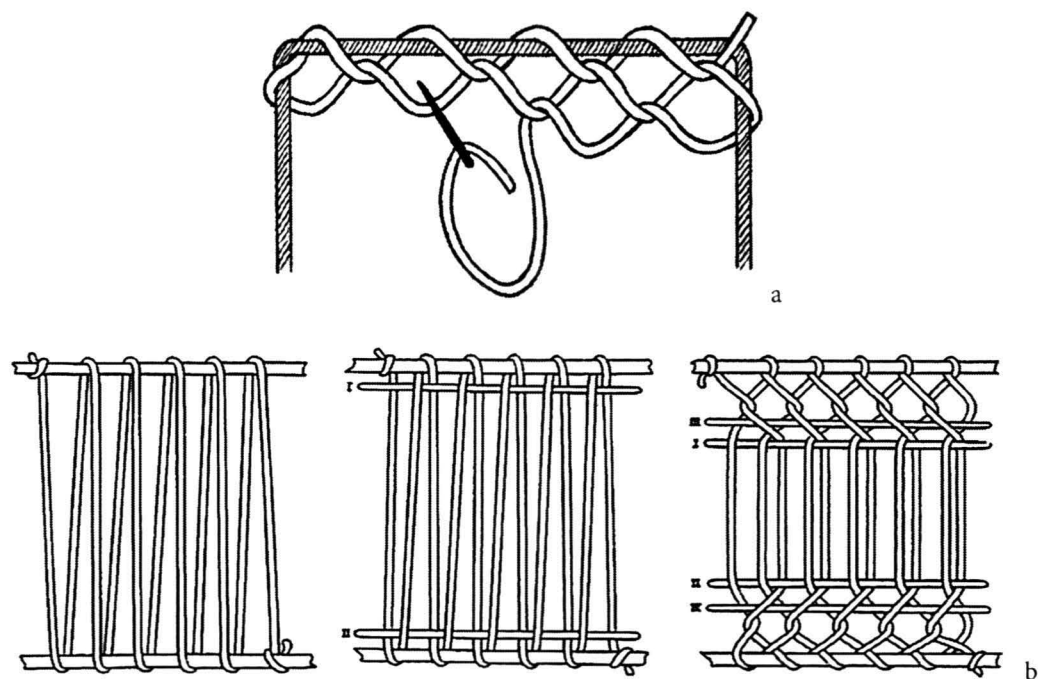


Fig. 3. Interlinking methods. a. Simple linking with the use of a needle (after COLLINGWOOD 1974);
b. Different stages of interlinking sprang technique (after BROHOLM-HALD 1940).

of each other. At the middle line the threads must be fasten in order to prevent the undoing of the fabric (COLLINGWOOD 1974, 31–32; BARBER 1991, 122; SEILER-BALDINGER 1994, 53, fig. 93) (Fig. 3/b). According to the handling of the warp fibres we can distinguish between interlinked, interlaced and intertwining sprang (COLLINGWOOD 1974; SEILER-BALDINGER 1994, 52–56). Our focus is concentrated towards interlinked sprang, whose aspect is similar to textiles produced using the linking method. Based on the way the warp fibres are arranged we can distinguish between flat and circular warp sprang (COLLINGWOOD 1974).

Because of their elasticity the fabrics made in sprang technique were mostly used for creating hairnets, stockings, sleeves and belts. For example some of the earliest finds of textiles made in sprang are the well-known woman's hairnets from Borum Eshøj, Skrydstrup and Munksgård, Denmark, Early Danish Bronze Age (BROHOLM-HALD 1940, 73–73, 99, fig. 93–94, 139–140; BARBER 1991, 122–123, fig. 3.36; BENDER JØRGENSEN 2003, 61; COLLINGWOOD 1974, 38). This technique becomes widely spread starting with the Iron Age (BARBER 1991, 122; COLLINGWOOD 1974, 39–42). Other reports in the literature of an earlier usage such as those from Rietzmeck, Kr. Roßlau, Germany, identified on Neolithic pottery (SCHLABOW 1960; BARBER 1991, 123) are most likely produced by other methods (COLLINGWOOD 1974, 37). We also express doubts about the net-like fabric discovered at Cucuteni–Cetățuie of being made using the sprang technique; it is more likely that the linking method was applied with the use of a needle, as it is the case of Cucuteni needle-looped textiles.

3. Twined textiles

Generally, twined fabrics are structures consisting of two thread systems in which the interlacing mode is characterized by a twist movement of two or more active elements around one or more passive or active elements (SEILER-BALDINGER 1994, 31–32; MÉDARD-SEILER-BALDINGER 2010, 61). The twining techniques have a wide applicability, being used for making a multitude of things as shown by both archaeological finds and ethnographic data. We can distinguish between

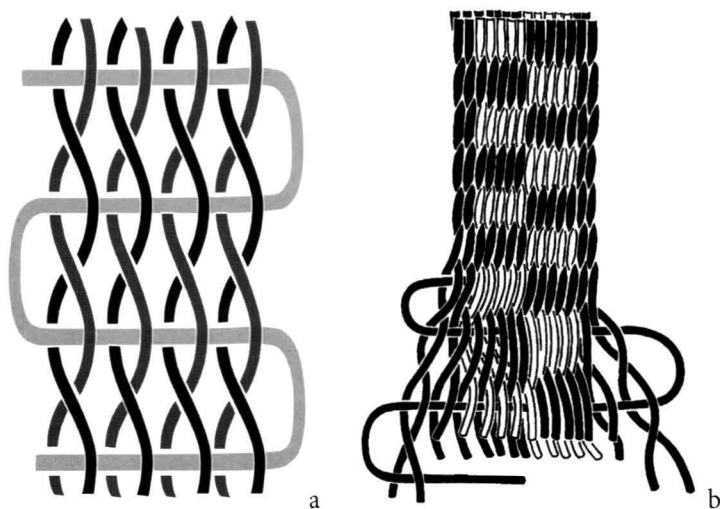


Fig. 4. Different types of warp twined textiles.

a. Open S twist twining; b. Narrow band made in warp faced Z twist twining (after SEILER-BALDINGER 1991).

the aspect and properties of cloth fabrics (RAST-EICHER 2005, 118–123). The latter technique falls under the category defined by A. Seiler-Baldinger as “advanced textile techniques” in which one system acts as warp yarns and the other as weft (SEILER-BALDINGER 1994, 50, 61; MÉDARD–SEILER-BALDINGER 2010, 61–62).

Considering the relationship between these two systems of threads, one may distinguish between textiles with active warp – warp twining (Fig. 4) – and textiles with passive warp – weft twining (Fig. 5). Warp twining is technologically more limited and less prevalent than weft twining. Occasionally it is used in combination with other methods such as ‘intertwining sprang’ or ‘half-weaving with continuous shed reservation’ (SEILER-BALDINGER 1994, 54, 70, fig. 93c, 130; MÉDARD–SEILER-BALDINGER 2010, 61–62, fig. 40c–d) (Fig. 8/b). Weft twining has allows for more technological freedom, as there are numerous varieties in the production of structures (SEILER-BALDINGER 1994, 61–62). The basic criterion for their classification is the number and arrangement of warp yarns enclosed by the weft twists. Based on this we can distinguish between simple or plain twining (Fig. 5/a–b) and twilled (diagonal) twining, also called twining on alternate pairs (Fig. 5/c–d). The derived types (Fig. 5) could be obtained by different twist directions for the weft or by having a different spacing of the weft rows (ADOVASIO 1977b, 15–20, fig. 6–8; BROUDY 1993, 37, fig. 2–20; MÉDARD 2010, 78–81, fig. 58; SCHICK 1988, 37, fig. 13–16; SEILER-BALDINGER 1994, 61–62, fig. 118; SEILER-BALDINGER 2003, 59, fig. 9).

Twined textiles are widespread throughout prehistory. The finds from Pavlov I, Dolní Věstonice I and II, dating back to Upper Palaeolithic (ADOVASIO *ET AL.* 1996; 1997; SOFFER *ET AL.* 1998; 2000a; 2000b) would indicate that they represent the oldest type of textile structure. Fragments of twined fabrics were also found in the Near East PPNB, at Tell-Halula, Syria from the 8th millennium BC (ALFARO 2002), Nahal Hemar in Israel (SCHICK 1988, 37) and Çatal Hüyük in Anatolia, around 6000 BC (BARBER 1991, 128, fig. 4.5; BURNHAM 1965, pl. XXXII/b; HELBAEK 1963, 40).

three-dimensional and two-dimensional twining by considering the type of fibres that are used as well as by the technique applied and the end product. More precisely, the three dimensional twining corresponds mostly to the twining basketry techniques in which fibres with a higher degree of rigidity are used and the end products are three-dimensional objects (e.g. hats, gloves, footwear,⁵ containers, etc.); the two-dimensional twining corresponds especially to those techniques that mainly require flexible fibres and the end products are textile items with

5 Common artefacts achieved by using the twining technique (usually found in craft markets in Romania) are the bulrush slippers. Currently they are made in certain settlements specialized in bulrush (*Typha* sp.) objects production located in Transylvania (e.g. Tonciu, Bistrița-Năsăud County).

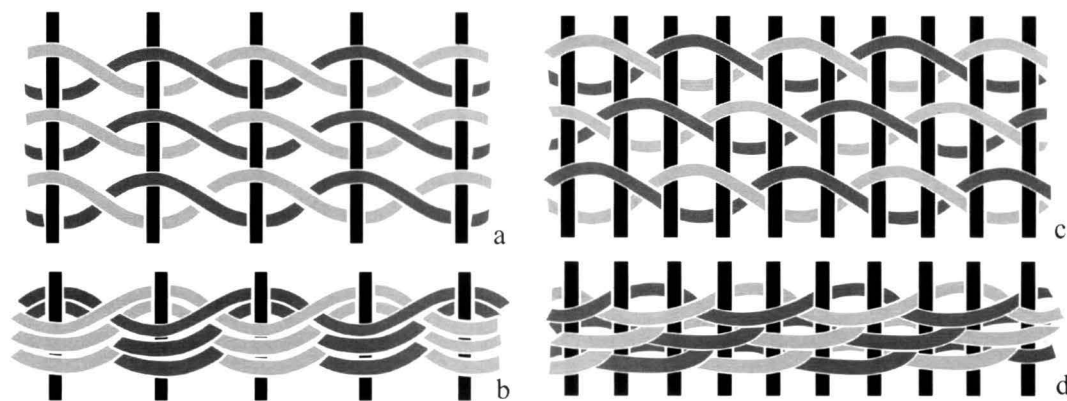


Fig. 5. Different twill twining techniques.

- a. Open simple Z twist twining; b. Close simple S twist twining; c. Open diagonal Z twist twining; d. Close diagonal S twist twining (after ADOVASIO 1977b; SEILER-BALDINGER 1991).

In Europe, twined fabrics were found as pottery imprints in Neolithic and Copper Age sites in Serbia: Divostin (ADOVASIO-MASLOWSKI 1988, 345–349, pl. I/a–f) and Selevac (TRINGHAM-STEVANOVIĆ 1990, pl. 10.1.a) Bulgaria: Čelopečene, Vetren, Gorni Bogrov, Yana (PETKOV 1965, 53–54, fig. 9–10); Greece: Kephala, Crete (CARINGTON SMITH 1977, 119–120), Italy: Fimon–*Molino Casarotto* in Vicenza (BAGOLINI *ET AL.* 1973, 186, fig. 21); Lithuania: Šventoji, ca. 3700–2500 BC (RIMKUTĖ 2009, 217), and Nida (GLEBA-NIKOLOVA 2009, 8). Textile artefacts generally dating back to the 4th and 3rd millennium BC were found in large amounts in the lake dwellings sites of the Swiss plateau (ALTORFER-MÉDARD 2000; BAZZANELLA *ET AL.* 2003; MÉDARD 2000; 2010). Later discoveries, dating from the Bronze Age, are the textiles fragments found in Sugokleya, Ukraine, from the Yamnaya culture, around 2500 BC (GLEBA-NIKOLOVA 2009) as well as the imprints and textile artefacts identified in several sites in Russia (SHISLINA 1999).

In Romania 22 twined textiles were identified. With one exception (the charred textile bedspread from Sucidava-Celei), all the others were actually textile imprints found on pottery fragments belonging to Starčevo–Criș, Vinča and Turdaș cultures, and Foeni group (Fig. 9; Table 1). Three categories of structures were distinguished: 3.1. *Open simple twining* (Table 1/19); 3.2. *Close simple twining* (Table 1/11); 3.3. *Close diagonal twining* (Table 1/ 2, 16, 18, 21, 24–25). 3.4. Besides these, there are two uncertain twined imprints with uncertain structure (Table 1/14, 26).

4. Woven textiles

Weaving is considered the most advanced textile technique. Its main characteristic is that it allows the automatic shed formation through the use of dedicated equipment. The structures thus created are characterized by interlacing at right angles of a two thread system: the warp – usually passive – and the weft – usually an active continuous thread (SEILER-BALDINGER 1994, 71; MÉDARD-SEILER-BALDINGER 2010, 62). The way the warp and weft interlaces defines the weave or binding structure and this varies depending on the number of warp threads caught or left loose by the weft threads (CIOARĂ 1998, 27–59; SEILER-BALDINGER 1994, 87–102; MAZĂRE 2010, 23–30, fig. 7) The simplest form of interlacing is called tabby or plain weave and it is characterized by passing alternatively the weft thread over and under every single warp thread (Fig. 6).

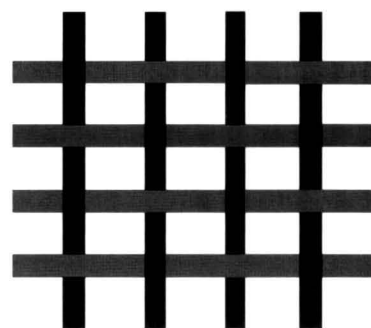


Fig. 6. Tabby or plain weave.

The woven structures can be obtained using different devices which could be found in more or less evolved forms starting from prehistory until present (VON KIMAKOWICZ-WINNICKI 1910; VOGT 1937; CROWFOOT 1954; LA BAUME 1955; HOFFMANN 1964; TABER-ANDERSON 1975; HALD 1980, 148–185, 203–239; COLLINGWOOD 1982; ALFARO GINER 1984, 85–108; HECHT 1989; ALFARO 1990; BARBER 1991, 79–121; BROUDY 1993; SEILER-BALDINGER 1994, 68–86; EVELY 2000; BAZZANELLA *Et AL.* 2003; WILD-WALTON-ROGERS 2003; CISZUK-HAMMARLUND 2008; GLEBA 2008, 122–153; BRENIQUET 2008, 33–38, 133–194; CHMIELEWSKI 2009, 159–223; MARIAN 2009, 30–52; ZAHARIA 2008, 59–80; GRÖMER 2010, 97–142).

The basic function, common to all, is to tension and separate the warp threads so as to facilitate the insertion of the weft threads. The weaving devices can be classified by morphology and dimension, shed formation and weaving process and also by the type of structure (fabric) they produce.

On one hand, large cloths with similar structure can be produced using relatively large devices (e.g. horizontal ground loom (Fig. 7/a); vertical two-beam loom (Fig. 7/d); warp-weighted looms (Fig. 7/b) and backstrap looms or body-tensioned looms (Fig. 7/c).⁶ When no other archaeological evidences exist to indicate it, it is almost impossible to determine the type of loom used in the weaving process just by analyzing a textile fragment or imprint.⁷

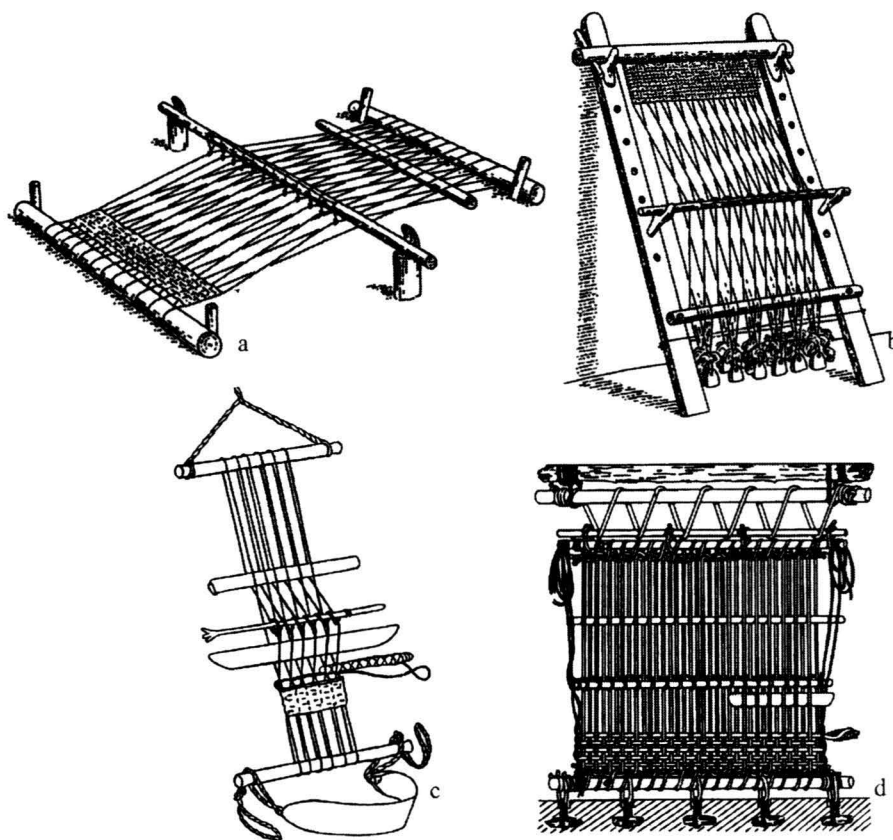


Fig. 7. Schematic drawings of different types of looms.

a. Groud loom; b. Warp-weighted loom (after CISZUK-HAMMARLUND 2008);

c. Backstrap loom (after TABER-ANDERSON 1975); d. Pueblo two-beam vertical loom (after BROUDY 1993).

6 At different levels, they are the most advanced ancient weaving devices “by the possibility of forming at least two separate sheds by mechanical means”. In A. Seiler-Baldinger’s opinion, this feature defines actually the true *full weaving* (SEILER-BALDINGE 1994, 71).

7 Some textile particularities may however indicate the type of loom. For example the textiles woven in warp-weighted looms reveal distinct starting borders.

On the other hand, ribbon type narrow textiles can be woven without using any sort of implements – the finger weaving method (Fig. 8/c) – or using small tools, known as band looms⁸ (BARBER 1991, 116–117). Except for the band looms, which make use of heddles⁹ (Fig. 8/e) or rigid heddles¹⁰ (Fig. 8/f), the weaving methods using small implements could be placed at the limit of the woven technique and other advanced textile techniques such as warp twining (SEILER-BALDINGER 1994, 68–77). They invariably produce structures similar to warp faced fabrics, sometimes with an identical appearance. For example, the warp twined structures produced by finger weaving (Fig. 8/c) and tablet weaving (Fig. 8/d) are similar to those made by warp twining method (Fig. 4) and half-weaving with shed reservation (Fig. 8/b). A special case is the half-weaving with alternate shed formation method (Fig. 8/a), by which there can be produced only warp-faced plain weaves.

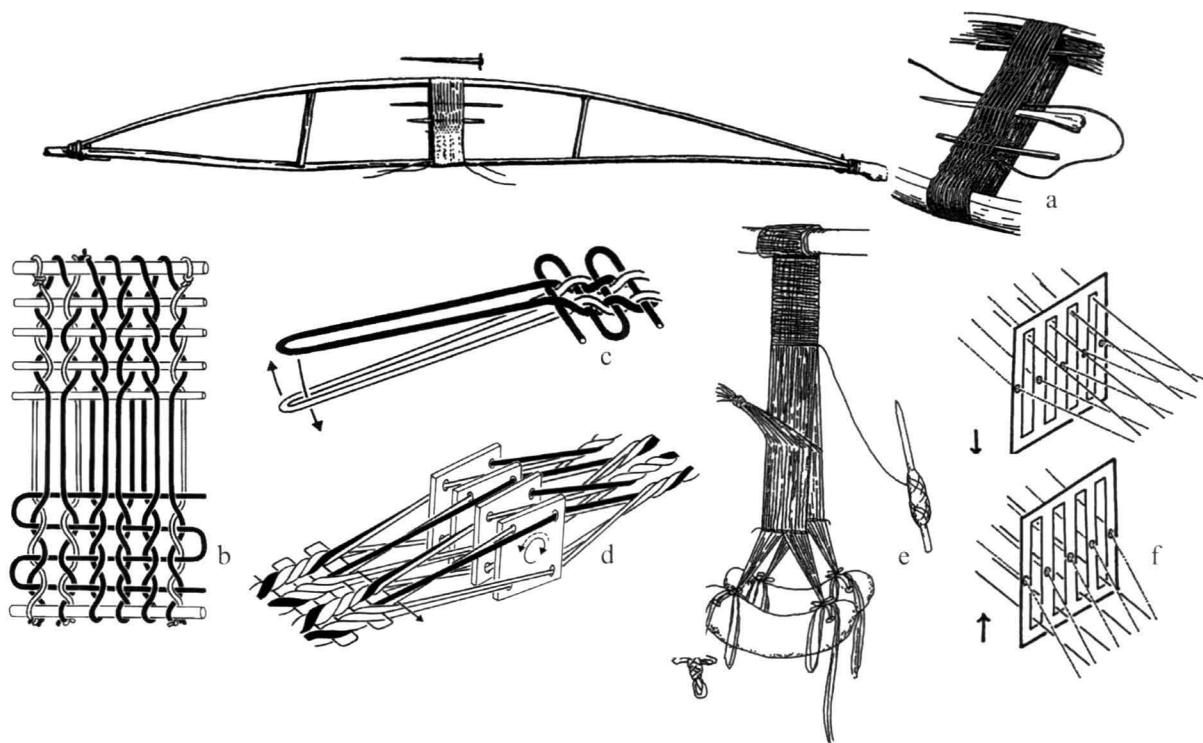


Fig. 8. Different methods of weaving narrow textiles.

a. Half-weaving with alternate shed formation using a 'bent-stick loom' (after BROUDY 1993, SEILER-BALDINGER 1991); b. Half-weaving with shed reservation, c. Finger-weaving, d. Tablet weaving (after SEILER-BALDINGER 1991); e. Weaving with heddles and loom weights (after BAIONI *ET AL.* 2003); f. Weaving with a rigid heddle (after EVELY 2000). Warp-faced plain weave (a, e, f); Warp-faced twined structure (b, c, d).

Taking into consideration the loom weights found in numerous Neolithic settlements, we can conclude that the warp-weighted loom is the only type that can be clearly documented for

8 Examples of such primitive tools, called 'bent-stick looms' were used in Solomon Islands, Papua New Guinea, parts of South and North America (HALD 1950, 215, fig. 215; HALD 1980, 212, fig. 215; BROUDY 1993, 96–98, fig. 5/34–38; SEILER-BALDINGER 1994, 68).

9 For the usage of small looms with heddles, see: LA BAUME 1955, 62–64, fig. 49–50; BAIONI *ET AL.* 2003, 106; GRÖMER 2010, 106, Abb. 46.

10 In Romania, weaving with a rigid heddle is known by its traditional name of *țesutul cu scândura* (APOLZAN 1944, 72–74, fig. 51–53; MAZĂRE 2008, 324–325, fig. 10–11; ZAHARIA 2008, 63, fig. 75). Even if currently it is ethnographically documented only for Transylvania (Apuseni Mountains, Hațeg and Sibiu areas), it is believed that in the past it was used on a larger area. Another term used for rigid heddle is *grătarul pentru țesut* (MARIAN 2009, 45).

this period. It is possible that other devices – like ground-loom, body-tensioned looms and various other small tools¹¹ – may have been used but they did not survive.

The archaeological finds also demonstrate that the representative binding structure for the Neolithic fabrics is the plain weave and its derivatives. Evidence of the oldest woven textiles was found in the Near East, the textile impressions found in PPNA at Jerf el-Ahmar or at PPNB sites from Jarmo, Çayönü, El Kowm (ADOVASIO 1977a, BARBER 1991, 126–127, fig. 4.2; BRENIQUET 2008, 32, 55, Tab. III). The oldest textile fragments, consisting of plain weave fabrics and narrow tapes in warp-faced weave were discovered at Çatal Hüyük (PPNB) (HELBAEK 1963, 40–41; BURNHAM 1965, 172, pl. XXXIII; BARBER 1991, 126–127, fig. 4.3; BRENIQUET 2008, 32, 55, Tab. III). Starting with the 6th millennium BC fragments of woven textiles were also discovered at various sites in Asia Minor (BARBER 1991, 128–133; BRENIQUET 2008, 56–58).

The oldest textile fragments from Europe were discovered in the submerged Neolithic settlement of La Marmota (lake Bracciano) dated to 5480–5260 BC (ROTTOLI 2003, 68; GLEBA 2008, 43). The major group of Neolithic textile vestiges however are of a later date, ca. 4000–2600 BC, and they were found in the lake-dwelling sites of Switzerland and Southern Germany (VOGT 1937; LA BAUME 1955; BAZZANELLA *ET AL.* 2003; BARBER 1991, 134–143; BENDER JØRGENSEN 2003, 55; RAST-EICHER 2005, 121–128; MÉDARD 2000; 2010; 105–143, 191–243). Elsewhere in Europe they appear sporadically in the form of textile imprints and are generally older than woven textiles found in Central Europe. Early Neolithic textile imprints were found in Hungary, at various sites belonging to the Körös culture, like those (over 40 imprints) from Endrőd (MAKKAY 2001, 12–18, fig. 1–3, 5–15) and Szentes–Kiss Boldizsár (RICHTER 2009, fig. 34.1.1). Also textile imprints were found in several Middle to Late Neolithic sites (Szakálhát, Tisza and Lengyel cultures) of the Great Hungarian Plain (MAKKAY 2001, 19–20, fig. 17; RICHTER 2005, fig. 7–8; RICHTER 2009, 211–212, fig. 34.1.2–3). In other countries textile imprints were found at Sitagroi, phase I, dated to ca. 5500–5200 BC (ADOVASIO–ILLINGWORTH 2003, 254–255, pl. 619; Elster 2003, 258, 259–261, 266, 271), Divostin, Serbia (Vinča culture) (ADOVASIO–MASLOWSKI 1988, 350, pl. 1/g–h), Hesserode, Kreis Melsungen, Germany (Linear Pottery Culture) (LÜNING 2005, 219, Bild 374); Kraków–Nova Huta-Cło, site 65 (KACZANOWSKA 2006, 108) or other sites from Polland (CHMIELEWSKI 2009, Ryc. 126; T. XXXIII; XXXIV). They also appear frequently in the area of the Cucuteni–Tripolie culture, in Ukraine (LJAŠKO *ET AL.* 2004, 94, 515), Republic of Moldova and Romania (MARIAN 2009).

Twenty-four woven textiles were identified in Romania, more precisely 22 textile imprints and 2 pseudomorphs (Table 1). Two types of structures were distinguished: 1. twenty-two plain weave fabrics (Table 1/1, 4–5, 8–10, 12–13, 17, 20, 22) and 2. one narrow tape in warp-faced weave (Table 1/15). Except the band imprint which dates back to Neolithic, all the other woven textile imprints come from the Copper Age: Foeni group and Cucuteni and Tiszapolgár cultures (Fig. 9–10).

Even though the discoveries from Romania are rather scarce, they prove that Neolithic and Copper Age populations were capable of producing a variety of textile structures using different techniques. We can clearly distinguish two large groups of textiles: twined and woven

11 Although controversial, some finds and features from the PPNB site of El Kowm (BRENIQUET 2008, 142–143, fig. 34) and the Chalcolithic *Cave of the Treasure* in Nahal Mishmar (BAR ADON 1980 after BRENIQUET 2008, 140–143, fig. 33; BARBER 1991, 86) seem to be the earliest evidence of the ground and/or backstrap loom usage.

textiles. They represent two spheres of technological approach and usage that apparently succeed one another from the chronological point of view (Fig. 9).¹² With the exception of the Sucidava-Celei textile artefact, dated at the end of Late Copper Age, all the other twined textiles can be dated in the Middle–Late Neolithic/Early Copper Age (ca. 5500–4500 BC). Woven textiles, with two exceptions, can be attributed to the Middle/Late Copper Age (ca. 4300–3500 BC).

From the point of view of spatial and chronological distribution (Fig. 10) we can notice a higher frequency in archaeological finds from Transylvania, the cultural spaces of Vinča, Turdaş and Tiszapolgár populations as well as in Moldova, with the Cucuteni B culture. With one exception there are no recorded discoveries for the southern part of Romania and this can be related either to the current state of research or possibly to a particular technological option in the creation of pottery that will be discussed later on. Even though there are no actual textile imprints or earlier finds than that at Sucidava-Celei, there are other evidences to support the use of weaving during the Neolithic and Copper Age for southern Romania.¹³










Chronological Frame		Textile Techniques								
		Needle looping		Linking	Twining			Weaving		
		 Simple	 Twisted	 Sprang?	 Open Simple	 Close Simple	 Close Diagonal	 ?	 Warp-Faced	 Plain weave
Copper Age	3000	Celei					1			
	3500									
	3800	Cucuteni	3	1	1					15
	4000									
	4500	Tiszapolgár								7
Neolithic	4800	Foeni				1	2			1
	5000	Turdaş					10			
		Banat				1				
		Vinča								
	A, B					7		1	1	
	Starčevo-						1			
5500	Criş IIIB-IVA									

Fig. 9. The frequency of Neolithic and Copper Age textile fabrics and techniques for Romania.

It is obvious that twining is a ‘specialty’ of Vinča communities and of those that share a common affiliation or area of development, like Banat culture, Turdaş culture and possibly the Foeni Group. Identical twined textile imprints to those found in Romania were identified on Vinča pottery from Serbia, at Selevac and Divostin (ADOVASIO–MASLOWSKI 1988; TRINGHAM–STEVANOVIĆ 1990). At Divostin, for example, among the 110 textile imprints published by J. Adovasio and R. Maslowski about 85 are twined textiles, and the majority (56) is created by closed diagonal twining (ADOVASIO–MASLOWSKI 1988). Typical for the Divostin twined textiles is the fact that the fibres are rough, unspun, with no indication of a frame being used to tension them.

12 Although discoveries like the late twined textile of Sucidava-Celei or the Early Neolithic textiles from Near East and Europe or the textiles from the Late Neolithic Swiss lake-dwellings do display a co-existence of these two types of textile technologies.

13 Recently at Pietrele–Măgura Gorgana (the KGK VI cultural complex, 4450–4250 BC) were found the remains of two warp weighted, looms (HANSEN *ET AL.* 2007, 49–52, Abb. 12–16; HANSEN *ET AL.* 2008, 31–32, Abb. 15–16; TODERAŞ *ET AL.* 2009, 46, 55, 60). They come to complete older evidences for weaving in the southern Romanian Neolithic and Copper Age, like agglomerations of loom weights from Radovanu–*La Muscalu*, Boian culture (COMŞA 1974, 88, 90) or the KGK VI cultural complex settlements at Căscioarele–Ostrovel, Călăraşi County (DUMITRESCU 1965; EVANS 1978, 123); Măgura–Jilavei, Ilfov County (COMŞA 1976, 112–113, 117, fig. 13–14); Izvoarele, Giurgiu County (COMŞA 2000); Medgidia, Constanţa County (HARTUCHE–BOUNEGRU 1997, 32, fig. 10); Carcaliu, Tulcea County (LAZURCĂ 1984, fig. III/1–2; IV).

The same was observed on the textile imprints of twined structures from Vinča and Turdaş finds at Miercurea Sibiului, Limba, Turdaş (which we had the opportunity to study). As in Divostin the structures from Romania were created without the use of a tension frame as it was noted by F. MÉDARD (2010, 145) in relation to Neolithic twined textiles from Switzerland (4th–3rd millennium BC). She noticed also that the twined textiles were made by tree bast, as opposed to the woven textiles using flax fibres, very finely spun (BAZZANELLA *ET AL.* 2003; MÉDARD 2010).

Next to the differences in technology and usage, these observations on the raw material used are of great importance. Recent archaeobotanical studies reveal that flax was cultivated during Neolithic in order to obtain flax oil and not necessarily as a textile plant (HERBIG–MAIER 2011; MAIER 2011) its fibres being poorly used in this way. According to F. MÉDARD (2010, 146–150) the connection between flax, seen as an exceptional raw material, and weaving, seen as a ‘prestige technology’¹⁴ would have created a notable difference in both quality and symbolic meaning in comparison to the other textiles around. In other terms woven textiles were prestige goods, used only by certain persons and only in particular circumstances.

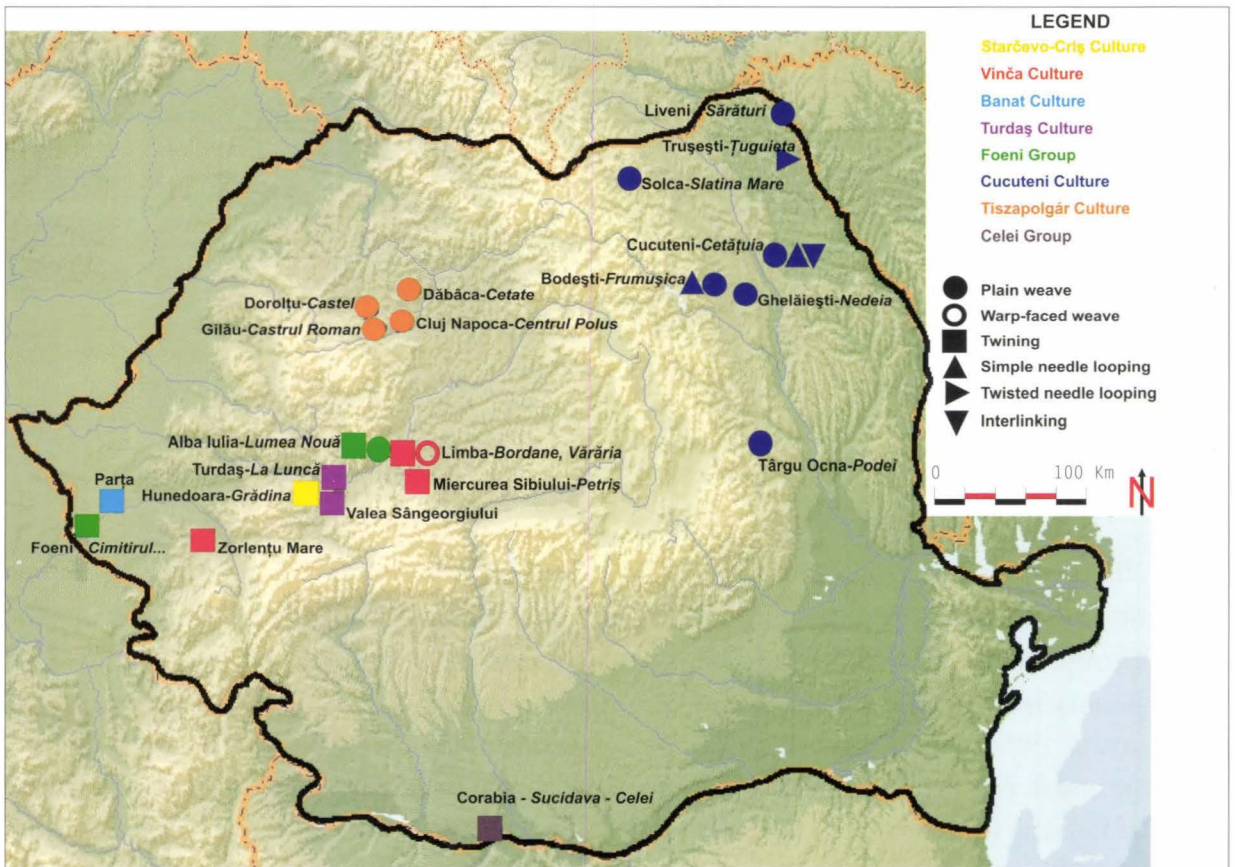


Fig. 10. The distribution map of Neolithic and Cooper Age textile structures/techniques identified in Romania.

Within this context we wonder what the significance was of weaved textiles imprints found on pottery and what do they reveal? In our opinion they represent a proof of a technological choice by which certain flexible structures, like matting or textiles were intentionally used as part of the technological processes involved in the creation of pottery.¹⁵ It is therefore hard to

¹⁴ According to the concept definition of HAYDEN 1998.

¹⁵ As this option is determined by a pre-existing cultural or technological tradition it can be found or not in different but contemporary communities, an explanation to the fact that textile impressions are not a constant feature throughout the pottery of Neolithic and the Copper Age.

believe that rare and valuable textiles would have been used within the pottery manufacturing process, as it is more likely that they used ordinary textiles, some worn out or even fragmentary. From this perspective the high frequency of imprints can be considered a proof of the common and every day use of textiles. The Romanian finds also point out that, by the end of the 5th millennium to the mid 4th millennium BC, woven textiles were quite commonly used and thus available for pottery manufacturing. As we have seen, the earliest discoveries show that weaving was known before but was not widely spread, probably because the main method at hand was twining, a more ancient technique, with roots going back to Palaeolithic. We assume that due to the social, economical and cultural changes brought on by the Copper Age weaving has moved up becoming a more important activity and also a source of trade goods. In this context weaved textiles would finally become objects of broad circulation that would be used by different sort of individuals.

Table 1. List of Neolithic and Cooper Age textile structures/techniques identified in Romania

No.	Site	County	Culture / Group	Find	Textile structure (Binding)	Thread: torsion, Ø (mm)	Density: warp/weft (cm ²)	References	Notes
1.	Alba Iulia– <i>Lumea Nouă</i>	Alba	Foeni	Textile imprint (TI) [x 1]	4.1 (1/1)	-	-	Unpublished, University of Alba Iulia (UAB) collection.	-
2.	Alba Iulia– <i>Lumea Nouă</i>	Alba	Foeni	TI [x 2]	3.3	-	-	Unpublished, UAB collection.	-
3.	Bodești– <i>(Cetățuia) Frumușica</i>	Neamț	Cucuteni, A phase	TI [x 1]	1.1	-	-	CUCOȘ 1999, fig. 27/4; MARIAN 2008; 2009, 101–102, fig. 88–89.	-
4.	Bodești– <i>(Cetățuia) Frumușica</i>	Neamț	Cucuteni, B phase	TI [x 2]; Pseudomorph [x 1]	4.1 (1/1)	-	-	CUCOȘ 1999, 74, fig. 23/4; MATASĂ 1946, 75, pl. XL1/338–339; SĂVEȘCU 2004, fig. 2.	-
5.	Cluj-Napoca– <i>Centrul Polus</i>	Cluj	Tiszapolgár	TI [x 1]	4.1 (1/1)	-	-	Unpublished, information courtesy of Z. Maxim; collection of the National Museum of Transylvanian History (NMTH), Cluj-Napoca.	-
6.	Cucuteni– <i>Cetățuie</i>	Iași	Cucuteni, unknown level	TI [x 2]	1.1	S-simple	17/17 loop rows (5 cm ²)	MARIAN 2009, 103–105, fig. 90–92; MARIAN <i>ET AL.</i> 2004, fig. 7–9; VĂLEANU–MARIAN 2004, fig. 289–291.	-
7.	Cucuteni– <i>Cetățuie</i>	Iași	Cucuteni, unknown level	TI [x 1]	2	-	-	MARIAN 2009, 89, fig. 75; MARIAN <i>ET AL.</i> 2004, fig. 1–2.	-
8.	Cucuteni– <i>Cetățuie</i>	Iași	Cucuteni, B1–B2 phase	TI [x 6]	4.1 (1/1)	S-simple; S-plyed	6/6–10/10; 8/12	MARIAN 2009, fig. 54–56, 64, 66–67; VĂLEANU–MARIAN 2004, fig. 292–298	-
9.	Dăbâca– <i>Cetate</i>	Cluj	Tiszapolgár, B phase	TI [x 1]	4.1 (1/1)	-	-	VLAȘA 1969, fig. 1.	-
10.	Dorolțu– <i>Castel</i>	Cluj	Tiszapolgár	TI [x 1]	4.1 (1/1)	-	-	Unpublished, NMTH collection.	-
11.	Foeni– <i>Cimitirul Ortodox</i>	Timiș	Foeni	TI [x 1]	3.2 -	Simple; Ø 2–3	3/7	AGHIȚOAIÉ–DRAȘOVEAN 2004.	1
12.	Gilău– <i>Castrul Roman</i>	Cluj	Tiszapolgár, B phase	TI [x 4]	4.1 (1/1)	-	-	KALMAR 1980, 450, fig. 12; KALMAR 1981, fig. 12/6, 8, 10.	-
13.	Ghelăiești– <i>Nedeia</i>	Neamț	Cucuteni, B phase	TI [x 1]	4.1 (1/1)	-	-	CUCOȘ 1999, fig. 27/5.	-
14.	Hunedoara– <i>Grădina Castelului</i>	Hunedoara	Starčevo, IIIB–IVA phase	TI [x 1]	3.4	-	-	Unpublished, information courtesy of Al. Bărbat, Museum of Dacian and Roman Civilisation (MDRC), Deva.	2

No.	Site	County	Culture / Group	Find	Textile structure (Binding)	Thread: torsion, Ø (mm)	Density: warp/weft (cm ²)	References	Notes
15.	Limba-Bordane	Alba	Vinča, B1-B2 phase	TI [x 1]	4.2 (1/1)	Ø 0.6-1.1	10/3 (5 mm ²)	MAZĂRE 2008, 318, 321, 324, fig. 2, 6, 11.	-
16.	Limba - Vărăria	Alba	Vinča, B1-B2 phase	TI [x 4]	3.3	Ø 0.8-1.7	6/5; 7/5	MAZĂRE 2008, 317, 319, 324, fig. 1, 4, 9; two of the imprints are unpublished, UAB collection.	-
17.	Liveni-Sărături	Botoșani	Cucuteni, B phase	TI [x 3]	4.1 (1/1)	S-simple; S-plyed	6/6-10/10	MARIAN 2009, fig. 59-60, 63.	-
18.	Miercurea Sibiului-Petriș	Sibiu	Vinča, A3-B1 phase	TI [x 3]	3.3	-	-	Unpublished, The Brukenthal Museum collection, Sibiu.	-
19.	Parța	Timiș	Banat	TI [x 1]	3.1	-	-	Lazarovici 1981, fig. 3/8	3
20.	Solca-Slatina Mare	Suceava	Cucuteni, B phase	TI [x 1]	4.1 (1/1)	-	-	NICOLA ET AL. 2007, 47, fig. 13.	-
21.	Sucidava-Celei	Olt	Celei	Charred bedspread (125x35cm)	3.3	Plyed (WA); simple (WE); Ø 2	-	NICA 1981.	4
22.	Târgu Ocna-Podei	Bacău	Cucuteni, B phase	Pseudomorph [x 1]	4.1 (1/1)	-	-	MATASĂ 1964, 23-24, fig. 9/1.	-
23.	Trușești-Țuguieța	Botoșani	Cucuteni, unknown level	TI [x 1]	1.2	Ø 2.5-2.7	-	MARIAN-CIOCOIU 2005; MARIAN 91-93, fig. 78-80.	5
24.	Turdaș-La Luncă	Hunedoara	Turdaș	TI [x 9]	3.3	-	-	ROSKA 1941, Taf. LXXVII/11-12, 14-15; unpublished, NMTH (Zsófia Torma Collection).	-
25.	Valea Sângiorgiului	Hunedoara	Turdaș	TI [x 1]	3.3	-	-	Mentioned by ANDRIȚOIU 1976, 411 but not published; MDRC collection, Deva.	-
26.	Zorlențu Mare	Caraș-Severin	Vinča	TI [x 1]	3.4	-	-	ZAHARIA-CĂDARIU 1979, 34, fig. 2.	6

Notes

1. The textile imprint was considered and published as a plain weave fabric. In our opinion this is a twined structure.
2. The imprint is not clear, but probably it is a twined textile structure.
3. The imprint seems to be a twined mat rather than a textile structure.
4. The textile was published by its discoverer as a plain weave cloth (NICA 1981, fig. 5), but to a closer look at the image there could be seen that the fragment was produced in twining technique (for more details, see: MAZĂRE 2008, 324-326, fig. 9-13).
5. The textile structure was interpreted as being similar with lace fabrics worked in *Aleçon* point.
6. Published by F. Zaharia and S. Cădăriu as plain woven textile. In our opinion it is actually a twined textile imprint. Unfortunately, the image is not clear and so the binding can't be identified with certainty.

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A COPPER AGE SETTLEMENT FROM TÂRGU MUREŞ. ASPECTS OF CHRONOLOGY AND RELATIONS OF THE ARIUŞD CULTURE

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In memoriam István Kovács

The rescue excavation from 2007 carried out by the Mureş County Museum in the Tornakert (Ro. Parcul Sportiv, Eng. Gym Park) at Târgu Mureş revealed new archaeological features dating from the Copper Age. The assemblages belonged to the same settlement researched by I. Kovács at the beginning of the 20th century. The archaeological materials consisting mainly of pottery come to complete the image of the habitat from Tornakert and they bring new data for the chronology and cultural interferences of the Ariuşd culture and the adjacent communities.

Keywords: Copper Age, Ariuşd culture, Bodrogheresztúr culture, settlement, pottery

The research of the archaeological periods from Transylvania preceding the Bronze Age has a past of more than a century, being rich in remarkable realisations, some of them having European importance. Beginning with the attendance of the first amateur archaeologist regarding the unearthing and framing of different discoveries and sites from the Neolithic and Copper Ages, through the modern archaeological research, supported sometimes by a real arsenal of interdisciplinary methods, the Transylvanian archaeology evolved dynamically in the 20th century. Assuredly, one of the most interesting and dynamic period of the history of research occurred in the years before the First World War. For Eastern and South-eastern Europe it was the period of the beginning of systematic researches, resulting in the chronological definition and ordering of the various cultural phenomena of prehistory. For Transylvania, this period was marked by the collecting activity and topographic researches of amateur archaeologists and collectors of antiquities like Gábor and István Téglás, Iulian Marţian, Endre Orosz or Julius Teutsch. It was also the period of the first systematic excavations of specialists like István Kovács, Ferenc László and Márton Roska.¹ Unlike the older custom of unearthing and collecting only the significant vestiges, the new excavations from Ariuşd, Corpadea, Decea Mureşului, Olteni, Sita Buzăului, etc.

1 Regarding the history of research of the period, see: ANDRIEŞESCU 1929, 252–257; BABEŞ 1981, 319–330; LÁSZLÓ 1987, 49–57.

demonstrated a surprisingly modern concept for that period. They aimed to study the archaeological features and the stratigraphy. The discovery contexts of artefacts and the unearthed materials themselves were registered based on new methods, like drawings of general or detail plans, by cartography and photography. Moreover, the results of these researches were published in detail and interpreted in various periodicals of that time.

The excavations of I. Kovács from Târgu Mureş from a century ago represent a good example for the new archaeological current from that period. Started after some incidental discoveries, the research was one of the first rescue excavations from Transylvania in the proper sense, following the exhaustive investigation of archaeological features on an urban area affected by building operations. At the beginning of the 20th century the territory of the archaeological site investigated by I. Kovács represented an urban area, situated on the periphery of the historical centre of the town, on a prolonged plateau of the first terrace of the Mureş River (Pl. 1/1), in the vicinity of the former public 'Gym park' (*Tornakert*, Pl. 2/1). The dynamic urban evolution from the period preceding the First World War required the extending of building sites, consisting of road and land improvements and other constructions. In 1909, during the road making process, the former Mikszáth Kálmán street (str. Artei in the present; Pl. 2/2) several discoveries from different archaeological periods were revealed. Supported by the local authorities, the excavations were initiated by the Transylvanian Museum Society (Erdélyi Múzeum Egyesület) who commissioned I. Kovács, who was at that time the warden of the antiquity collection of the institute from Cluj. The campaigns were accomplished, with intermissions, between 1909 and 1910; in this period the traces of a settlement from the Copper Age were also discovered, consisting of three circular pits with 150–220 cm diameter and 122–160 cm depth, interpreted by I. Kovács as pit-houses. On the same occasion sporadic settlement related materials from the Early Iron Age, respectively a few graves from a Scythian cemetery and another from the Migration Period (6th c. AD) were unearthed.

The results of the excavations were published a few years later in a detailed, accurately documented study (KOVÁCS 1915, 226–325). Without insisting over the discoveries from the more recent epochs, one can assess that I. Kovács's observations regarding the cultural framing and the dating of the vestiges from the Copper Age settlement broadly passed the test of time. Starting from the typological and stylistic characteristics of the pottery, he separated two distinct cultural phenomena: one defined by the painted, Ariuşd type pottery, and another with incised ornaments, defined at a later date by the Hungarian archaeology as the Bodroghkeresztúr culture. The joint appearance, in the same archaeological features of the two groups caused I. Kovács to date the entire material correctly at a contemporaneous chronological horizon – at least partially – with the painted pottery culture from South-eastern Transylvania (KOVÁCS 1915, 246–250). Even if the small number of features and of the unearthed materials delivered relatively scarce information about the structure and extension of the Copper Age settlement, the observations of I. Kovács were for a long time the only source of documentation for the site from *Tornakert*.

In the century following the excavations from 1909–1910, the site from the centre of the town was severely damaged by anthropic factors. The former *Tornakert*, a place appreciated by the citizens because of its facilities for recreation had gone, while nowadays the entire place is densely built (Pl. 1/2). The original aspect of the area is only kept in a small proportion, under the form of a little park (the Maternity Park from the Unirii Square), close to the western margin of the Artei Street (Pl. 1/3). In 2007, on the occasion of some construction interventions on

the territory of the park, S. Berecki carried out a rescue excavation.² The present paper plans to present the results of that research and, along with them, to re-discuss some issues regarding the cultural-chronological framing, the role and importance of the settlement in connection with the Copper Age from the eastern half of Transylvania.

In 2007, the underground gas pipes from the Unirii Square had been replaced. On this occasion, at least three archaeological features had been affected, human bones and pottery fragments from the Copper Age and the modern era being collected from the trenches. Following these chance discoveries, in the course of the archaeological investigations six trenches (S1–6) of different dimensions were opened (Pl. 2/4), conditioned by the terrain and the location of the industrial intervention (Pl. 3/1). From these, only the four trenches (S1–4) from the margins of the plateau contained archaeological finds. Their stratigraphy was the following:

At a maximum depth of 120 cm the virgin soil could be observed, an archaeologically sterile yellowish layer. It was superimposed by a dark brown layer down to 59–60 cm, from the Copper Age, containing archaeological features like pits and pottery fragments. Above this layer the modern age brown fill had a 20–22 cm thickness down to 39–37 cm, containing pottery fragments from the 18th–19th centuries, while at 18–37 cm depth a recent yellowish-grey fill could be observed, with lots of gravel. In the modern age the park was rearranged, the whole surface being levelled with small gravels and in some places with clayish sand. The humus in present days has 18 cm in thickness. On the whole area of the excavations four archaeological features were identified, all of them in S1 (Pl. 3/2), but only two of them dated from the Copper Age.

In the eastern part of S1, at a depth of 70 cm, in a shallow pit of 12 cm which did not reach the virgin soil (Af. 1), a pottery agglomeration could be observed (Pl. 2/5; 3/2). The irregular shaped pit had a diameter of 140 cm, its walls were oblique, the bottom straight, and it contained dark brown, loose ground. At the inferior level of the Copper Age layer from the same section another pit deepened into the virgin soil was observed (Af. 3). It started from 100 cm, deepened to 125 cm (Pl. 2/7, 3/2), it had a relatively round shape with 60 cm in diameter, slightly oblique walls and straight bottom; its fill was the same dark brown soil as in the case of Af. 1. The two other features (Af. 2 and Af. 4) from S1 were recent pits from the modern ages, which intersected the Copper Age layer, one of them reaching the virgin soil. The entire Copper Age level in this sector was disturbed by posterior interventions; therefore it was not possible to determine the precise depth from which the Copper Age pits were dug, and no other feature connected to these pits could be observed. The fact that the Af. 1 was dug starting from the middle of the Copper Age level indicates the initial existence of several – at least two – Copper Age soil depositions. At the same time, the hypothesis cannot be sustained by other field observations; also the archaeological finds can be separated neither stylistically nor chronologically.

In the other trenches no features were identified. Only the stratum of the Copper Age settlement could be observed, with a larger quantity of materials in the trenches S2–4, the prehistoric traces becoming rarer towards south-east, to the centre of the park.

The archaeological features, both the ones discovered at the beginning of the 20th century and those from the last years are scarce traces of the Copper Age settlement, consisting of small sized pits with fragmented archaeological materials. I. Kovács's opinion according to which the pits were sunken dwellings cannot be accepted, since their shape indicates that these were more

2 The site can be found in the National Archaeological Repertory (RAN: Repertoriul Arheologic Național), code: 114328.11).

probably storages, used after their abandonment as refuse pits, fact which explains their content of ceramic shards, stone, flint and copper tools, charcoal, ashes and animal bones. The observations of I. Kovács (1915, 231, 234) referring to the discovery of daub fragments keeping the traces of posts and beams indicate the existence of surface constructions/houses of wattle-and-daubed wooden structure. Daub fragments came to surface in 2007, too, from the trenches S1–4.

Even if the archaeological research – both the more recent ones and those made by I. Kovács – do not offer sufficiently precise details about the Copper Age settlement from the centre of Târgu Mureş, based upon the materials discovered some considerations about its position and character can nevertheless be drawn. The constructions and other building activities from the modern ages largely changed the original aspect of the place. The historical data reveal that the prehistoric site was on the margin of the inferior plateau of the Mureş River. The extensive plateau is sloped to the south-west, it exceeds the everglade of the Mureş River by 10–15 m (see the I. Kovács's photo from the Mikszáth Kálmán Street, Pl. 2/2), margined in this area by precipitous declivities, while at south and south-east it is flanked by the Poklos Stream. Following to north-east–south-west the valley of the Mureş River, fragmented by narrow secondary valleys, the long terrace represents a territory densely populated in different periods of the history of this region, beginning with the Neolithic till the Middle Ages.³ The real dimension of the archaeological site is almost impossible to be established; yet, based on the dates provided by I. Kovács and the recent field observations one can consider that its surface was about 1.5 ha, situated approximately on the territory of the present day Unirii Square, Artei (former Mikszáth Kálmán) Street and the adjacent zones from the south-western side of the Köteles Sámuel Street.

The archaeological materials from the Copper Age collected from the features described and from the whole researched area, consist of a considerable quantity of potsherds, wattle and daub, a few stone – flint and obsidian – tools and flakes. In the fill of the Af. 3 a milling-stone was discovered. The pottery is very fragmentary, no vessel could be entirely reconstructed, fact which renders the reconstitution of the forms difficult. Though, based on the characteristics of the fragments and the analogies, the type and the dimension of several vessels could be established.

From the point of view of the techniques, the pottery from Târgu Mureş–*Tornakert* presents the traditional categories of fine, semi-fine and coarse wares. Quantitatively reduced (ca. 16%), the fine pottery (Pl. 5/9, 11; 8/6; 10/1–3, 7, 8) is made up by fragments from vessels of small and medium dimension, with a height between 20 and 25 cm; they were tempered with fine sand, submitted to oxidizing fire, having light colours of reddish-yellow and brick-red, and rarely light brown or black. Their walls were thin, the surface well evened, but seldom polished. Exceptions would be the fragments from cups with polished walls and glossy aspect (Pl. 10/1, 3, 7). The semi-fine pottery (Pl. 5/3–5, 8; 7/2–4, 7; 8/3, 7–9) present in a proportion of 21%, represented by small and large-sized vessels, was modelled from a less compact paste, tempered with coarse sand and crushed potsherds. Unlike the coarse wares, this type of pottery was well modelled and the surfaces were evened, having generally a neat aspect. Usually the firing is of good quality, sometimes incomplete though, the majority of the recipients having a dark colour, from brownish-brick-red to dark brown or brownish-grey. The coarse pottery (Pl. 5/1–2, 6–7, 10; 6/1–2, 5–9; 7/1, 5–6; 8/2, 5; 9/3; 10/9–10) represents 69% and contains fragments of middle-sized and large (some of them were higher than 50 cm) vessels, made of clay, tempered with coarse sand and frequently

3 For the archaeological discoveries from these areas, see: LAZĂR 1995, 211–213 (Sângeorgiu de Mureş), 255–260 (Târgu Mureş).

crushed potsherds. The modelling and slicking of these vessels was made less carefully, their surface was porous, sometimes rough, both inside and outside. Their colour varied from the light nuances of brick-red to dark brown or even black. Often the firing was incomplete, the exterior surface of the vessel getting a lighter colour.

The ornaments are very rare and poor. On some of the large vessels the cut or impressed cordons appear (Pl. 10/9); in other cases impressions made with the finger were aligned on the slightly oblique rim of the vessel (Pl. 6/2). A double truncated cone shaped vessel was decorated with large channels and a rounded impression on the engrossed shoulder (Pl. 8/3). Exceptionally, the fragment of a cup, with black rim, bears traces of white painting, however too corroded in order to reconstruct the ornamental motif (Pl. 10/1). On the fragment of a serving spoon's handle marks of reddish painting can be observed (Pl. 8/4). But considering the entire quantity of discovered pottery in 2007, the decorated pottery – painted or engraved – represents 1%.

The repertory of forms is not diversified, either. Because of the preponderance of household pottery, most of the wares are large coarse vessels: sack-shaped pots with truncated cone shaped body and slightly inverted rims (Pl. 5/6; 6/2, 5; 7/1; 8/5), double truncated cone shaped pots with usual accessories: handle-bosses with rounded tip (Pl. 9/2; 10/10) and vertically or horizontally perforated handles (Pl. 5/10; 6/1, 3). A horizontal handle with rounded section (Pl. 6/4) applied in the region of the shoulder (which is also the maximum diameter of the vessel) probably belongs to an elongated piriform amphora with short, almost cylindrical neck, met in the repertory of the forms of the Ariuşd culture (LÁSZLÓ 1927/2007, pl. V/D 2–3, 5). A double truncated cone shaped vessel with wide shoulder (Pl. 8/3) was decorated with wide oblique channels, marked on their edges by smooth, circular impressions. The form belongs to the largely spread category of double truncated cone shaped, belly vessels of the Ariuşd culture, usually decorated with bichrome painting associated on the shoulder with engraved ornaments: channels forming circular motives, oblique lines, lain spirals or impressions. Analogies can be mentioned from Ariuşd–*Tyiszk-hegy* (LÁSZLÓ 1927/2007, pl. IV/C 18), Ciucsângiorgiu–*Potovszky-kert* (LAZAROVICI ET AL. 1993, fig. 8, without number) or Păuleni–*Várdomb* (LAZAROVICI ET AL. 2000, pl. XII/1). The large goblets with short truncated cone shaped stems (Pl. 8/7–9) can also belong to a variant of these channelled-shouldered vessels, the prototype of which was a pot mentioned from the eponym site (LÁSZLÓ 1927/2007, pl. IV/C 19). Specific forms of the Ariuşd culture are the truncated cone shaped, cambered cups with everted margins, made of fine clay, with well evened and polished surface (Pl. 10/1, 3, 7). These small- and medium-sized vessels – their height is up to 12–15 cm – are one of the director types of the culture – and generally of the Cucuteni A1–A3 phases⁴ – usually were decorated with bichrome painting, consisting of simple, linear motifs, painted with white on a brown, brick-red or black background. Traces of white linear painting can be seen on the exterior surface of a fragmentary cup from trench S2 (Pl. 10/1). From the restorable forms which can be surely included in the repertory of the pottery of the Ariuşd culture one should mention the hemispheric cups with everted rims (Pl. 5/4–5; 8/6), the simple, truncated cone shaped shallow and deep bowls, with rounded, straight rim (Pl. 5/1–2, 7–8; 8/1; 10/4) or largely inverted rims (Pl. 5/9; 10/8) a high, fragmentary cylindrical support

4 From Transylvania analogies can be mentioned from Ariuşd (LÁSZLÓ 1927/2007, pl. II/B 3, 10, 12, 15; SZTÁNCSEJ 2003, fig. 5; 10/6–8), Ciucsângiorgiu (LAZAROVICI ET AL. 1993, fig. 1, without numbers, three pieces; 6/1), Olteni–*Vármege* (LÁSZLÓ 1911, fig. 23), Păuleni (BUZEA–LAZAROVICI 2005, 30, pl. XXV/1, 3, 6–8, 10; XXVII/1–2, 5–7; XXIX/1, 4, 5–9), or from the area of the Cucuteni culture, at Bodeşti–*Frumuşica* (MATASĂ 1946, pl. XXVI/187–189, 191, 194; XXXII/192) or Hăbăşeşti (DUMITRESCU ET AL. 1954, pl. LXXX/9–11, 18).

with everted margins, made of coarse paste, tempered with coarse sand and crushed potsherds (Pl. 9/3); a fragment from the handle of a serving spoon (Pl. 5/11); a miniature vessel representing a 'fruit-bowl' with high stem (Pl. 6/6). The different types and variants of these vessels are met among the materials of almost all settlements of the Ariuşd culture from eastern and south-eastern Transylvania.⁵

From the materials discovered one should notice the fragment of a middle-sized vessel (rim diameter approx. 10 cm), made of fine paste, reddish-brown with grey spots after firing, with cylindrical neck and a horizontally perforated wide handle on the rim. Albeit the fragment is too small for a precise typological classification, it must have belonged to a so called 'milk-pot', characteristic for the Bodrogkeresztúr culture. Similar middle-sized vessels with cylindrical neck and two symmetrical handles on the rim appear in the funerary inventories in cemeteries like Polgár–*Basatanya* (BOGNÁR-KUTZIÁN 1963, pl. I/1a–b, 6; V/3–4; XXIII/1; etc.), Kunszentmárton–*Pusztaiştvánháza* (HILLEBRAND 1929, Taf. V/2; VI/2; VII/7), Paszab–*Hordozódülő* (HILLEBRAND 1929, Abb. 14/8, 11) or Tiszavalk–*Tetes* (PATAY 1978, fig. 32/1, 10; 37/1) as well as settlements like Mezőzombor (PATAY 2002, fig. 8). Even if in the classification of the variants of this type for different periods of the culture there are distinctions,⁶ the small fragment does not make possible a more accurate dating of the vessel.

The pottery discovered in 2007 completes the repertory of the forms published by I. Kovács at the beginning of the 20th century. From the excavations undertaken in 1909–1910 several intact or restorable vessels were unearthed along with fragments belonging to the following types: cup made of fine paste, black coloured in the upper part because of the firing (Pl. 4/1), together with other fragments belonging to the same type (KOVÁCS 1915, 236–237); a grayish-black shallow bowl with inverted rims (Pl. 4/4), a few fragments of cylindrical supports (KOVÁCS 1915, fig. 4/4; 7/1) and spoons decorated with trichrome painting (Pl. 4/6–7). Based on their forms and ornaments they can be included in the Ariuşd culture. The figurine from pit B belongs to the same cultural milieu. The artefact probably represents a feminine human silhouette in vertical position, the bust is flattened, the short arms are upraised, and the breasts are modelled by two rounded clay-chips applied on the bust (Pl. 4/9). The object can be included in the category of anthropomorphic representations specific for the Cucuteni culture area. Analogies are known from Transylvania and from Moldavia.⁷

Among the elements specific to the Bodrogkeresztúr culture a deep bowl (Pl. 4/2) discovered in pit C (KOVÁCS 1915, fig. 3/13 profile; 16 image and 20–21 the reconstructed ornament of the vessel) excels. Modelled from fine paste and tempered with sand, the grey coloured vessel with evened and polished surface represents indeed one of most frequent forms from the Bodrogkeresztúr culture's area. Similar vessels, usually without ornaments, with slightly cambered body and rounded bottom, having two band-handles close to the rim are met in cemeteries like Beba Veche (PATAY 1961, pl. XXXIV/V), Ciumeşti III (LUCA 1999, fig. 29/1), Kiskőrös (PATAY 1961, pl. XVI/2), Kunszentmárton–*Pusztaiştvánháza* (HILLEBRAND 1929, Abb. 4/7; 11/5; Taf. I/7) or

5 For analogies of the presented vessels, see: LÁSZLÓ 1911; 1927/2007 (Ariuşd and Olteni); LAZAROVICI *ET AL.* 1993 (Ciucsângeorgiu); BUZEA-LAZAROVICI 2005 (Păuleni).

6 For the typology and chronology of these vessels, see: BOGNÁR-KUTZIÁN 1963, 276, pl. CXXXIV–CXXXV and more recently PATAY 2008, 34–35.

7 See the similar pieces from Ariuşd (SZTÁNCSUJ 2009, fig. 2/1, 5–6; 5/2); Bod–*Priesterhügel* (TEUTSCH 1900, Abb. 117–119); Cernatul de Sus–*Mihács-kert* (SZTÁNCSUJ 2009, fig. 6/4); Leţ–*Várhegy* (SZTÁNCSUJ 2009, fig. 4/3; 6/2); Malnaş Băi (REPCOVASNA, pl. IV/3). For the Cucuteni culture, see: MONAH 1997.

Polgár–Basatanya (BOGNÁR-KUTZIÁN 1963, pl. LXXV/5; XCI/6; XCIII/3; C/1 or CVIII/7). Analogous pieces, ornamented in the same way as the deep bowl from Târgu Mureş can be mentioned from Tiszadob–Borzik-tanya (PATAY 1950, 114, pl. XXXIV/1–1a, probably from a grave) and Tiszavalk–Tetes (PATAY 1978, fig. 27/6) respectively the exquisite exemplar from grave nr. 22 from the cemetery at Ostrovul Corbului (ROMAN–DODD–OPRIȚESCU 2008, fig. 33/2; pl. III/2). A similar vessel was discovered in the settlement of the Ariuşd culture from Reci–Telek (SZÉKELY 1964, fig. 2/4). The analogies mentioned from the Bodrogkeresztúr culture belong mainly to the early (transition) and classic phases, yet these are also present in the late period as in the case of the ones unearthed in group D of the cemetery from Basatanya (BOGNÁR-KUTZIÁN 1963, pl. CVIII/7; CXII/12–13; CXVIII/8). Although it was not published, I. Kovács mentioned another similar exemplar, this time without ornament, which was discovered in pit B (KOVÁCS 1915, 240). The ornament composed by meandered angular lines and spaces filled with net-like incisions is a widely spread decoration for the Bodrogkeresztúr culture (PATAY 1960, 363–387). A truncated cone shaped shallow bowl belongs to the same cultural milieu; it has two obliquely perforated bosses on the margin of the bottom – considered initially lid by I. Kovács (1915, fig. 3/4; 14). Its analogies are known from Basatanya (BOGNÁR-KUTZIÁN 1963, pl. C/2; CXIII/19; CXVII/5), respectively from the IInd level of the settlement at Pecica–Forgaci (LUCA 1999, fig. 13/2). A hemispheric cup with straight upper part and two perforated bosses on the everted rim shows similarities to vessels discovered in funerary inventories of the cemeteries from Kunszentmárton–Pusztaitvánháza (HILLEBRAND 1929, Abb. 11/6), Sáradsány (PATAY 1961, pl. XXVII/2), Szentes–Kistőke (PATAY 1961, pl. XXIX/6), Polgár–Basatanya (BOGNÁR-KUTZIÁN 1963, pl. II/12) or Tiszavalk–Tetes (PATAY 1978, fig. 27/8). Finally, among the typical elements of this culture, a vessel decorated on the shoulder with *Pseudofurchenstich* lines can be mentioned (Pl. 4/5),⁸ as well as a fragmented cup with everted rim with two perforations, decorated on the bottom with an incised line forming a spiral (KOVÁCS 1915, fig. 7/5 and 5a). The two types of ornaments – the successive sticks and spirals realized by incised lines –, often applied in combination, are characteristic for the late period of the culture and they appear on vessels which indicate the transition to the Hunyadi-halom culture (PATAY 2008, fig. 1/4: Szarvas, 5: Szécsény, 9: Tiszakeszi–Fáykert). Therefore, the presence of these elements suggest a dating in the late period of the Bodrogkeresztúr culture. Nevertheless, because of fragmentary character of the materials such a chronological determination can only be approximate.

Resuming the data of the Copper Age discoveries from Târgu Mureş–Tornakert we hope we are not mistaking by dating the habitat to an evolved aspect of the Ariuşd culture, which, because of the elements of western origins, presents intensive connections with the area of the Bodrogkeresztúr culture. The materials discovered predominantly consist of pottery forms characteristic for the Ariuşd culture, together with a smaller quantity of elements specific for the Bodrogkeresztúr culture. These characteristics were already recognized by I. Kovács as well, who at the same time underlined that the materials appertain to the same chronological horizon. The studies from the second half of the last century concerning – usually only tangentially – the Copper Age materials from Târgu Mureş generally accepted the chronology and cultural attribution determined by I. Kovács. Accordingly, the discoveries from *Tornakert* – together with similar

8 For the origin and spread of the ornament in the Bodrogkeresztúr culture, see: PATAY 2008, 23–24.

discoveries from eastern Transylvania – were interpreted as Bodrogkeresztúr settlements with late Ariuşd elements (SZÉKELY 1964, 125–126); a “western facies of the Ariuşd culture where foreign cultural influences can be detected” (VLASSA 1964, 358–359); “Bodrogkeresztúr imports in the context of the Ariuşd culture” (LUCA 1999, 12, 15, 43) or “a late evolution phase of Ariuşd type” showing the results of cultural synthesis processes (ROMAN 1971, 108–110; ROMAN 1973, 63).

The chronological paralleling of the Ariuşd and Bodrogkeresztúr elements also resulted in critical reactions. In one of his papers dedicated to the chronological and cultural connections of the Cucuteni–Tripolie complex with neighbouring cultural manifestations, V. Dumitrescu contested I. Kovács’s opinion, asserting that “the vestiges of the Bodrogkeresztúr culture are posterior to the materials of the Cucuteni culture” and they got into the same features due to posterior disturbances (DUMITRESCU 1968, 38).

One should remember that the chronology and internal division of the Cucuteni culture – including its Transylvanian aspect – effectual till the present days is based on the system elaborated by H. Schmidt in the first half of the last century, completed and modified in some of the details especially by H. and V. Dumitrescu, R. Vulpe and A. Niţu. In the process of establishing of the three main phases and of the different periods of the culture the typological and stylistic properties have been taken into consideration, as well as the proportion of different procedures of pottery ornamentation statistically compared for several settlements (SCHMIDT 1932; DUMITRESCU 1961; 1963a; 1963b; MONAH–MONAH 1997; MANTU 1998, with bibliography). The sites from Transylvania generally were dated to the first phase, especially in the Cucuteni A2–A3 periods. Regarding the interferences with the Bodrogkeresztúr culture, these were established based on the spread of several pottery forms in the settlements of the Cucuteni culture, like the vessels with *Scheibenhenkel* (handles with discoid attachments) or lobed rims discovered at Traian–Dealul Fântânilor and Poduri–Dealul Ghindaru, or metal objects like typical pendants and axes, etc., indicating the parallelism between the Bodrogkeresztúr culture and Cucuteni A–B and partially Cucuteni B periods (DUMITRESCU 1961, 69–73; DUMITRESCU 1968, 42–47; DUMITRESCU 1976, 356–357; MONAH ET AL. 1982, 10; see also LÁSZLÓ–SZTÁNCSUJ 2010 with bibliography). The connections and synchronisms thus established excluded the possibility of the contemporaneity of the Bodrogkeresztúr and Ariuşd cultures.

The archaeological investigations in settlements dated to the Ariuşd culture beginning with the 1960s brought to light a series of discoveries which chronologically could not be included in the above mentioned periods. Vessels or fragments typologically and stylistically classified in Cucuteni A–B and B phases were discovered in settlements at Cernatul de Sus–Mihács-kert (SZÉKELY 1970, 307–308, fig. 12), Cernatul de Jos–Templomdomb (SZÉKELY 1965, 272, nr. 3), Cristuru Secuiesc–Fenyő-alja (SZÉKELY 1977, 13; SZÉKELY 1983, 33), Doboşeni–Borvízoldal (SZÉKELY 1957, 151, fig. 3/4; SZÉKELY 1965, 272, nr. 5), Feldioara–Dealul Cetăţii (ROMAN 1971, 102–103; COMŞA 1973, 45–46), Leţ–Várhegy (SZÉKELY 1951, fig. 8/1–2, 5; SZÉKELY 1965, 272, nr. 2; COMŞA 1988, 116), Moacşa (SZÉKELY 1965, 272, nr. 1), Mugeni–Pagyvan-tető (FERENCZI–FERENCZI 1975, 56–67, pl. I/13), Odorheiu Secuiesc–Budvár, Reci–Telek (SZÉKELY 1964, 121–126), Sânzieni–Köszörükő (SZÉKELY 1973, 38–39, fig. 1–2; COMŞA 1988, 116) or Turia–Balázs-telke (SZÉKELY 1987, 260–261, pl. I/2), as well as in the re-opened excavations from 1968 from Ariuşd (SZÉKELY 1973, 38; ZAHARIA 1973, 29–31, fig. 1/7; 2; ZAHARIA–SZÉKELY 1988, 107–108). In some cases – at Cristuru Secuiesc, Feldioara, Mugeni or Reci – these artefacts appeared in association with elements of the Bodrogkeresztúr culture, interpreted at that moment as imports

from the Tiszapolgár, Tiszapolgár–Bodrogkeresztúr or Late Tisza cultures. Even if these finds, in most of the cases, appear from unclear contexts, without a clear stratigraphic relationship, they – differently interpreted as proves of similar evolution period with the extra Carpathian Cucuteni area (SZÉKELY 1973, 38–39) or just as “intrusion elements”, without a development in the Ariuşd culture (ZAHARIA–SZÉKELY 1988, 108) – seemed to indicate a longer evolution of the Transylvanian aspect, which exceeded the chronological limits of the Cucuteni A phase.⁹ Also confirmed by the re-evaluation of older materials, such as the hoards of prestige goods from Ariuşd (DUMITRESCU *ET AL.* 1954, 452–454; SZTÁNCSUJ 2005, 99–100; SZTÁNCSUJ 2007, 58–59), the hypothesis is also supported by the presence of fragments with *Scheibenhenkel* unearthed in the upper Copper Age level from the eponym site, as well as in incidental discoveries from probably also Ariuşd cultural milieu at Feldioara–Dealul Cetăţii, Cheile Vârghişului–Peştera Mare/Orbán Balázs and Cheile Vârghişului–Lócsúr (ROMAN 1971, 102, Abb. 33/1; BOROFFKA 1994, Taf. 96/7; LÁSZLÓ–SZTÁNCSUJ 2010, 171–173, pl. 1/1–4; 2/4–5). These discoveries have analogies in a wider chronological interval corresponding to the Herculané II–Bodrogkeresztúr and Herculané III–Hunyadi-halom–Pecica–Şanţul Mare (the inferior level)–Cheile Turzii periods, which synchronize with the evolved phases (A–B and the beginning of B) of the Cucuteni culture (LÁSZLÓ–SZTÁNCSUJ 2010, 174–182). The presence of Cucuteni A–B and the *Scheibenhenkel* materials in Ariuşd milieu had been analyzed in details. In the present state of the research there seem to be sufficient pieces of evidence that the evolution of the western branch of the Ariuşd–Cucuteni–Tripolie cultural complex in the eastern and south-eastern regions of Transylvania was longer than it was affirmed earlier, probably surviving till a contemporaneous chronological sequence with the end of the Cucuteni A–B phase, the B1 period of this culture (LÁSZLÓ–SZTÁNCSUJ 2010, 180–182). The cultural connections with the Bodrogkeresztúr culture can be justified in this late period, therefore the place – and role – of the discoveries from Târgu Mureş and other related sites from Transylvania should be seen from this perspective.

Settlements of the Ariuşd culture with archaeological materials more or less similar to those from Târgu Mureş are known in Transylvania from Cristuru Secuiesc, Mugeni or Reci–Telek and the list continues with unpublished discoveries from Moacşa–Maksahát/Falu-határ (Hotarul satului), Reci–Márton-tag (Pământul lui Márton) or Şimoneşti–Betlen. These sites generally were investigated by reduced ranged excavations and the results were summarily published. For example, at Cristuru Secuiesc and Reci several houses were discovered with Bodrogkeresztúr materials along with Ariuşd and Cucuteni A–B pottery. But in the succinct reports of these investigations the materials were not entirely presented, only the ones considered important, without mentioning the features to which they belonged. Therefore, it is impossible to establish how and in what quantity these cultural elements were associated in the different features. Notwithstanding, based on the published information and study of materials kept in the museums from Cristuru Secuiesc, Odorheiu Secuiesc and Sfântu Gheorghe, one can ascertain that they generally present the same characteristics as the ones from the *Tornakert*. The majority of the pottery typologically belongs to the Ariuşd culture. There can be outlined the presence of biconical vessels with channelled and impressed shoulder (SZÉKELY 1983, 32–33, nr. 8, pl. III/5, Cristuru Secuiesc, the fragment was interpreted erroneously as belonging to a shallow bowl with inverted rim assigned to the Bodrogkeresztúr culture), the simple cups or pedestaled cups (SZÉKELY 1983, pl. I/3–4, Cristuru Secuiesc; FERENCZI–FERENCZI 1975, pl. I/2, 8, Mugeni), the shallow bowls with

9 For a recent overview of the Ariuşd culture’s chronology, see: LÁSZLÓ 2006; 2009.

wide, everted or inverted rim (BARTÓK 2005, pl. 48/1–2, Cristuru Secuiesc; FERENCZI–FERENCZI 1975, pl. I/5, Mugeni), the ‘Swedish helmet’ type lids (SZÉKELY 1964, fig. 2/8, Reci; FERENCZI–FERENCZI 1975, pl. I/13; II/9-drawn upwards, Cristuru Secuiesc), supports with everted rims (FERENCZI–FERENCZI 1975, pl. I/7, Mugeni), serving spoons (FERENCZI–FERENCZI 1975, pl. I/10, Mugeni), anthropomorphic and zoomorphic figurines and vessels (FERENCZI–FERENCZI 1975, pl. I/9; II/2; III/2, 4, 6, 11, Mugeni; SZTÁNC SUJ 2009, fig. 7/3, Reci), etc. The painted ornament is present in a very low proportion, represented by potsherds with bichrome or trichrome decoration; this last category includes the Cucuteni A–B ones (SZÉKELY 1964, fig. 3/1–2; 4/1–2, 4, Reci; SZÉKELY 1977, pl. II/1–2; SZÉKELY 1983, pl. III/8; IV/3, Cristuru Secuiesc).

The Bodrogkeresztúr elements can be interpreted as imports represented by vessels of typical shape and decoration for this culture: ‘milk-pots’ (SZÉKELY 1983, pl. I/9–11; III/9–10; IV/1–2, Cristuru Secuiesc), vessels with truncated cone shaped pedestals (SZÉKELY 1983, pl. I/8, Cristuru Secuiesc), rectangular vessels (SZÉKELY 1964, fig. 2/8, Reci), deep bowls (FERENCZI–FERENCZI 1975, pl. II/13, Mugeni; SZÉKELY 1964, fig. 2/4, 7, Reci), vessels with lobed rim (SZÉKELY 1964, fig. 3/1; 4/4, Reci; SZÉKELY 1983, pl. III/1–2, Cristuru Secuiesc), decorated with net-shaped incised lines or *Pseudofurche nstich* type successive sticks, barbotine (SZÉKELY 1964, fig. 3/3–6, Reci; SZÉKELY 1983, pl. III/9–10; IV/1–2, Cristuru Secuiesc; see also BARTÓK 2005, pl. 24; 29; 33; 44; 51; FERENCZI–FERENCZI 1975, pl. III/3, Mugeni), etc. In other cases they represent indirect influences, by overtaking and synthesizing different forms and decorative procedures from the two distinct cultural areas. Proofs for this phenomenon are some of the vessels and potsherds from Mugeni (FERENCZI–FERENCZI 1975, pl. III/1) and Reci (SZÉKELY 1964, fig. 2/5; 3/1; 4/4; see also LÁSZLÓ–SZTÁNC SUJ 2010, 178–179), which by shape have their correspondents in the Bodrogkeresztúr culture, but their technique and ornament reminds us of the fine pottery from the Ariuşd culture. Therefore, the elements mentioned can be interpreted as result of a cultural synthesis process.

The chronological position of the discoveries from Cristuru Secuiesc, Mugeni and Târgu Mureş relating to the periodization of the Bodrogkeresztúr culture, as demonstrated before, is only approximate, since the sporadic and fragmentary character of the materials does not make possible a precise chronological classification. Exception would be the Bodrogkeresztúr type of discoveries from Reci, which date from the late phase of the culture, indicated by the pottery fragments ornamented with *Pseudofurche nstich*, the lobed rimmed vessels, the rectangular vessels with stem decorated with impressed or cut cordon, or those with globular body and cylindrical neck. In present these forms appear together with the so called *Scheibenhenkel* horizon in the period of Bodrogkeresztúr B phase from eastern Hungary, transmitted further in the posterior chronological phase of the Hunyadi-halom culture (PATAY 2005, 76–105; PATAY 2008, 23–25, with further bibliography). Accordingly, based on the connexions shown and similarities, the materials from Reci could be an indicator for the chronological position of similar settlements from the Ariuşd culture’s area, like the sites from Cristuru Secuiesc, Mugeni and Târgu Mureş.

Finally, we can add-on that sporadic materials from the Bodrogkeresztúr culture are also known from other eastern Transylvanian settlements and sites as well: from Bixad–*Vápa-vára* (SZÉKELY 1951, 89, fig. 17/3, 13), Cheile Vârghişului–*Peştera Mare/Orbán Balázs* (ROMAN 1971, 102, Abb. 33/2), Feldioara–*Dealul Cetăţii* (ROMAN 1971, 102–103; COMŞA 1973, 45–46; IONIŢĂ

ET AL. 2004, 16–18, fig. 3–13), Măgheruş–Losonczi (SZÉKELY 1965, 273; BARTÓK 2005, pl. 49/1) or lately Păuleni–Várdomb (LAZAROVICI ET AL. 2000, 95, pl. XIV/4–6), but the context of discoveries or their stratigraphic report is unknown or unpublished. The appearance of these elements in settlements of the Ariuşd culture, associated in some cases with discoveries typical for the Cucuteni A–B period from Moldavia demonstrate once again the existence of tight connections between the two extensive cultural areas – on the one hand the one from the middle Danube area and on the other hand the eastern Carpathian one. The phenomenon formerly observed based on the circulation of objects specific for the metallurgy of the period (PATAY 1958; DUMITRESCU 1961; VULPE 1973; RACZKY 2000; MAREŞ 2002), materialised through the eastern Transylvanian regions, where the communities of the late Ariuşd culture probably played a determining role. The existence of such a late phase of the Ariuşd culture, in parallel with the Cucuteni A–B phase and the late Bodrogkeresztúr period, characterised by the gradual disappearance of the painted pottery and apparition of new forms, resulted on the account of the relations and maybe cultural synthesis with the ‘western world’ seems to be sustained by the data of the settlements from Cris-turu Secuiesc, Mugeni, Reci or Târgu Mureş. Establishing the content and details of this cultural and chronological level requires the re-evaluation and valuation of the former excavations and the undertaking of new field researches.

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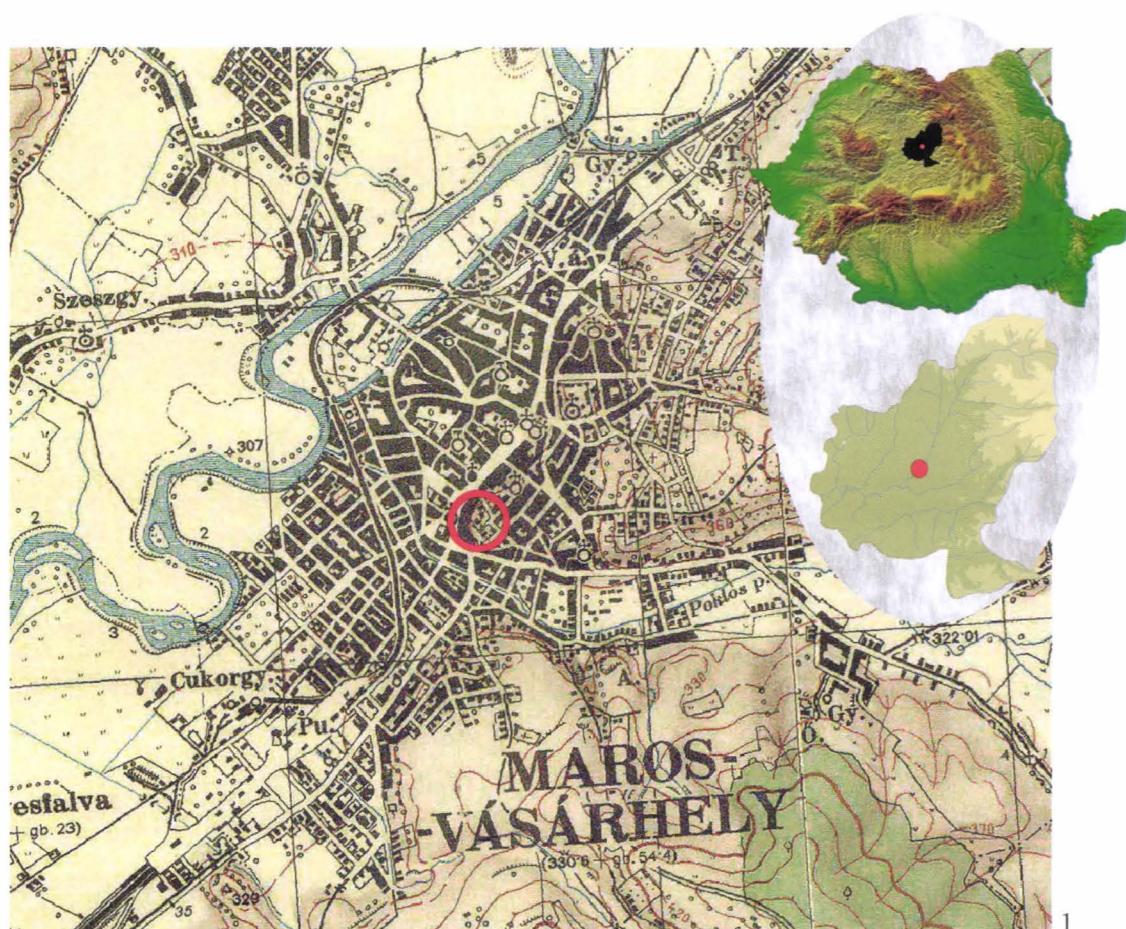


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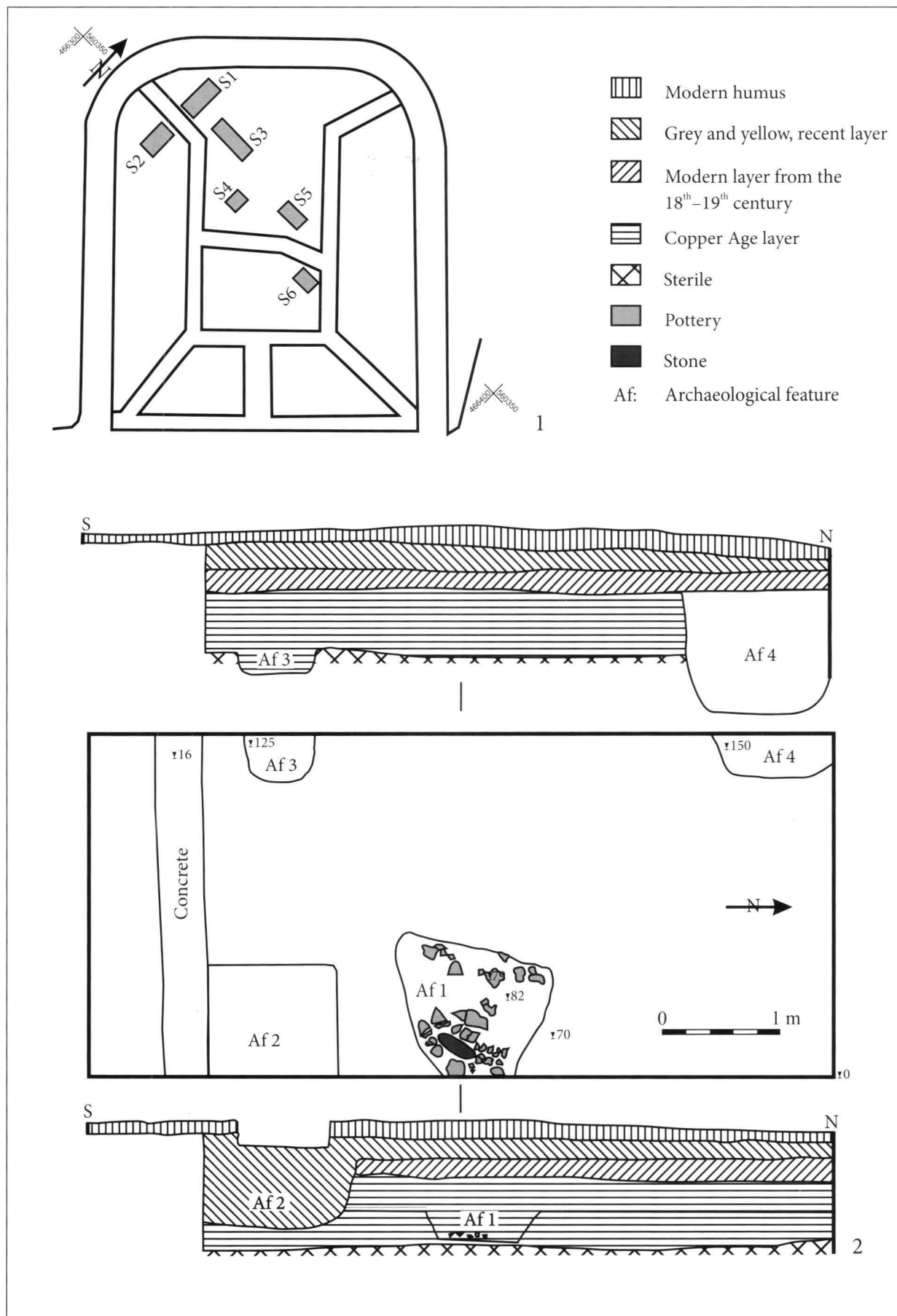


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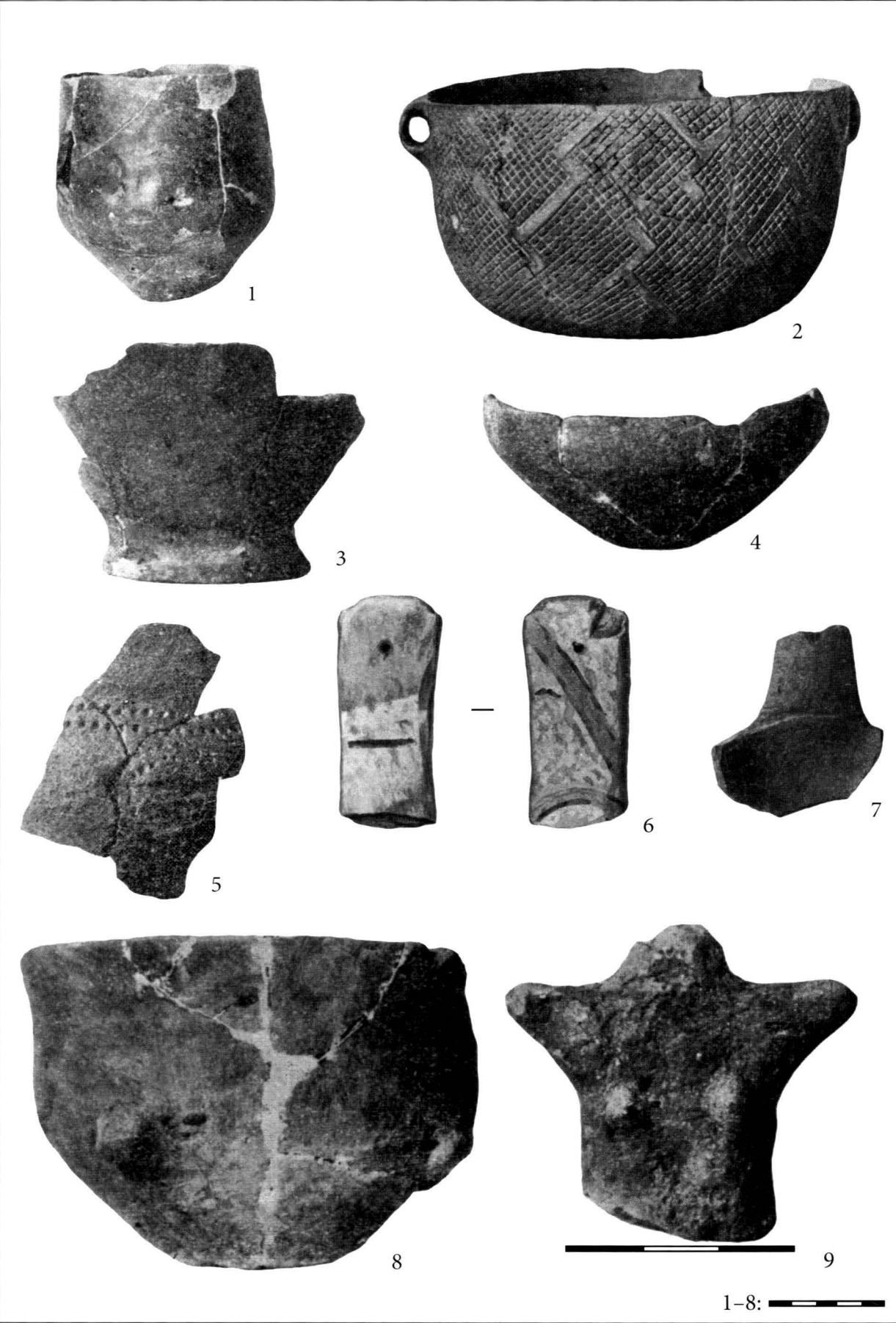


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Materials discovered in 1909 (after KOVÁCS 1915, fig. 4, 8–12, 16).

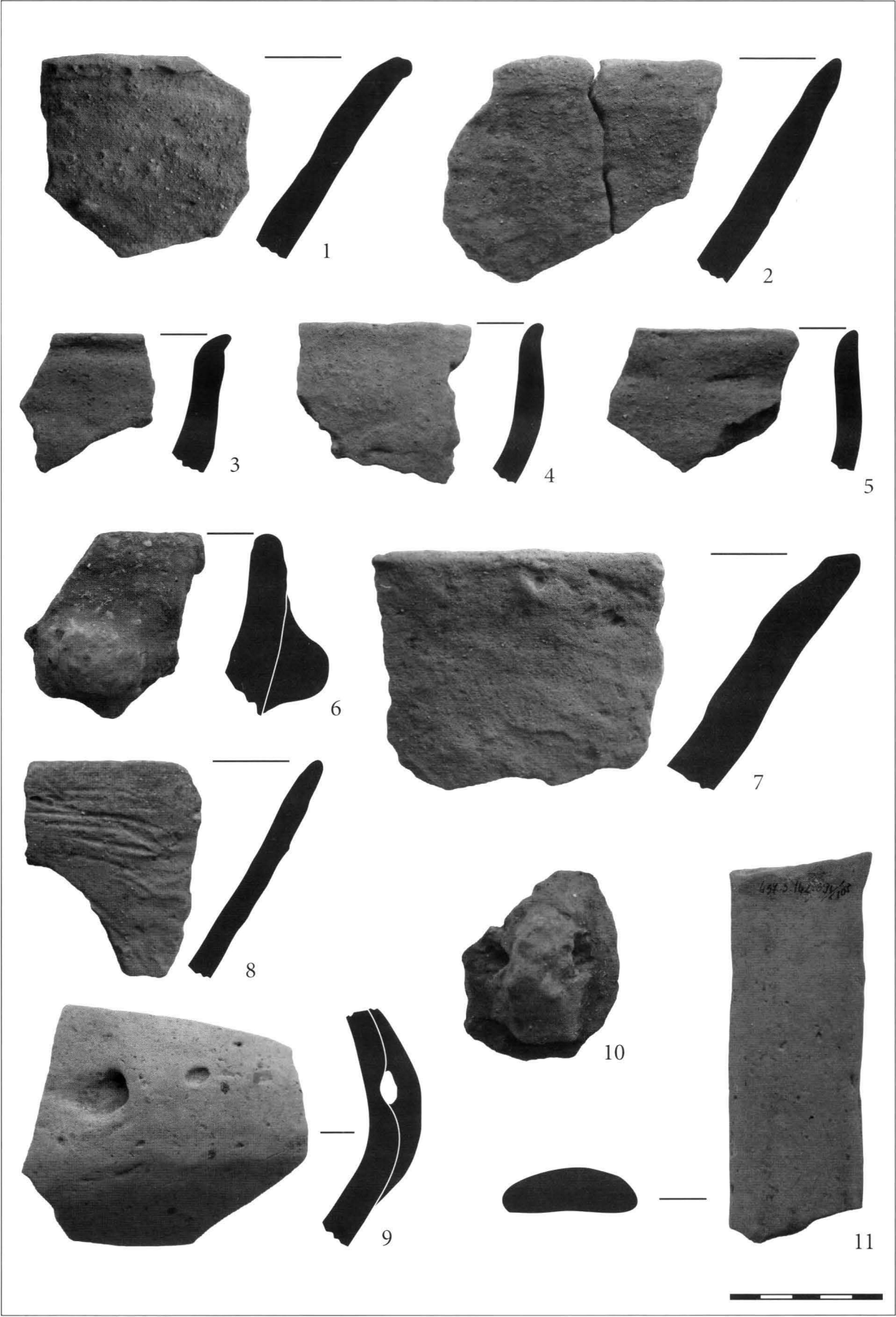


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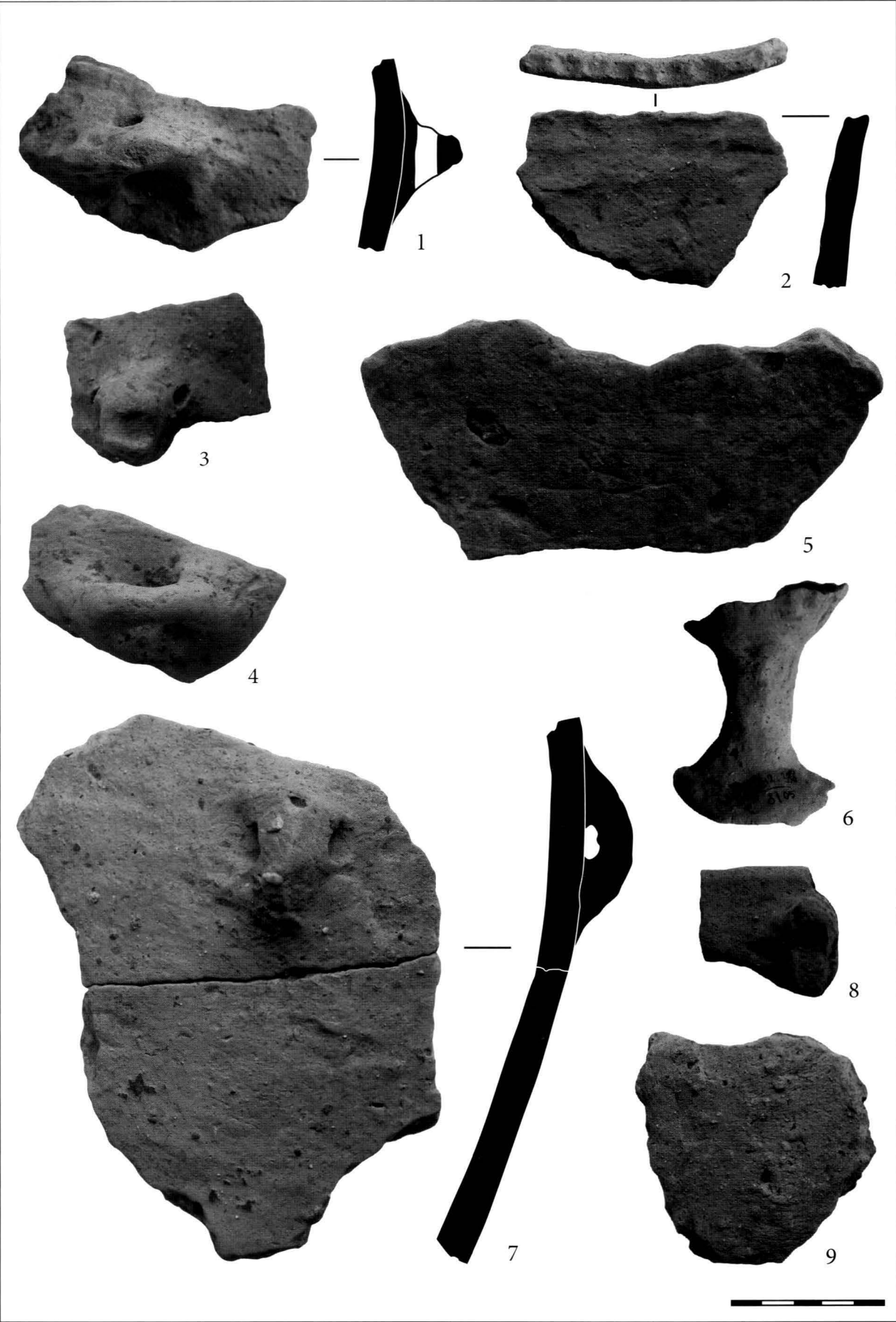


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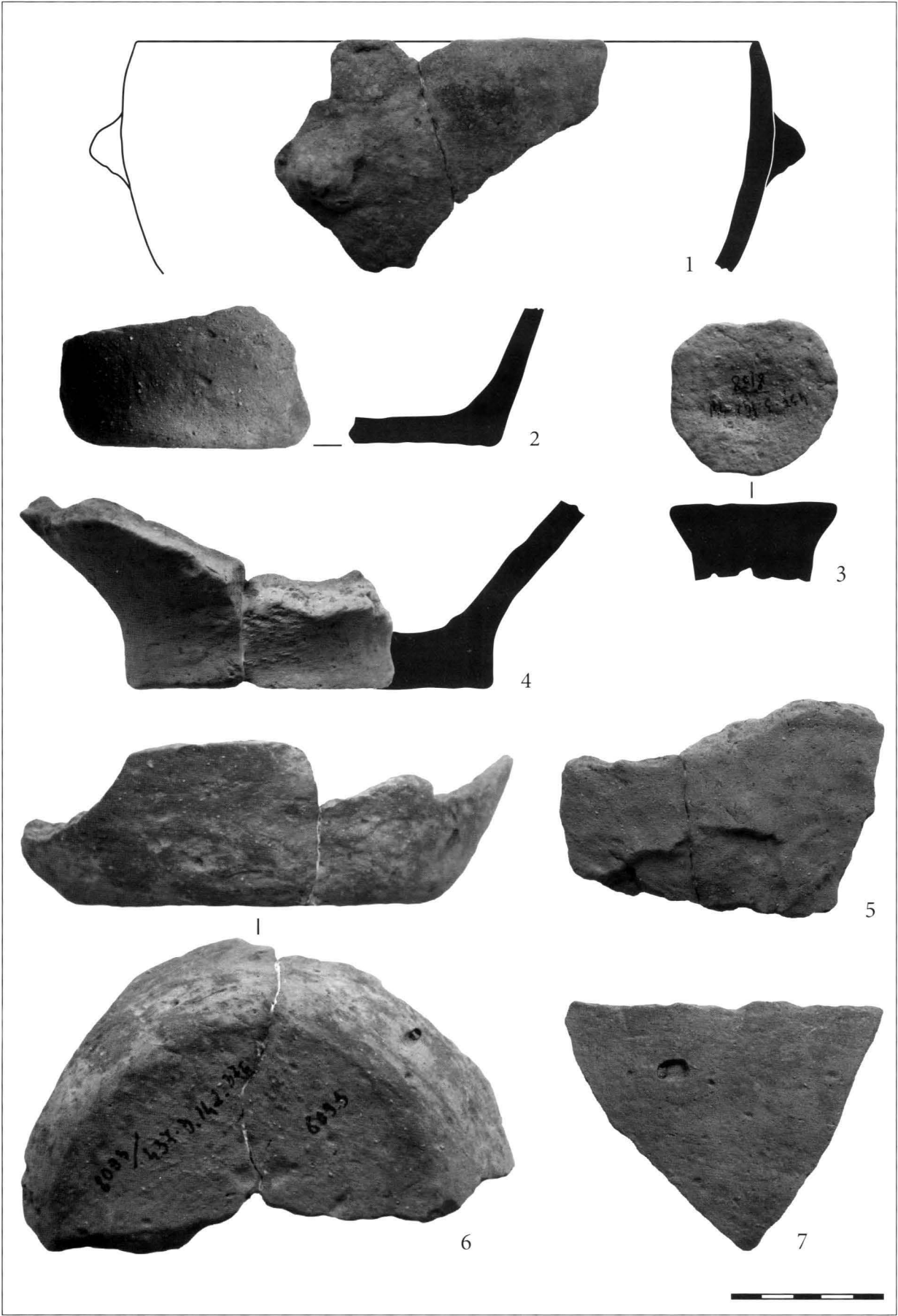


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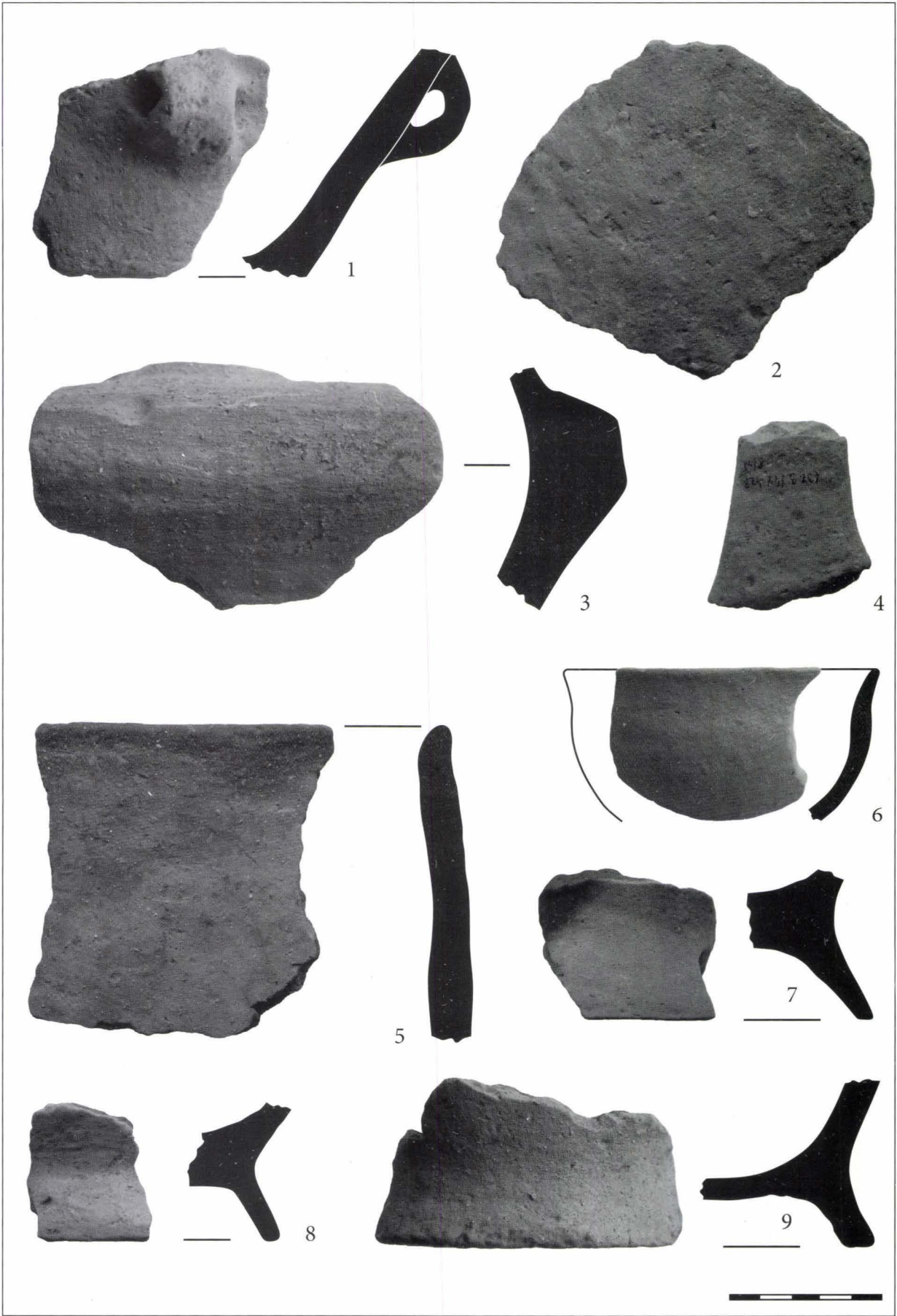


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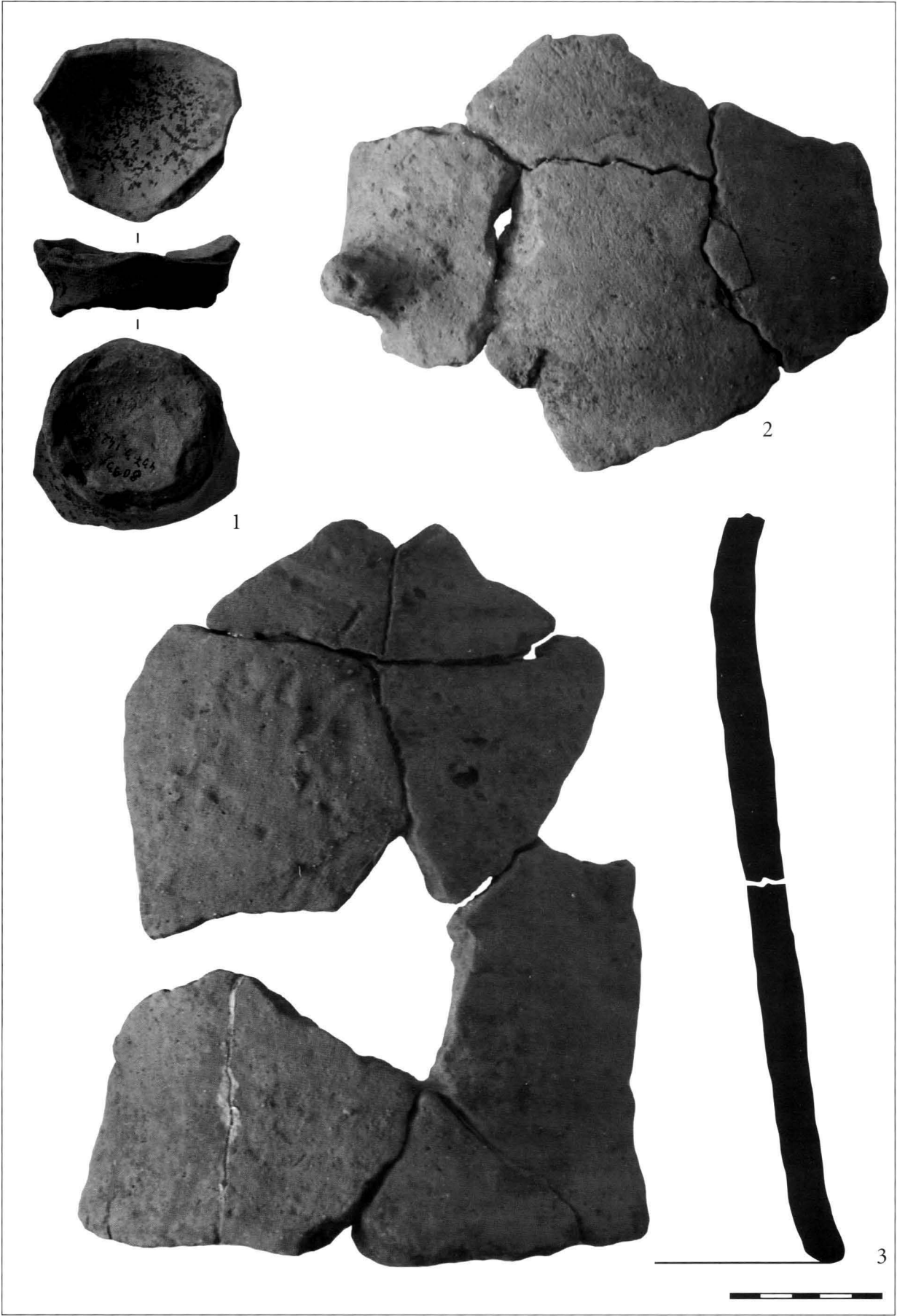


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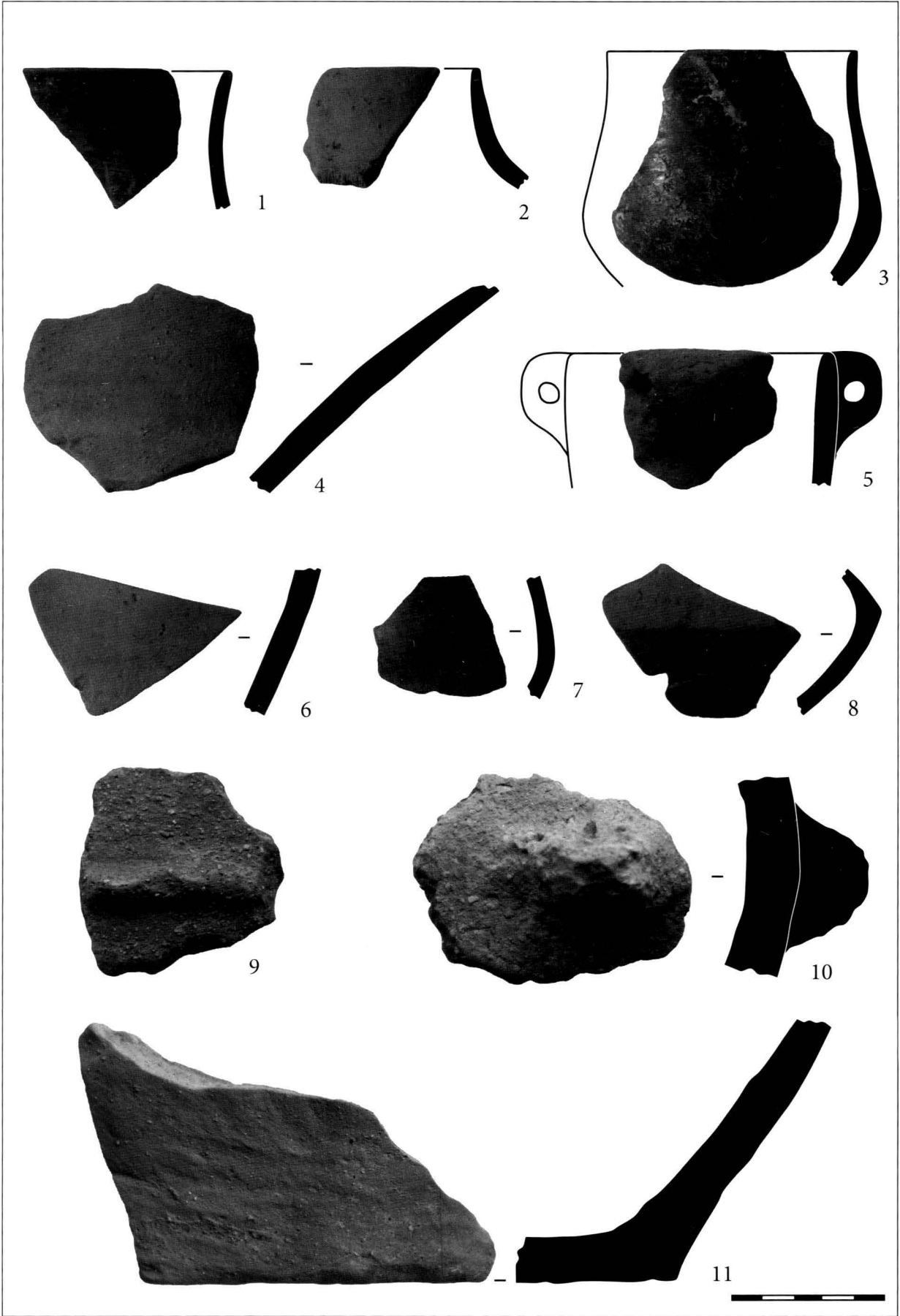


Plate 10. Târgu Mureş–Tornakert 2007. Pottery.

UN SCEPTRE INÉDIT DE L'ÂGE DU BRONZE DÉCOUVERT À MIHOVENI, DÉPARTEMENT DE SUCEAVA

VASILE DIACONU

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Mots clé : sceptre, Âge du Bronze, Mihoveni

On connaît le fait que pendant l'Âge du Bronze, une série d'artefacts lithiques ont accompli des fonctions qui dépassaient les limites des activités quotidiennes, ayant le rôle d'indicateurs sociaux. On pense à certains types d'armes, comme seraient les haches de combat, confectionnées surtout en roches volcaniques, auxquelles on peut ajouter, aussi, différentes pièces, connues dans la littérature archéologique « comme sceptres », rencontrés en milieux culturels et contextes archéologiques variés.

La note ci-jointe apporte en premier plan un objet semblable (Fig. 1), découvert récemment sur le territoire de la localité Mihoveni, la commune Șcheia, dép. de Suceava (Pl. 1), qui peut être encadré dans la catégorie des sceptres perforés, comme celle-ci a été définie dans la littérature archéologique (KAISER 1997, 116). La pièce a été récupérée l'été de l'année 2010, de la rive gauche de la rivière Suceava, à 10 km NNO de la ville de Suceava, mais sans connaître le contexte archéologique d'où celui-ci provient. Il est possible que la pièce soit entraînée d'une terrasse de Suceava, rompue à la suite des inondations d'ampleur de l'été de la même année.

L'artefact¹ en discussion a une forme plan-convexe et est prévu avec une perforation centrale, aisément tronconique. Sur la surface dorsale, celui-ci présente plusieurs décroches ébréchées et des traces évidentes de roulement, situation qui peut être expliquée, aussi, grâce au fait que la pièce a été découverte dans le lit de la rivière Suceava. Pourtant, sur une portion restreinte du bord de l'artefact, on observe un aplatissement facile, grâce à l'utilisation de l'objet pour une activité qui à ce moment-ci ne peut pas être précisé (on n'exclut pas la possibilité de l'utilisation ultérieure en tant que polisseur).

1 On adresse nos remerciements aux Messieurs M. Burlacu et C. Mucileanu de Suceava qui ont découvert la pièce et nous l'a mis à disposition pour l'étudier et la publier. Nous sommes reconnaissants, aussi, à Monsieur le maître de conférences universitaire dr. N. Buzgar, de l'Université « Al. I. Cuza » Iași et à Monsieur le maître de conférences universitaire dr. L. Popescu de la Faculté de Géographie de l'Université « Ștefan cel Mare » Suceava, qui ont réalisé l'analyse pétrographique de la pièce.

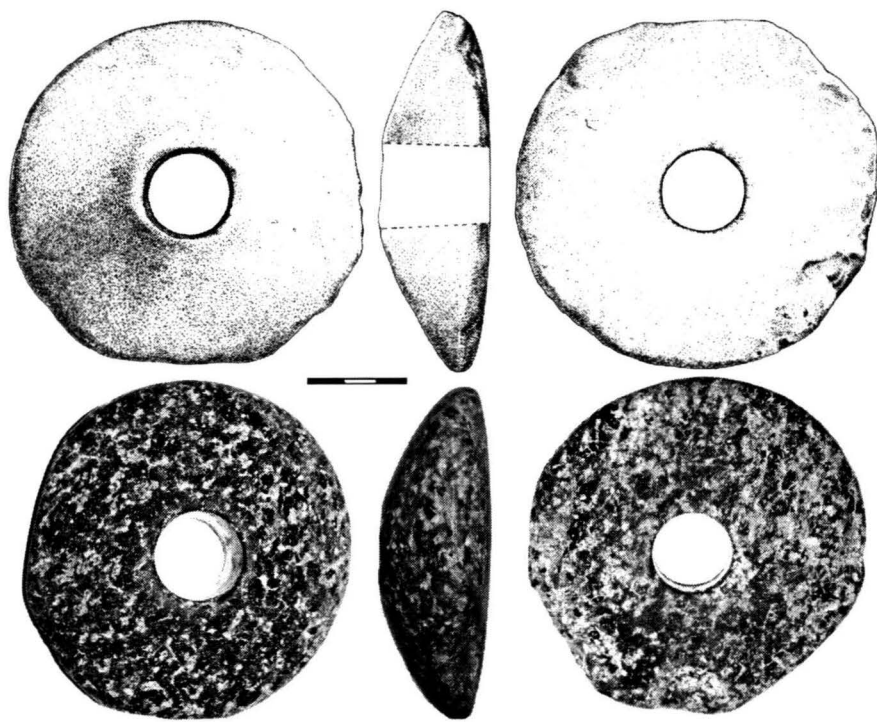


Fig. 1. Sceptre en pierre; Mihoveni.

La pièce est très bien finissée, avec une couleur grise-noirâtre, et des insertions verdâtres-foncées, avec aspect tacheté et a été confectionné en roche magmatique, respectivement hornblendite. Dimensions: diamètre : 10,6 × 11,2 × 11,4 cm; hauteur : 3,4 cm ; le diamètre de l'orifice : 2,7 × 2,8 cm; poids : 509 gr. Comme cet artefact provient d'une découverte fortuite, on ne peut pas apporter des précisions concrètes

concernant l'encadrement chronologique et culturel de celui-ci. De plus, le manque des analogies édificatrices nous limite la possibilité de tirer des autres conclusions plus amples.

A l'Âge du Bronze, les sceptres perforés sont représentés par quelques types distincts. Sans entrer en détails, on rappelle qu'on connaît des pièces avec des proéminences disposées de manière symétrique (connus aussi, comme sceptres cruciformes), des pièces avec tendances de bitronconisme, pièces tronconiques, mais aussi sceptres au corps sphérique dont la base est prévue avec un petit manchon (KAISER 1997, 118–124; DIACONU 2009, 65, fig. 3). En ce qui concerne la pièce de Mihoveni, on peut l'encadrer strictement dans un des types mentionnés, quoiqu'elle présente certaines similitudes avec les sceptres tronconiques. Pour comparaison, on rappelle que la pièce que nous avons analysée présente certaines similitudes morphologiques avec le sceptre biconvexe découvert à Oprișeni (Ukraine), entre Siret et Tchernovtsy (Cernăuți), et qui a été attribué au milieu culturel Komariv (ANDRONIC 2008, 119, fig. 5).

En ce qui concerne l'encadrement chronologique et culturel du sceptre discuté dans la note ci-jointe, on peut affirmer, en général, que celle-ci appartient à l'Âge du Bronze, dans les conditions où pour l'Énéolithique, on n'a pas documenté des pièces similaires ; la même situation, pour le Hallstatt. Le contexte de la découverte ne permet pas un encadrement précis, mais on peut attribuer le sceptre aux milieux culturels spécifiques au bronze moyen ou tardif, dans les conditions où dans cette zone, on a signalé de nombreux sites caractéristiques aux étapes temporelles mentionnées (NICULICĂ 2006). Quoiqu'on ne puisse pas établir des liaisons certes, on mentionne que, toujours dans la zone de la ville de Suceava, on a découvert encore deux sceptres en pierre, attribués à l'Âge du Bronze. On y fait référence au sceptre bitronconique perforé de Șcheia (IGNAT 1981, 136, fig. 2/6), et à la pièce tronconique de Suceava-Ițcani (BOROFFKA-SAVA 1997, 90, fig. 27/8; URSU-MITREA 2001, 164–165, fig. 3/9), tous les deux attribués au milieu culturel Noua.

En ce qui concerne la signification de cet objet, on ne peut pas apporter des données concrètes, grâce aux conditions de découverte. Pourtant, à la base des comparaisons avec des

autres artefacts semblables, on peut tracer quelques coordonnées sommaires. Quoique certains chercheurs sont d'avis que des pièces semblables ont constitué des simples armes (COMȘA 1972, 260; MUNTEANU 1991, 416), on souscrit à l'opinion de la majorité de ceux qui affirment que des artefacts semblables avaient une valeur symbolique, accomplissant la fonction d'armes de parade, ou des symboles sociaux (LEAHU 1966, 79; KLOCHKO–PUSTOVALOV 1994, 211; DUMITROAIA 2000, 124). Malgré cela, on ne doit pas exclure le rôle votif de tels sceptres, rencontrés dans l'inventaire funéraire ou en dépôts, l'exemple le plus concluant étant les pièces de Borodino, Ukraine (KAISER 1997, 116–124).

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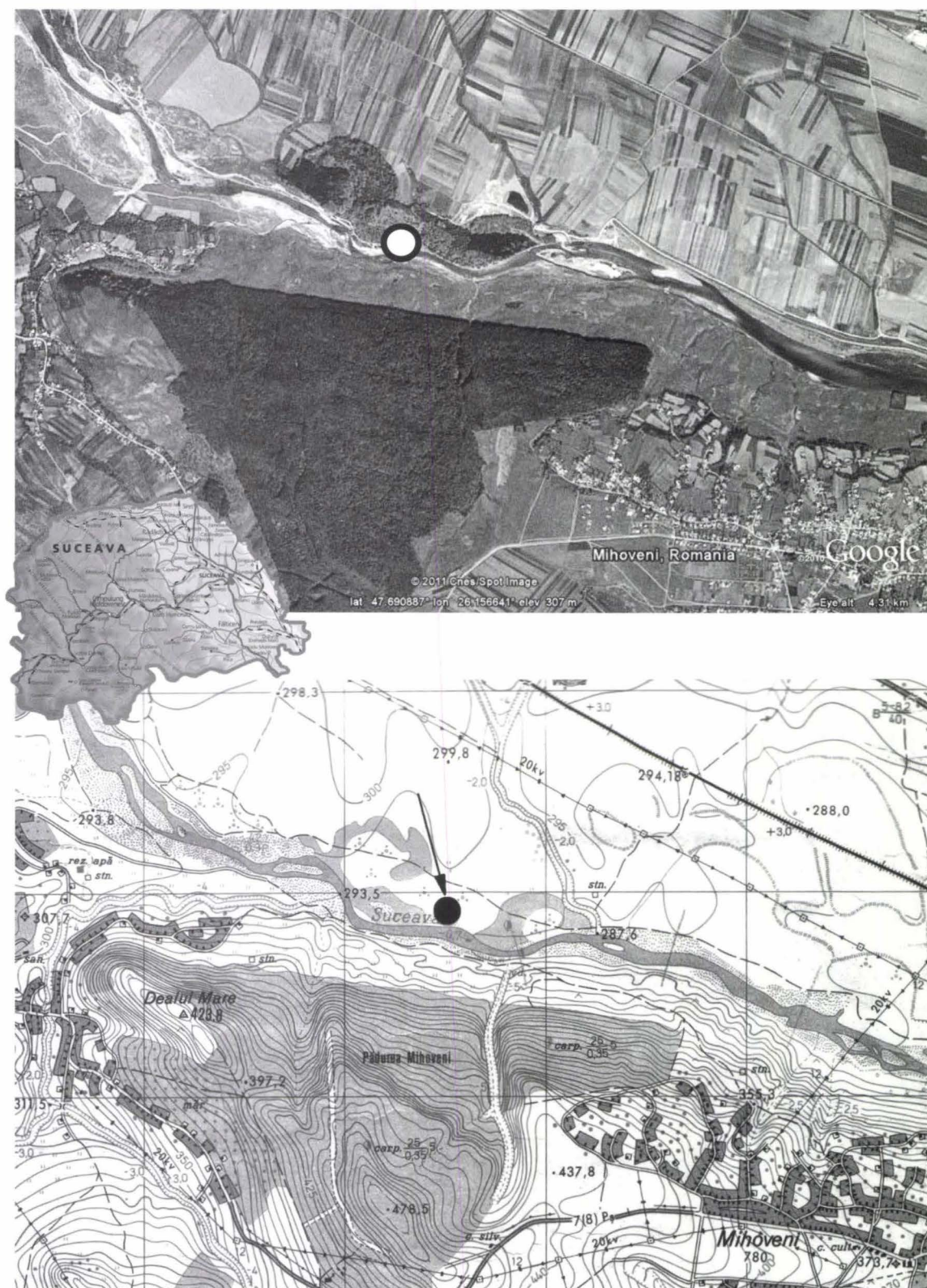


Planche 1. La localisation de la découverte (en haut: selon Google Earth 2010; en bas: la carte topographique).

ZENTRALISIERTE PRODUKTIONSSTRUKTUREN? ÜBERLEGUNGEN ZUR RÄUMLICHEN BEZIEHUNG VON BRONZEZEITLICHEN GUSSFORMEN UND FERTIGPRODUKTEN IN SÜDOSTEUROPA AM BEISPIEL DER RUMÄNISCHEN TÜLLENBEILE

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Bei der Bewertung des räumlichen Verhältnisses von Gussformen zu Fertigprodukten im Karpatenbecken müssen Überlieferungsfilter stärker als bisher in Betracht gezogen werden. Zunächst stammen Tüllenbeilgussformen, anders als die Fertigprodukte, ganz überwiegend aus Siedlungen und wurden bei Ausgrabungen entdeckt. Der Stand der Siedlungsarchäologie bestimmt damit die Verbreitung von Gussformen in hohem Maße mit. Der zweite Überlieferungsfilter betrifft die bronzezeitliche Gusstechnik. Es ist kaum anzunehmen, dass allein steinerne Gussformen verwendet worden sind. Neben einigen Funden fragiler und daher selten überlieferter zweischaliger Tongussformen liegen Belege verschiedener Arten von Modellen zur Herstellung von Ton- oder Formsandgussformen vor. Dies deutet darauf hin, dass vermutlich auch archäologisch schwer sichtbare Gussverfahren einen Anteil am Gesamteindruck der Verbreitung von Tüllenbeilgussformen in Rumänien haben. Die Steingussformen können gut zur Herstellung dieser Modelle gedient haben, ohne dass hier ihre einzige Funktion gelegen haben muss.

Schlüsselwörter: Rumänien, Tüllenbeile, Tüllenbeilgussformen, räumliche Verteilung, Überlieferungsfilter

Die Organisation des spätbronzezeitlichen Metallhandwerks im Karpatenbecken ist noch kaum erforscht. Zwar liegen einige Befunde vor, die mehr oder weniger sicher mit Metallhandwerk in Verbindung gebracht werden können, doch lassen sich diese noch nicht recht zu einem stimmigen Gesamtbild zusammenfügen. So stehen den Fragen, die der große Reichtum an z.T. serienmäßig produzierten Bronzen aufwirft, noch recht wenige Antworten gegenüber. Einer dieser Fragen, der räumlichen Beziehung zwischen Gussformen und Endprodukten, sollen die folgenden Zeilen gewidmet sein.

Der geographische Bezug zwischen Gussformen und Fertigprodukten

In seiner grundlegenden Arbeit zu den Gussformen für Tüllenbeile in Südosteuropa hat B. WANZEK (1989, 176) herausstellen können, dass die Verbreitung von Fertigprodukten und zugehörigen Gussformen nicht identisch ist. Letztere lägen zumeist im Randbereich der Tüllenbeilverbreitung oder sogar außerhalb davon. Von diesem Befund ausgehend stellte er das Modell

einer an befestigte Zentralorte gebundenen Herstellung von Tüllenbeilen und einem Netz von Verteilungswegen auf (WANZEK 1989, 188–192). Diese quasi-industrielle Herstellung von Tüllenbeilen verortete er in Siedlungen mit bemerkenswerten Gießereibefunden wie z.B. Velem St. Vid. Depotfunde von Gussformen liessen ferner auf Wanderhandwerker schließen, während in kleineren Siedlungen mit wenigen Gussformen für den eigenen Bedarf oder die Kleinregion produziert worden sei. Sowohl die Höhensiedlungen als auch die kleineren Siedlungen wären auf die Anlieferung von Rohstoffen angewiesen gewesen und ihre Lage richtete sich somit nach dem Wegenetz aus, was zu der Abweichung der Verteilung von Fertigprodukten und Gussformen geführt habe. Zumal der Verteilung der Depotfunde, aus denen die meisten Fertigprodukte stammen, sicher andere Ursachen zugrunde liegen als ein Wegenetz, ist man geneigt diesem Gedankengang zu folgen.

Der von Wanzek geschilderten Ausgangssituation ist auch bei einem heute etwas erweiterten Forschungsstand zuzustimmen. Betrachtet man eine Kartierung (Taf. 1) von Tüllenbeilfunden aus Rumänien und den nach wie vor sehr wenigen Funden von Gussformen, so fällt sofort deren randliche Lage ins Auge. Insbesondere die reiche Deponierungslandschaft des Someș-Beckens erscheint in Bezug auf Gussformen fundleer, während der an Tüllenbeilen arme außerkarpatische Raum zahlreiche Gussformenfunde aufweist. Nur selten stammen zudem bislang Fertigprodukte und Tüllenbeile vom selben Fundort, Ausnahmen sind die Siedlungen von Radovanu–*Gorgana a doua* (MORINTZ–ȘERBĂNESCU 1985, bes. 16, Abb. 15/1), Reci–*Telek* (SZÉKELY 1966) und möglicherweise Tășad (PETRESCU-DÎMBOVIȚA 1977, 112f., Taf. 213/1–7; WANZEK 1989, 202, Nr. 56, Taf. 49/2). Diese offenkundige Divergenz in der Verbreitung von Fertigprodukten und Gussformen lässt sich mit B. Wanzeks Überlegungen ohne Frage erklären, wenn wir auch sicher noch weit davon entfernt sind, ein bronzzeitliches Wegesystem im Karpatenbecken rekonstruieren zu können, abgesehen von der offenkundigen Bindung der Siedlungen an Wasserläufe. Doch beachtet unserer Meinung nach dieses Modell zu wenig die Überlieferungsbedingungen der beiden verglichenen Fundgruppen, bzw. die auf diese einwirkenden Überlieferungsfilter.

Gussformen für Tüllenbeile aus Rumänien: der Einfluss von Überlieferungsfiltern auf die Fundverbreitung

Die Auffindungsumstände von Fertigwaren und Gussformen sind bisher nicht zur Erklärung des Fundbildes herangezogen wurden. B. Wanzek hat für die südosteuropäischen Tüllenbeilgussformen darauf hingewiesen, dass sie zu 45,2% Siedlungs- und zu 38,4% Einzel-funde¹ darstellten (WANZEK 1989, 15). Depotfunde sind mit 12,3% deutlich weniger häufig, Grabfunde kommen kaum vor (1,4%). Auch in Rumänien stammen 46% (19 Stücke) der Gussformen aus Siedlungen gegenüber 29% (12 Stücken) aus Depotfunden (Abb. 1; Fundliste 1). Der Gesamteindruck einer Bindung der Funde an Siedlungen wird noch verdichtet durch den Umstand, dass der Gussformendepotfund von Ciumești (Fundliste 1, Nr. 8) sicher, der von Brădicești (Fundliste 1, Nr. 4) möglicherweise aus einer Siedlung stammt. Zudem lieferten insgesamt nur vier Depotfunde die 12 Gussformen.

Entsprechend wurden die rumänischen Tüllenbeilgussformen auch überdurchschnittlich häufig bei systematischen Ausgrabungen (18 Stücke, 44%) und Oberflächenbegehungen (3 Stücke, 7%), also systematischer archäologischer Feldarbeit entdeckt (Abb. 2). Betrachtet man

1 Diese im Vergleich zu den rumänischen Funden (s.u.) hohe Anzahl könnte dadurch zu erklären sein, dass „Einzelfund“ in der Literatur häufig mit „Fundumstände unbekannt“ gleichgesetzt wird.

nun aber die Fundumstände der Fertigprodukte, so stammen die Tüllenbeile zu etwa 75% sicher aus Depotfunden und zu weiteren 5% aus unsicheren Depotfunden, hinzu kommen 8% Einzelfunde und nur etwa 1% Siedlungsfunde (Abb. 3).² Funde aus Ausgrabungen sind aufgrund dieser Fundumstände überaus selten.

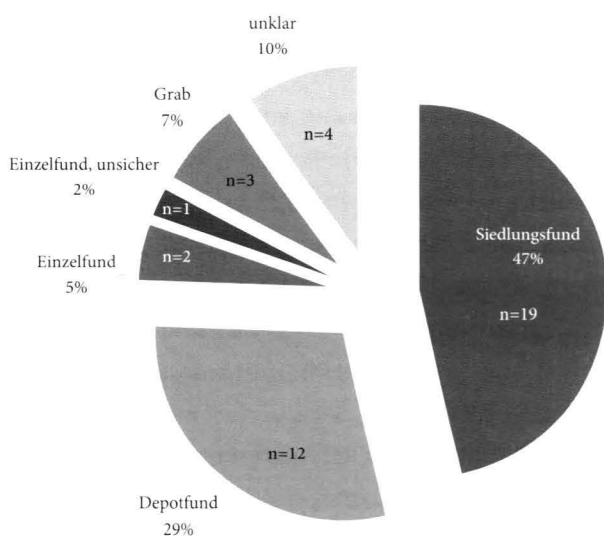


Abb. 1. Tüllenbeilgussformen aus Rumänien nach Fundkategorien.

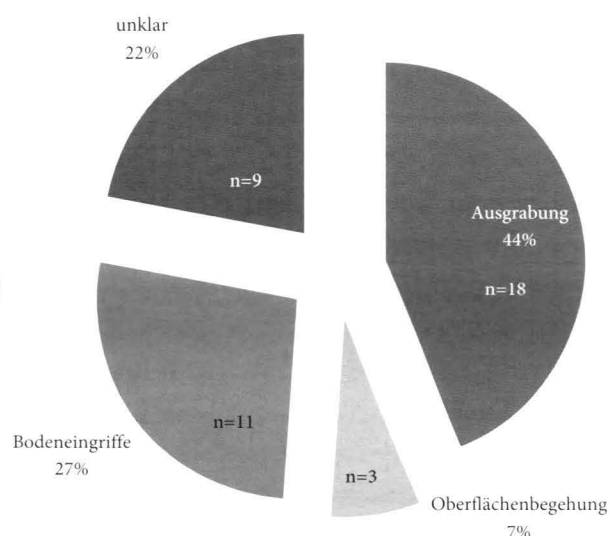


Abb. 2. Tüllenbeilgussformen in Rumänien nach Fundumständen.

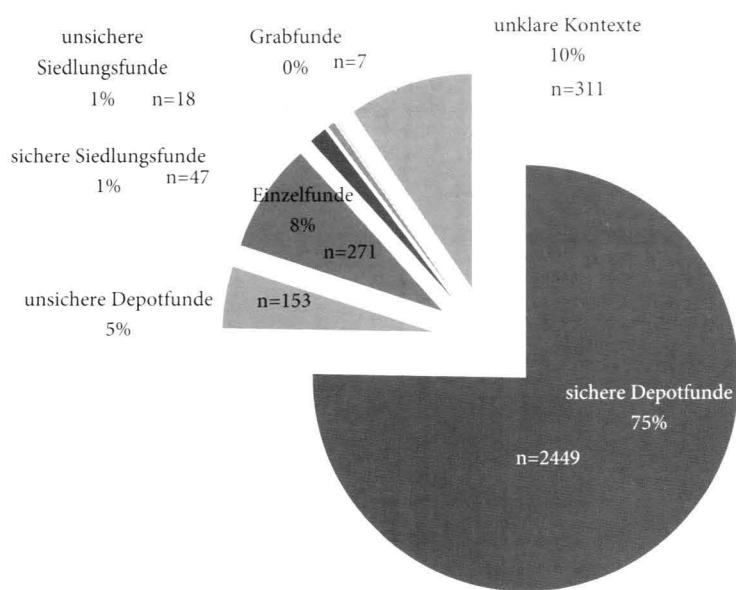


Abb. 3. Tüllenbeile in Rumänien nach Fundkategorien (Arbeitsstand: 3256 Tüllenbeile).

Somit betrachten wir mit Fertigprodukten und Gussgerät zwei auf völlig unterschiedliche Art und Weise zustandegekommene archäologische Quellengruppen. Durch den oft noch nicht sehr umfangreichen Stand der Siedlungsarchäologie sind Gussformen mit Sicherheit im Fundbild deutlich unterrepräsentiert. Die Fertigprodukte dominieren hingegen durch die

² Die Zahlenangaben beziehen sich auf einen Arbeitsstand von 3256 Tüllenbeilen in DIETRICH 2009. Diese Zahl repräsentiert nicht alle rumänischen Tüllenbeile, doch ändern sich die relativen Verhältnisse aufgrund seitdem hinzugekommener Stücke kaum.

stark ausgeprägte innerkarpatische Depotfundsitze das Fundbild.³ Somit könnten die Verbreitungskarten momentan eher die Lage umfangreich ausgegrabener Siedlungen anzeigen, als die prähistorische Verbreitung von Gussformen wiederzuspiegeln.

Gussformen für Tüllenbeile aus Rumänien: der Einfluss der Gusstechnik

Neben dem oben geschilderten Überlieferungsfilter möchten wir noch auf einen weiteren aufmerksam machen. Der ganz überwiegende Teil der überlieferten Gussformen besteht aus Stein (36 Stücke, Abb. 4, vergl. Fundliste 1). Dieses Material ist durch seine Härte und Dauerhaftigkeit in der Fundüberlieferung und damit archäologischen Sichtbarkeit gegenüber Gussformen aus anderem Material klar im Vorteil. Gussformen aus Ton sind aus Rumänien in geringer Zahl überliefert (vier Stücke, Abb. 4, vergl. Fundliste 1) und ihr fragiler Zustand verweist deutlich auf einen der Gründe. Dass Tongussformen in Südosteuropa in erheblichem Maße zur Herstellung von Tüllenbeilen in Gebrauch waren, zeigen beispielhaft die Funde von Sveti Petar Ludbreški-*Staro groblje*, Kroatien (ŠIMEK 1979; 2004). Da Tüllenbeile regelhaft Gussnähte aufweisen und die erhaltenen Tongussformen auch immer zweischalig konzipiert sind, kann jedoch nicht ein theoretisch möglicher Guss in verlorener Form für das auffallend seltene Auftreten entsprechender Funde verantwortlich gemacht werden. Eher wird man mit einem weiteren Gussverfahren, nämlich dem in verlorenen Sandformen, zu rechnen haben, das im Regelfall keine Spuren hinterlässt (GOLDMANN 1981, bes. 115). Bei diesem Verfahren wird von einem Model des zu giessenden Objekts ein Abdruck in einer Kiste mit Formsand genommen, möglich ist natürlich auch das Abformen eines Fertigprodukts. Für komplexere Gegenstände wie Beile müssen natürlich zwei Formsandkisten verwendet werden, die für den Guss verbunden werden müssen. Hieraus resultieren in jedem Fall Gussnähte, wie sie an allen südosteuropäischen Tüllenbeilen vorhanden sind. K. Goldmann betont, dass die Oberfläche der Gusstücke je nach Körnung des Sandes nahezu glatt sein könne (GOLDMANN 1981, bes. 115), was allerdings bei Tüllenbeilen eine geringere Rolle spielen dürfte, da die meisten Stücke ohnehin nach dem Guss überarbeitet werden mussten, um funktionsfähig zu sein. Nicht nur die Klingen wurden gedengelt, oft finden sich Hammerspuren auf dem gesamten Körper.

Obwohl der Guss in Formsand von K. GOLDMANN (1981) etwas provokativ als mögliches „Hauptverfahren alteuropäischer Bronzegießer“ in die prähistorisch-archäologische Diskussion eingebracht worden ist, hat dies eher wenig Niederschlag gefunden, was nicht zuletzt an den wenigen direkten Belegen der Anwendung dieser Technik liegen dürfte. Goldmann interpretierte den Inhalt eines bronzenen Gefäßes aus dem Depotfund von Seth, Kr. Segeberg als Rest von Formsand (GOLDMANN 1981, 109).

Zwar liegen auch aus dem Karpatenbecken keine direkten Belege für diese Form des Bronzegusses vor, doch sind sehr wohl einige Fundstücke vorhanden, deren Funktion es möglicherweise war, als Model für Sand- oder Tonformen zu dienen. Es handelt sich um insgesamt acht Belege von Halbgüssen von Tüllenbeilen oder Tüllenhämmern von fünf Fundorten (Fundliste 2, Taf. 2/1–8). Die Funde stammen allesamt aus transdanubischen Depotfunden des Gyermely- und

3 Dies dürfte auch für die Fertigprodukte zu einer möglicherweise nicht immer prähistorischen Realitäten entsprechenden Verschiebung der Fundkonzentration ins Karpatenbecken führen. Die Anlage großer Deponierungen ist ein Charakteristikum dieses Raums, während wir außerhalb der Karpaten vor allem Einzelfunden begegnen (DIETRICH 2010, 34f., Abb. 7). Zudem fällt auf, dass auch drei der vier Depotfunde von Tüllenbeilgussformen außerhalb der Karpaten liegen. Hier deuten sich mit einiger Sicherheit eher regionale Präferenzen im Deponierungsgut an, als dass sich aus den Karten auf prähistorische Verbreitungsrealitäten schließen lässt.

Kurd-Horizonts (vergl. MOZSOLICS 1984, 40). Offenbar gehörten sie also nur regional und zeitlich beschränkt zu den Objektkategorien, die für eine Niederlegung in Depotfunden in Frage kamen. Dies muss allerdings nicht bedeuten, dass sie nicht insgesamt häufiger und chronologisch sowie regional weiter verbreitet waren.

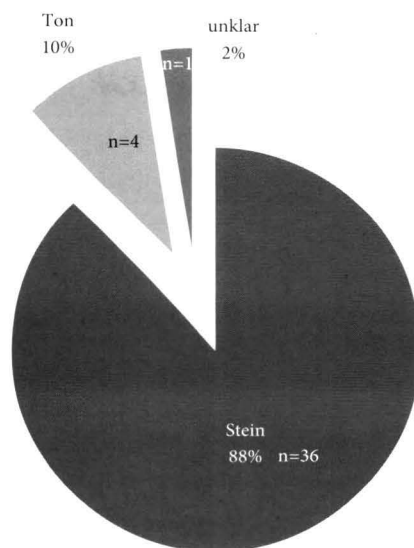


Abb. 4. Tüllenbeilgussformen in Rumänien nach Material.

Nach A. Mozsolics dienten sie als „Kern, von dem negative Gußformen gewonnen werden konnten, bzw. waren Probestücke, ob die beiden Gußformenhälften gleich sind“ (MOZSOLICS 1984, 39f.). Wanzek sieht die Objekte hingegen als Schablonen bzw. Modelle, „die die Länge, Verzierung und Dicke im Gußmodell – also die Einarbeitungstiefe – vorgeben“ (WANZEK 1989, 37f.). Weiter seien sie dazu verwendet worden, die Stellung der Negative zueinander festzulegen. Leider wird nicht ausgeführt, wie man sich die genaue Anwendung dieser „Schablonen“ vorzustellen hätte. Über ein einfaches umreißen der Form auf dem Gussformenrohling könnte sie kaum hinausgegangen sein, denn es bleibt unklar, wie z.B. die aufwendige Verzierung des Models aus Beremend (Fundliste 2, Nr. 1) hätte übertragen werden sollen. Auch ein Einlegen der Model in die in Arbeit befindlichen Formen zur Tiefenbestimmung des Negativs erscheint uns weniger wahrscheinlich, denn soweit Querschnitte publiziert sind, scheinen die Stücke zu schmal zu sein, um in Verdoppelung ein funktionsfähiges Tüllenbeil zu ergeben. Sehr viel wahrscheinlicher erscheint es uns, dass es sich tatsächlich um Model handelt, die zur Herstellung von Ton- oder Sandgussformen dienten. Natürlich könnte man solche Formen auch von Fertigprodukten abnehmen, doch haben die Model den Vorteil einer erheblichen Material- und Gewichtersparnis, wenn zahlreiche Beilformen vorgehalten werden sollten.

Weiter ist auf eine in Rumänien bislang nur ein Mal belegte Fundgattung hinzuweisen. Aus dem Depotfund von Dezmir–Bocomaia liegt ein bleiernes, komplett ausgegossenes Tüllenbeil vor (RUSU ET AL. 1977, R65b/23; Taf. 2/9). Aufgrund seines Materials und der fehlenden Tülle kann es niemals zum Gebrauch bestimmt gewesen sein. Dieser momentan im Karpatenbecken noch allein stehende Fund eröffnet eine Brücke zu ähnlichen, gut dokumentierten Funden aus dem atlantischen Kreis.

In Cambridge–New Street wurde ein Fragment eines solchen Beils in einer bronzenen Gussform festgestellt (Fundliste 3, Nr. 2), ein weiterer Fund stammt aus Southall–Brickfield (Fundliste 3, Nr. 9). Eine Form für Tüllenbeile aus einem Depotfund von der Isle of Harty, Kent

der Bleireste anhafteten, beschrieb schon A. Evans als Teil seiner eigenen Sammlung (EVANS 1881, 441f.). S. P. Needham und D. R. Hook haben, die o.g. eingeschlossen, sieben Funde von Blei im Kontext von Gussformen von den Britischen Inseln auflisten können (NEEDHAM-HOOK 1988, Appendix 2).

R. F. Tylecote vermutete, dass es sich bei den auch ohne Fundzusammenhang mit Gussformen häufiger vorkommenden bleiernen Beilen (Fundliste 3) um Kerne handele, die die Rolle des Wachsmodells beim Guss in verlorener Form übernommen hätten (TYLECOTE 1962, 125–128). Technische Einwände hiergegen, die besonders den Gussvorgang beeinträchtigende Bleirückstände in den Formen betreffen, hat E. Foltz geltend gemacht (FOLTZ 1980). Zudem wurden Tüllenbeile, wie oben angemerkt, nicht in verlorener Form hergestellt. Obwohl auch sie diese Einwände zur Kenntnis nehmen, möchten Needham und Hook das „Bleiausschmelzverfahren“ trotzdem nicht gänzlich verwerfen (NEEDHAM-HOOK 1988, 265–268).

In der deutschsprachigen Frühgeschichtsforschung existiert eine umfassende Literatur zur Rolle von bleiernen Modellen beim Bronzeguss, die für das erste nachchristliche Jahrtausend quantitativ gut belegt und dokumentiert sind (zusammenfassend zum Forschungsstand BERGEN 2005, 26–37). Besonders für Fibeln, die aufgrund ihrer Trageweise in gussgleichen Paaren hergestellt werden mussten, existieren entsprechende Modelle. War auch hier anfangs vermutet worden, dass die Bleiobjekte das Wachs beim Guss in verlorener Form ersetzt haben könnten, so hat sich mittlerweile die Ansicht durchgesetzt, dass Bleimodelle in mehrstufigen Prozessen zur Herstellung von zweiteiligen tönernen Gussformen oder für Abdrücke in Formsand genutzt wurden.⁴ Auch Goldmann hatte die Nutzung von Blei- oder Zinnmodellen als Möglichkeit angesprochen und zudem auf eine steinerne Tüllenbeilgussform unbekannten Fundortes aus dem Museum für Vor- und Frühgeschichte Berlin hingewiesen, an deren Oberfläche Reste von Blei-Zinnoxid bzw. Bleioxid und Zinnoxid festgestellt werden konnten (GOLDMANN 1981, 112, 115, Anm. 17, Abb. 4), hinzu kommen die o.g. britischen Exemplare. Wir wollen hier nicht bestreiten, dass Bronzeguss in steinernen Gussformen stattgefunden hat. Doch erscheint uns eine primäre Funktion zur Herstellung von Gussmodellen nicht unwahrscheinlich. Metallanalysen an den Oberflächen von Gussformen stehen aus Rumänien noch aus, doch ist Blei in Rohform in einigen Depotfunden des Karpatenbeckens bekannt.⁵ Weiterhin ist auch zu bedenken, dass Abdrücke in Formsand oder Ton auch von Fertigprodukten problemlos genommen werden können.⁶

Es liegen damit aus unserer Sicht genügend Hinweise vor, um anzunehmen, dass der Guss in Tonformen oder Formsand ein weit verbreitetes Verfahren darstellte, das jedoch archäologisch kaum sichtbar wird. Das schütterere Verbreitungsbild steinerner Gussformen spiegelt damit sehr wahrscheinlich nicht unmittelbar die Zentren des Tüllenbeilgusses wieder, der möglicherweise sehr viel dezentralisierter erfolgte als es das Fundbild vermuten ließe.

4 Vergl. FOLTZ 1980, der ältere Vorstellungen überzeugend widerlegt. Gegen das Ausschmelzen von Bleimodellen auf Basis von Funden und mittelalterlicher / neuzeitlicher Quellen auch DRESCHER 1978, 97–98.

5 Aiud-Neubauviertel Nr. III, jud. Alba, RO: RUSU 1982, bes. 375–378; Aparhant, Kom. Tolna, HU: MOZSOLICS 1984, 49, Nr. 1; Brăglez-Lola, com. Surduc, jud. Sălaj, RO: BEJINARIU 2007, 33, Nr. 115–117, Taf. II/3a–c; Gușterița II, eingemeindet in die Stadt Sibiu, jud. Sibiu, RO: PETRESCU-DÎMBOVIȚA 1977, 95–97; Miljana, Krapinsko-Zagorska žup., HR: DÖRFLER ET AL. 1969, bes. 69–72, Taf. I/1–2; Rădetice-Na Stráži, ok. Příbram, CZ: KYTLICOVÁ 2007, 298, Nr. 198; Uioara de Sus-Tăul Mare (heute Stadtteil von Ocna Mureș), jud. Alba, RO: STOICOVICI 1965, 471f.

6 Dies sollte man im Übrigen auch bei der Beurteilung der Verbreitung von Fertigprodukten in Betracht ziehen, da so auch „fremde“ Formen einfach lokal nachgeahmt werden können.

Bei der Bewertung des räumlichen Verhältnisses von Gussformen zu Fertigprodukten im Karpatenbecken müssen aus unserer Sicht Überlieferungsfilter stärker als bisher in Betracht gezogen werden. Zunächst stammen Tüllenbeilgussformen, anders als die Fertigprodukte, ganz überwiegend aus Siedlungen und wurden bei Ausgrabungen entdeckt. Der Stand der Siedlungsarchäologie bestimmt damit die Verbreitung von Gussformen in hohem Maße mit. Möglicherweise werden sich die Herstellungsräume erst dann klarer fassen lassen, wenn sich das Fundbild für Gussformen durch Untersuchungen in Siedlungen deutlich verdichtet.

Der zweite Überlieferungsfilter betrifft die bronzezeitliche Gusstechnik. Es ist kaum anzunehmen, dass allein steinerne Gussformen verwendet worden sind. Neben einigen Funden fragiler und daher selten überlieferter zweischaliger Tongussformen liegen Belege verschiedener Arten von Modellen zur Herstellung von Ton- oder Formsandgussformen vor. Dies deutet darauf hin, dass vermutlich auch archäologisch schwer sichtbare Gussverfahren einen Anteil am Gesamteindruck der Verbreitung von Tüllenbeilgussformen in Rumänien haben. Die Steingussformen können gut zur Herstellung dieser Modelle gedient haben, ohne dass hier ihre einzige Funktion gelegen haben muss.

Wir möchten betonen, dass die vorliegenden Gedanken nicht dahin zielen, das von Wanzek vorgestellte Modell zur Beziehung zwischen Gussformen und Fertigprodukten unbedingt zu widerlegen. Vielmehr ging es uns darum, bislang weniger beachtete Aspekte in die Diskussion einzuführen. Es ist möglich, dass auch bei wesentlichen Fortschritten in der Erforschung von Siedlungen unterschiedliche Verbreitungsschwerpunkte der beiden Quellengruppen bestehen bleiben, die dann in solchen Überlegungen ihre Erklärung finden könnten.

FUNDLISTE 1

Gussformen für Tüllenbeile aus Rumänien

- 1. Alexandria**, jud. Teleorman, Siedlung der Coslogeni-Kultur. Fragment einer Gussformenhälfte aus ungleichmäßig gebrannter, feiner Keramik, durch Oberflächenbegehungen entdeckt. Privatbesitz P. Mirea. PĂTRAȘCU 2004, 27–31, Abb. 2/2; MIREA–PĂTRAȘCU 2006, 39, Nr. 42, Abb. 27/1.
- 2. Arad–Bulevardul Republicii**, jud. Arad, Siedlung der Gáva-Kultur. Steinerne Gussformenhälfte für Tüllenbeile mit Öse, zerbrochen in zwei Hälften, bei Bauarbeiten entdeckt. Slg. Gh. Miloi, Arad. DÖRNER 1970, 449, Nr. I/4, Abb. 8/2; RUSU ET AL. 1977, R68a9; WANZEK 1989, 200, Nr. 42a, Taf. 49/6.
- 3. Beregsău Mare**, com. Săcălaz, jud. Timiș, Fundumstände unklar. Steinernes Gussformenhälftenfragment, einseitig Negativ für Tüllenbeile, andere Seite Negativ einer (Tüllen-)Beilklinge. Mus. Timișoara. SZENTMIKLOSI–DRAȘOVEAN 2004, 108, Nr. 7 (mit Abb.); LUCA 2006, 34, Nr. 38.1a.
- 4. Brădicești–Odaie**, com. Dolhești, jud. Iași, Depotfund, bei von 1977–1980 durchgeführten Ausgrabungen entdeckt, die auch früheisenzeitliche Scherben zu Tage brachten. Steinerne Gussformenhälfte für Tüllenbeile ohne Öse. Mus. Iași. ICONOMU 1984; WANZEK 1989, 200, Nr. 42b, Taf. 50/4; ICONOMU 1995, bes. 247f., Nr. 9, Abb. 2/11a–b, Taf. XII/9a–b.
- 5. Căscioarele–Ostrovel**, jud. Călărași, Siedlungsfund, gefunden bei Ausgrabungen 1962, nach einer Eintragung im Grabungstagebuch „in der Erde über den Resten des Randbereichs von Haus 3“. Steinerne Gussformenhälfte für Tüllenbeile ohne Öse mit Uhrpendelzier. Eine Ecke ausgebrochen, rekonstruiert. Institutul de Arheologie „Vasile Pârvan“ Bukarest. Unpubliziert, freundliche Mitt. Dr. A. Popescu, Bukarest.
- 6. Cernat**, jud. Covasna, Siedlungsfund, gefunden bei Ausgrabungen in einer hallstattzeitlichen Siedlung, 1. Steinerne Gussformenhälfte für Tüllenbeile; 2. Fragment einer steinernen Gussformenhälfte, sichtbar Negativ für Klingenteil eines Tüllenbeils. Museum Sfântu Gheorghe. SZÉKELY 1966, Taf. 8/6; WANZEK 1989, 200, Nr. 43, Taf. 49/4a–b, 5.

7. **Cernica**, jud. Ilfov, Siedlungsfund, gefunden 1962 bei Ausgrabungen Gh. Cantacuzinos in einem Siedlungskontext der späten Tei-Kultur, tönernen Gußformenhälfte für Tüllenbeile ohne Öse. Nationalmuseum Bukarest. WANZEK 1989, 200, Nr. 44 (nach mündl. Mitt. B. Hänsel), LEAHU 2003, 145f., Taf. LXVII.
8. **Ciumeşti-Fântâna păunii (La Silozuri)**, com. Sanislău, jud. Satu Mare, Depotfund, bei Bauarbeiten in 0,80 m Tiefe in der Nordwestecke eines hallstattzeitlichen Hausbefundes entdeckt, die Anzahl der zugehörigen Gussformen wird unterschiedlich angegeben. 1. Steinerne Gussformenhälfte für Tüllenbeile mit Öse. 2. Steinerne Gussformenhälfte für Tüllenbeile mit Öse. 3. Steinerne Gussformenhälfte für Tüllenbeile mit Öse. Nationalmuseum Bukarest. PETRESCU-DÎMBOVIȚA 1977, 90, Taf. 132/11–14, 133/1–15; PETRESCU-DÎMBOVIȚA 1978, 118, Taf. 91; BADER 1978, 123, Nr. 28, Taf. LXIV; WANZEK 1989, 200, Nr. 45; KACSÓ 2004, Taf. LXXIX/1.
9. **Drăcșani**, com. Drăcșenei, jud. Teleorman, Fundumstände unklar. Eine Gussformenhälfte für Tüllenbeile, Material unklar. Keine Abbildung oder Beschreibung. Verbleib unklar. PĂTRAȘCU 2004, 31.
10. **Grădiștea-Coslogeni**, com. Roșeti, jud. Călărăși, Siedlungsfund. Gefunden bei Ausgrabungen in der eponymen Siedlung der Coslogeni-Kultur, in einem Haus der obersten Schicht. Zweiseitige steinerne Gussformenhälfte für Tüllenbeile und „Harpunen“. Mus. Călărăși. NEAGU-BASARAB NANU 1986, 111–113, Abb. 16; 21; AILINCĂI 2005, 22.
11. **Holboca-Peste Baltă**, jud. Iași, Siedlungsfund. Gefunden bei Ausgrabungen „um ein zerstörtes Haus herum“. Dass die zwei tönernen Gussformenfragmente wie ZAHARIA ET AL. (1970) meinen zur Herstellung von Tüllenbeilen dienten, ist anhand der Abbildungen schwer nachzuvollziehen. Verbleib unklar. WANZEK 1989, 201, Nr. 46; ZAHARIA ET AL. 1970, 197, Taf. 61/9–10, 61/1–2.
12. **Lăpuș**, jud. Maramureș, Grabfunde. Bei Ausgrabungen gefunden. 1. Steinerne Gussform für Tüllenbeile mit Öse, eine der Hälften ist beidseitig mit einem Negativ für Tüllenbeile versehen. 2. Teil einer steinernen Gussformenhälfte in zwei Fragmenten. 3. Steinerne Gussformenhälfte. Mus. Baia Mare. WANZEK 1989, 201, Nr. 47a–b, Taf. 48/6a–b, 48/7a–d, Nr. 47c–d, Taf. 49/1; KACSÓ 2004, 239, Taf. LXIV/1.
13. **Logrești-Moșteni**, com. Logrești, jud. Gorj, Depotfund. Fundumstände unklar. 1. Steinerne Gussformenhälfte für Tüllenbeile; 2. Steinerne Gussformenhälfte für Tüllenbeile, zweiseitig, Rückseite mit Negativen für Messer; 3. Steinerne Gussformenhälfte für Tüllenbeile. Privatslg. I. Capșa. MOISIL 1911, 84, Abb. 1/8; ANDRIȘESCU 1925, 362, Anm. 2; NESTOR 1932, 140; BERCIU 1939, 138, Abb. 176; RUSU 1966, 36, Nr. 77; PETRESCU-DÎMBOVIȚA 1977, 79, Taf. 96/6–8; PETRESCU-DÎMBOVIȚA 1978, 112, Nr. 107, Taf. 74C; WANZEK 1989, 201, Nr. 48, Taf. 48/5; SOROCEANU-LAKÓ 1995, 192, Nr. 17; CRĂCIUNESCU 2004, 90, Taf. XCIV.
14. **Mediaș-Cetate**, jud. Sibiu, Siedlungsfund. Gefunden zufällig beim Hausbau. 1. Steinerne Gussformenhälfte für Tüllenbeile mit Öse. 2. Steinerne Gussformenhälfte für Tüllenbeile mit Öse. Mus. Mediaș. SZÉKELY 1953, Abb. 2–3; WANZEK 1989, 201, Nr. 49, Taf. 47/1, 3b–c; LUCA 2003, 130, Nr. 128.10.
15. **Mediaș-Cetate** oder Umgebung, jud. Sibiu, Einzelfund?, Fundumstände unklar. Steinerne Gussformenhälfte für Tüllenbeile mit Öse. Museum Mediaș. WANZEK 1989, 202, Taf. 47/2.
16. **Orșova**, jud. Mehedinți, Einzelfund. Fundumstände unklar. Wohl steinerne Gussformenhälfte für Tüllenbeile. Verbleib unklar. GUMĂ 1993, 255, Nr. 44b (unter Berufung auf eine mündliche Mitt. von Fl. Medeleț); LUCA 2006, 186, Nr. 417.1h
17. **Păltiniș-Toplița**, com. Cornuțel, jud. Caraș-Severin, Siedlungsfund. An der genannten Stelle gefunden, von der auch frühhallstattzeitliche Keramik vorliegt. Steinerne Gussformenhälfte für Tüllenbeile. Museum Caransebeș. ROGOZEA 1983, 141, Nr. III, Taf. 1b; WANZEK 1989, 202, Nr. 51; GUMĂ 1993, 255, Nr. 45; LUCA 2004, 108, Nr. 180.1; LUCA 2006, 194, Nr. 427.1a.
18. **Plenița-Dealul Bobului**, jud. Dolj, Depotfund. 1915 beim Brechen von Steinen neben dem Friedhof des Ortes am o.g. Hügel gefunden. 1. Steinerne Gussform für Tüllenbeile mit Öse; 2. Steinerne Gussform für Tüllenbeile mit Öse; 3. Steinerne Gussformenhälfte für Tüllenbeile mit Öse; 4. Steinerne Gussformenhälfte für Tüllenbeile mit Öse; 5. Steinerne Gussformenhälfte für Tüllenbeile mit Öse. Nationalmuseum Bukarest und Mus. Craiova. NICOLĂESCU-PLOPȘOR 1923; BERCIU 1939, 138, Abb. 175/1–6; PETRESCU-DÎMBOVIȚA 1977, 125, Taf. 295/4–10; PETRESCU-DÎMBOVIȚA 1978, 139, Nr. 209, Taf. 222C; WANZEK 1989, 202, Nr. 52, Taf. 47/5–7, 48/1; SOROCEANU-LAKÓ 1995, 192, Nr. 27; BOROFFKA-RIDICHE 2005 (mit weiterer Literatur); LAZĂR 2005, 104f., Nr. 60, Taf. XXXV.

19. **Popeni–Cercez**, jud. Vaslui, Siedlungsfund. Auf der Oberfläche eines „Aschehügels“ der Noua-Kultur. Steinerne Gussformenhälfte für Tüllenbeile. Verbleib unklar. ROTARU 2008, 54, Abb. 1/2.
20. **Poian**, Kr. Covasna, Einzelfund. Fundumstände unklar. Steinerne Gussformenhälfte für Tüllenbeile. Mus. Sf. Gheorghe. WANZEK 1989, 202, Nr. 53, Taf. 49/3 (nach mündl. Mitt. N. Boroffka).
21. **Radovanu–Gorgana a doua**, Kr. Călărași, Siedlungsfund. Ausgrabung, aus einer Schicht der Coslogeni-Kultur. Fragment einer steinernen Gussformenhälfte für Tüllenbeile. Verbleib unklar. MORINTZ–ȘERBĂNESCU 1985, bes. 16.
22. **Reci–Telek**, Kr. Covasna, Siedlungsfunde. Bei Ausgrabungen in einer hallstattzeitlichen Siedlung entdeckt. 1. Fragment einer steinernen Gussformenhälfte; 2. Fragment einer steinernen Gussformenhälfte. Museum Sf. Gheorghe. SZÉKELY 1966, 12, Taf. VIII/7, 8.
23. **Sănnicolau Mare?**, jud. Timiș, aus der Slg. Fuchs, Fundortangabe unsicher. Fragment einer steinernen Gussformenhälfte für Tüllenbeile. Mus. Timișoara. WANZEK 1989, 202, Nr. 55, Taf. 49/7; SZENTMIKLOSI–DRAȘOVEAN 2004, 108, Nr. 10 (mit Abb.).
24. **Siret**, jud. Suceava, Siedlungsfund. Ausgegraben in einer Siedlung der Gavá-Kultur. Steinerne Gussformenhälfte für Tüllenbeile. Museum Suceava. LÁSZLÓ 1994, 180, Nr. 216, Taf. 50/2–3; IGNAT 2000, 20f., Abb. 2/2–3.
25. **Tășad**, com. Drăgești, jud. Bihor, Siedlungsfund. Ausgegraben in einer Siedlung der Gáva-Kultur. Fragment einer steinernen Gussformenhälfte für Tüllenbeile mit Öse. Museum Oradea. WANZEK 1989, 202, Nr. 56, Taf. 49/2 (mündl. Mitt. M. Rusu).
26. **Teleac**, jud. Alba, Siedlungsfunde. Gefunden in sekundärer Position in Phase II des Walls, entsprechend Phase III der Siedlung. 1. Fragment vom Oberteil einer steinernen Gussformenhälfte; 2. Fragment einer steinernen Gussformenhälfte. Neben dem Beilnegativ noch solche für Anhänger und Ringe. Museum Alba Iulia.
CIUGUDEAN ET AL. 2008, 44, Taf. XXIII/1, 4.

FUNDLISTE 2

Tüllenbeilhälften

1. **Beremend**, Kom. Baranya. Depotfund, drei Tüllenbeilhälften, davon eine fragmentarisch. WANZEK 1989, 37f.; MOZSOLICS 1984, 50f., Nr. 9; MOZSOLICS 1985, 95f., Taf. 252/5, 8, 9.
2. **Keszőhidegkút**, Kom. Tolna. Depotfund, eine Tüllenbeilhälfte. WANZEK 1989, 37; MOZSOLICS 1984, 58, Nr. 41, Taf. 10/5; MOZSOLICS 1985, 135–137, Taf. 35/1.
3. **Kurd**, Kom. Tolna. Depotfund, eine Tüllenbeilhälfte. WANZEK 1989, 37; MOZSOLICS 1984, 58f., Nr. 44, Taf. 10/6; MOZSOLICS 1985, 140f., Taf. 23/11.
4. **Lengyeltóti**, Kom. Somogy. Depotfund III, zwei Tüllenhammerhälften. WANZEK 1989, 37; MOZSOLICS 1984, 59, Nr. 46; MOZSOLICS 1985, 143, Taf. 108/20–21.
5. **Lovasberény**, Kom. Tolna. Depotfund, eine Tüllenbeilhälfte. WANZEK 1989, 38; MOZSOLICS 1984, 59, Nr. 47; MOZSOLICS 1985, 144f., Taf. 245/3.

FUNDLISTE 3

Bleierne Beile

1. **Anwick, Lincolnshire**, GB. Einzelfund. Bleierne Tüllenbeil mit verdickter Mündung, darunter ein Wulst, unter dem unmittelbar die Öse ansetzt. Gerade Bahn, die erst im unteren Drittel leicht zu einer kaum geschwungenen Klinge ausbiegt. Körperquerschnitt in Form eines Quadrates mit abgerundeten Ecken. Späte Bronzezeit. GOWLAND 1901, 368, Nr. 4 (Alnwick); CLARK 1905, 258; DAVEY 1973, 68, Taf. 13/138; TYLECOTE 1986, 93, Tab. 54.

2. **Cambridge–New Street**, Cambridgeshire, GB. Einzelfund? Fragment (Hälfte) eines bleiernen Tüllenbeils in einer bronzenen Gussform. Späte Bronzezeit. TYLECOTE 1962, 127, Tab. 49; LAWSON 1979, 178; TYLECOTE 1986, 93, Tab. 54; NEEDHAM–HOOK 1988, 274, App. 2.1.⁷
3. **Dezmir–Bocomaia**, jud. Cluj, RO. Depotfund, bleiernes Tüllenbeil. HaBl. RUSU *ET AL.* 1977, R65b/23.
4. **Gammelgarn**, Gotlands län, SE. Einzelfund. Miniaturbeil aus einer Blei-Zinn-Legierung. Länge 3,8 cm, Schneidenbreite 3,5 cm. Vermutlich ältere Bronzezeit. OLDEBERG 1974, 271, Nr. 2109, Abb. 2109.
5. **Lachen–Speyerdorf**, Gem. Neustadt/Weinstraße, Rheinland–Pfalz, DE. Grabfund. Hälfte einer Doppelaxt⁸ aus Blei in Form eines etwas unregelmäßigen, gleichschenkligen Dreiecks mit abgerundeten Ecken. HaBl. SPRATER 1929; NACHRICHTENBLATT 1929; MÜLLER-KARPE 1959, 316, Taf. 211K; JOCKENHÖVEL 1971, 145f., Nr. 274, 150, Nr. 279, Taf. 22.274; JOCKENHÖVEL 1973, 23, Abb. 2/2; SPERBER 2000.
6. **Maidstone**, Kent, GB. Einzelfund. Absatzbeil, seitlich durch den Pflug beschädigt. Länge 9,5 cm. Späte Bronzezeit. BARBER 2003, 121, Abb. 35–36; Portable Antiques Scheme Nr. KENT368: http://www.findsdatabase.org.uk/hms/pas_obj.php?type=finds&id=0013EA161210120D (überprüft 21.04.2009).
7. **Patrington**, Humberside, GB. Einzelfund. Facettiertes bleiernes Tüllenbeil. Späte Bronzezeit. NEEDHAM–HOOK 1988, 272, App. 1.⁹
- ***Perugia**, Prov. Perugia, IT. OLSHAUSEN (1883, 104) erwähnt von hier in der Slg. Guardabassi ein Tüllenbeil und eine Pfeilspitze „der italienischen späteren Bronzezeit“ aus Blei oder Zinn. Das Beil lässt sich bei CARANCINI (1984) nicht identifizieren.
8. **Seamer Moor**, Yorkshire, GB. Einzelfund. Tüllenbeil mit verdickter Mündung, darunter eine leichte Rippe, an der unmittelbar die Öse ansetzt. Die Bahn schwingt leicht aus zu einer fast geraden Klinge. Späte Bronzezeit. GOWLAND 1901, 368, Nr. 6; CLARK 1905, 258; TYLECOTE 1986, 93, Tab. 54; NEEDHAM–HOOK 1988, 266, Abb. 3, 273, App. 1 (Blei mit Zinn, genaue Analyse nicht angegeben).¹⁰
9. **Southall–Brickfield**, Greater London, GB. Depotfund, vor 1897 oder in diesem Jahr gefunden, einzelne Teile wurden von den Findern verkauft und sind unbekannt. Zweiteilige bronzene Tüllenbeilgussform, darin ein bei der Auffindung möglicherweise noch komplettes Bleibeil. Späte Bronzezeit. GOWLAND 1901, 368, Nr. 2; BRITTON 1960, GB51/1a–b; TYLECOTE 1986, 93, Tab. 54; MARASZEK 2006, 423, Nr. ENG/G025.

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- 7 In den Arbeiten TYLECOTES (1962, 1986) wird auf CLARK (1905) verwiesen, der den Fund jedoch nicht erwähnt. Die Anm. „Now in Cambridge Museum of Arch. and Ethn.“ bei TYLECOTE (1962, 127, Tab. 49) scheint anzudeuten, dass er den Fund aus eigener Anschauung kennt. LAWSON (1979, 178) erwähnt den Fund ohne Bezug auf Literatur.
- 8 Die Ansprache als Doppelaxtfragment beruht auf einer Neuaufnahme des Fundes durch Sperber, zuvor war man von einem Bleibarren ausgegangen (SPERBER 2000, 386–395).
- 9 NEEDHAM–HOOK 1988, App.1 geben in ihrer tabellarischen Zusammenstellung der britischen Bleifunde als Referenz für das Tüllenbeil aus Patrington TYLECOTE 1986, 93, Tab. 54 an. Dort ist der Fund jedoch nicht verzeichnet, auch sonst fanden sich keine Literaturbelege für diesen Fund.
- 10 NEEDHAM–HOOK 1988, 273, App. 1 geben den Fundort mit *Semer Common, Suffolk* an.

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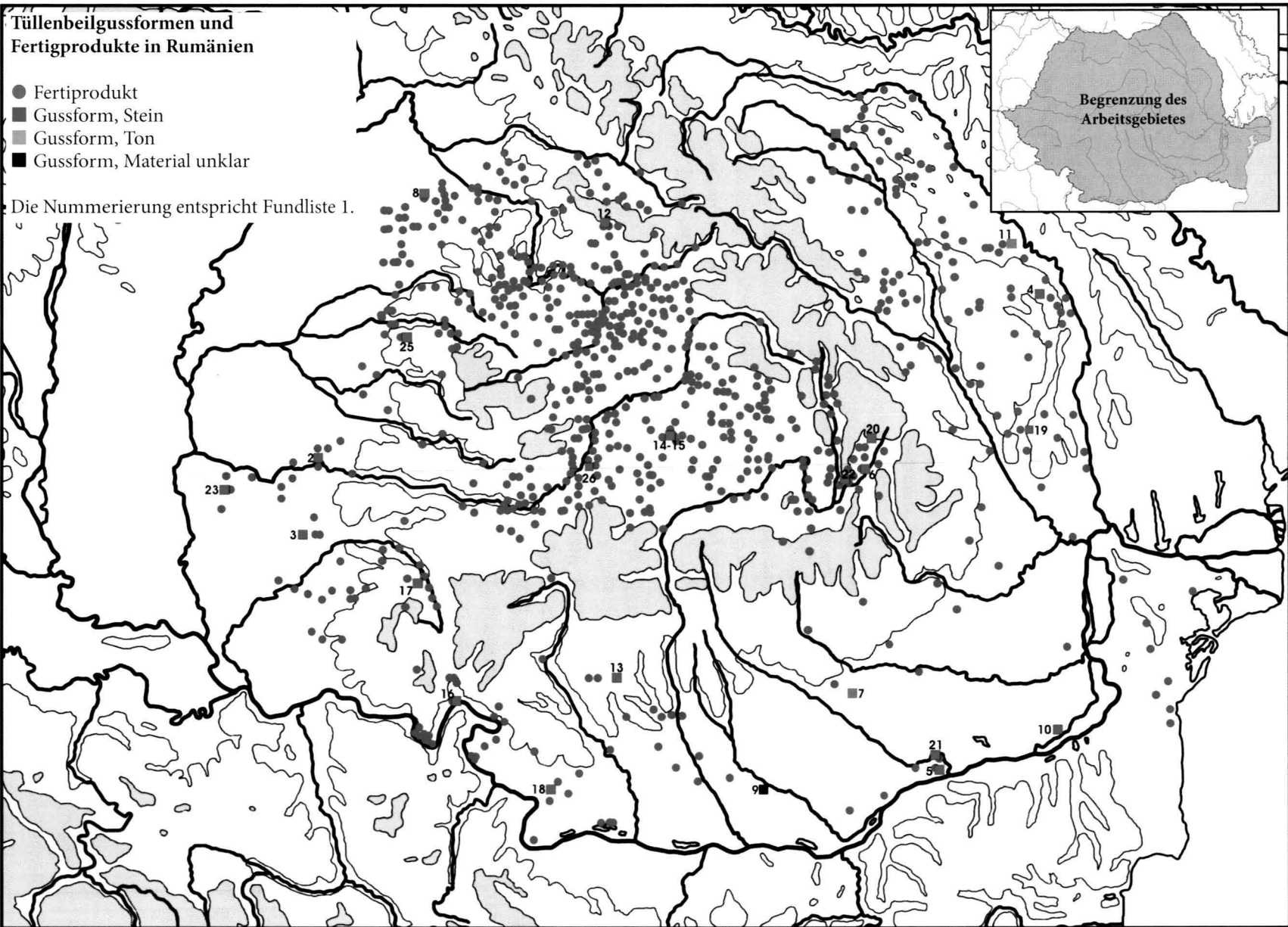
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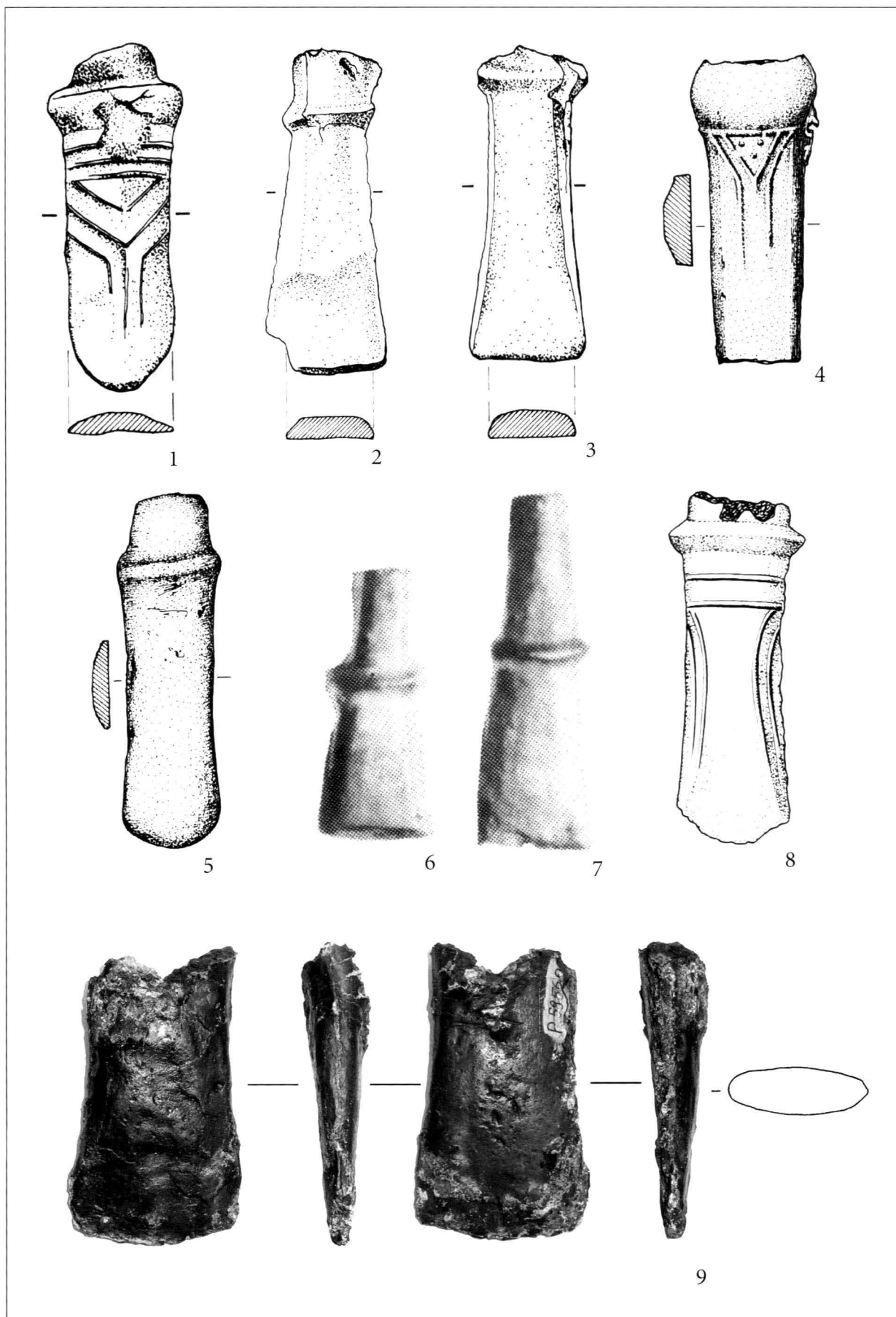
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Tafel 1. Tüllenbeile und Tüllenbeilgussformen in Rumänien (nach DIETRICH 2009; bei einem Bearbeitungsstand von 3256 Tüllenbeilen).

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STERNPARALLAXE. BEMERKUNGEN ZU EINER ÄLTERURNENFELDERZEITLICHEN ORNAMENTFORM ZWISCHEN BANAT UND HARZ¹

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Ausgehend von den auffallend ähnlichen Verzierungen auf Keramikfunden aus dem Hügel von Susani im Banat und bronzenen Tassen an Elbe und Rhein, vor allem dem Geschirrdepot von Dresden-Dobritz, beschäftigt sich der vorliegende Artikel mit einem spezifischen Ornament der älteren Urnenfelder- bzw. Spätbronzezeit (BzD–HaA). Dieses besteht aus mehreren, sich an den Spitzen berührenden Bogengruppen, die sternartig um den Boden der jeweiligen Gefäße platziert sind. Im ersten Teil werden in einem forschungsgeschichtlichen Überblick sowohl Vorkommen wie Herkunft dieses Dekors kritisch analysiert. Es zeigt sich, dass vergleichbare Verzierungen bereits ab der Mitte des zweiten Jahrtausends v. Chr. auf verschiedenartigen, gegossenen Gegenständen in weiten Teilen Mitteleuropas auftreten. In der Urnenfelderzeit ist das Sternornament dann plastisch und vergrößert vor allem im Karpatenbecken auf getriebenen Blecharbeiten, darunter Helme und Schmuckscheiben, sowie auf Tongefäßen dokumentiert. Chronologisch und regional ist eine Bindung an Gruppen mit kannellierter Keramik feststellbar, deren charakteristische Girlandenzier offenbar als Vorbild für das Sternornament diente.

Im zweiten Teil werden die spätbronzezeitlichen Beziehungen zwischen Banat und Harz näher untersucht. Dabei steht die Frage im Mittelpunkt, wie das Auftreten des Sterndekors auf verschiedenartigen Objekten, jedoch in sehr übereinstimmender Ausführung über eine Entfernung von annähernd 1000 Kilometern verstanden werden kann. Abgesehen von einem Rückgriff auf ältere Ornamente, die im gesamten Bereich Mitteleuropas belegt sind, dürfen neben unterschiedlichen Metallgegenständen insbesondere die südkarpatenländischen Keramikgefäße aus dem Grab von Gräfenhainichen-Zschornowitz als Zeugnisse intensiven Kulturtransfers zwischen beiden Regionen gelten. Auf ähnliche Weise gelangten womöglich auch sternverzierte Tassen und Schüsseln an die Elbe, um dort eine Übernahme des Dekors auf bronzene Exemplare zu inspirieren. Die Kenntnis vergleichbar ornamentierter Helme aus dem Karpatenbecken könnte ein entsprechendes Randfragment aus Depot I von Elsterwerda anzeigen.

Schlüsselwörter: Bronzegefäße, Fernbeziehungen, Helme, Keramik, Sterndekor

„Die Frage erhebt sich: wer imitiert wen?“, so bemerkten I. STRATAN und A. VULPE (1977, 52) anlässlich der Publikation der Funde aus dem Hügel von Susani, județ Timiș, im rumänischen Banat. Sie bezogen sich auf die auffällige Ähnlichkeit zwischen den Zierornamenten auf einigen der dort entdeckten Keramikgefäße und solchen auf Bronzetassen aus Mitteldeutschland

¹ Für freundliche Hinweise und notwendige Korrekturen danke ich Laura und Oliver Dietrich (Berlin).

(Abb. 1). Es handelt sich dabei um Exemplare der dem Typ Friedrichsruhe untergeordneten Variante Osternienburg-Dresden (JACOB 1995, 18; MARTIN 2009, 41–43). Das in Frage stehende Dekor besteht aus mehreren, kreisförmig angeordneten, bogenförmigen Kanneluren bzw. Rippen, deren Spitzen sich berühren und auf diese Art an der Außen- und/oder Innenseite des Gefäßkörpers einen plastischen, fünf- bis achtzackigen Stern bilden. Dieses auch mit einem Spinnennetz assoziierte Ornament ist im Karpatenbecken weiterhin auf Schmuckscheiben und Kappenhelmen anzutreffen.

Durch neue Funde und Forschungen der letzten Jahrzehnte soll nachfolgend die Einordnung des Sterndekors auf breiterer Basis untersucht werden. Dabei steht die Frage im Mittelpunkt, wie das Auftauchen jenes Ornaments in einem Abstand von 1000 Kilometern zu erklären ist. Es werden zunächst die bislang eher kursorischen Bemerkungen verschiedener Forscher zu dieser Problematik kritisch zusammengetragen, um in einem zweiten Schritt zu einer fundierten Bewertung des Verhältnisses des in Frage stehenden Dekors auf unterschiedlichen Bildträgern und damit den kulturellen Beziehungen zwischen Banat und Harz während des älteren Abschnittes der Spätbronze- bzw. Urnenfelderzeit (BzD–HaA) zu gelangen.

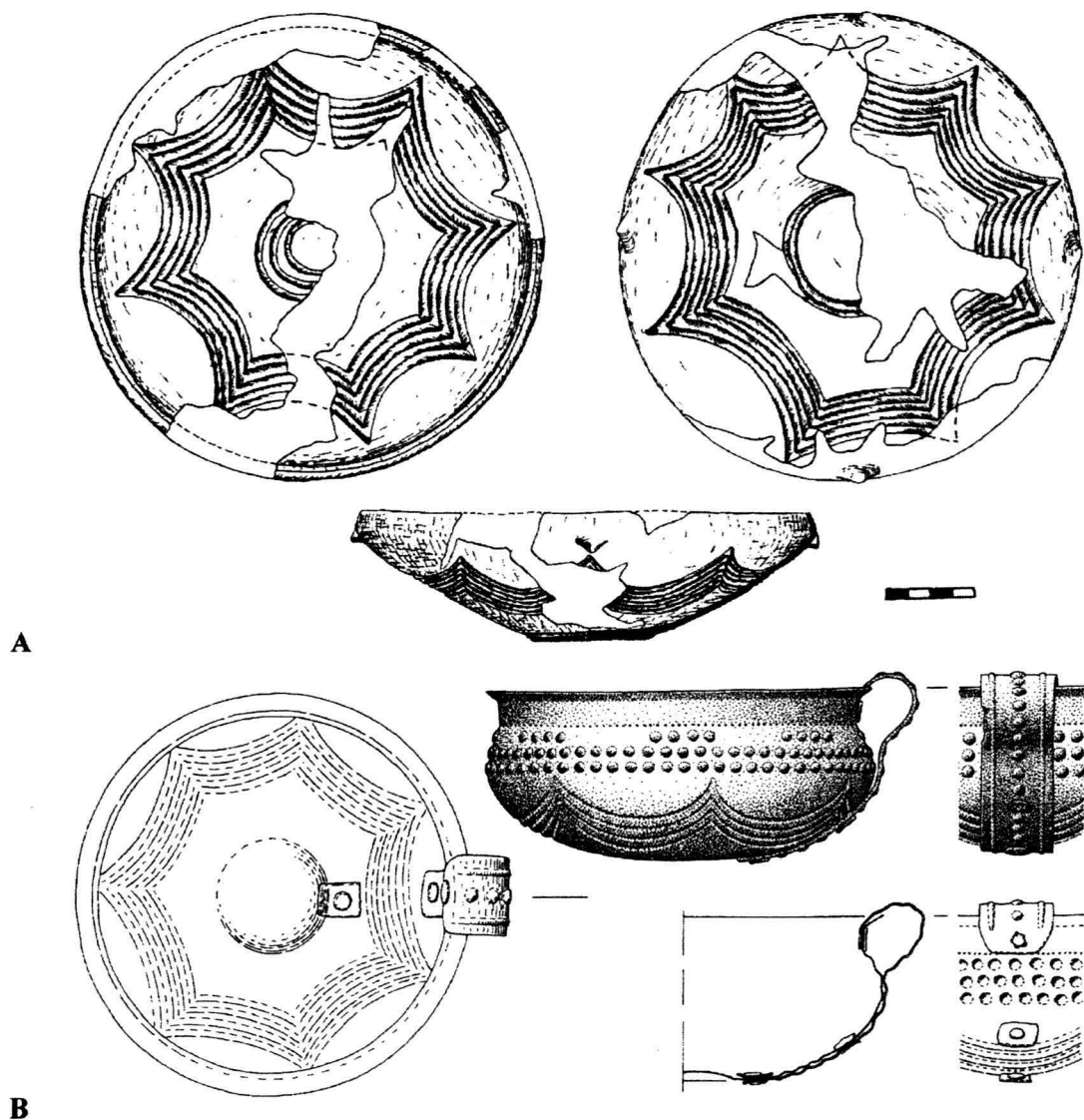


Abb. 1. A. Keramischale mit kanneliertem Sternornament aus dem Hügel von Susani, Rumänien; B. Bronzetasse aus dem Depot von Dresden-Dobritz, Deutschland (nach STRATAN–VULPE 1977; MARTIN 2009).

Das bogenförmige Sternornament auf metallenen Gegenständen

Die frappierenden Übereinstimmungen in der Ornamentierung verschiedenartiger Artefakte mit einem plastischen Stern- bzw. Spinnennetzmuster über einen erstaunlich weiten geographischen Raum wurden bereits früh erkannt. So verband G. VON MERHART (1940, 36) das entsprechende Dekor auf einem kappenförmigen Helm unbekannten Fundortes im Ungarischen Nationalmuseum (MOZSOLICS 1955, 37; HENCKEN 1971, 146; KEMENCZEI 1979; CLAUSING 2001, 215) mit der Verzierung einer Bronzetasche aus Grab 29 in Hügel 2 von Osternienburg, Landkreis Anhalt-Bitterfeld, Sachsen-Anhalt, Deutschland (SPROCKHOFF 1930, 90; MARTIN 2009, 42, Nr. 36). Das erstgenannte Objekt wurde von J. HAMPEL (1887, Taf. LXVI) noch als „unbestimmter Gegenstand“ bezeichnet und nach Art eines Gefäßes mit der Mündung nach oben abgebildet.

Bis zum Jahre 1948 blieben diese beiden Gegenstände die jeweils einzigen Vertreter ihrer Art. Dann jedoch vermehrte sich der Fundbestand der Tassen durch die Entdeckung des Geschirrdepots von Dresden-Dobritz, Sachsen, Deutschland (COBLENZ 1951; VON BRUNN 1968, 316–317, Nr. 53 [Dresden-Laubegast Fund 5]; COBLENZ 1992; KAISER 2007, 102, Nr. 70; MARTIN 2009, 40, Nr. 28), deutlich und wurde kurze Zeit später um ein Stück aus einem Urnenflachgrab auf der Flur Kiesloch bei Viernheim im Landkreis Bergstraße, Hessen, Deutschland (JORNS 1960; HERRMANN 1966, 153, Nr. 535; HANSEN 1994, 477, D 1096; JACOB 1995, 18–19, Nr. 5), auf die aktuell bekannte Menge erweitert. Übereinstimmend werden diese Entdeckungen an das Ende der älteren Urnenfelderzeit datiert.

Eine ähnliche Zunahme erfuhren die Kappenhelme mit Sterndekor, die eine Sonderform innerhalb der Gruppe der einteiligen Kopfwehren mit horizontal umlaufender Rippenzier bilden (HENCKEN 1971, 146; BORN-HANSEN 2001, 61–74; CLAUSING 2001, 208–216). Analog zum Omphalos der Tassen dient in diesen Fällen der Knauf als zentraler Fokuspunkt des Ornaments. Leider liegen nur für das 1999 an einem Strandabschnitt der Donau bei Paks, Tolna megye, Ungarn, entdeckte Exemplar Informationen zu den Bergungsumständen vor (GAÁL 2001, 46–49). Neben den wenigen vollständigen Stücken existieren zahlreiche Blechfragmente, die mit unterschiedlicher Berechtigung und Wahrscheinlichkeit ebenfalls Helmen zugeordnet werden. Ich habe diese Problematik bereits an anderer Stelle angesprochen (MÖRTZ 2011) und möchte hier nochmals darauf verweisen, dass sich gerade die Differenzierung zwischen rippenverzierten Schmuckscheiben bzw. Phaleren und Schutz Waffen anhand zum Teil kleinster Bruchstücke als überaus schwierig erweist.

Da sich auf den vollständig oder größtenteils erhaltenen Kopfwehren zwischen den Zwickeln der bogenförmigen Verzierungen keine eingepunzten Kreisaugenornamente befinden, ist es meines Erachtens konsistenter, entsprechend gestaltete Fragmente Schmuckscheiben zuzuweisen (HANSEN 1994, 258–260; KÖNIG 2004, 75–76 mit 181, Liste 15a²) und nicht von einer lokalen Sondergruppe metallener Kappenhelme zwischen Balaton und Save auszugehen (CLAUSING 2001, 210; KARAVANIĆ 2009, 116–118). Zumal die in Frage stehenden Bruchstücke zugleich weit darüber hinaus, beispielsweise in den Funden von Augsdorf in Kärnten, Österreich (MÜLLER-KARPE 1959, 278; SCHAUER 1971, 142, Nr. 426; HANSEN 1994, 510, A 22), oder Přestavlky, Olomoucký kraj, in Mähren (RZEHAČ 1907; MAČALA 1985; HANSEN 1994, 500, CS 524), belegt sind.

2 Zu ergänzen wären: Kainischthal-Brandgraben, Steiermark, Österreich (SGO 2008, 137, Kat. Nr. 2.3.47); Markovac-Grunjac, Južnobanatski okrug, Vojvodina, Serbien (JOVANOVIĆ 2010, 170, Taf. 56/482); Nadap, Féjer megye, Ungarn (MAKKAY 2006, 153, Taf. V/7); Přestavlky, Olomoucký kraj, Mähren, Tschechische Republik (RZEHAČ 1907, Taf. III/21; MAČALA 1985, 197, Taf. XI/10, und 201, Taf. XV/7)

Gleichsam ist das Argument, in einigen Fällen seien mit den vermeintlichen Kappen- auch Randfragmente von Helmen vergesellschaftet, kaum stichhaltig, da entsprechende Artefakte ebenso häufig fehlen. Das gemeinsame Auftreten ist damit keinesfalls regelhaft und kann daher nicht im Sinne einer funktionalen Ansprache der in Frage stehenden Bruchstücke verwertet werden. Vollständige oder zu größeren Teilen erhaltene Phaleren liegen in den Depots von Nadap, Féjer megye, Ungarn (MAKKAY 2006, 139, Nr. 7 mit Taf. V/7), oder Nova Bingula, Sremski okrug, Vojvodina, Serbien (POPOVIC 1975, 38, Nr. 77a–e mit Taf. XXXVI/1–5), vor. Im letzten Fall fehlt allerdings die sonst typische Kreisaugenzier. Dieser Umstand darf als weitere Illustration der Schwierigkeiten hinsichtlich der Zuweisung von Blechfragmenten mit bogenförmiger Leistenzier gelten.

Auf den Zusammenhang zwischen derartigen Schmuckscheiben und den mit einem Sternornament versehenen Helmen sowie Tassen wies H. MÜLLER-KARPE (1959, 112) hin. O. KYTLICOVÁ (1991, 38–39, Anm. 78) griff diese Beobachtungen auf und erweiterte das Spektrum der entsprechend gestalteten Gegenstände um eine nur bruchstückhaft erhaltene Tasse aus einem Bestattungsbefund von Gyldensgård auf Bornholm, Dänemark (SPROCKHOFF 1930, 49–50; THRANE 1962, 112–116). Mit dieser Bemerkung wurde das Auftreten des in Frage stehenden Dekors weit nach Norden ausgedehnt. Erkennbar ist im Falle von Gyldensgård zwar ein sternförmiges Bodenmuster, das allerdings im Gegensatz zu den bisher besprochenen Artefakten nicht aus bogenförmigen Leisten gestaltet und zudem mit Punkt buckeln gefüllt ist. Ein ähnliches Gefäß möchte K. RANDSBORG (1993, 55–57) in einigen, tatsächlich sehr kleinen Blechfragmenten aus dem berühmten Steinhügelgrab von Kivik, Skåne, in Schweden, identifizieren.

Die etwas älter zu datierende, gegossene Tasse aus Grab 9 in Hügel 2 von Löptin im Landkreis Plön, Schleswig-Holstein, Deutschland (HUNDT 1958; JACOB 1995, 11–12), besitzt eine ähnliche, jedoch eingeritzte Verzierung. Diesem Gefäß ist techno-, typo- und chronologisch ein weiteres Exemplar aus einem Grabhügel bei Sellin auf Rügen, Mecklenburg-Vorpommern, Deutschland (KERSTEN 1958, 19, Nr. 117; MARTIN 2009, 19–20), zur Seite zu stellen. Diese Stücke gehen wiederum auf hölzerne Tassen mit x-förmigen Henkeln aus dänischen Baumsargbestattungen zurück, welche mitunter mit kleinen Metallnägeln bzw. -stiften in sternförmiger Anordnung verziert waren (SPROCKHOFF 1930, 49–50; HUNDT 1958, 34–40; THRANE 1962, 132–141; MARTIN 2009, 20). Damit wird innerhalb des nordischen Kreises die sukzessive Umsetzung von Artefakten aus organischen Materialien in metallene Nachahmungen bezeugt.

Das Dekor der frühen Tassen lebt auf einigen gegossenen Becken und Gürtelbuckeln der jüngeren Bronzezeit fort (SPROCKHOFF–HÖCKMANN 1979; VERLAEKT 2001; MARASZEK 2006, 143–151), ist dabei allerdings in ein reicheres, vornehmlich aus Wellenbändern bestehendes Bildprogramm eingepasst. Es begegnet daneben beispielsweise auch auf einer goldenen Schale aus dem Depot von Eberswalde, Landkreis Barnim, Brandenburg, Deutschland (KOSSINNA 1913, 6, Nr. 6; SCHUCHHARDT 1914, 14, Nr. 8; HIDDE 1997; MARTIN 2009, 133, Nr. 216). Regelhaft treten strahlenförmige, gegossene Sternmuster auf dem Boden der Periode III-zeitlichen Dosen auf (BELTZ 1921; HUNDT 1950).

Eine genetische Verbindung zu dem plastischen, aus bogenförmigen Leisten geformten Ornament Mitteleuropas ist allerdings nur indirekt, nämlich hinsichtlich seiner Platzierung, gegeben. Zudem lassen sich anhand der recht zahlreichen, getriebenen Metallgefäße der jüngeren Bronzezeit innerhalb des nordischen Kreises keine zu den Tassen der Variante Osternienburg-Dresden analogen Verzierungen erkennen (THRANE 1965). Diese Region darf demnach für die folgenden Überlegungen vernachlässigt werden.

J. MARTIN (2009, 49) befasste sich kürzlich ebenfalls mit der Herkunft des hier diskutierten Sterndekors und konstatierte: „Seine Wurzeln sind nicht exakt herauszuarbeiten, da unklar ist, inwieweit man das Motiv auf getriebenem Metall von dem auf gegossenen Gegenständen trennen darf. Nimmt man beide Gruppen zusammen, läßt sich der, Osternienburg-Dresden-Stern' bis in die mittlere Bronzezeit zurückverfolgen, wo er beispielsweise auf vielen Nadelköpfen vor allem der Vorlausitzer Kultur Polens, auf Vollgriffschwertern und Nackenscheibenäxten erscheint und damit wiederum einen Schwerpunkt im östlichen Mitteleuropa aufweist.“ Eine Herleitung des Ornaments von Objekten der mittleren Bronzezeit ist unstrittig und umso überzeugender, je stärker sich deren regionales Auftreten mit den jüngeren Gegenständen überschneidet.

Die von Martin angesprochenen Verzierungen befinden sich zwar an prominenten Stellen der genannten Objekte, sind jedoch im Vergleich zum hier thematisierten Dekor auf spätbronzezeitlichen Gefäßen und Helmen deutlich kleiner (Abb. 2). Dass bogenförmige Ornamente auf den Nackenscheiben karpatenländischer Äxte der mittleren Bronzezeit angebracht wurden, bemerkte schon W. COBLENZ (1951, 156, Anm. 69) im Zuge der Vorlage des Geschirrdepots von Dresden-Dobritz. Dabei ist diese Verzierungsart jedoch nur eine Variante eines umfangreicheren Repertoires. Vor allem Wellen-, Spiral- und Wirbelmuster sind deutlich häufiger (MOZSOLICS 1967, 33–49; HÄNSEL 1968, 61–65; DAVID 2002, 92–158; SICHERL 2004, 86–97).

Eine vergleichbar nebengeordnete Stellung läßt sich für die Kopfornamente mittelbronzezeitlicher Nadeln beobachten (MOZSOLICS 1967, 81–85; HÄNSEL 1968, 77–82; INNERHOFER 2000, 287–289). Obwohl jene Variante einem deutlich umfangreicheren Bestand an Dekorationen untergeordnet ist, wies F. INNERHOFER (2000, 288) darauf hin, dass die aus Kreisbögen konstruierten Muster am weitesten verbreitet und die einzelnen, mitunter regional begrenzten Typen auf diese Art miteinander verbunden sind. So deutet sich bereits ab der Mitte des zweiten Jahrtausends v. Chr. ein weiter, große Teile Mitteleuropas umfassender Kommunikationsraum an, der sich eines gleichartigen Motivschatzes bedient. Mit der Verkleinerung der Nadeln zu Beginn der Spätbronzezeit geht nicht nur der Platz für komplexere Ornamente verloren, sondern das Sterndekor verschwindet völlig.

Ähnlich weite Beziehungen lassen sich anhand der von J. Martin ebenfalls angesprochenen Vollgriffschwerter belegen. Sie weisen auf ihren Knaufplatten bereits mit dem frühen Typ Apa sternförmige Ornamente auf, wenngleich diese wiederum nur eine von mehreren Dekorvarianten darstellen (HÄNSEL 1968, 25–34; KRÄMER 1985; KEMENCZEI 1991; VON QUILLFELDT 1995; STOCKHAMMER 2004). Häufig sind konzentrische Kreise innerhalb der Bögen bzw. zwischen den Spitzen zu erkennen, womit eine konzeptionelle Nähe zu den älterurnenfelderzeitlichen Phalern auszumachen ist (Abb. 2A und B). Man könnte diese daher als vergrößerte Versionen der Knaufscheiben begreifen. Vollgriffschwerter der jüngeren Urnenfelderzeit besitzen hingegen nur sehr selten bogenförmige Sternverzierungen, die zudem auf das über den Griff hinausragende Knaufende beschränkt und damit sehr klein sind (STOCKHAMMER 2004, 104–118).

Um eine kulturgeschichtliche Einordnung der verschiedenen Zierornamente auf spätbronzezeitlichen Artefakten bemühte sich ebenfalls S. HANSEN (1994, 241–269). Das Sternmuster wird dabei zwar nur kurz behandelt, doch sind alle bisher dargestellten Bezüge enthalten (HANSEN 1994, 258–260). Die dort erwähnten, früheisenzeitlichen Zeugnisse (HANSEN 1994, 260, Anm. 108) sollen an dieser Stelle vernachlässigt werden. Wichtig ist allerdings die Abgrenzung des Sterndekors von dem aus vier, sich aber nicht berührenden Kreisbögen konstruierten Ornament. Dieses wird von HANSEN (1994, 252–256) zurecht dem Kanon der Radmotive zugeordnet.

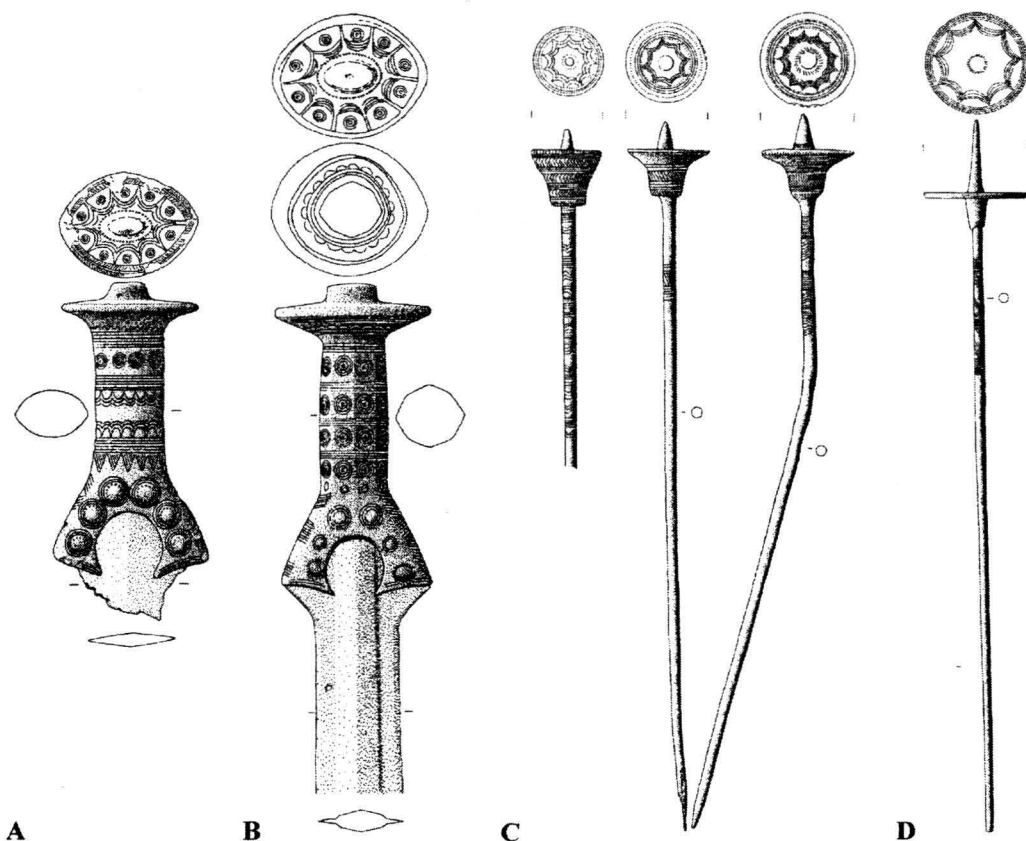


Abb. 2. Sterndekor auf Knaufscheiben von Vollgriffschwertern aus Bayern, Deutschland (A–B), sowie Spund- (C) und Spindelkopfnadeln (D) aus Schlesien, Polen. A. Spatenhausen; B. Pflugdorf; C. Jordanów Śląski, Grab A; Kietrz, Grab 934 und 1143; D. Wrocław-Księża Wielkie (nach von Quillfeldt 1995; Gedl 1983).

Insgesamt zeigt sich, daß die von J. Martin aufgeworfene Frage nach der Herstellungsweise der Bildträger zunächst nachrangig und ebenso in Abhängigkeit von technologischen Evolutionsprozessen zu bewerten ist. Das hier thematisierte Sterndekor ist deutlich seit der Mitte des zweiten Jahrtausends v. Chr. im ornamentalen Repertoire der bronzezeitlichen Kulturgruppen über weite Teile Mitteleuropas nachweisbar und wird auf verschiedenartigen, zunächst gegossenen Metallartefakten angebracht. Während der älteren Urnenfelderzeit findet sich ein entsprechendes Dekor dann auch auf Blecharbeiten.

Das bogenförmige Sternornament auf keramischen Gegenständen

Von den bisherigen Darstellungen ausgehend, erweist es sich als notwendig, ebenso nicht-metallische Gegenstände in den Kanon der Vergleichsstücke einzubeziehen, wie es das einleitend wiedergegebene Zitat von I. Stratan und A. Vulpe verdeutlicht. Bereits H. HENCKEN (1971, 146) besprach in seiner Studie zu den frühen Helmen zunächst die oben aufgezählten Blecharbeiten, merkte jedoch weiterhin an, dass ein entsprechendes Sternornament auch auf Keramikgefäßen aus Schlesien und Mähren zu finden ist. Da diese in die jüngere Urnenfelderzeit datieren, sei eine chronologische Zuweisung des einzigen damals bekannten Kappenhelmes mit Sternzier in die Stufe HaA nicht klar zu belegen.

Anlässlich des Ankaufs eines zweiten, angeblich aus Nordungarn stammenden Exemplars griff T. KEMENCZEI (1979) die Bemerkungen Henckens auf und beschäftigte sich ausführlicher mit der chronologischen sowie regionalen Einordnung jener Objekte. Mit Blick auf das Verbreitungsgebiet der ähnlich ornamentierten Keramikschalen und -tassen, seien die Kappenhelme

mit Sterndekor von Handwerkern der Lausitzer-Kultur in der Slowakei hergestellt worden (KEMENCZEI 1979, 84–87). Die grundlegende Form der Schutzwaffen hätte man allerdings aus Transdanubien übernommen, wo entsprechende Fragmente in älterurnenfelderzeitlichen Horten auftreten. Die mit einer solchen Rekonstruktion verbundenen Datierungsdivergenzen wurden von T. Kemenczei nicht problematisiert.

Denn die aus dem Bereich der sogenannten mitteldanubischen Urnenfelder sowie der nördlich anschließenden Regionen, d. h. Mähren, den westlichen Karpaten und dem Einzugsgebiet der oberen Oder, belegten Keramikgefäße mit Sternzier gehören in die ausgehende Spätbronzezeit. Im Gegensatz zu den Funden aus dem Hügel von Susani sind die Ornamente nur selten kanneliert, sondern überwiegend eingeritzt (Abb. 3). Entsprechende Gefäße werden als charakteristisch für die schlesische Gruppe der Lausitzer-Kultur und die Kyjatice-Kultur erachtet (GOLLUB 1960, 16; PODBORSKÝ 1970, 50; DOHNAL 1975, 47–49; VELIAČIK 1983, 133–135; KEMENCZEI 1984, 45; KUJOVSKÝ 1994, 312–313; FURMÁNEK *ET AL.* 1999, 108). Sie treten vor allem als Beigaben in Bestattungen auf.

Die betroffenen Inventare, beispielsweise auf dem großen Gräberfeld von Kietrz, województwo Opole, in Oberschlesien, Polen, datieren an das Ende der jüngeren Urnenfelderzeit, d. h. nach HaB 2/3 bzw. Periode V (GEDL 1979, 46; GEDL 2000, 92). Tendenziell lässt sich eine Bindung an reichere Ausstattungen mit umfassenden Geschirrsätzen feststellen, weshalb man den Tassen und Schalen mit Sterndekor wohl eine Funktion als besondere Trinkgefäße zuordnen darf. Eine hohe gestalterische Ähnlichkeit zu metallenen Ausführungen ist aus dieser Sicht kein Zufall und wird durch mitunter auftretende Knubben als Imitation der typisch jüngerurnenfelderzeitlichen Buckelzier unterstrichen (PODBORSKÝ 1970, 50; DOHNAL 1975, 48). Zusätzlich handelt es sich mehrheitlich um graphitierte und polierte Waren, die zumindest ansatzweise den Glanz metallischer Gefäße nachzuahmen vermögen.

Es wird aus dieser Perspektive deutlich, dass die von T. Kemenczei vorgeschlagene Herleitung der Sternzier auf Kappenhelmen aus dem Bereich der mitteldanubischen Urnenfelder nicht nur aus chronologischen Gründen kaum aufrechterhalten werden kann. Zudem kommen mutmaßliche Fragmente entsprechender Schutzwaffen insbesondere in älterurnenfelderzeitlichen Depots zwischen Balaton und Save sowie in Siebenbürgen vor (HANSEN 1995; CLAUSING 2001, 208–216; MÖRTZ 2011). Für das Einzugsgebiet der mittleren Theiss sind hingegen kegel- und glockenförmige Kopfwehren typisch (HENCKEN 1971, 32–51; SCHAUER 1988; HANSEN 1995; CLAUSING 2001, 217–220; MÖRTZ 2011). Es ist daher meines Erachtens überzeugender, das plastische Sterndekor mit der kannelierten Keramik zu verbinden, die für weite Teile des Karpatenbeckens als charakteristisch für die ältere Urnenfelderzeit anzusehen ist (KEMENCZEI 1984, 64–73; GUMĂ 1993; BUKVIĆ 2000; PANKAU 2004, 27–42; PRZYBYŁA 2009, 89–116).

Das Sterndekor in der Innen- und/oder Außenfläche von tönernen Schalen und Tassen ist dieserart als Variante der Girlandenzier zu sehen (BOROFFKA 1994, 8–17; PANKAU 2004, 71–73). Belege für entsprechende Tonwaren hat C. PANKAU (2004, 72–73) zusammengetragen, wenngleich sich die Verweise mitunter auch auf bogenförmige Ornamente beziehen, die hier der Radsymbolik zugeordnet werden. Es wäre falsch, diese strikt voneinander zu trennen, da sie einerseits beide auf den Innenseiten gleichartiger Tassen bzw. Schalen auftreten und sich andererseits ihre jeweilige Verbreitung überschneidet. So kommen beide Ausführungen beispielsweise innerhalb des Keramikfundes von Debrecen–*Haláp Puszta*, Hajdú-Bihar megye, Ungarn (KEMENCZEI 1984, 154, Nr. 25b), vor. Es ist hier allerdings nicht der Ort, um etwaige inhaltlich-symbolische Konvergenzen zu erörtern.

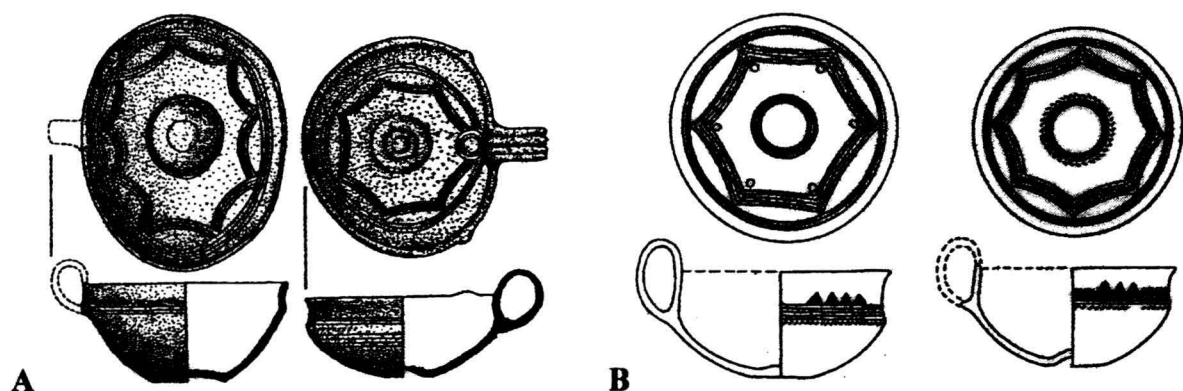


Abb. 3. Tassen mit Sterndekor aus Schlesien und den Westkarpaten. A. Grab 215 von Kietrz, Polen; B. Grab 47 von Zlaté Moravce–Kňazice, Slowakei (nach GEDL 2000; KUJOVSKÝ 1994).

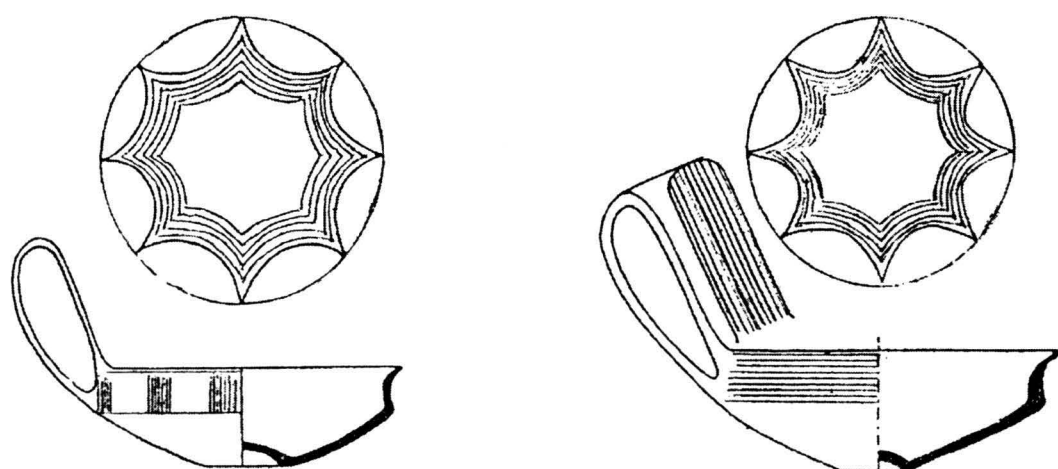


Abb. 4. Tassen mit Sterndekor der Igrîța-Gruppe im Bereich des Bihor-Gebirges, Rumänien (nach CHIDIOȘAN–EMÖDI 1982).

Die von Pankau vorgelegte Liste der Fundorte sternverzierter Keramik ist sicherlich zu erweitern. An dieser Stelle soll lediglich auf die Entdeckungen von Alba Iulia–*Monolit*, județ Alba, Rumänien (CIUGUDEAN 2009, 69–70 mit 84, Taf. IX/5), aufmerksam gemacht werden, da dieserart entlang des Mureș die Funde von Susani mit den umfangreichen Bruchhorden Siebenbürgens, darunter vor allem Gușterița II, județ Sibiu, sowie Șpălnaca II und Uioara de Sus, beide județ Alba, verbunden werden können. Aus diesen kennt man Randfragmente metallener Kappenhelme (MÖRTZ 2011), wenngleich aufgrund des zerstückelten Zustandes und den mangelhaften Publikationen vorerst unklar bleiben muss, ob diese ebenfalls das hier thematisierte Ornament auf ihren Kappen trugen.

Es zeigt sich, dass die sternförmigen Verzierungen auf Tongefäßen zwar bislang vergleichsweise gering an Zahl, jedoch mit einer weiten Verbreitung im Bereich der Gruppen mit kannelierter Keramik inner- und außerhalb des Karpatenbeckens dokumentiert sind. Man wird dieserart verzierte Gefäße daher und ebenso aufgrund ihrer relativ aufwendigen Herstellungsweise als Teil besonderer Geschirrsätze erachten dürfen, die wohl insbesondere während kultischer Handlungen, u. a. im Zuge von Bestattungen, eingesetzt wurden. Auf einen derartigen Gebrauch deuten nicht zuletzt die Deponierungen im Hügel von Susani (STRATAN–VULPE 1977, 39–46; VULPE 1995) oder der Höhle von Igrîța, județ Cluj, Rumänien (Abb. 4) (EMÖDI 1980; CHIDIOȘAN–EMÖDI 1982).

Die jüngeren Schalen und Tassen mit eingeritzten Sternornamenten aus dem Bereich der Westkarpaten, Mähren und Schlesien können als Nachahmungen der kannelierten Keramik des Karpatenbeckens verstanden werden. Die Form der Gefäße ist ähnlich, vor allem aber handelt es sich in beiden Fällen mehrheitlich um graphitierte, polierte Waren mit metallischem Glanz. Das Auftreten kannelierter Keramik nördlich des Karpatenbeckens, insbesondere in Klempen, ist seit längerem bekannt und wurde kürzlich ausführlich von M. S. PRZYBYŁA (2005; 2009, 251–345) besprochen.

Auch hinsichtlich des Sterndekors auf tönernen Gefäßen können bereits ältere Vorläufer benannt werden. So machte S. HANSEN (1994, 260) auf eine mit Girlanden verzierte Schale aus Grab 65 B von Tiszafüred, Jász-Nagykun-Szolnok megye, Ungarn (KOVÁCS 1973; KEMENCZEI 1988, 10, Nr. 13), aufmerksam. Im Vergleich mit der älterurnenfelderzeitlichen Keramik noch ähnlicher sind Funde aus den Bestattungen von Tiszapalkonya, Borsod-Abaúj-Zemplén megye, Ungarn (KOVÁCS 1979, 58; KEMENCZEI 1988, 13, Nr. 25). Beide Plätze sind der Füzesabony-Kultur zuzurechnen. Auch im südlichen Karpatenbecken treten bereits während der mittleren Bronzezeit girlandenartige bzw. bogenförmige Zierornamente auf. Dies betrifft vor allem Gefäße der Zuto Brdo–Gârla Mare-Kultur (HÄNSEL 1968, 133–142; ȘANDOR-CHICIDEANU 2003, 91–97). Das Sterndekor auf Tonwaren hat seine Wurzeln somit ebenfalls bereits in der ersten Hälfte des zweiten Jahrtausends v. Chr., was mit den im vorherigen Abschnitt gemachten Beobachtungen hinsichtlich des Belegs entsprechender Verzierungen auf metallenen Gegenständen harmoniert.

Kulturkontakte zwischen Banat und Harz während der älteren Urnenfelderzeit

Es bleibt zunächst festzuhalten, dass das aus mehreren, sich berührenden bzw. überschneidenden Bögen konstruierte Stern- oder Spinnennetzdekor über einen langen Zeitraum sowie über weite Entfernungen hinweg die verschiedenen Regionen des bronzezeitlichen Mitteleuropas verbindet. Innerhalb dieses Kommunikationsraumes muss sein Auftauchen auf den Blechtassen von Dresden-Dobritz, Osternienburg und Viernheim weitab von ähnlich gestalteten Keramikgefäßen nicht überraschen. Trotzdem soll es abschließend um die Beziehungen Ostdeutschlands in das Karpatenbecken gehen, um die eingangs aufgeworfene Frage hinsichtlich der Funde aus dem Hügel von Susani und vergleichbarer Keramik nochmals aufzugreifen.

Die analog ornamentierten Blechtassen mit Sterndekor sind zwar auf wenige Fundorte an Rhein und Elbe beschränkt, der übergeordnete bzw. eng verwandte Typ Friedrichsruhe hat allerdings wie viele andere Metallgefäße der Bronzezeit eine deutlich ausgedehntere Verbreitung. Man kennt Exemplare von Jütland bis Siebenbürgen (SPROCKHOFF 1930, 51–56; THRANE 1962, 142–144; JACOB 1995, 12–23; PATAY 1996, 406–408; SOROCEANU 2008, 35–41; MARTIN 2009, 33–52). Auch der Eimer, in dem sich ein Teil der übrigen Gegenstände des Depots von Dresden-Dobritz befand, gehört dem in weiten Teilen Europas dokumentierten und langlebigen Typ Kurd an (SPROCKHOFF 1930, 131–136; VON MERHART 1952, 29–33; PATAY 1990, 34–40; SOROCEANU 2008, 165–176; MARTIN 2009, 96–98). Als ebenso überregional und dauerhaft sind die hornartigen Appliken beiderseits des Henkels zweier Tassen aus nämlichen Fund (COBLENZ 1951, 147–148, Nr. 15–16; MARTIN 2009, 41, Nr. 32, und 44, Nr. 50) zu bezeichnen, die sich mit dem Übergang zur Eisenzeit zu Rinderprotomen wandeln (VON MERHART 1952, 22–29; PRÜSSING 1991, 45–47).

Die grundsätzliche Gestalt und Herstellungsart der Gefäße mit Sterndekor kann demnach nicht als fremdartig im lokalen Milieu der Lausitzer-Kultur am Mittellauf der Elbe angesehen werden, vielmehr gehören sie transkontinentalen Formen an. Diese Einbindung in ein weiträumiges Beziehungsgeflecht spiegelt sich weiterhin in der Art der reinen Deponierung wider, die

ebenfalls zwischen Skandinavien und Karpatenbecken sowohl hinsichtlich der Auswahl wie der Anordnung der Objekte gleichartigen Mustern folgt (HANSEN 1995; METZNER-NEBELSICK 2003; SOROCEANU 2005). Dass die Tassen im Falle von Osternienburg und Viernheim in Urnenbestattungen gelangen konnten, entspricht einer allgemeinen Differenzierung der Überlieferungssitten zwischen dem westlichen und östlichen Mitteleuropa (HANSEN 1994, 115–123). In beiden Fällen waren keine weiteren Metallgefäße vergesellschaftet. Allerdings enthielt das überdurchschnittlich ausgestattete Grab 11 des Hügels von Osternienburg ein umfangreiches, bronzenes Trinkservice (SPROCKHOFF 1930, 90; MARTIN 2009, 42, Nr. 35) sowie ein aus Oberitalien stammendes, verziertes Lappenbeil (BIETTI SESTIERI 1997, 392; SCHWARZ 2004).

Neben den aufgrund ihrer streng reglementierten Komposition außergewöhnlichen Deponierungen wie Dresden-Dobritz lassen sich auch anhand verschiedenartig zusammengesetzter Bronzefunde auf gleiche Weise vielfältige Bezüge in teils weit entfernte Räume aufzeigen. Exemplarisch führte dies Ch. REICH (1991; 1997) für den Hort von Spindlersfeld im Bezirk Köpenick der Stadt Berlin, Deutschland, vor. Ähnliche Ergebnisse ließen sich wohl mittels des ca. 50 km nordwestlich von Dresden-Dobritz entdeckten Hortes I von Elsterwerda, Landkreis Elbe-Elster, Brandenburg, Deutschland (VON BRUNN 1968, 317, Nr. 57; SOMMERFELD 1994, 321–323, Nr. 40), erzielen. Wie bereits W. A. VON BRUNN (1968, 143) darlegte, handelt es sich bei einem Blechfragment aus jenem Ensemble um das Randstück eines kappenförmigen Helmes, wie sie sonst insbesondere im südlichen Karpatenbecken in vergleichbar strukturierten Deponierungen mit hohen Bruchanteilen auftreten (HANSEN 1995; CLAUSING 2001, 208–216; MÖRTZ 2011).

Die Horte von Elsterwerda I und Spindlersfeld eint u. a. das Vorhandensein zweiteiliger Blattbügelfibeln, die E. SPROCKHOFF (1938) einst als „Spindlersfelder Typ“ benannte und welche auch in dem großen Bruchdepot von Uioara de Sus, județ Alba, in Siebenbürgen (PETRESCU-DÎMBOVIȚA 1978, 132–135, Nr. 184; BADER 1983, 33, Nr. 16.17; BADER 1991, 123–124, Nr. 315.316; HANSEN 1994, 593, RO 425; SOROCEANU 2008, 37–38), wiederum gemeinsam mit Helmfragmenten, belegt sind. Der unweit von Elsterwerda I entdeckte Bronzefund von Weißig am Raschütz, Landkreis Riesa-Großenhain, Sachsen (KLEEMANN 1942; VON BRUNN 1968, 344–345, Nr. 226; SOMMERFELD 1994, 360–364, Nr. 178; PUTTKAMMER 2007, 167–168, Nr. 146), enthielt eine Wangenklappe. Zu welcher Art von Helm diese einstmals gehörte, lässt sich mangels aussagekräftiger Vergesellschaftungen beider Gruppen nur schwer ermessen, doch dürfte das Stück ebenfalls aus dem Karpatenbecken stammen.

Neben den Bronzen erregt ebenso die Gestaltung des keramischen Behältnisses, in welchem die Gegenstände von Elsterwerda I niedergelegt worden waren, Aufmerksamkeit. Das Zylinderhalsgefäß besitzt nämlich schräg geriefte Henkel (VON BRUNN 1968, Taf. 63/1), die ebenfalls in einen transkontinentalen Zusammenhang zu stellen sind (BOUZEK 1992; KOSSACK 2002). Diese, offenbar eine Torsion metallener Stäbe nachahmende Formgebung kann demnach während der älteren Urnenfelderzeit von der Lausitz bis in die Ägäis verfolgt werden, besitzt allerdings die stärksten Affinitäten zur kannelierten Keramik des Karpatenbeckens, insbesondere im Banat, der Vojvodina und im Einzugsgebiet der Morava, sowie im Bereich der mitteldanubischen Urnenfelder (KOSSACK 1996, 298–301; KOSSACK 2002, 205).

Doch es sind nicht nur einzelne, gestalterische Elemente, die aus dieser Region ihren Weg nach Norden fanden. So wurden ebenso vollständige Keramikgefäße entweder über diese großen Entfernungen hinweg transportiert oder wahrscheinlicher von kundigen Töpfern weitab ihrer Heimat hergestellt. Dies illustrieren schlaglichtartig die karpatenländischen Funde aus dem keine 30 Kilometer von Osternienburg entfernten Grab von Gräfenhainichen-Zschornowitz,

Landkreis Wittenberg, Sachsen-Anhalt, Deutschland, denen G. KOSSACK (1996) eine ausführliche Studie widmete.

Die flache Knickwandtasse mit waagerechter Riefung an Schulter sowie Halsansatz besitzt einen weit über den Rand hinausgezogenen, pseudotordierten Henkel und stellt damit sowohl eine Verbindung nach Süden wie zum Depotbehälter von Elsterwerda I her. Das vergesellschaftete, hohe Kegelhalsgefäß mit horizontaler Kannelierung im oberen Halsbereich und vier, jeweils nach oben wie unten gerichteten Griffklappen am Umbruch findet seine Parallelen jedoch erst im südlichen Karpatenbecken. Es entspricht der Variante B der „Pseudoprotovillanova“-Urnen nach St. FORENBAHER (1988) und datiert nach BzD. Diese sind charakteristisch für die sogenannte Belegiš II- bzw. Cruceni-Belegiš II-Kultur entlang der Donau zwischen Mündung der Drau und Eisernem Tor (GUMĂ 1993; FORENBAHER 1994; PRZYBYŁA 2009, 91–95 und 126–134).

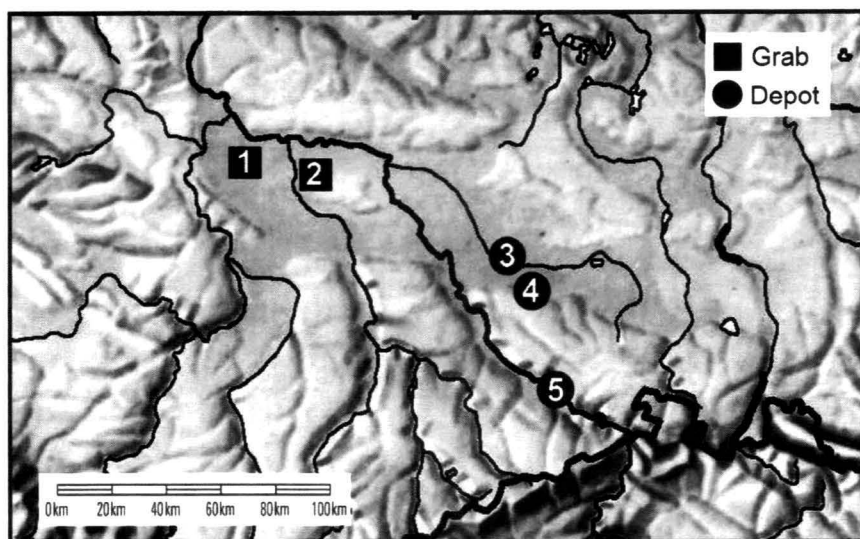


Abb. 5. Lage der im Text erwähnten Fundstellen entlang der Elbe zwischen Elbsandsteingebirge und Saalemündung: 1. Osternienburg; 2. Gräfenhainichen-Zschornewitz; 3. Elsterwerda; 4. Weißig am Raschütz; 5. Dresden-Dobritz.

Abgesehen von verschiedenen Eigenarten, die I. STRATAN und A. VULPE (1977, 58–60) veranlassten, von einer eigenständigen Gruppe im Banater Bergland auszugehen, können die Tongefäße aus dem Hügel von Susani ebenfalls diesem Keramikkreis der älteren Urnenfelderzeit (BzD–HaA) zugeordnet werden. Eben jene Region erbrachte auch die meisten Bruchstücke kappenförmiger Helme (MÖRTZ 2011) und ist zugleich Hauptverbreitungsgebiet der mit einem Sterndekor versehenen Schmuckscheiben (KÖNIG 2004, Taf. 91). Auf dem gleichen Weg wie die Funde von Zschornewitz könnten demnach auch mit girlandenförmigen Kanneluren versehene Schalen und Tassen oder entsprechend gestaltete Blecharbeiten an die Elbe gelangt sein, um dort eine Übernahme des Ornaments zu inspirieren. Ähnlich zur Keramik zeigt sich bei den Metallgefäßen von Dresden-Dobritz, Osternienburg und Viernheim eine hohe gestalterische Variabilität hinsichtlich der Anzahl und Anordnung der bogenförmigen Rippen. Zudem wurde bei der Vernietung des Henkels nicht immer Rücksicht auf das am Boden befindliche Ornament genommen.

Die kappenförmigen Helme mit Sterndekor lassen sich weniger gut in dieses Beziehungsgeflecht einpassen, da man nur in einem Fall den exakten Fundort kennt. Für die übrigen Vertreter besitzt man entweder keine oder nur die allgemeine Angabe, sie kämen aus dem Norden Ungarns (MOZSOLICS 1955, 37; HENCKEN 1971, 146; KEMENCZEI 1979; CLAUSING 2001, 215). Das sicher lokalisierbare Exemplar von Paks an der Donau könnte damit den Weg weisen,

den die Helme und übrigen, oben aufgezählten Artefakte aus dem Bereich der Belegis II-Kultur nach Norden nahmen. Offenbar handelt es sich um einzeln niedergelegte Objekte, die aus diesem Grund der sonst üblichen Zerstückelung entgingen. Vielleicht diente ein solcher Helm als Vorlage für die Blechtassen, zumindest ist mit dem Fragment von Elsterwerda I die Kenntnis dieser Produkte in der Lausitz bezeugt.

Neben dem Sterndekor kann der Geschirrfund von Dresden-Dobritz noch über ein weiteres Ornament mit frühen Helmen verbunden werden. Es handelt sich dabei um ein aus konzentrischen Kreisen bestehendes Perlpunzmuster mit ebenfalls plastischem Mittelpunkt, das in vierfacher Ausführung auf einer kleinen Schale auftritt (Abb. 6A) (COBLENZ 1951, 148, Nr. 17; MARTIN 2009, 85, Nr. 119). In ähnlicher Form sind sowohl die ostalpinen Helme mit dreilappigem Kamm (Abb. 6B) (HENCKEN 1971, 58; EGG 2002; EGG-TOMEDI 2002; LIPPERT 2010), das Exemplar aus der Oder bei Szczecin-Zdroje, województwo Zachodniopomorskie, Polen (HENCKEN 1971, 157–159; ALBRECHT 1991; RIEMER 1997; BORN-HANSEN 2001, 74), als auch einige wohl zu einer Kopfwehr gehörige Blechfragmente aus dem nahe der Schwarzmeerküste entdeckten Depot von Techirghiol, județ Constanța, Rumänien (ARICESCU 1965; HENCKEN 1971, 160; PETRESCU-DÎMBOVIȚA 1978, 136, Nr. 192; BADER 1991, 83, Nr. 135), sowie das zweiteilige Stück aus Fossa Grab XXVIII von Tiryns in der Argolis, Peloponnes, Griechenland (Abb. 6C) (HENCKEN 1971, 23–26; BORCHHARDT 1972, 43–44), verziert. Sich um eine kulturhistorische Einordnung dieses Dekors und den daraus ableitbaren Kulturkontakten Alteuropas zu bemühen, soll jedoch anderen Studien vorbehalten bleiben.

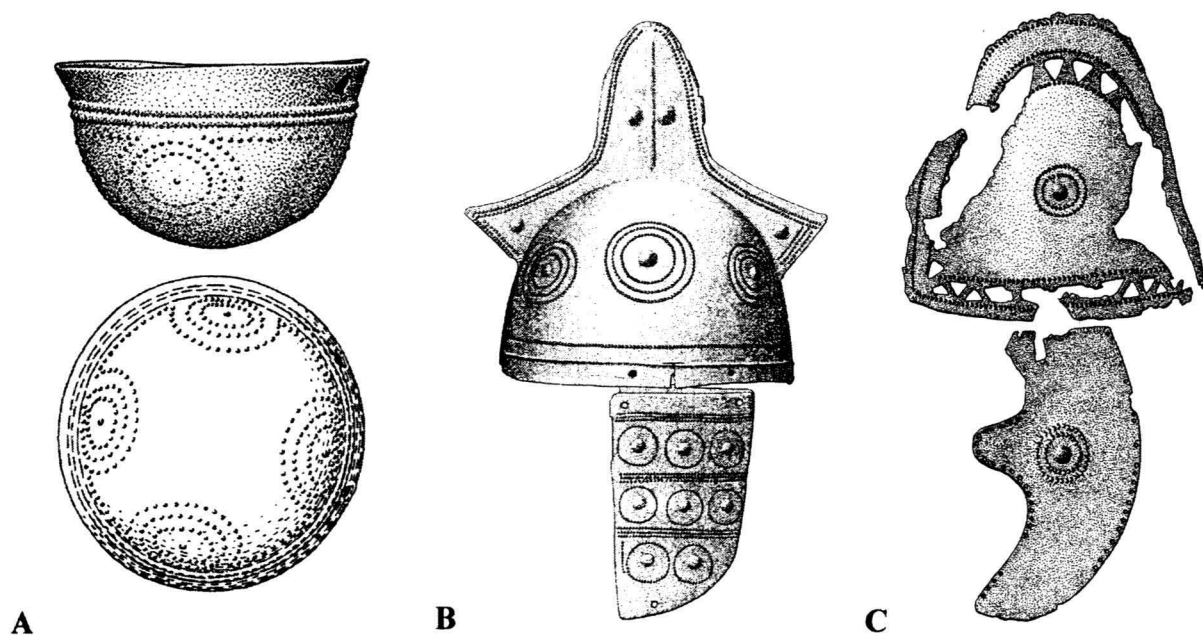


Abb. 6. Getriebene Metallobjekte mit konzentrischen Kreisornamenten aus Perl buckeln: A. Schale aus dem Depot von Dresden-Dobritz, Deutschland; B. Helm mit dreilappigem Kamm von Pass Lueg, Österreich; C. Helm aus Fossa Grab XXVIII von Tiryns, Griechenland (nach MARTIN 2009; EGG-TOMEDI 2002; MÜLLER-KARPE 1980).

Der hier aufgezeigte Kommunikationsraum zwischen Banat und Harz teilte offenbar nicht nur einzelne Gegenstandstypen, sondern in gleicher Weise spezifische Ornament- und damit mutmaßlich Symbolsysteme. Dass im Zuge der Untersuchung ein lediglich grober Zeitrahmen

von mehreren Jahrhunderten (BzD–HaA) gewählt wurde und entsprechende chronologische Feinheiten unberücksichtigt blieben, ist zum einen den Datierungsproblemen geschuldet, die mit der Einordnung der Bronzedeponierungen allgemein sowie der kannelierten Keramik im Karpatenbecken zusammenhängen. Zum anderen gestatten die archäologischen Hinterlassenschaften nur einen ausschnitthaften Blick in die Vergangenheit, den es mit möglichst vielen Funden zu füllen gilt, um ein konsistentes Bild zu erhalten.

Auch wenn wir die geschilderten Vorgänge nicht in der gewünschten historischen Klarheit fassen können, so zeigt sich doch, dass während der älteren Urnenfelderzeit engste Beziehungen zwischen der Lausitzer-Kultur entlang der mittleren Elbe und Gruppen mit kannelierter Keramik im Karpatenbecken, insbesondere der Belegiš II–Kultur, bestanden. Diese waren die Grundlage für den Austausch verschiedenster Güter und gleichsam für den Transfer einer bestimmten Zierform auf unterschiedlichen Trägermedien. Letztlich geht es innerhalb dieses überregionalen Netzwerkes weniger um die Frage nach Imitation, denn die Gestaltung sowohl der Gefäße von Susani als auch die der Blechtassen greift auf weit ältere und jeweils lokal bereits seit der mittleren Bronzezeit bekannte Ornamente zurück.

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ABBILDUNGEN

Abb. 1. A. Keramikschale mit kanneliertem Sternornament aus dem Hügel von Susani, Rumänien; B. Bronzetasche aus dem Depot von Dresden-Dobritz, Deutschland (nach STRATAN–VULPE 1977; MARTIN 2009).

Abb. 2. Sterndekor auf Knaufscheiben von Vollgriffschwertern aus Bayern, Deutschland (A–B), sowie Spund- (C) und Spindelkopfnadeln (D) aus Schlesien, Polen. A. Spatzenhausen; B. Pflugdorf; C. Jordanów Śląski, Grab A; Kietrz, Grab 934 und 1143; D. Wrocław-Księże Wielkie (nach VON QUILLFELDT 1995; GEDL 1983).

Abb. 3. Tassen mit Sterndekor aus Schlesien und den Westkarpaten. A. Grab 215 von Kietrz, Polen; B. Grab 47 von Zlaté Moravce–Kňazice, Slowakei (nach GEDL 2000; KUJOVSKÝ 1994).

Abb. 4. Tassen mit Sterndekor der Igrîța-Gruppe im Bereich des Bihor-Gebirges, Rumänien (nach CHIDIOȘAN–EMÖDI 1982).

Abb. 5. Lage der im Text erwähnten Fundstellen entlang der Elbe zwischen Elbsandsteingebirge und Saa-
lemündung: 1. Osternienburg; 2. Gräfenhainichen-Zschornewitz; 3. Elsterwerda; 4. Weißig am Raschütz;
5. Dresden-Dobritz.

Abb. 6. Getriebene Metallobjekte mit konzentrischen Kreisornamenten aus Perl buckeln: A. Schale aus dem Depot von Dresden-Dobritz, Deutschland; B. Helm mit dreilappigem Kamm von Pass Lueg, Österreich; C. Helm aus Fossa Grab XXVIII von Tiryns, Griechenland (nach MARTIN 2009; EGG–TOMEDI 2002; MÜLLER-KARPE 1980).

ASPECTS OF METALLURGICAL ACTIVITY IN THE EARLY IRON AGE SETTLEMENT AT ȘIMLEU SILVÂNIEI-OBSERVATOR

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This paper examines the discoveries of metal pieces and objects that can be linked to the metallurgical activity in the period of the Early Iron Age from Șimleu Silvaniei-Observator, an intensely researched site in the last two decades. It brings together new material kept in the Museum of History and Art in Zalău. From cultural point of view, the settlement belongs to the Gáva culture, chronologically covering the period to the second half of the HaA2 phase and the end of HaC, and probably also the beginning of the next period. Although the settlement is located in an area lacking mineral resources, the objects used in the metallurgical activities indicate the presence of local and itinerant craftsmen, producing metal objects. This is probably due to its proximity to the raw materials from Bihor Mountains and Maramureș, which could represent an opportunity to purchase various raw materials to trade on borders. Although, the dominant position in which this site is located should be outlined Through this position, which entailed a major advantage in controlling the movement of goods and persons in Crasna Valley, between Transylvania, Crișana, Sătmăr and further to the Tisza Basin, a part of the resources could reach there by imposing a system of customs clearance on those who transited the area. Therefore, it seems probable that the technological development of the production of objects of metal from Șimleu Silvaniei-Observator was based both on the needs of the community, and on the relationships or social status of high society in this community.

Keywords: iron, bronze, axe, needles, arrowhead, moulds, craftsmen

Being a favourable environment for habitation since ancient times, the investigated territory was geographically and geomorphologically heterogeneous (Pl. 1/2-4), comprising the upper slopes of Măgura Hill, situated North to Șimleu Silvaniei. With a maximum altitude of 596 m, it takes the form of a hillock cut by deep valleys. Sloppy towards the Crasna Valley and more gentle northwards, the hill keeps a smooth surface on the top as a 'platform of erosion'. From geological point of view, most of these forms of relief are made up of crystalline limestone with granite intrusions and other Cretaceous sediment types (GEOGRAFIA 1992, 46).

The first written sources about the metal pieces found in fortified settlement from Șimleu Silvaniei-Observator are from J. F. Fetzer. Collector and amateur archaeologist from Șimleu Silvaniei, he mentions at the end of the 19th century some bronze pieces – chisel and bracelet

– found on Măgura Hill, pieces that could be related to the settlement from the Early Iron Age (FETZER 1898, 418). Due to scarce archaeological researches, for almost one hundred years, any mention about such finds is missing. Under the leading of M. Rusu, since 1994 H. Pop and I. Bejinariu (MJIA Zalău) started the first systematic archaeological excavations at this site. During the first three seasons (1994–1996) there have been wholly or partially researched, 23 archaeological features, when the first metal objects were also discovered (BEJINARIU–POP 1997, 60; POP–BEJINARIU 1999, 118). In 2000, during the opening of an exhibition about the archaeological research related to Șimleu Silvaniei–*Observator*, a catalogue summarizing the results of excavations was released, containing the first published image of a bronze arrowhead from this site (POP–BEJINARIU 2000).

After 2000 the excavations were continued and other pieces have been discovered. In 2001 a structure interpreted at that time as a metallurgical workshop, which featured “three moulds of whole and fragmented, burnt sandstone tables, along with charcoal and pottery” and a meat offering, at first considered “a part of a human skeleton” (POP *ET AL.* 2002, 305).¹ These data have been reported also in the annual chronicles (POP *ET AL.* 2004, 333; POP *ET AL.* 2009, 210) and in the paper dedicated to the history of archaeological research of Șimleu Silvaniei (SANA 2006, 60).

Metal pieces

Metal pieces are the largest and most important category of artefacts from this site. Their importance lies both in the intrinsic value of the metal and in their chronological role or their connections with other cultural areas. Depending on the materials from which they were made, there are two main groups: a) iron objects; and b) bronze objects. Given the fragmentary state of items or their multiple roles we opted for covering the subject from the perspective of functional criteria.

a) Iron objects

The only piece that certainly² belongs to this category is a fragmentarily preserved flat axe with wings and slim body (L. 7.5 cm). The piece, discovered in the feature L1/1994, seems to have been broken from bending, preserving traces of fibre curvature (Pl. 2/14). These parts probably had a double functionality, being used both as weapons (VASILIEV *ET AL.* 1991, 53) and as tools (URSUȚIU 2001, 11). Such discoveries are quite rare for the Gáva culture from Transylvania, findings being mentioned from Cernatu (SZÉKELY 1966, 24, pl. 9/6; BOROFFKA 1987, 62, fig. 3/4; BOROFFKA 1991, 4, fig. 3/4), Cetățuia (BOROFFKA 1987, 62, fig. 4/2; BOROFFKA 1991, 4, fig. 4/2), Coldău (BOROFFKA 1987, 67, fig. 4/4; BOROFFKA 1991, 4, fig. 4/4) and Sebeș (VASILIEV *ET AL.* 1991, 50, footnote 142; URSUȚIU 2001, 9, fig. 2/4; URSUȚIU 2002, 58, pl. CXXX/4), most of the pieces of these kinds coming from Teleac (LÁSZLÓ 1975, 22, fig. 2/16; BOROFFKA 1987, 70, fig. 8/5; BOROFFKA 1991, 4, fig. 9/5; VASILIEV *ET AL.* 1991, 50, fig. 17/13–16). Similar finds also appeared in the settlements of the Gornea–Kalakača group (BOROFFKA 1987, 67, fig. 4/7; BOROFFKA 1991, 4, fig. 4/9; GUMĂ 1993, 264) and in the Babadag cultural area, at Telița (JUGĂNARU 2005, 70, fig. 44/6). In addition, a series of discoveries from Moldavia can be mentioned, some of them

1 The preliminary analysis of bones showed that they belong to the species *Canis familiaris*. Identification was made by B. Kelemen and later confirmed, on the basis of detailed photos, by E. Berendi. We would like to thank for their help.

2 The layers from La Tène and medieval period from Șimleu Silvaniei–*Observator* make difficult the chronological classification of fragmentary iron pieces coming from various archaeological levels.

associated with bronze hoards (LÁSZLÓ 1975, 18, fig. 2/12, 14; BOROFFKA 1987, 62, fig. 1/3–4; BOROFFKA 1991, 4, fig. 1/3–4; LÁSZLÓ 1994, 150, fig. 77/3–4).

Based on the analogies particularly from Teleac (VASILIEV *ET AL.* 1991, 50;³ URSUȚIU 2001, 12; URSUȚIU 2002, 60) and Telița (JUGĂNARU 2005, 70), but especially on the context in which it appeared,⁴ the piece can be dated in HaC or even later, without being able to determine with certainty the period to which it belonged.

b) Bronze objects

Better documented than the iron pieces, unfortunately the not very diversified category of bronze objects, belonging to different types and variants of trimming needles, represent the most numerous artefacts discovered in this settlement. Thus in the dwelling L1/1999 a poorly preserved bronze needle with bowl-shaped head (*Vasenkopfnadeln*) was found, broken in the upper part (Pl. 2/2). Three analogous pieces have been discovered at Teleac, two of them coming from dwellings (VASILIEV *ET AL.* 1991, 64, fig. 18/5–7). Another one was unearthed in a complex assigned to the Lăpuș II–Gáva I horizon, in the settlement from Petea–Csengersima (MARTA 2009, pl. 9/13; MARTA 2010, pl. 9/13). These pieces have a wide dating, from the Late Bronze Age until the middle of the Early Iron Age (VASILIEV *ET AL.* 1991, 64).

From the area of feature L4/1999 comes a bronze wire needle, with slightly curved tip and spiral-shaped head (*Spiralenkopfnadeln, Variante mit zurückgelegtem Spiralenkopf*), achieved by striking and twisting the bronze wire (Pl. 2/4). This type is largely dated, from the BrC until HaC (MAREK 1983, 104, pl. 34/517–518, 520–521). Given its association with the so called *Zweischleifige Bogenfibeln mit tordiertem Bugel* type fibula, we consider that it belongs to the last period, respectively HaC. Another approximately similar bended and corroded needle without patina, made of bronze wire, with the maximum diameter of 4 mm was discovered in S1/2006 between m 35–36, at 240 cm depth. The object had one sharp end and another flattened one by beating and twisting, forming a simple loop (Pl. 2/5). It can be included in the type of needles with spiral shaped head and straight shaft (*Spiralenkopfnadeln / Rolellenkopfnadeln, Variante mit geradem Schaft*), also widely dated from BrC till HaA (MAREK 1983, 112, pl. 35/540–580).

A fragmentary bronze needle was found in the same section, at grid 17.30 m and at 80 cm depth, coming from the greenish-brown layer between features C65 and C63. Its preserved length is 10.3 cm; it is decorated with three circular/oval knobs, arranged in four registers of horizontally profiled ribs. Broken in ancient times, the head of the piece is not preserved (Pl. 2/1). According to the typology of J. Řihovský the artefact can be included in the early version of ball-shaped needles with ribs (*Kolbenkopfnadeln der jüngeren Form, Varianten mit gerundeten Rippen*) and it has analogies in the Eastern Alpine area (ŘIHOVSKÝ 1979, 97, pl. 28/524), in western Hungary (ŘIHOVSKÝ 1983, 72, pl. 26/656), in the Balkans (VASIĆ 2003, 81, pl. 31/532) and in Northern Italy (CARANCINI 1975, 72, pl. 78/2515–2525). Based on the above mentioned analogies the objects dates beginning with HaA till HaD.

3 Here V. Vasiliev proposes a dating of the pieces from Teleac only in the Hallstatt period.

4 In the feature a large quantity of pottery was discovered, among them we notice a fragment of a bowl decorated on the inside, both on the rim and on the body, with beams of fluted arranged in oblique angle (see: VULPE 1967, pl. III/2, 4) or a fragment of a probably double truncated cone shaped large vessel, with a button on the shoulder having a massive, nearly discoid tip, very similar to the projections that appear on the top of a pot from the necropolis at Cipău (VLASSA 1961, fig. 4/4).

Another fragmentary needle decorated with incised horizontal lines – barely visible because of corrosion – was found in section S1/2006 between grids 18.5–21 m, at 90 cm depth. Without being able to specify the exact place of discovery, the artefact seems to come from the brownish-green layer cut by feature C65, or possibly from this feature (Pl. 2/3). Because of its poor state of preservation, no chronological or typological considerations are possible. Another bronze object was a simple needle, with a length of 10.02 cm, without decoration. The upper part was polished, so the piece had no head. The needle appeared in a secondary position in a feature belonging to a more recent period (Pl. 2/6).

A bronze needle rod, round tube, discovered in feature G161/2003 (Pl. 2/7), and an identical, 7.5 cm long one (Pl. 2/8) came from the section S1/2006 layer culture. Because of their fragmentary state of preservation there is no possibility of chronological or typological considerations.

A highly oxidized bronze pearl with the length of 1.2 cm comes from the feature L1/1994 (Pl. 2/11). Analogies from the contemporary settlements are not known. Similar findings were mentioned in the necropolis of Stoicani, attributed to the group with the same name, dated in the middle period of the Early Iron Age (LÁSZLÓ 1994, 150). In the same dwelling a very fragile and slightly curved fine brass wire was also discovered. Because of its precarious state of conservation it could not be illustrated. Its presence at Șimleu Silvaniei–*Observator* can be linked to the mould found in the feature L10/2001. The closest analogies from settlements for the loop ring can be mentioned from Teleac (VASILIEV ET AL. 1991, 62, fig. 18/38).

A bronze arrowhead was discovered in the pit G62/96 (BEJINARIU–POP 1997, 60). The slightly curved arrowhead, from which only the fragmentary top is preserved, was broken at the end of the mounting part. The piece has two lobes, and heavily corroded, prominent median ridge (Pl. 2/9). Since its fragmentary state, it cannot be precisely defined typologically, yet it is similar to the archaic Scythian type arrowheads from Teleac (VASILIEV ET AL. 1991, 57, fig. 17/11). The authors dated first to the late 7th century BC and early 6th century BC (VASILIEV ET AL. 1991, 58), while A. Ursuțiu, based on its synchronization with the Basarabi type pottery decorated by impressions, proposed a dating to the second half of the 8th century BC (URSUȚIU 2001, 8; URSUȚIU 2002, 74). Because of the lack of early Basarabi type materials, the arrowhead from Șimleu Silvaniei–*Observator* should rather be dated to the 7th century BC.

From the site two well preserved brooches were unearthed, one belonging to the type with two torsion resorts and bow (*Zweischleifige tordiertem Bogenfibeln mit Bügel*), the second representing a rare form derived from the so called *Violinbogenfibel* type. Other objects were the waste resulting from the process of casting bronze and fragmented pieces, difficult to classify typologically because of their advanced state of degradation. From feature G25/1995 an object broken in ancient time was unearthed, with the strong side covered by oxides. Its length is only 2.1 cm, and probably it represents a fragment from the blade of a socketed axe.⁵ In the pit G63/1996 a fragmentary, 3 cm long bronze piece was discovered, with triangular section (Pl. 2/10), which seems to be the fragment of a spiralled bracelet. A small bronze tablet comes from G69/1999, while from feature G153/2003 a small piece of bronze sheet with a twisted edge was discovered, probably the foot of a *Bogenfibeln* type brooch (Pl. 2/14).

In the section S2/2001, a bronze casting stump was found (Pl. 2/12), along with a small piece of slag. From the features C31/2006 and C45/2008 other similar findings come to surface:

5 It is inventoried as arrowhead (MJIAZ, C.C. 1070/1996).

the lump fragments from bronze scrap slag (Pl. 2/15) and a small oval dripping bronze. In the area of section S3/2008 another fragmentary bronze lump was discovered (Pl. 2/16).

Moulds

From Șimleu Silvaniei–*Observator* the few unearthed mould, all preserving marks of secondary firing because of the use, indicate evidence of metallurgical activity – local or itinerant – in the settlement. One mould – which would plead for itinerant craftsmen –, approximately 4 cm wide and 3.5 cm in length broken in ancient times with traces of secondary burning, made of a fine-grained sandstone, was found in the area of C2/2006 (Pl. 3/4). The mould has three rows of grooves. Two of them seem to have served to cast a single piece, with a width of 0.7 cm and another one of 0.6 cm, the latter being degraded. The grooves are parallel, placed at a distance of 0.8 cm; the area between them seemed to be approx. 0.1 cm lower than the sides. The best preserved piece has three symmetrically arranged and equally spaced grooves, being the imprint of three prominent ribs. The third footprint, which might have served to cast a different object, steps down approximately 0.8 cm. Its fragmentary preservation does not allow determining what kinds of objects were made with its help. Its best analogy is the fragmented Mörigen-type belt hook casting mould discovered in eastern France at Brison–Saint-Innocent, dated to the end of the Urnfield culture (HaB3), or perhaps even earlier (KILIAN-DIRLMEIER 1975, 80, pl. 26/310).

The fragments of three moulds made of small-grained and compact sandstone were found in dwelling L10/2001, but only two preserved the shape of the casted objects. The first is a fragment of a bivalve mould, made from a rectangular piece of sandstone, with preserved length of approx. 4 cm, width 3 cm and height 2 cm. The sides are straight, except for the ends, which are broken. On both sides there are traces of burning from its usage, still preserving the shape of a ring with a diameter of 2.2 cm. Also based on its dimensions, the mould was probably used to cast undecorated bronze rings (Pl. 3/1), similar to the ones in which the objects from Mediaș were casted, dated by C. PANKAU (2004, 17) in HaA period, dating considered recently too early by L. MARTA (2010, 218). The second fragment was from a bivalve mould made from a rectangular piece of sandstone, with preserved length of approximately 4 cm, width of 4 cm and height of 3 cm. The piece has two well smoothed straight sides; the rest of the piece is deformed because of breakage. On all sides it shows traces of burning because of its use. On the narrow side the piece keeps longitudinally arranged narrow grooves, which might have been the casting channel or the form of the casted needle. The corner formed by two straight sides has a groove with a width of 0.6 cm and profiled angle – maybe a second casting channel –; the piece is strong burned (Pl. 3/2). Another fragmentary object was made of sandstone with a preserved length of approximately 4.7 cm, 3.7 cm width and height of 3.5 cm. It has two well smoothed straight sides, the rest being deformed because of its breakage. On one of the sides there are traces of burning (Pl. 3/3).

Moulds pieces are frequently found in other settlements of the Gáva culture, in Romania at Ciumești (PETRESCU-DÎMBOVIȚA 1977, 90, pl. 132/11–14; 133), Teleac (VASILIEV *ET AL.* 1991, 48, fig. 23/2–10; 24/2) or Reci (SZÉKELY 1966, 12, pl. VIII/7–8), or in Hungary at Poroszló (PATAY 1976, 200, fig. 4/2) or Prügy (KEMENCZEI 1984, 161), etc.

The metal pieces and objects related to metallurgical activities were found rarely in archaeological features and mainly in the cultural layer. Still, no evident traces of workshops could be identified. The L10/2001 could have been a building with such a purpose, yet its functionality

is not entirely clear at this moment. Because of the three fragmentary moulds found here along with the sandstone blocks and burnt charcoal and pottery, initially it was interpreted as a metal workshop (POP *ET AL.* 2002, 305). However, the lack of hearths, melting pot, bronze slag or other materials, like utensils used for metalworking⁶ – clear evidences of metallurgical activity – makes difficult such a conclusion, questioning supported by the observation regarding the depth of the feature, which would favoured the accumulation of toxic gases. Yet, since the feature was only partially researched, in case of future archaeological excavations there is still possible to identify more evidence of metalworking even within this building.

Even so, the practice of metallurgical activities in the settlement from Șimleu Silvaniei–*Observator* can be sustained based on the moulds with traces of use and waste resulting from the process of bronze casting, which indicate the presence of blacksmiths, craftsmen and even workshops. The area lacks mineral resources – which made the metal objects more valuable –, therefore these craftsmen probably satisfied the needs of local elites. The political and military control of the Crasna valley, important area and crossroad between Transylvania and the Tisza Basin from prehistory to the modern times, probably provided an advantage in their attempt to procure the necessary raw materials.

The bronze pieces and especially the Mörigen-type belt hook casting mould with analogies in Central Europe (Pl. 3/B), indicate that the settlement from Șimleu Silvaniei–*Observator* was located in the proximity of a significant route of cultural contacts and long range economic exchanges. We consider that technological development in the production of metal goods from Șimleu Silvaniei–*Observator* was determined both by the needs of subsistence economy –tools and weapons – and the relations or social status of inhabitants of the most important settlements from the Șimleu Depression. All this suggests the existence of a stratified society, without the possibility of determining more precisely their characteristics.

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6 A small, simple chisel of bronze revealed by our friend and colleague H. Pop may constitute an exception. Although this piece was generously put to our disposal, the lack of well-dated context and clear analogies dated in the period covered by our study, determined us not to include it in the present paper.

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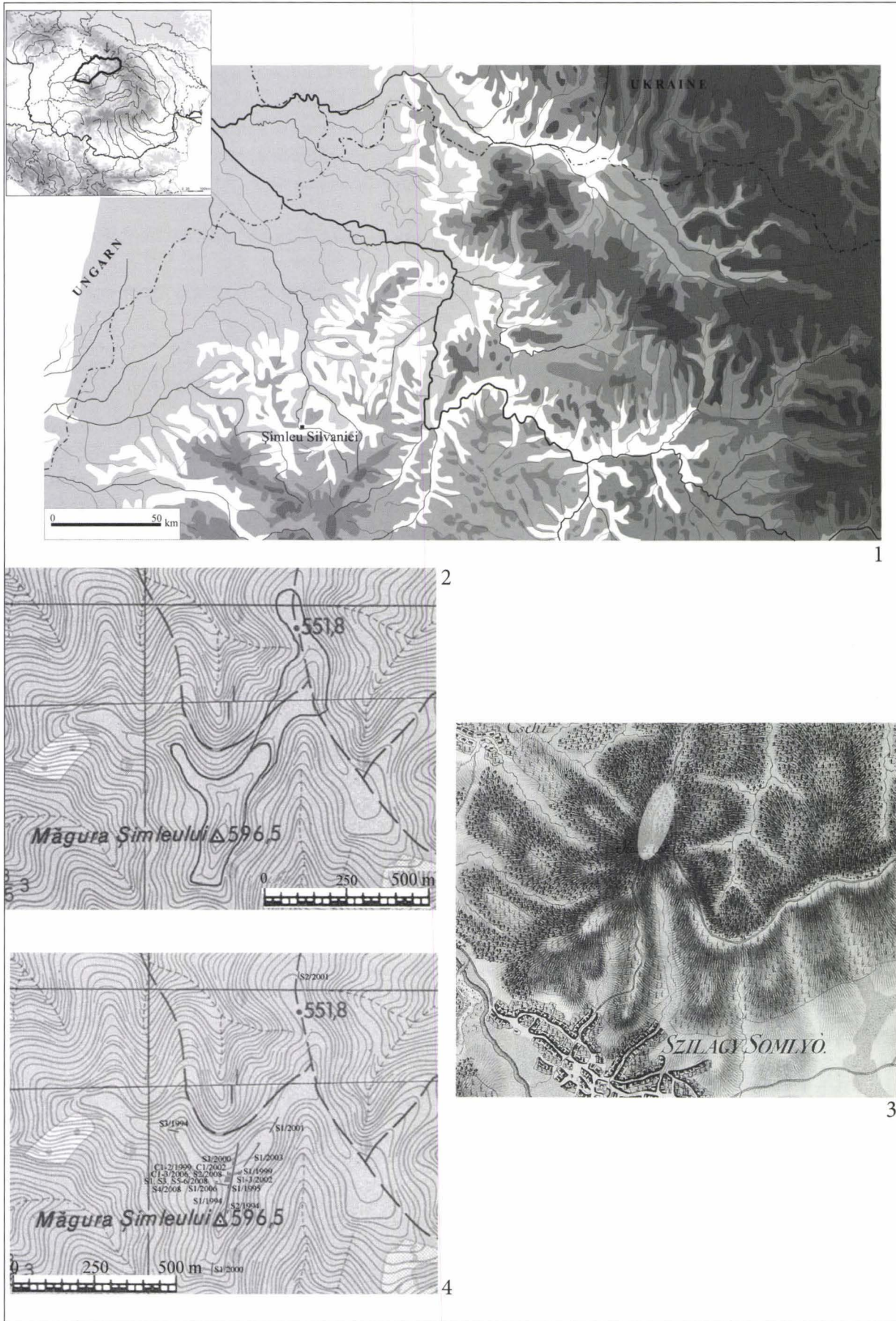


Plate 1. 1. The Șimleu Depression; 2. Plan of the Early Iron Age fortifications; 3. The site of Șimleu Silvaniei–*Observator* on the Austrian topographic map (18th century); 4. General plan of excavations (1994–2008).
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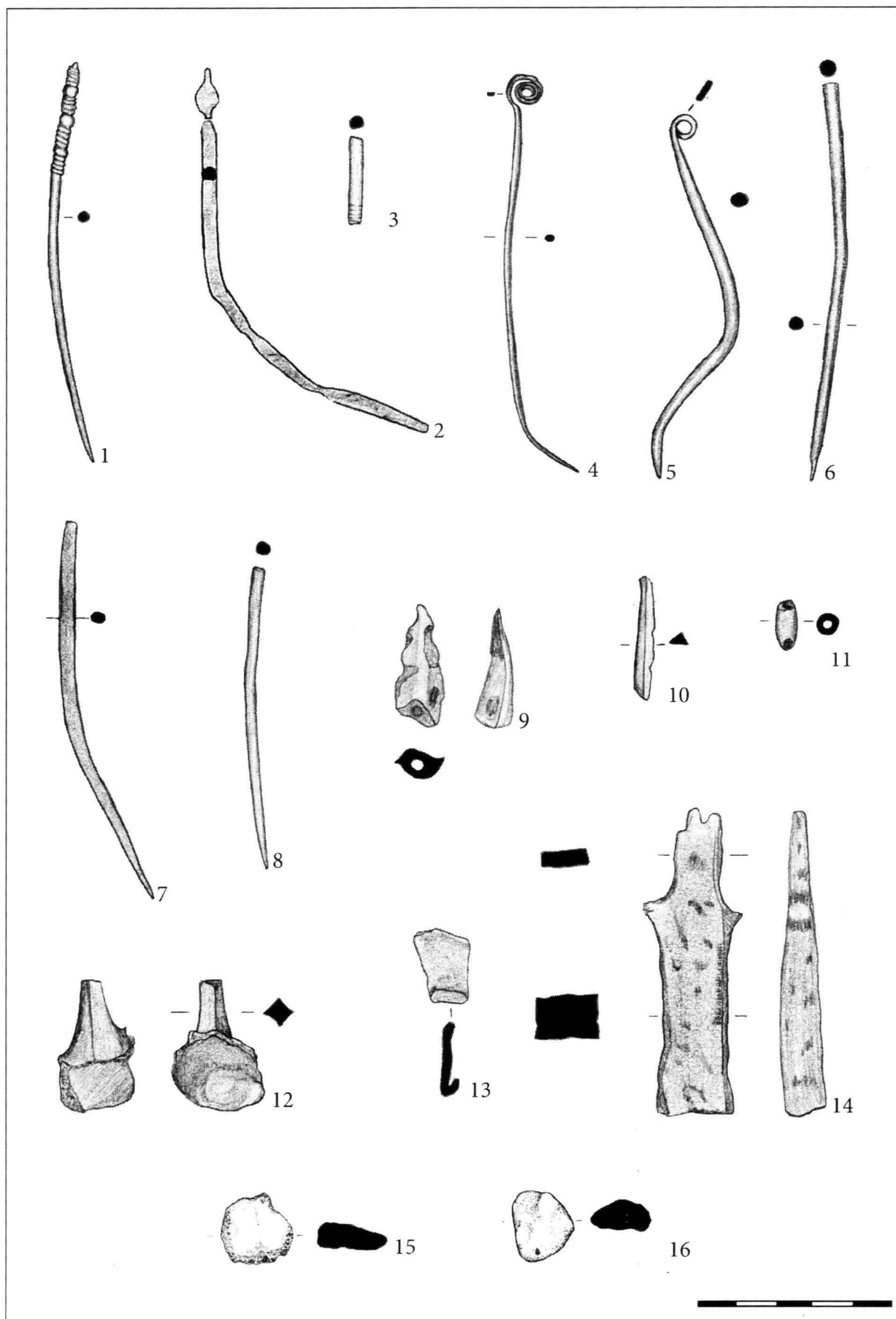


Plate 2. Bronze and iron objects.

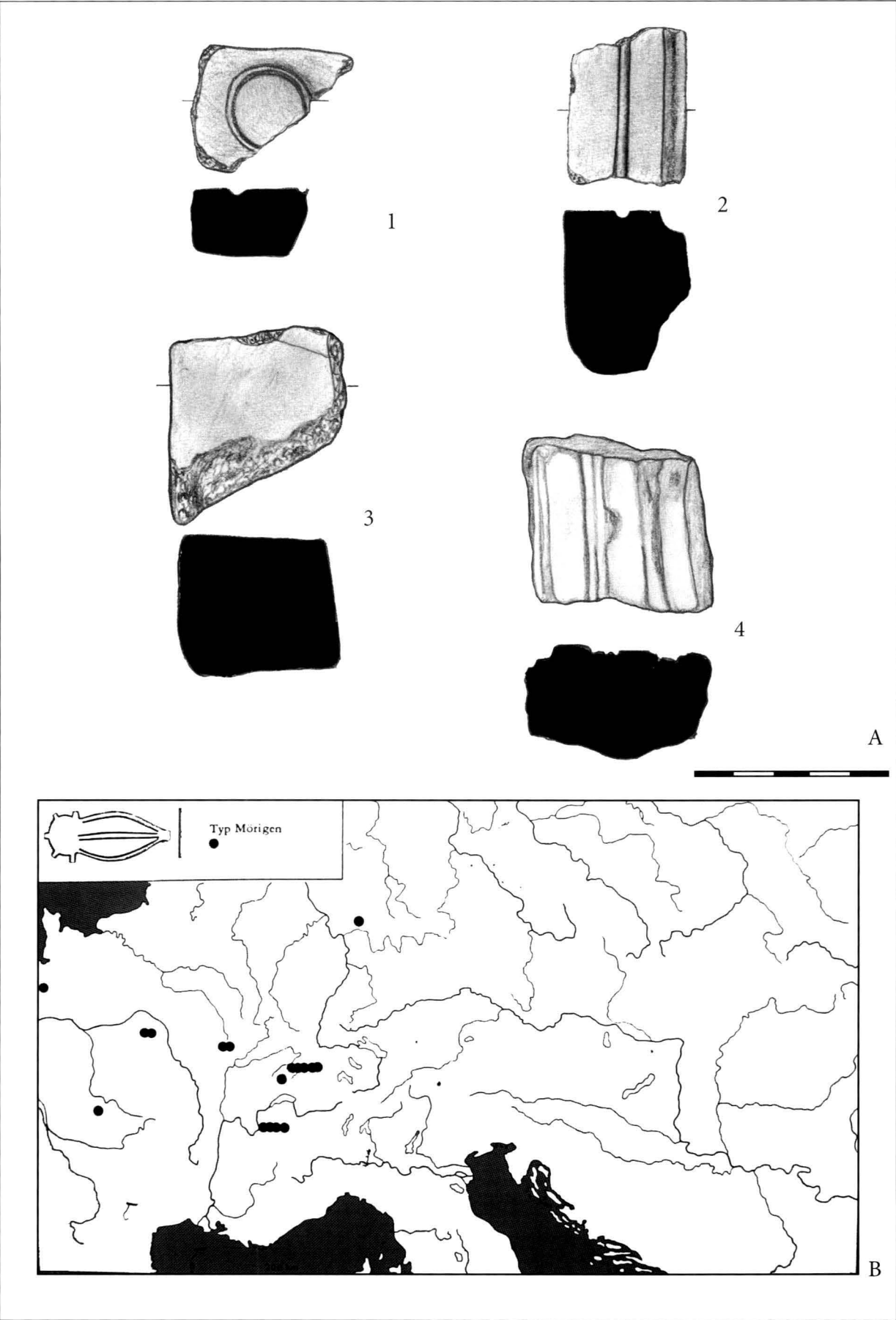


Plate 3. A. Sandstone moulds; B. Distribution map of the Mörigen-type belt hooks
(after KILIAN-DIRLMEIER 1975).

ARCHAEOLOGICAL FINDS BELONGING TO THE LATE HALLSTATT AND LA TÈNE PERIOD FROM CĂMIN/KÁLMÁND-KRASZNAPART, SATU MARE COUNTY

JÁNOS NÉMETI
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The region situated on the place of the former Ecsed Marsh is very rich in archaeological sites. From the great number of discoveries from several periods the most well represented are the Early and Late Iron Age finds. The materials were unearthed on a small region from several sites; some of them came to the surface due to the drainage works, while other settlements were investigated by rescue excavations. The materials evidence important Scythians and later Celtic settlements in the region, completing the archaeological image of the last five centuries of the last millennium BC.

Keywords: Early Iron Age, Scythians, Late Iron Age, Celts, settlement, pottery, workshop

The village Cămin (Hu. Kálmánd) situates in the wider, plain territory that came to exist on the place of the former Ecsed Marsh (Pl. 1). The marsh was inhabited from early periods of history, some of the studies about its geology also reflected about the probable landscapes of human habitations. O. Hermann 'sailing' on the marsh from the nearby Berveni mentioned a 'mountain', the so called Rákóczi earth mound. According to the archaeological observations, it is known that albeit it is an important archaeological site, the earth mound has nothing to do with the famous prince of Transylvania (NÉMETI 2002, 13–28). During the works of drainage – by digging channels and building dams – on the islands and other parts of the marsh the archaeologists discovered many settlements, cemeteries and graves from the prehistoric to the medieval period. The first archaeological finds were rescued by the engineers working on the drainage. Unfortunately, they did not make notes about the "green coloured" bronze objects, the fragments of ceramics, burned dwellings and hearths. The first archaeological find was the bronze hoard from the boundary of Căpleni and Cămin.

The work carried out in order to provide adequate drainage for floodwaters was done in several steps. First, there was a drainage ditch constructed along the dike on the right side of the river. Than channel no. 2 – presently known as 'Crasna River' – was widened; and finally the earth was bulldozed along the left riverbank so that an outer dike was erected approx. 30–35 m from the river. A drainage ditch was constructed on the inner side of the new dam facing the village. Due to all these ground works important archaeological finds were uncovered, providing information for the reconstruction of those settlements that were destroyed during the constructions.

In 1986 nine graves were unearthed from a cemetery belonging to the Bodrogkersztúr culture at the Crasna Bridge from Cămin (*Disznólegelő*). Between 1992 and 1999 there were conducted several small rescue excavation. Further archaeological observations were made after the bursting of the dam in 1998.

For a structured presentation of the archaeological finds from the above mentioned area, we divided the bank of Crasna River into six zones, from the bridge at Căpleni to the one at Berveni, marking them from A to F (Pl. 1/5, Appendix 1).

Scythian discoveries

The Scythian objects from Cămin–Krasznapart were already presented in a former study (NÉMETI 1982, 71–82), and partially they were also included in the repertory of the area (NÉMETI 1999, 75–76, 51 a–c). New isolated finds and objects were uncovered in the zone C, on the area of a HaD2 Scythian settlement. The drainage ditch from the left bank of the river almost destroyed the site, but a small part of it was revealed in trench no. 1 (SI) during the survey excavation in 1999. The rescued part of the site was transected by a La Tène pit.

- Fragment of a bowl with inverted rim, its colour is dark grey outside and brown inside, grit tempered with a smooth surface; rim diam.: 26 cm, bottom width: 9cm, height: 6.2 cm; inv. no. 18.848 (Pl. 5/1).
- Fragment of the rim and body of a wheel-thrown, light grey, sand-tempered biconic beaker with smooth surface; rim diam.: 10 cm, height: 5.6 cm; inv. no. 18.989 (Pl. 5/4).
- Prism form, sand tempered, brown clay stamp seal with geometric decoration; length: 4.5 cm, width: 2.1 cm; inv. no. 18.843 (Pl. 5/3).
- Fragment of a grit tempered deep bowl with lightly inverted rim. It is brownish-grey with black patches outside and black on the inside; SII; rim diam.: 24 cm, bottom width: 13.2 cm, height: 11 cm; inv. no. 18.845 (5/2).
- Rim and body fragment of a hand-made, brown, rough surfaced grit-tempered flower-shaped vessel; SII; rim diam.: 34 (?) cm; inv. no. 18.873 (Pl. 6/4).
- The handle fragment of a wheel-thrown, grey beaker; SII; inv. no. 18.860 (Pl. 6/5).
- Fragment of the rim and body of a hand-made, sand-tempered, middling-surfaced bowl with inverted rim; inv. no. 18.872 (Pl. 6/1).
- The rim and body fragment of a hand-made grey beaker; SII; inv. no. 18.858 (Pl. 6/2).
- The rim fragment of a hand-made bowl, its colour is brown outside and brick-red inside; stray find; rim diam.: 26 cm; inv. no. 18.853 (Pl. 6/7).
- The rim and body fragment of a hand-made, sand-tempered, smooth surfaced bowl with inverted rim, its colour is brown outside and grey inside; stray find; rim diam.: 32 cm; inv. no. 18.854.
- The body fragment of a hand-made, sand tempered bowl with inverted rim, its colour is brown outside and greyish-black inside; stray find; rim diam.: 34 cm; inv. no. 15.550.
- The rim fragment of a hand-made, fireclay-tempered bowl, its colour is brown outside and greyish-black inside; stray find; inv. no. 14.705.
- The rim and body fragment of a wheel-thrown sand-tempered, greyish bowl with thick rim; inv. no. 18.144 (Pl. 6/6).
- The rim and body fragment of a flowerpot-shaped vessel with rough surface, its colour is brick red, decorated with a horizontal impressed cordon; stray find; inv. no. 18.143.
- The rim and body fragment of a deep, hand-made, fireclay-tempered bowl with a horizontal handle under the rim, its colour is brown outside and greyish inside; S1/1999; inv. no. 18.990 (Pl. 6/3).

The hand-made bowls with inverted rims correspond to the type 'B' of the Scythian Age ceramics (NÉMETI 1988a, pl. 1; 4–6; NÉMETI 2010, pl. 2–3; 5; 8). The fragments of flowerpot-shaped vessels belong to the type 'A' (NÉMETI 1988a, pl. 1/3; NÉMETI 2010, pl. 2/4). The fragments

of the wheel-thrown, biconic or light brown beakers can be enrolled into the type 'F' (NÉMETI 1988a, pl. 2/7; 9–10; NÉMETI 2010, pl. 4/6–7; 13). The fragments of wheel-thrown, grey bowls with inverted and board rim refer to the type 'G' (NÉMETI 1988a, pl. 2/12–13; NÉMETI 2010, pl. 4/8; 12).

The above mentioned hand-made and wheel-thrown ceramics are typical for the Scythian Age cemeteries and settlements. Analogies can be mentioned from the cemetery at Sanislău–Homokosdomb (NÉMETI 1982, 115–144), or the settlements from Ghenci–Clay mine (Hu. *Agyagbánya*), Moftimu Mic/Kismajtény hill, Carei–Kozárd (NÉMETI 1999, 109, pl. 48). Similar analogies are known from the cemeteries and settlements of the Great and Little Hungarian Plain (KEMENCZEI 2001, 7–38; KEMENCZEI 2009, 93–110; CHOCHOROWSKI 1984; 1985; 1996; 1998; ROMSAUER 1991; CSEH 1999; 2002, 83, pl. 3; CSEH 2006, 37, pl. 14).

The clay stamp seal (*pintadera*) is a rarity among the Scythian Age finds from north-western Transylvania. Seals with geometric decorations were used for stamping on fabric or human body rather than to decorate ceramics. On the surface of some stamp seals red iron oxide were also found, but it occurred that ochre clots were placed together with stamp seals in graves. These objects are frequent in the cemeteries and settlements of the Scythian Age in the Great and the Little Hungarian Plain. Analogous finds are known from the settlement at Tokod–Orosháza–Gyopárpos, grave no. 2 (KEMENCZEI 2001, 35, ill. 15; KEMENCZEI 2009, 93–94; CHOCHOROWSKI 1985, 23, ill. 11). According to J. CHOCHOROWSKI (1985, 83), from the region approx. 90–100 stamp seals are known; 10–11% of them had a prism form and geometric decoration.

La Tène (Celtic) settlements

Fragments of La Tène vessels were found in 1981–1983 along the right side dam of the drainage ditch of the Crasna River, at the site known as *Disznólegelő*. The pottery fragments were discovered in a pit and in a pottery kiln, which was identified in the section wall of the trench. Among those stray finds there were fragments of typical hand-made and wheel-thrown Celtic vessels.

- The rim and body fragment of a hand-made, flowerpot-shaped vessel, its colour is brick red both inside and outside, decorated with a horizontal/vertical impressed cordon; inv. no. 19.438 (Pl. 17/5).
- The body fragment of wheel-thrown, graphite-tempered, big steel-grey situla, under the rim it is decorated with a slim cordon; rim diam.: 38 cm; inv. no. 19.439 (Pl. 17/1).
- The rim and body fragment of wheel-thrown, sand-tempered, dark brown, deep bowl; rim diam.: 18 cm; inv. no. 18.879 (Pl. 17/4).
- The rim and body fragment of a wheel-thrown, sand tempered, smooth surfaced, grey bowl; rim diam.: 14 cm; inv. no. 18.883 (Pl. 9/3).
- The rim and body fragment of a wheel-thrown, graphite-tempered situla, it is perforated under the rim; rim diam.: 32 cm; inv. no. 15.537 (Pl. 7/8).
- The rim and body fragment of a wheel-thrown, graphite-tempered, brownish-grey situla, with a wide burnish pattern starting from the rim; rim diam.: 34 cm; inv. no. 15.538 (Pl. 9/1).
- The rim and body fragment of a wheel-thrown, graphite-tempered, steel-grey situla with a wide burnishing; inv. no. 15.540 (Pl. 9/2).
- The base and body fragment of a wheel-thrown, graphite-tempered situla; inv. no. 15.039 (Pl. 14/4).
- The rim and body fragment of a wheel-thrown, sand-tempered, brown bowl; inv. no. 15.563.
- The fragment of a spindle-whorl cut from the body of a pot; inv. no. 15.558 (Pl. 15/6).
- The rim and body fragment of a wheel-thrown, sand-tempered, smooth surfaced, dark brown, deep bowl; rim diam.: 18 cm; inv. no. 18.879 (Pl. 17/3).
- The rim and body fragment of a wheel-thrown, sand-tempered, smooth surfaced bowl, its colour is dark grey outside and black inside; rim diam.: 14 cm; inv. no. 18.883.

The Celtic settlement continues on the left bank of the Crasna River, in the B zone: at 210 m from the Crasna bridge at Cămin towards Căpleni, at the bank of the widened river bed a grey patch was outlined in the yellowish-brown clay bottom. Its dimension was 240 × 230 cm. After the recovery its relative depth was 50–60 cm (Pl. 4/1). The A/3a feature was rectangle with rounded corners, and it was probably the flat base of a dwelling, although post holes were not found. From the filling of the holes fragments of hand-made and wheel-thrown pottery were recovered, together with ashes, remains of coal, animal bones, some wattle and daub, fragments of two spindle-whorls and an amber bead.

- The rim and body fragment of a hand-made, sand-tempered, smooth surfaced, dark grey bowl with straight rim, it is decorated with a button-shaped knob rising from the rim; rim diam.: 24 cm, inv. no. 24.948.
- The rim and body fragment of a hand-made, barrel-shaped, thick, brown pot decorated with impressed motifs, inv. no. 24.876 (Pl. 7/1).
- The body fragment of a hand-made, grog-tempered, barrel-shaped, brown pot, it is gadrooned with finger impressions; inv. no. 24.877 (Pl. 7/2).
- The body fragment of a hand-made, grog-tempered, flowerpot-shaped, brown vessel, gadrooned with finger-tip impressions; inv. no. 24.878 (Pl. 7/3).
- The base and body fragment of a grog-tempered, small brown vessel; inv. no. 24.874 (Pl. 7/4).
- The rim and body fragment of a hand-made, greyish-brown deep bowl with slightly inverted rim, it was tempered with sand and fire clay; rim diam.: 60 cm; inv. no. 24.872 (Pl. 7/6).
- The rim and body fragment of a hand-made, grog-tempered, barrel-shaped pot, its colour is brown outside and grey inside, decorated with flat knobs; inv. no. 24.871 (Pl. 7/5).
- The rim and body fragment of a hand-made, sand-tempered, smooth surfaced, brown deep bowl; rim diam.: 36 cm; inv. no. 24.873 (Pl. 7/12).
- Fragment of a hand-made brown bowl, tempered with crushed potsherds, with an inverted rim; rim diam.: 30 cm; inv. no. 24.945.
- The fragment of a hand-made, sand-tempered, brick-red bowl with slightly inverted rim, which is decorated with stab-and-drag technique; rim diam.: 28 cm; inv. no. 24.880 (Pl. 7/7).
- The bottom and body fragment of a hand-made, barrel-shaped, small, brown pot; inv. no. 24.724.
- The rim and body fragment of a wheel-thrown, sand tempered, smooth surfaced, brown (slip) bowl, perforated under its rim; rim diam.: 12 cm; inv. no. 24.882 (Pl. 17/2).
- The rim and body fragment of a wheel-thrown, sand tempered, smooth surfaced, brown, (slip) bowl, diam.: 28 cm; inv. no. 24.881 (Pl. 7/10).
- The rim and body fragment of a wheel-thrown, smooth surfaced, (slip) grey bowl; width: 19 cm. inv. no. 24.884 (Pl. 7/9).
- Fragment of a biconic, brown spindle-whorl; inv. no. 24.725 (Pl. 7/13).
- Fragment of a biconic, spindle-whorl; inv. no. 24.726 (Pl. 7/15).
- A small, amorphous, perforated amber bead; inv.no. 24.728 (Pl. 7/14).

Settling basin

At the left bank of the river at the 5.6–6 river km in 1988–1989 a settling basin was constructed. The topographic number of this area is A-120, this village boundary is called *Cundlis* or *Moren tag*. Before the reclaim it was a flat, often flooded territory of about 30 hectares, with higher parts between the 5.8–6 river km. Those parts were inhabited by the populations of the Tiszapolgár culture. It became an important settlement during the Late Bronze Age III (Gáva culture), but La Tène (Celtic) settlements had also been established at that part of the river bank. Some Celtic ceramics and iron finds were collected from this site when the settling basin was constructed and afterwards, during a survey excavation in 1992 (Pl. 2/2).

- The body fragment of a wheel-thrown, engobe-dipped, sand-tempered, grey coloured big vessel; its surface is decorated with stamped motives of reversed garlands and concentric circles; S2/1999; inv. no. 18.197 (Pl. 15/3).
- The rim and body fragment of a wheel-thrown, graphite-tempered, smooth surfaced, greyish-browned coloured situla; stray find; inv. no. 18.918 (Pl. 16/5).
- The body fragment of a wheel-thrown, graphite-tempered situla with a wide burnishing; inv. no. 18.179 (Pl. 14/3).
- The rim and body fragment of a wheel-thrown, graphite-tempered, smooth surfaced situla, it is perforated under the rim at two places; stray find; rim diam.: 22 cm, inv. no. 24.956 (Pl. 12/2).
- The rim and body fragment of a hand-made, sand-tempered, smooth-surfaced greyish-brown coloured bowl with inverted rim, stray find; inv. no. 24.797 (Pl. 12/1).
- The rim and body fragment of a hand-made, grog-tempered, greyish-brown coloured bowl with slightly inverted rim; stray find; inv. no. 19.003 (Pl. 12/3).
- The handle fragment of a wheel-thrown, sand-tempered, greyish-black coloured, Celtic type pitcher; the handle is decorated with a cordon in the middle, on its upper part, there is a flat disc impressed in the middle and incised in the outer part; S3/1992; inv. no. 14.437 (Pl. 15/4).
- Fragment of a shaft-hole iron graver, rather corroded, probably used for woodworking; stray find; the length of the fragment is 19 cm; inv. no. 8358 (Pl. 10/4).
- Fragment of a crucible made of graphite, steel grey coloured; the length of the fragment: 7 cm, inv. no. 24.958. It is a stray find, found near the SI L1 building, in 1991 (Pl. 9/4).
- The rim and body fragment of a hand-made, sand-tempered, grey-brown coloured bowl with inverted rim; S3/1992; rim diam.: 22.5 cm, inv. no. 14.706 (Pl. 12/4).
- The rim and body fragment of a hand-made, brown coloured bowl, it was tempered with black sand; S3/1992; inv. no. 14.708 (Pl. 16/3).

Zone C, between 6–6.1 river km

In this area Celtic finds were discovered during the remedial works and the widening of the drainage ditch along the left side dam after the bursting of the former one in 1998. At the edge of the ditch, facing to the river, a Celtic site was disturbed, where a post pit with a diameter of 30–40 cm and depth of 40 cm was revealed. From its fill some fragments of Celtic pottery and of a severely corroded iron knife were collected. During the above mentioned ground works the following pottery fragments were collected:

- The rim and body fragment of a wheel-thrown, graphite-like, greyish-black coloured situla, there is a surrounding burnish line decoration under the rim and wide burnish motif on the body; inv. no. 18.975.
- Rim fragment of a graphite-tempered, grey coloured situla with thick rim; inv. no. 18.976 (Pl. 18/3).
- Body fragment of a thin, grey coloured situla with brushed decoration; inv. no. 18.974.
- Fragment of a crucible, almost entirely made of graphite, there are remains of ingot in its inner surface; inv. no. 24.958 (Pl. 10/3).
- Body fragment of a wheel-thrown, sand-tempered, yellowish-brown jar-shaped vessels, decorated with a circular gadrooned motif between two burnished lines, it has two circular thin burnished lines on its body; inv. no. 18.972.
- Bottom and body fragment of a wheel-thrown, sand-tempered, jar shaped omphalic grey coloured vessel; inv. no. 24.938.
- Wheel-thrown body fragment, dipped with grey engobe; inv. no. 24.937.
- Wheel-thrown, brown coloured, sand-tempered body fragment; inv. no. 24.936.
- Rim fragment of a hand-made, rough surfaced, grog-tempered, barrel-shaped vessel it is grey outside and brown inside; stray find; inv. no. 24.939.
- Rim fragment of a hand-made, sand-tempered, bowl with inverted rim, it is grey outside and black inside; inv. no. 18.226.

In 1999 there was a rescue excavation in this area. Its aim was to define the different settlements from a stratigraphic and a chronological point of view. Four test trenches – trench I–II and trench IV–V – were traced out on an undisturbed area between the drainage ditch on the left side of the dam and the settling basin. Relying on the levels of the trenches we made the following stratigraphic observations: the contemporary plough, under the humus at a depth of 30–40 cm, an iron fibula, a small iron disk, hand-made and wheel-thrown pottery fragments, iron slag, a spindle-whorl, and some wattle and daub were found. After the floods of the Crasna River the sediments made the surface in this area higher. Thus, the natural and original level from the Scythian and La Tène period was probably at a depth of 30–40 cm. The two – HaD and La Tène – levels could only be distinguished based on the typology of the ceramics. The underlying level was the ‘humus’ of the Late Bronze Age, Early Bronze Age and the Middle Neolithic period. This was followed by the yellow coloured clay level, in which features from different ages contoured as grey patches (Pl. 4/2). From the Iron Age finds we would mention selectively:

- The rim and body fragment of a wheel-thrown, graphite-tempered, steel grey coloured situla, it is perforated under the rim; inv. no. 24.956.
- Bottom and body fragment of a wheel-thrown, steel grey coloured situla, decorated with wide burnish lines; inv. no. 24.955.
- The rim fragment of a wheel-thrown, fire-spotted, smooth-surfaced, sand-tempered bowl; inv. no. 24.966.
- The rim fragment of a hand-made, grog-tempered pot with rough surface and a cordoned decoration; inv. no. 24.974.
- Rim fragment of a similar hand-made big pot; inv. no. 24.975.
- Iron bracelet, preserved in bad condition, conserved in laboratory; the ring's inner surface is plain. It is decorated by successive smaller and larger knobs; this type of bracelet made by bronze is popular but it is rare made of iron; its inner diam. is 7.2 cm, the outer diam. is 8.3 cm; based on its dimensions, one could suppose that it was worn by an adult; inv. no. 18.837 (Pl. 11/6).
- Button-like object made by iron sheet, its diam. is 2.8 cm, severely corroded; inv. no. 18.834 (Pl. 11/7).
- Fragment of an iron nail, length 4.5 cm, severely corroded; inv. no. 18.836 (Pl. 11/2).
- Fragment of iron cramp, its length is 6 cm, severely corroded; inv. no. 18.833.
- Fragment of a big iron brooch; the length of the fragment is 5.2 cm; inv. no. 18.835 (Pl. 11/4).
- A whetstone made of sandstone; length 21.5 cm; inv. no. 18.176 (Pl. 15/1).

The dwelling discovered in the drainage ditch was uncovered in the trench SI together with the connecting exploration areas. The L1 feature – the dwelling – was oval-shaped and it had a NE–SW orientation, and it measured 4.4 × 3.4 m. Though it was affected by the drainage ditch and its details could not be observed accurately, it probably had a square shape with rounded corners. At 65 cm depth an ashy, grey patch could be observed with potsherds, animal bones and fragments of fireclay, strongly burned pieces of clay and some wattle and daub with impressed marks of posts and hedges. In the yellow sterile soil berms were distinctly revealed on both longitudinal sides of the dwelling. It extended at one side at a depth of 83 cm, at the other side, lightly inclining, at a depth from 85 to 110 cm, fading into the level of the packed but not plastered floor. The floor was rather well defined at a depth of 106–112 cm. Opposite to the already mentioned post pit – discovered in the drainage ditch – another post pit was discovered with the dimensions of 44 × 28 cm, it was at 25 cm depth in the subsoil. Not far from it there was a smaller post pit (32 × 30 cm) deepened 20 cm in the subsoil. Another post pit with the same dimensions was discovered a bit farther at 80 cm. These two pits probably belonged to the entrance of the dwelling,

and they held a flat roof. At the one side of the dwelling we also found a post pit with a diameter of 20 × 15 cm, deepened 10–15 cm in the subsoil. The two longitudinal pits indicated a roofing with purlins, thus, the latter pit had nothing to do with the roof. It might have been the place of a pole for hanging clothes or other objects. The filling of the feature was ashy grey down to the floor level. It was full with potsherds: there were 49 pieces of hand-made and 41 wheel-thrown pottery fragments registered, belonging to different types of vessels. There were also discovered fragments of spindle-whorls and loom weights, a considerable quantity of iron slag, burnt clay, some wattle and daub – indicating the wall structure of the building –, significant amount of animal bones, some fragments of corroded iron brooches, fragments of a sapropelit and several glass bracelets. The finds and mainly the great amount of iron slag yelling from this feature distinguish it from the usual Celtic pit houses, thus, it might have been rather a workshop of iron working than a household (Pl. 3).

- The fragments of a boot-shaped, wheel-thrown, black coloured vessel. Its upper part is like a small pot with rounded rim, without any decoration. Both sides of the 'boot' are decorated with incised, arched lines down to the sole and toe cap of the 'boot'. Its middle part is also decorated with an incised line. It belongs to the group of boot-shaped vessels of smaller size. Dimensions: the rim diam. of the upper part of the boot: 3 cm, height: 4.5 cm, the height from the sole to the beginning of the leg: 6.2 cm, the total height: 10.2 cm, the length of the sole: 15.7 cm, without the heel: 10.1 cm; inv. no. 10.820 (Pl. 13).
- Rim fragment of a wheel-thrown, grey coloured, smooth-surfaced, sand-tempered, bottle-shaped vessel; it has a circular gadrooned decoration under its rim, the colour of the section is grey, the reducing firing; rim diam.: 19 cm; inv. no. 18.192 (Pl. 8/1).
- Rim and body fragment of a wheel-thrown, graphite-tempered, greyish-brown spotted as fired situla with brushed decoration and it is perforated under the rim; rim diam.: 20 cm; inv. no. 18.169 (Pl. 14/2).
- Rim fragment of a wheel-thrown, sand tempered jar, it is greyish-black outside and brown inside, it is a circular gadrooned decoration on its neck; inv. no. 18.190.
- Neck fragment of a wheel-thrown, sand-tempered, grey coloured large pot; inv. no. 18.193 (Pl. 8/3).
- Rim and body fragment of a wheel-thrown, steel grey situla; it has a circular gadrooned decoration under its rim; inv. no. 18.167.
- Body fragment of a large, wheel-thrown, sand-tempered jar, the lower part of the neck is decorated with two circular burnished lines with a slightly gadrooned decoration between them; inv. no. 18.191 (Pl. 8/9).
- Body fragments of a wheel-thrown, sand-tempered, grey fired bottle-like vessel; inv. no. 18.194–195 (Pl. 8/7).
- Neck and body fragment of a wheel-thrown, sand-tempered, grey coloured jar, its surface is smooth and circular gadrooned decoration under its rim; inv. no. 18.189.
- Body fragment of a wheel-thrown, graphite-tempered, steel grey coloured situla, with brushed decoration; inv. no. 18.168–170 (Pl. 8/4).
- Body fragment of a wheel-thrown, grey coloured thin deep bowl, it is perforated under the rim; rim diam.: 28 cm; inv. no. 18.198 (Pl. 16/4).
- Rim and body fragment of a wheel-thrown, graphite-tempered, S-shape profiled bowl, it is perforated at one side; rim diam.: 28 cm; inv. no. 18.199 (Pl. 16/6).
- Rim and body fragment of a wheel-thrown, sand and graphite-tempered, slightly profiled bowl, with smooth surface; rim diam.: 36 cm; inv. no. 18.200 (Pl. 8/2).
- The fragment of a hand-made, grog-tempered, smooth-surfaced bowl, with inverted rim, it is grey outside and black inside; rim diam.: 22 cm; inv. no. 18.226.
- Rim and body fragment of a wheel-thrown, sand-tempered, brown and grey spotted, engobed lid. Under its rim and upper part there are two circular burnished lines, between them there is an incised triangle-shaped line. Inside the 'triangles' there is a *pointillé* decoration. The inner side of the lid has got a rim, so it properly covers the vessel; rim diam.: 23 cm; inv. no. 18.103 (Pl. 14/1).

- Body fragment of a wheel-thrown, graphite-tempered, steel grey coloured, brown spotted small situla with incised brushed decoration on its surface; inv. no. 18.168.
- Body fragment of a wheel-thrown, slightly engobe applied, dark grey coloured vessel; ornamented with a wide gadrooned decoration, under which there are stamped concentric circles connected with parallel, burnished lines; inv. no. 18.132 (Pl. 15/5).
- Body fragment of a wheel-thrown, smooth-surfaced, grey coloured big vessel; decorated with stamped, roulette-like motifs connected with stamped concentric circles; in. no. 18.897 (Pl. 15/7).
- Body fragment of a wheel-thrown, graphite-tempered situla with comb impressed decoration; inv. no. 18.094.
- Rim and body fragment of a wheel-thrown, sand-tempered, engobe applied black fired big vessel, its section is brick red coloured; inv. no. 24.954 (Pl. 18/3).
- Rim and neck fragment of a wheel-thrown small vessel, the applied engobe on it was fired black, its section is brown; inv. no. 18.926.
- Body and bottom fragment of a wheel-thrown, graphite-tempered, steel grey coloured big situla; inv. no. 18.203 (Pl. 12/6).
- Rim and body fragment of a wheel-thrown, smooth-surfaced, brown coloured with grey fired spots, deep bowl with everted rim; inv. no. 18.165.
- Body fragment of a wheel-thrown, graphite-tempered situla, it is greyish-brown spot-fired outside and steel grey inside; inv. no. 18.977 (Pl. 8/8).
- Rim and body fragment of a wheel-thrown, smooth-surfaced, graphite-tempered situla with thickened rim, its neck is marked with a thin incised line and wide, burnished vertical lines are connected to it; rim diam.: 24 cm; inv. no. 18.927 (Pl. 8/4).
- Rim and body fragment of a wheel-thrown, sand-tempered, brown coloured, deep bowl; rim diam.: 24 cm; inv. no. 24.953 (Pl. 8/6).
- Rounded rim and body fragment of a wheel-thrown, sand-tempered, engobe dipped light brown coloured deep bowl; inv. no. 18.029.
- Fragment of a wheel-thrown, smooth-surfaced, fine sand tempered, dark grey coloured thin bowl; rim diam.: 22.5 cm; inv. no. 18.883.
- Rim and body fragment of a wheel-thrown, smooth-surfaced, sand-tempered, light grey coloured bowl with S-shaped profile; rim diam.: 24 cm; inv. no. 18.879.
- Fragment of a hand-made, grog-tempered, grey-brown spot-fired tick, deep bowl with straightened rim; rim diam.: 36 cm; inv. no. 18.806 (Pl. 12/5).
- Body fragment of a hand-made, grog-tempered thick pot, decorated with finger-tip impressed boss; inv. no. 24.848 (Pl. 16/1).
- Body fragment of a hand-made, fireclay-tempered, brown coloured pot, decorated with boss and small impressed decoration; inv. no. 24.847 (Pl. 16/2).
- Handle fragment of hand-made, sand-tempered jar with grey-brown spots, the section of the fragment is square-shaped; inv. no. 24.960.
- Bottom fragment of a wheel-thrown, graphite-tempered steel grey coloured situla; inv. no. 24.062.
- Body fragment of a wheel-thrown, graphite-tempered situla with wide, brushed decoration; inv. no. 24.961.
- Body fragment of a wheel-thrown, sand-tempered, rather smooth-surfaced, grey coloured big pot; inv. no. 18.880.
- Fragment of a sapropelit bracelet; inv. no. 35.290 (Pl. 11/3).
- Fragment of a glass bracelet, its section is D-shaped, its basic colour is cobalt blue decorated with yellow line incrustation; inv. no. 35.289 (Pl. 11/9).
- Fragment of a glass bracelet, its section is D-shaped, its basic colour is green decorated with yellow line incrustation; inv. no. 35.290 (Pl. 11/8).
- Spindle-whorl cut from the body of a graphite-tempered, thin vessel; inv. no. 18.196 (Pl. 12/5).
- Fragment of an iron brooch, severely corroded, it has a long bow, its foot-plate is joined to the bow; length: 8 cm; inv. no. 18.835 (Pl. 11/5).
- Hand-made biconic, brown coloured spindle-whorl; diam.: 3.5 cm; inv. no. 18.831 (Pl. 11/10).
- Hand-made biconic, brick red coloured spindle-whorl; diam.: 3.2 cm; inv. no. 18.898 (Pl. 11/11).

- Fragment of an iron knife, the back of blade is arched (HaD type) very corroded; length of the fragment: 11 cm; inv. no. 8833 (Pl. 11/1).
- Fragments of iron slag, inv. no. 24.823–825 (Pl. 10/1–2).
- Beside the iron slag a severely corroded iron object, a socketed tick iron sheet (probably a tool, without known analogies) was found; inv. no. 18.101 (Pl. 10/5).

In the filling of the feature a considerable quantity of animal bones was found; among them there were some utensils: a polished cow rib and a cut and sharpened antler. Apparently – and based on analogies (SZABÓ 2007, 285–295) – they belonged to *bos primigenius*, *cervus elaphus*, *capreolus capreolus*, *sus crofa*, *lepus europeus*, *equus caballus*, but no archaeozoological examinations had been carried out yet.

The settlement continued towards Căpleni (zone D), where a large quantity of La Tène ceramics had been collected, coming mainly from the drainage ditch along the left side of Crasna River from the 6.2 to 6.8 river km.

- Rim and body fragment of a wheel-thrown, graphite and grog-tempered, rough-surfaced big dolium; inv. no. 15.736 (Pl. 15/2).
- Rim and body fragment of a hand-made, sand-tempered, grey coloured bowl with inverted rim; inv. no. 24.797 (Pl. 18/1).
- Fragment of a wheel-thrown, sand-tempered, grey coloured, deep bowl; rim diam.: 22 cm; inv. no. 17.921.
- Neck and body fragment of a wheel-thrown, bottle-shaped vessel, it is grey outside, its neck is decorated with a lattice decoration between two burnished lines; inv. no. 19.031 (Pl. 18/2).
- Body fragment of a wheel-thrown, sand-tempered, engobe dipped, grey coloured pot with burnished lattice decoration; inv. no. 15.741 (Pl. 18/5).
- Body fragment of a wheel-thrown, sand-tempered, smooth-surfaced, grey coloured pot with burnished lattice decoration; inv. no. 15.742 (Pl. 18/4).
- Rim and body fragment of a wheel-thrown, graphite-tempered, steel grey coloured situla, decorated with circular fishbone pattern under its rim; inv. no. 15.735 (Pl. 18/6).

The pottery of the sites can be divided into two major groups: hand-made and wheel-thrown vessels. Among the hand-made vessels the 'B' type bowls of different size are popular (NÉMETI 1988a, pl. 6/9–15; NÉMETI 2010, pl. 13/1–7); the 'C' type barrel-shaped pots (NÉMETI 1988a, pl. 6/16–22; NÉMETI 2010, pl. 13/8–18); body and rim fragments of 'A' type big vessels (NÉMETI 1988a, pl. 6/2–8; NÉMETI 2010, pl. 12/1–7). Fragments of 'D' and 'E' type jars and beakers (NÉMETI 1988a, pl. 7/1–13; NÉMETI 2010, pl. 14/1–8; 15/1–5). These types of vessels can be found in the 'A' type of the Sajópetri–Hosszú-dűlő settlement (SZABÓ–TANKÓ 2007, 167–176). The most frequent types of vessels are the 'I' type situlae (NÉMETI 1988a, pl. 8/18; NÉMETI 2010, pl. 18/12–13); 'H' type bowls with inverted rim (NÉMETI 1988a, pl. 8/8–13; NÉMETI 2010, pl. 17/1–4); 'J' type deep bowls (NÉMETI 1988a, pl. 8/19–26; NÉMETI 2010, pl. 17/6; 18/1–10); 'K' type bottle-shaped vessels (NÉMETI 1988a, pl. 9/1–11; NÉMETI 2010, pl. 18/1–6). The typology of the beakers, cups and jars fragments could be specified only according to their handles. These types of vessels can be found in the 'B' type of the settlement at Sajópetri–Hosszú-dűlő (SZABÓ–TANKÓ 2007, 167–176). The lid revealed in the dwelling L1 is rear, it belongs to the 'N' type (NÉMETI 2010, pl. 19/12). Analogies can be mentioned from the settlement at Biharia (DUMITRAȘCU 1982, 157–166, pl. 5/1) or grave 2 from Farnos (HELLEBRANDT 1999, pl. 6/3). This type of lid can be also found in LT D settlements attributed to Dacians: (CRIȘAN 1969, 132,

pl. 4/11); like at Zemun (TODORVIĆ 1968, pl. 6/2–3); Malaja Kopanja (KOTIGOROSKO 1995, pl. 45/22–23); Brad–Zargidava (URSACHI 1995, pl. 109/1–5; 111/15). This type of lid is dated to LT D (2nd–1st c. BC) and appears both in Dacian and Celtic sites.

The 'L' type boot-shaped vessels are also rare (NÉMETI 2010, pl. 22/2). This type of vessel is already present in the Tumulus culture, more frequent in the Urnfield culture and in the late period of the Early Iron Age (HaD) and the beginning of the Late Iron Age (LT A). Analogies can be mentioned from Gávavencselő–Kastélykert (DANI 2001, pl. 4/5a, 5b, Gáva culture); Budapest–Békásmegyer (SCHREIBER 2010, pl. 11/1; 13/2; 26/1; 32/3; 90/1–4); Mannersdorf grave 4 (NEUGEBAUER 1992, 56, Abb. 19); Dürnberg grave 131 (MOOSLEITNER 1980, 151–155, Abb. 23); Curtiușeni, grave 16 (NÁNÁSI 1975, 47–50; TELEAGĂ 2008, 158, pl. 16/1–3); Gáva–Katóhalom (JÓSA 1915, 197–211); Kosd (SZABÓ 1992, 50); Polárikovo–Nové Zámky, grave 75 (BENADIK 1975, 98); Jikev (SCHWAPPACH 1967, 320–332, Abb. 1/1); or the settlement from Esztergom–Szentgyörgymező (SZÖLLÖSI 2009, 123–156). The boot-shaped vessels were discovered mainly in graves, exceptions are the finds from Kálmánd–Krasznapart and Esztergom–Szentgyörgymező, which were revealed from settlements. From a typological point of view, the tiered vessels – bottle and bowl – do not belong to the type of boot-shaped vessels, as it was considered by E. TELEAGĂ (2008, 119).

The 'O' type crucible is connected to iron smelting (NÉMETI 2009a, t. XIV/1–3), with analogies at Mukachevo–Gállis-Lovacska (BIDZILJA 1971, fig. 21); Polgár–Király-érpart (SZABÓ *ET AL.* 2008, fig. 11); Matijevo (ČERKUN 1995, fig. 2/13). 'M' type dolia storage vessels were unearthed at Berea–Nyúlvár (NÉMETI 2009a, t. XVI/2), Pișcolt–Kincsverem (NÉMETI 2009a, t. XI/3; NÉMETI 2010, pl. 19/8). Spindle-whorls frequently appear in the La Tène settlements, the biconic shape is of Scythian tradition, while the flat shape is of Celtic type, with analogies at Sajópetri–Hosszúdűlő (SZABÓ 2007, pl. LXXIV/3; LXXVI/11; C/15; CXIX/3–4; CXXIV/12–15; CVIII/1).

The knife with arched back blade can be dated to HaD, but they also appear in the Celtic settlements and cemeteries. Analogies are known from the HaD cemetery from Sanislău–Homokosdomb; the LT B–C cemetery from Pișcolt–Homokosdomb; LT B2–C cemetery from Sanislău–Téglavető; the LT C settlement from Ciumești–Tökös (NÉMETI 1999, 110–111); or the LT B–C settlement from Sajópetri–Hosszúdűlő (SZABÓ 2007, pl. CXLI/3; CXLIV/5–6).

The shaft-hole iron graver for woodworking has analogies at Mukachevo–Gállis-Lovacska (BIDZILJA 1971, pl. 26/1–3) or Trísov (BREN 1991, 244–247). Iron nails and cramps are also frequent, in most of the cases severely corroded these are revealed in settlements and they probably were used at the structure of dwellings, like at Sajópetri–Hosszúdűlő (SZABÓ 2007, pl. CXXXIX/2; CLXVII/4, 13–14; CLV/9).

The brooches from the settlements were seriously corroded, thus they can be hardly included in typologies. Probably they belong to the 19th type big-sized brooches with 2+2 springs (NÉMETI 1993, 3A, 4th phase at the cemetery from Pișcolt). Analogies for brooches with 1+1 spring are known from the Celtic cemetery at Tiszavasvár (ALMÁSSY 1998, 55–106, pl. I/2; II/6; VIII/3–4, XI/4; XVIII/1–2). This type of big-sized iron brooch is characteristic for the LT C1 and the following period. In the cemetery with 17 unearthed graves from Tiszavasvár there are twelve such brooches.

The ring-shaped, flat, iron bracelet, decorated by successive smaller and larger knobs is very rare among the Celtic finds, only the iron bracelet dated to LT C1/C2 discovered in the cemetery at Jászberény–Cseróhalom could be mentioned (KAPOSVÁRI 1969 178–198, pl. 1/10). The

fragments of glass bracelets are frequent and they mainly appeared in settlements: Pişcolt–Kincsverem (NÉMETI 2000, 166–178, with further bibliography); Sajópetri–Hosszú-dűlő (SZABÓ 2007, pl. CXXXVII/2). The sapropelit (or lignite) bracelets are well-known from the Celtic inhumation graves, but fragments also appeared in settlements, like at Sajópetri–Hosszú-dűlő (SZABÓ 2007, pl. CXXXVII/13; CXXXVIII/6–9).

The Celtic settlement from Kálmánd–Krasznapart is 2 km long, along the Crasna River between the 5 and 6.8 river km. Many sites were registered at the territory called *Disznólegelő*, and between the 5.9–6.1 river km, while in D zone we did not find sites. Probably, the main part of the settlement was destroyed during the constructions drainage ditches. The L1 dwelling feature with the great amount of iron slag should be emphasized, since it suggests the existence of a workshop of iron working, with analogies at Carei–Protestant cemetery (unpublished finds); Sajópetri–Hosszú-dűlő (SZABÓ 2007, 260–270, pl. LXII).¹ According to the finds discovered at Ciumeşti, Berea, Urziceni (from Nyírség, Ecsed Marsh), remarkable deposits of bog iron are known, which were used by the Celts for making weapons and artefacts.

The settlement lacks appropriate artefacts for a precise dating. The fragments of big-sized brooches, glass bracelets, the wheel-thrown Celtic lid and the fragment of a wheel-thrown pot with burnished lattice decoration made us to conclude that the settlement at Kálmánd–Krasznapart could be dated to the end of the middle La Tène (LT C1/C2) period, analogous to the one from Nyékládháza–Istvántó dated to LT C2–D1 phases (HELLEBRAND 2006, 79–106, k. 7/1, 8/13).

APPENDIX

Archaeological repertory of Cămin/Kálmánd–Krasznapart

A. The drainage ditch along the right dike of Crasna river, from the Crasna bridge at Căpleni to the Crasna bridge at Cămin (Pl. 1/5A). From an archaeological point of view, the most important area of this zone is Cămin–*Disznólegelő* (Pl. 2/1).

A1. A part of settlement from Bodrogheresztúr culture and contracted burial from the same period (NÉMETI 1988b, 123–126).

A2. At 250–300 m from the Crasna bridge towards the village Căpleni, in the wall section of the ditch the remains of a Late Iron Age (Celtic) settlement were discovered.

A3. At the same place fragments of Roman pottery from the Imperial period, some probably is belonging to the Przeworsk culture.

A4. Isolated traces of an Avar settlement from the 8th–9th c.

A5. The remains of village from the 13th–14th c. The village Cămin first appeared in the documents in 1392, mentioned as *Ket-Kalmand* (BOROVSKY 1910, 89; NÉMETI 2002, 13–27; NÉMETI 2009b, 18–42, 49–52; NÉMETI 2009c, 33–68).

B. The zone from the Crasna bridge towards village Căpleni, on the left bank of the river, between the 5.6 and 5.9 river km (Pl. 1/5B).

B1. Some completely destroyed features from the middle Neolithic period.

B2. Some refuse pits, wattle and daub, hearth, and fragments of pottery belonging to the Tiszapolgár culture, Middle Copper Age.

B3. At the same place, partly superposed, the remains of a settlement from the Bodrogheresztúr culture.

B4. Isolated traces of a La Tène settlement.

¹ Presenting the workshop of iron working from Sajópetri–Hosszú-dűlő, the authors also described the technologies of iron working.

C. The zone between the 5.9–6.1 river km on the left bank of the river (Pl. 1/5C).

C1. A refuse pit from the Tiszapolgár culture.

C2. The Early Bronze Age, Szaniszló culture artefacts (rescue excavation between 1992–1999).

C3. The remains of a Late Bronze Age (Cehăluț I) settlement, Hajdúbagós/Pișcolt–Cehăluț culture (?).

C4. Traces of a Pregáva (Gáva I) site, probably continuing also in the Gáva culture.

C5. The remains of an Iron Age (Scythian Age) site.

C6. La Tène (Celtic) settlement, which is in relation to the feature observed on the right bank of the river (zone A).

C7. Isolated pottery fragments from the Roman Imperial period, 2nd–4th c. AD.

D. On the left bank of the river between the 6.2–6.8 river km (Pl. 1/5D).

D1. The continuation of the Early Bronze Age I. settlement.

D2. Isolated La Tène (Celtic) objects.

E. On the bank of the river from the Crasna bridge at Cămin towards Berveni, till the pumping station (Pl. 1/5E).

E1. Late Neolithic settlement and grave (NÉMETI 1987, 2–24).

E2. The continuation of the Tiszapolgár settlement (B2).

E3. The ruins of a Late Avar settlement from the 8th–9th century.

F. This zone is the part of the river bank from the pumping station till the Crasna bridge at Berveni (Pl. 1/5F).

F1. The continuation of the Late Neolithic settlement (E1).

F2. The traces of another Tiszapolgár settlement.

F3. Settlement dated to the Cernavodă III–Boleraz culture and a cremation grave (NÉMETI 2001).

F4. Isolated remains of Late Bronze Age II (Gáva culture) settlement, opposite to the hump factory at Berveni.

F5. Some objects from Árpadian period (11th–13th c.), near to the Crasna bridge at Berveni (probably the disappeared Tótbörvely village (?), mentioned in the documents).

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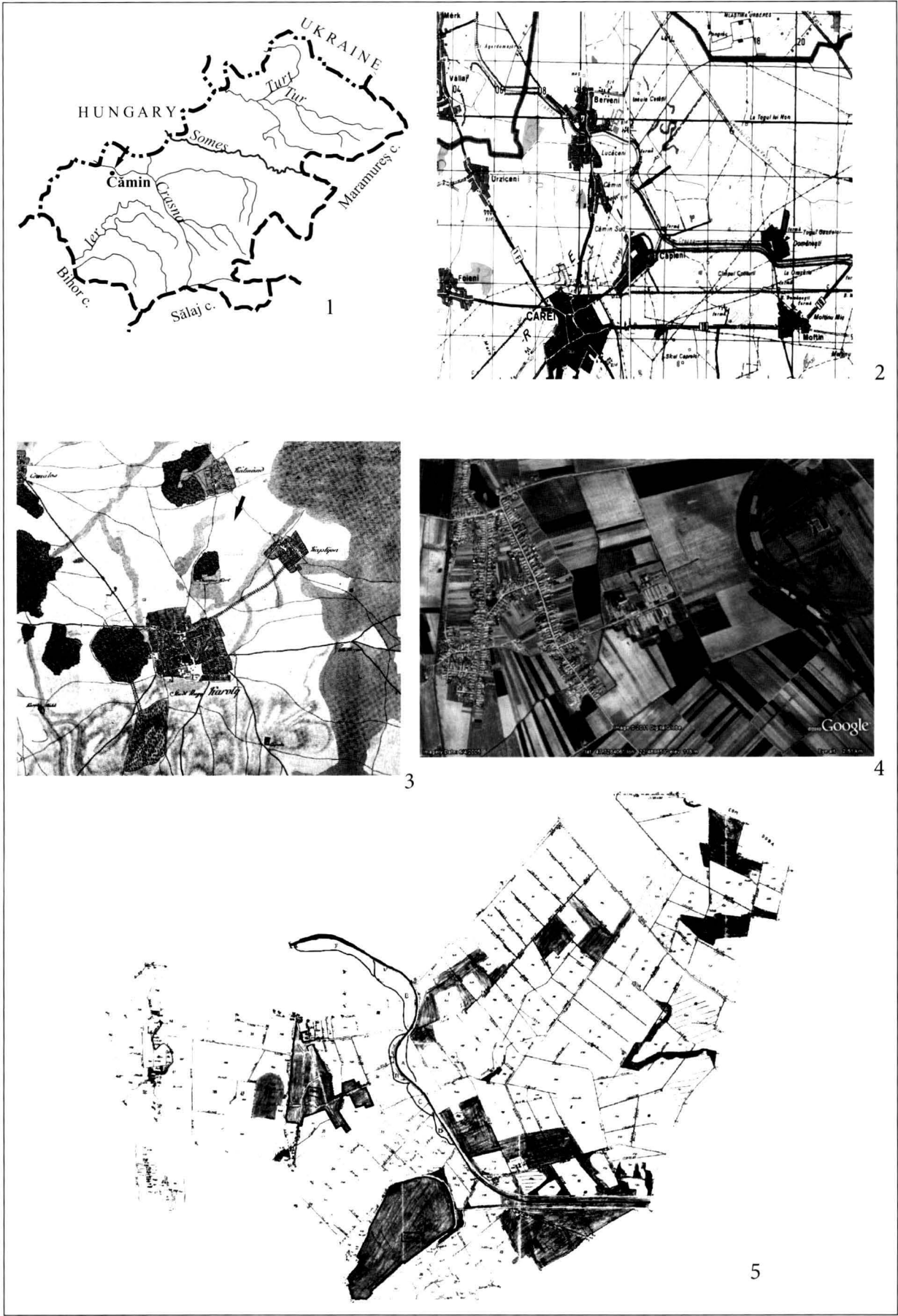


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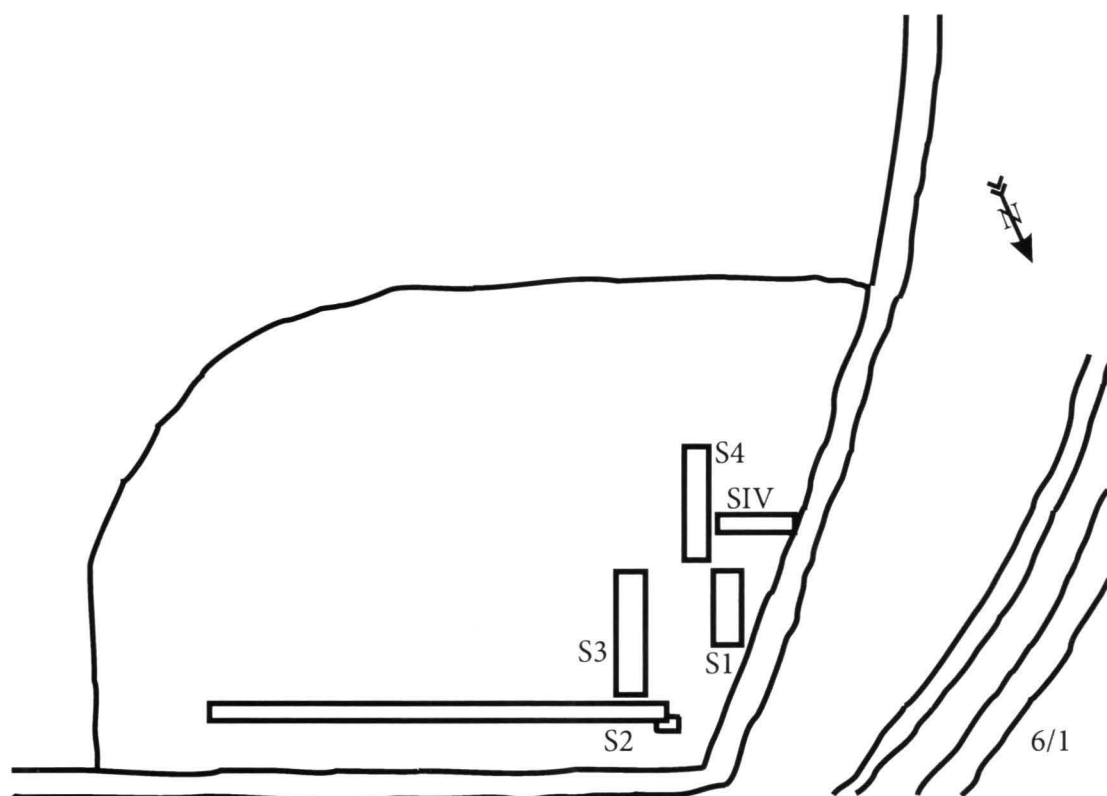
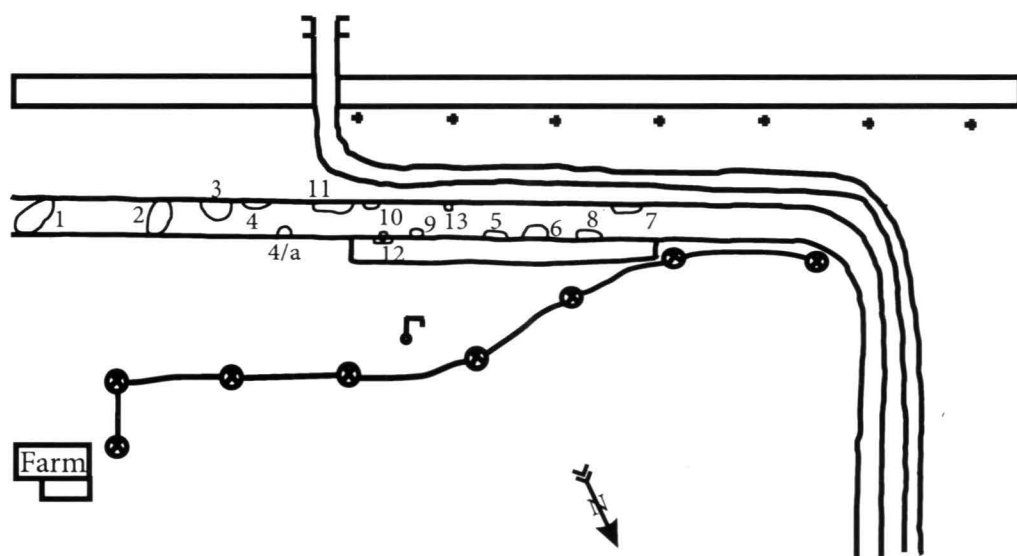


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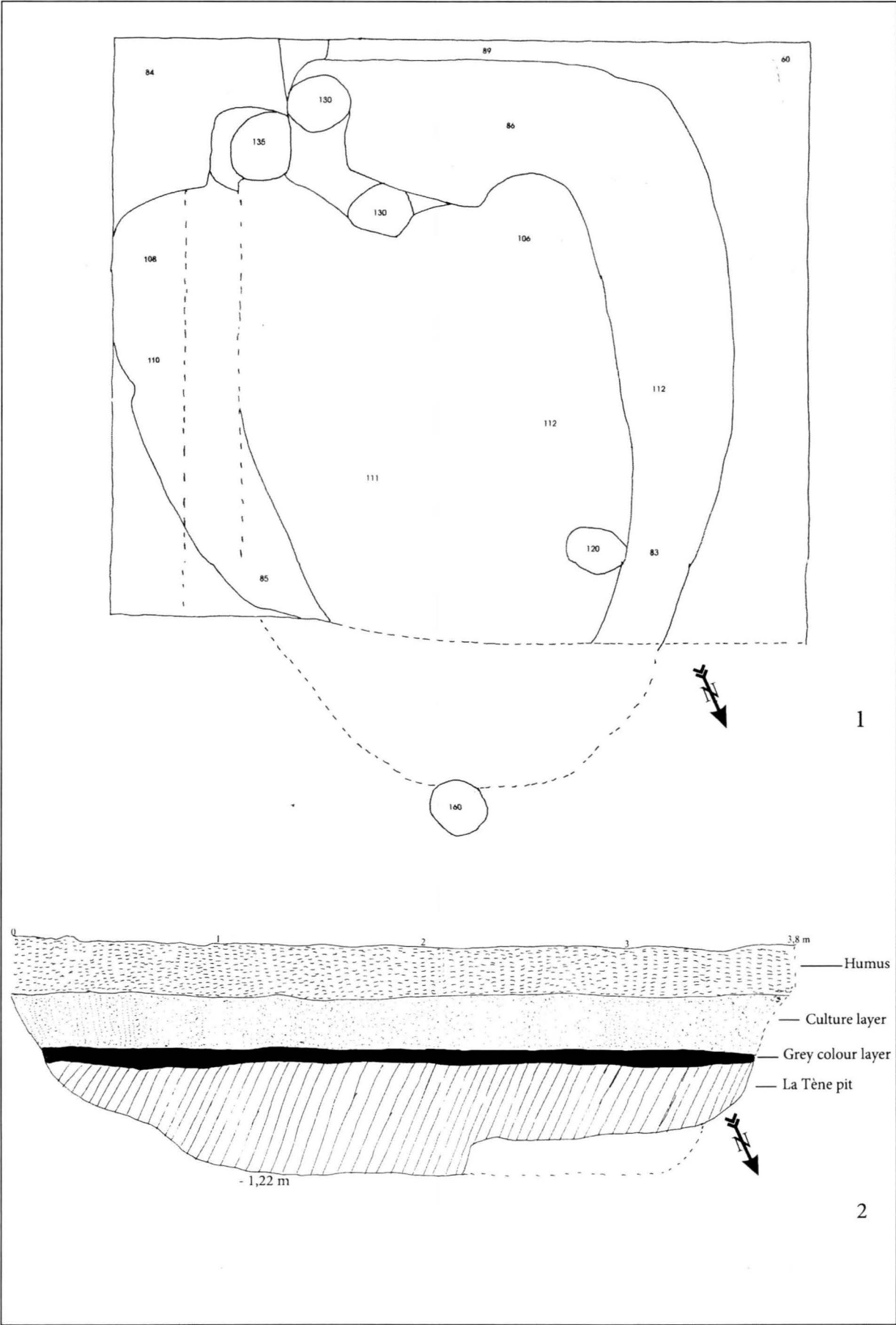


Plate 3. Cămin-Krasznapart, dwelling no 1. Plan and profile.

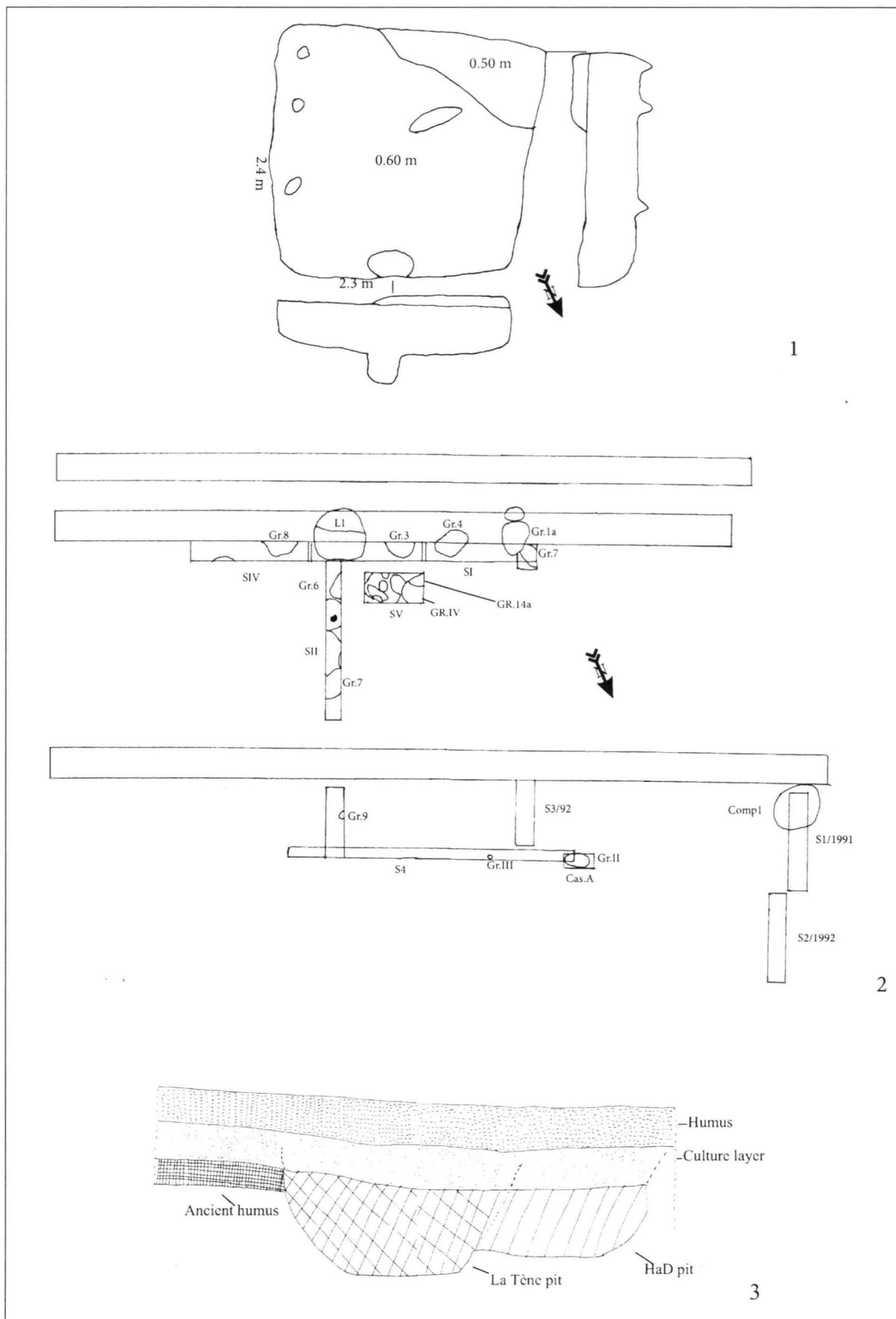


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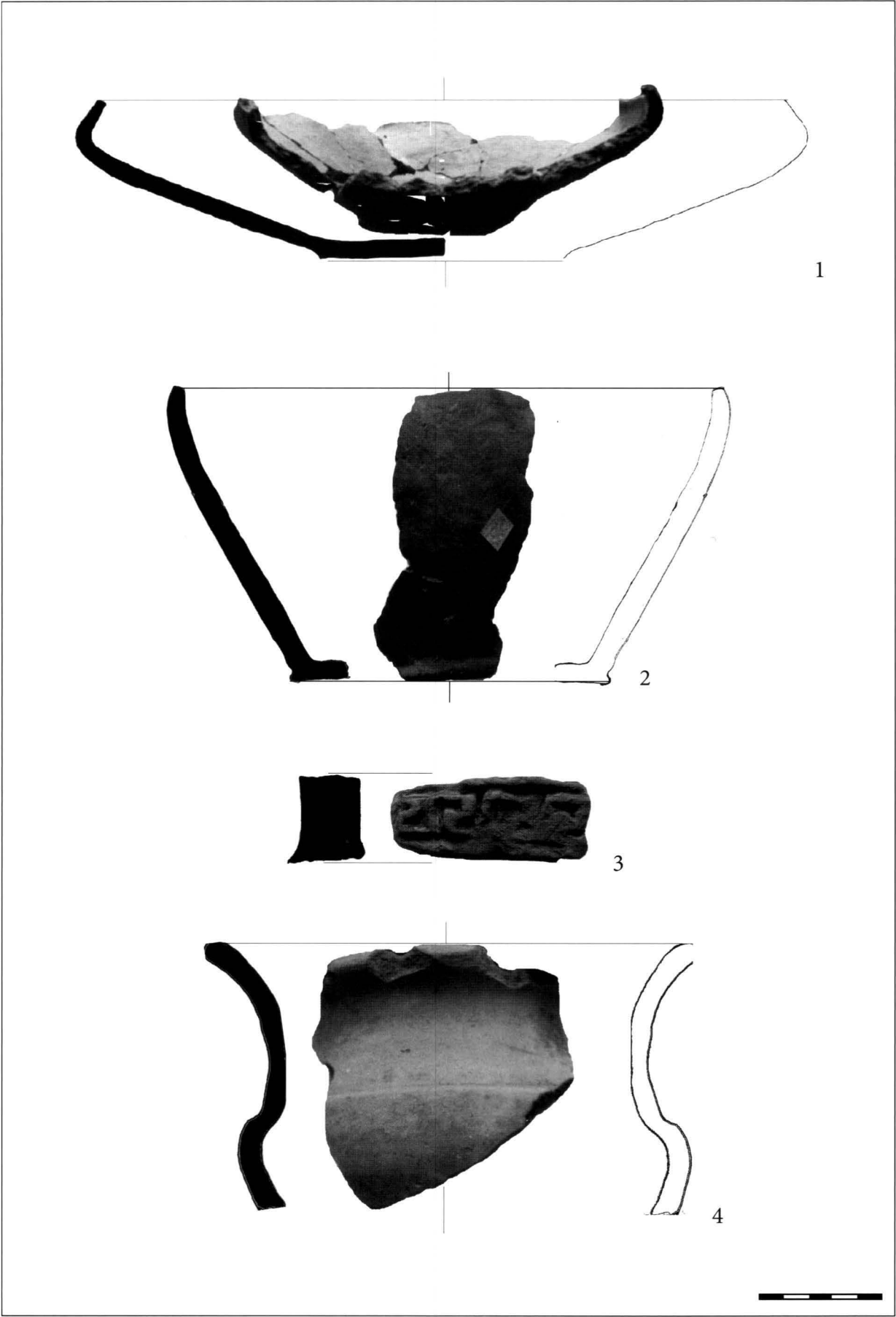


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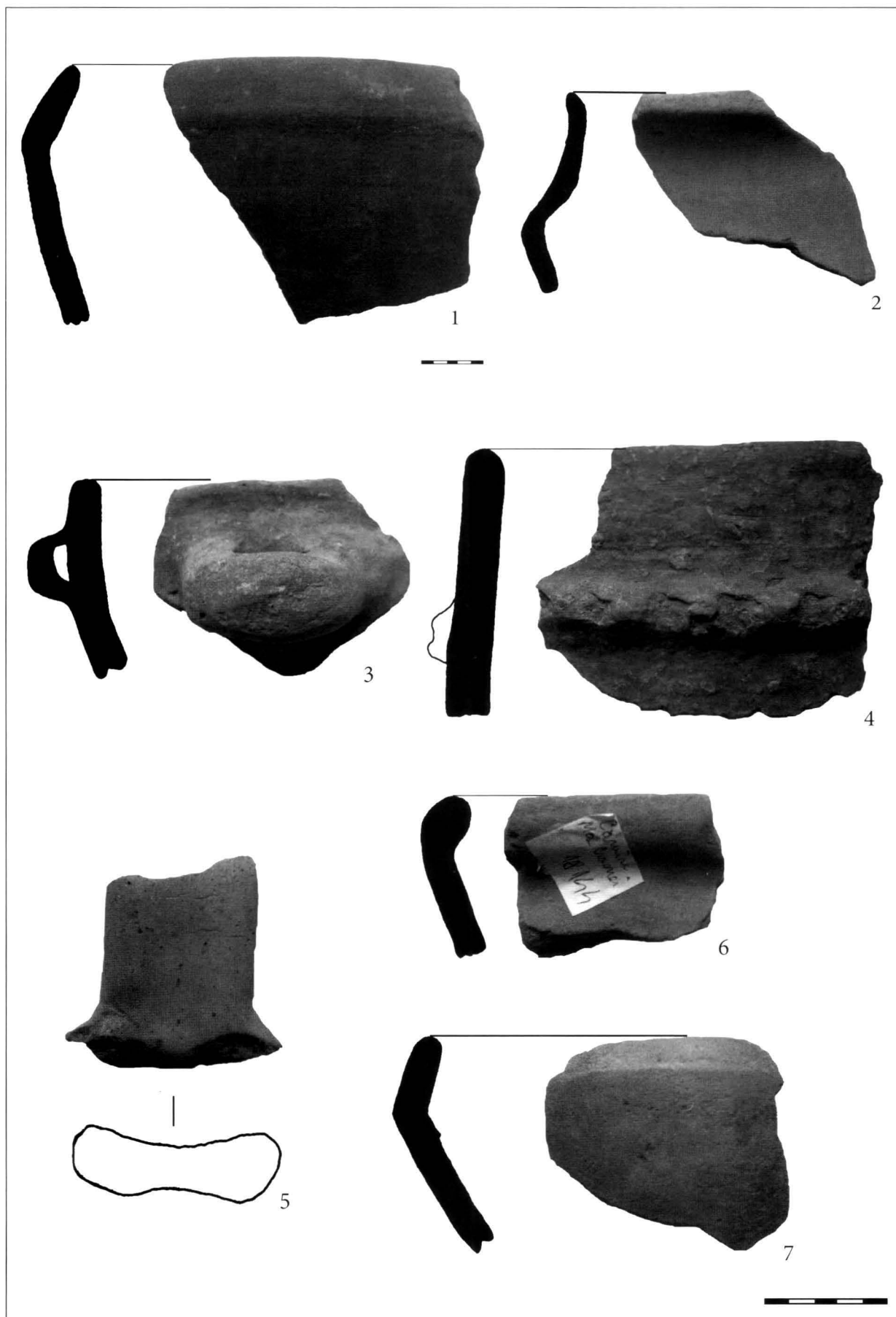


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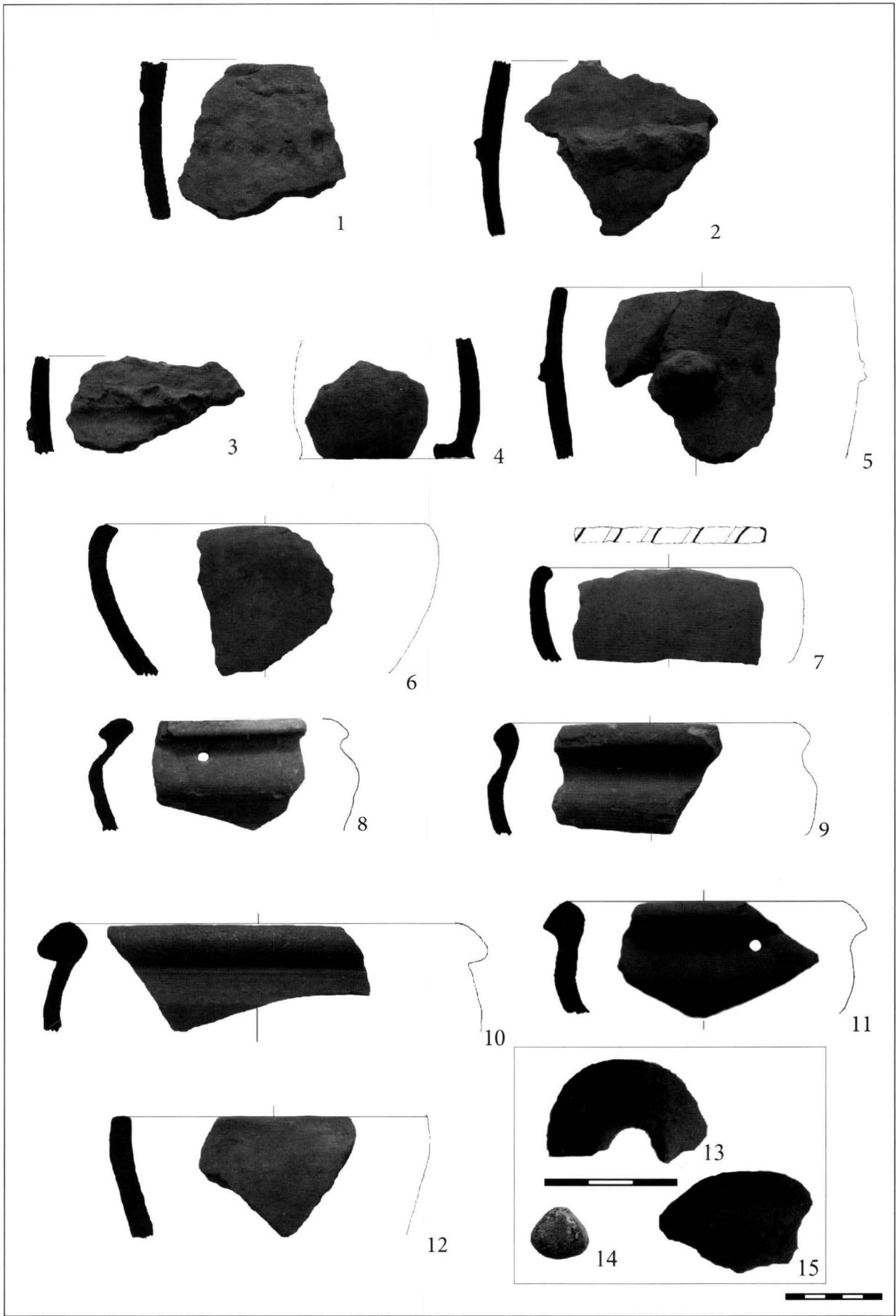


Plate 7. 1–12. Hand-made and wheel-thrown Celtic pottery from Pit 3a;

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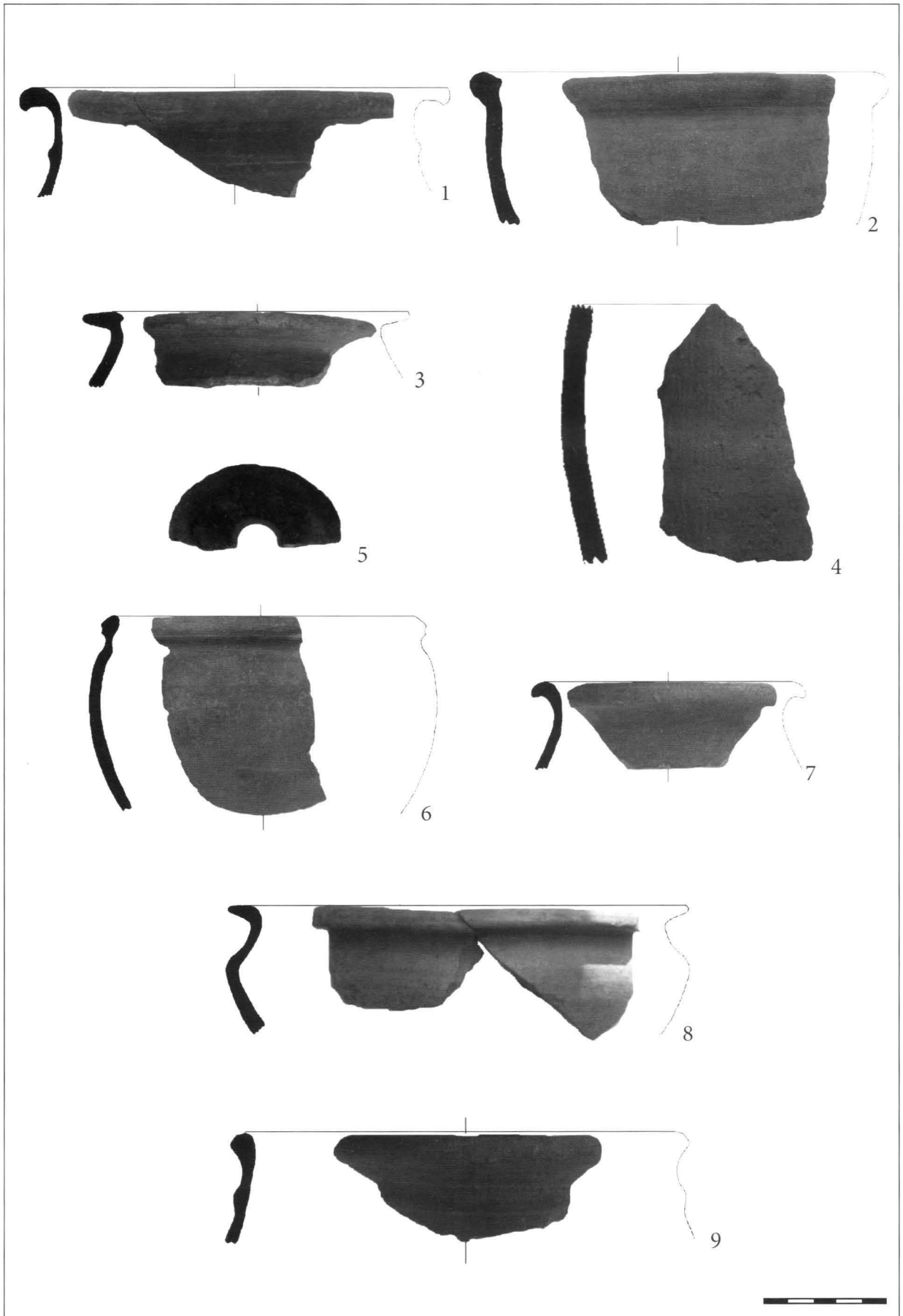


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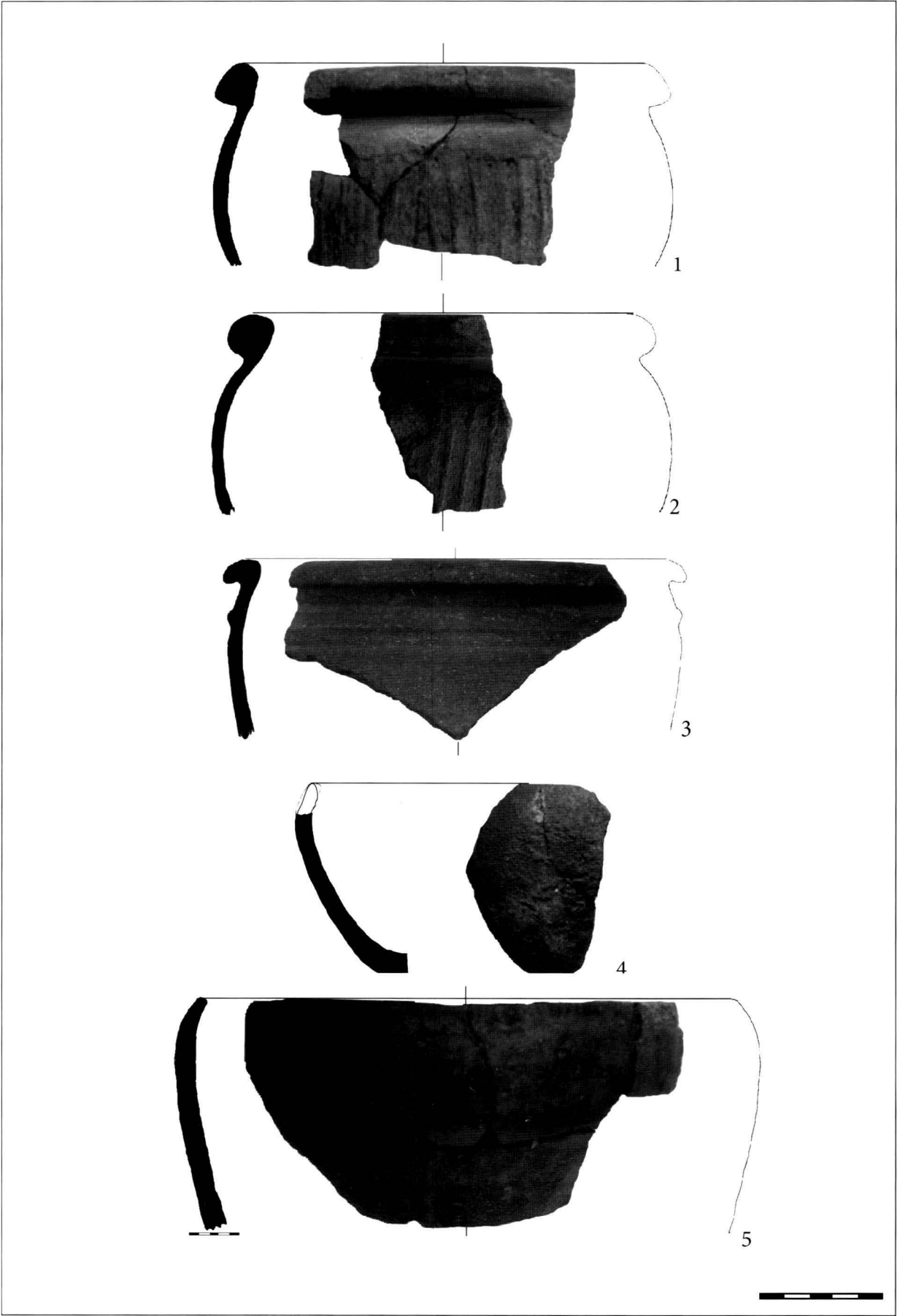


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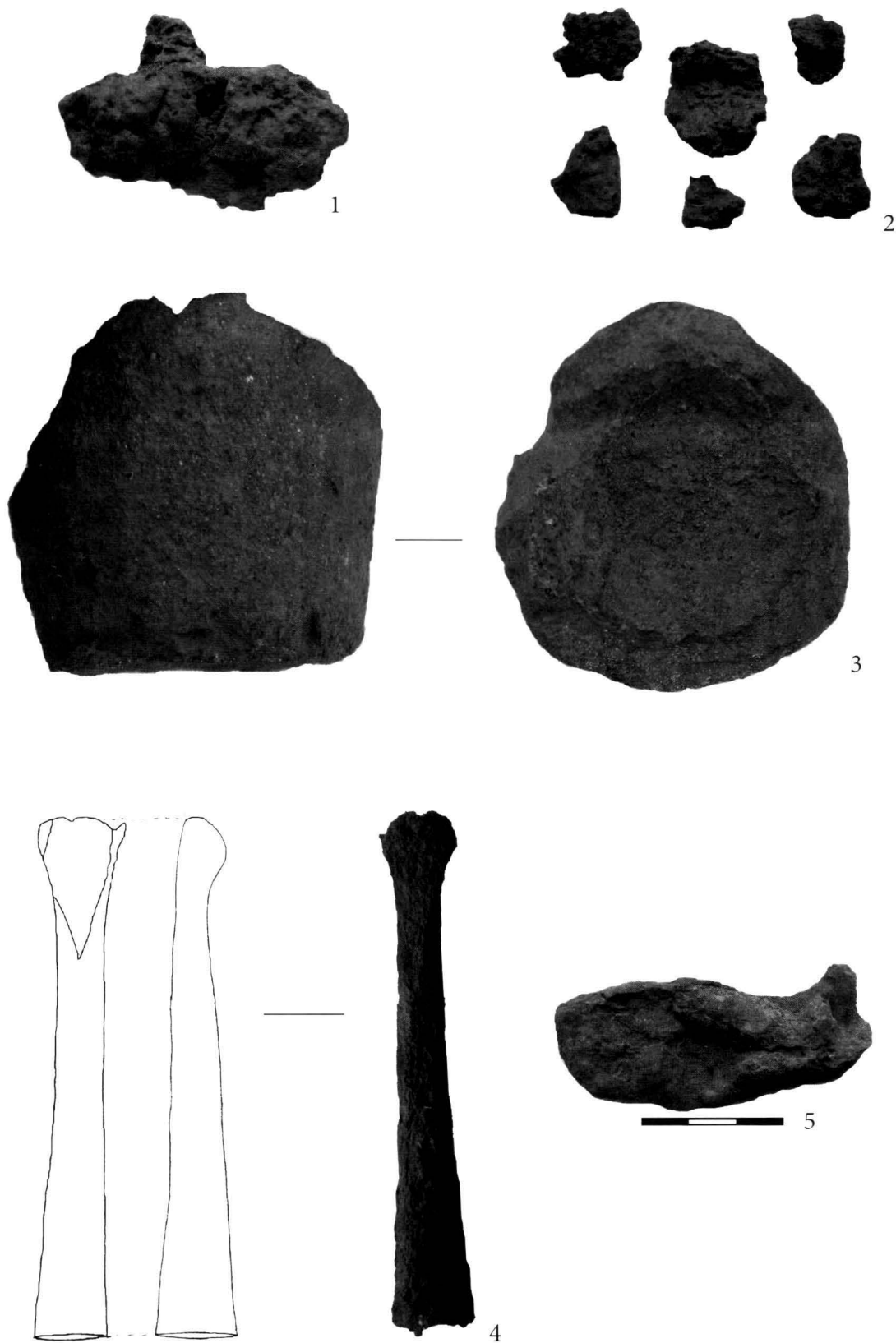


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5. Corroded iron object (SI/L1).

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<https://biblioteca-digitala.ro> / <http://muzeulmures.ro>

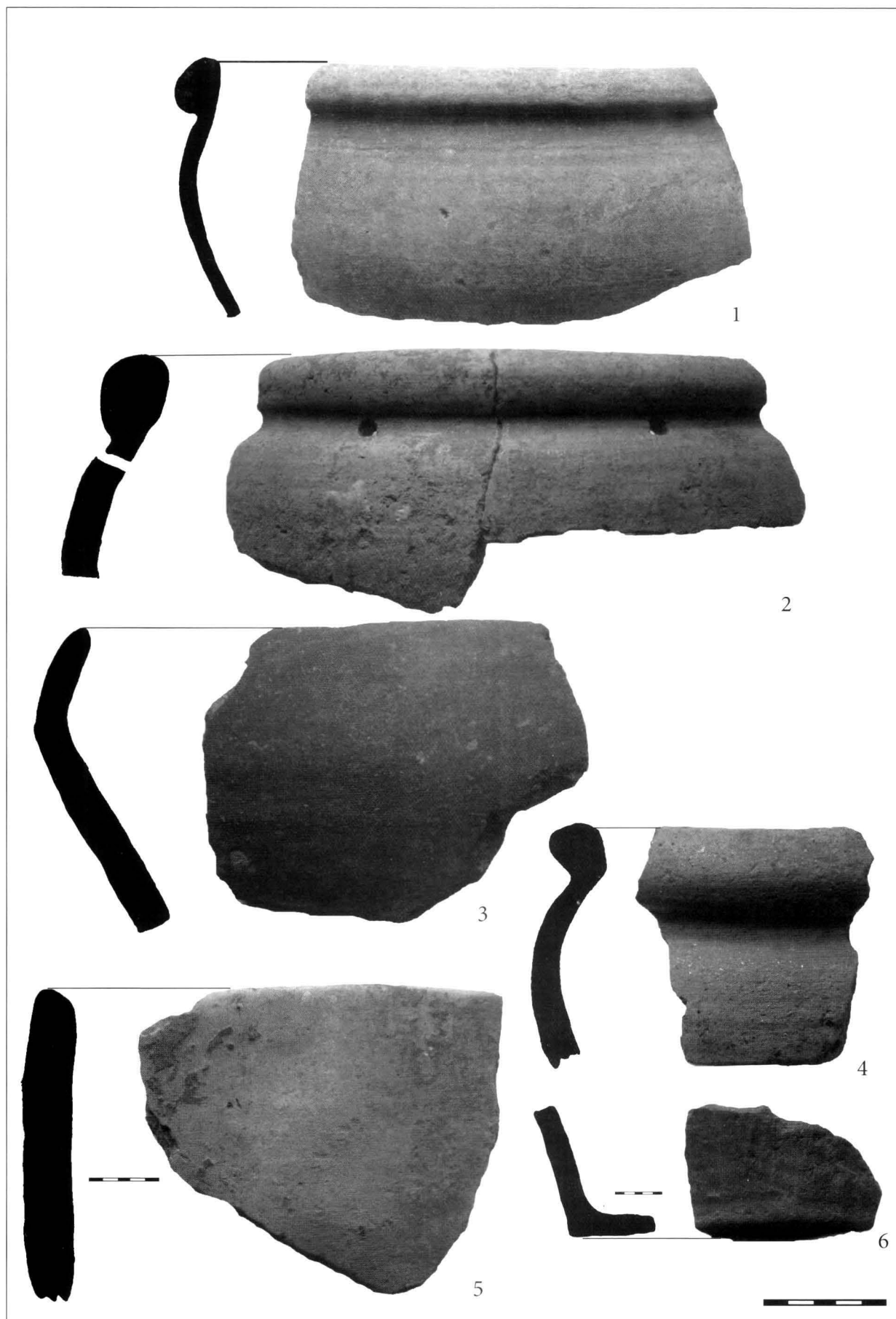


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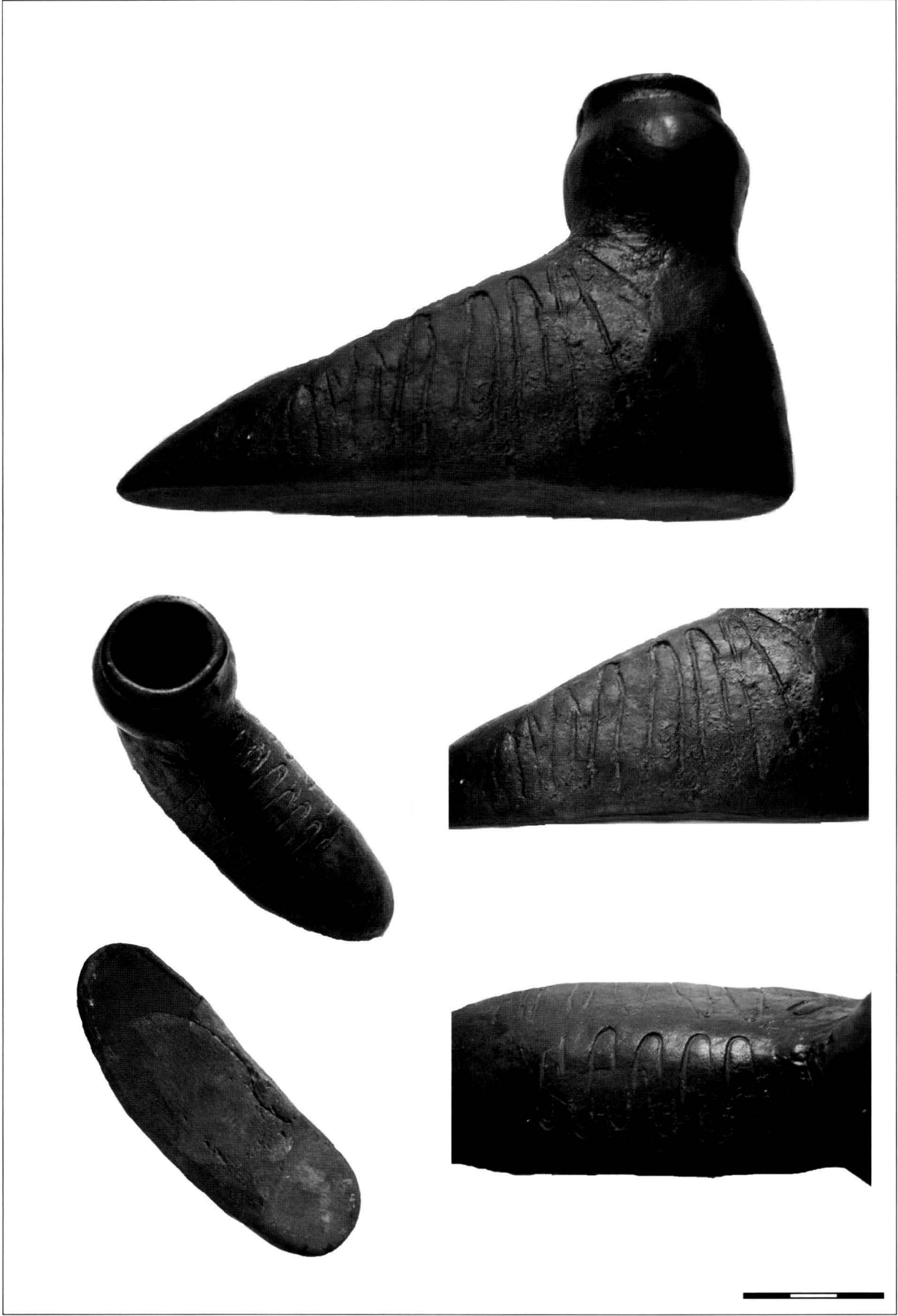


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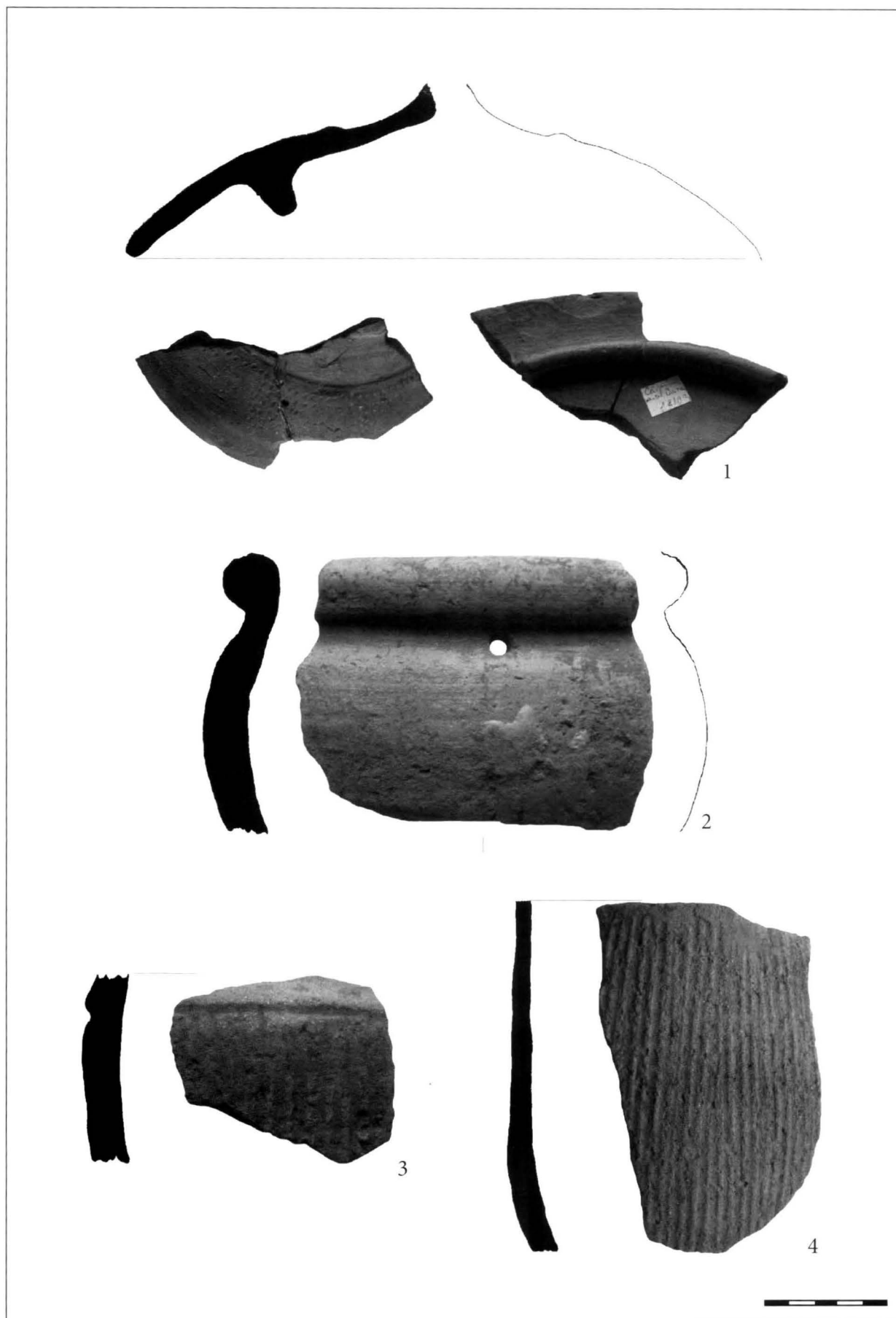


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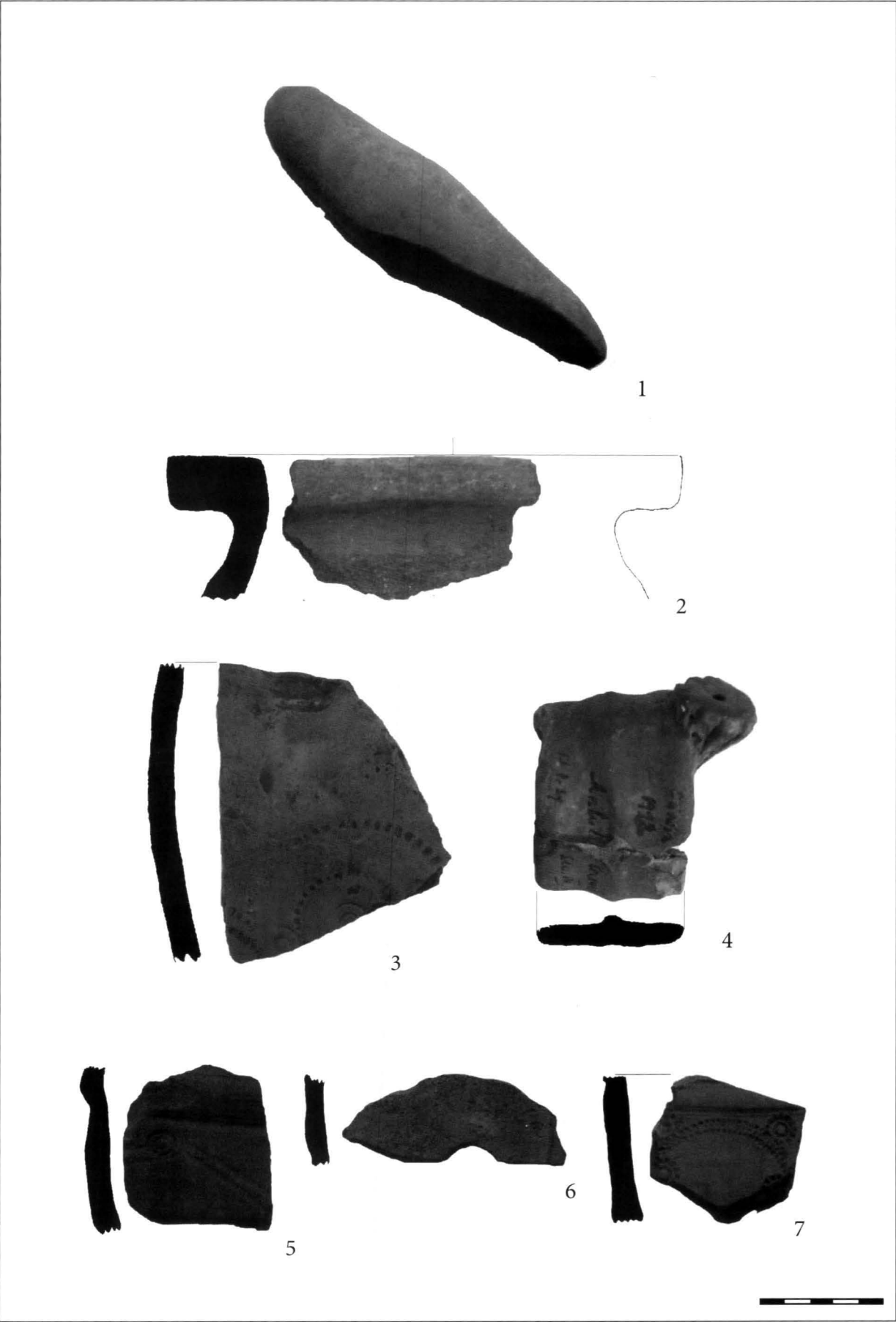


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<https://biblioteca-digitala.ro> / <http://muzeulmures.ro>



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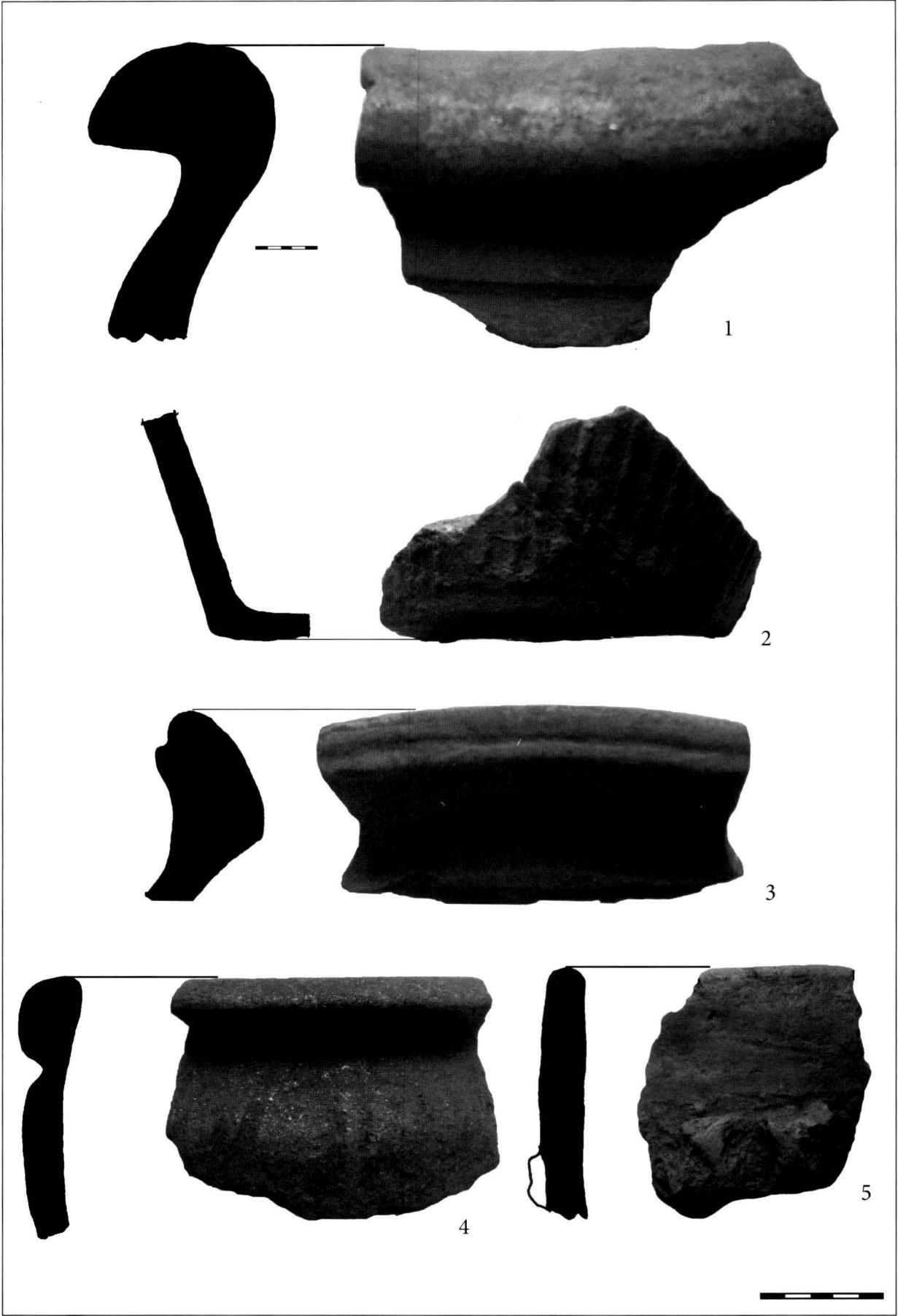


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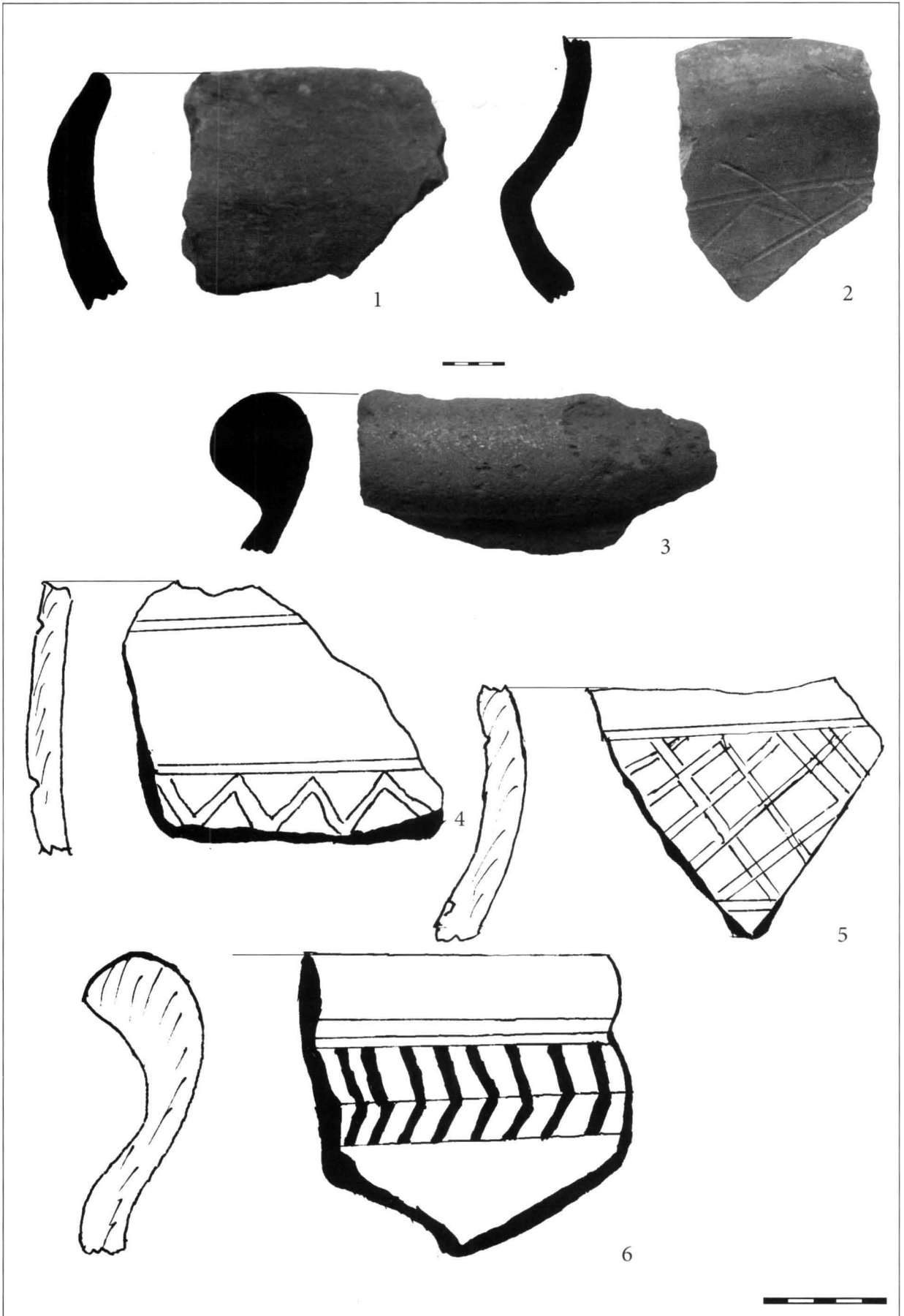


Plate 18. La Tène pottery (D zone). 1, 3, 6. Wheel-thrown; 2, 4–5. Decorated pottery.

ABOUT AN IRON VESSEL FROM SARMIZEGETUSA REGIA*

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The paper presents an iron vessel found in a suspicious way on the territory of the Dacian capital, Sarmizegetusa Regia, lately attained by the Museum of Deva. In Late Iron Age these types of artefacts are rare for the region; from Dacia only eight such metal vessels are known in the present, dated to the 2nd century AD.

Keywords: iron vessel, Dacians, Sarmizegetusa Regia

In the spring of 2003, Muzeul Civilizației Dacice și Romane from Deva bought from Ovidiu Georgescu, villager from Costești, a highly oxidized iron vessel (Fig. 1). The owner declared that the vessel was found by others in the forest, in the place known as *Grădiștea Muncelului*, the same area identified as *Sarmizegetusa Regia*, the capital of the Dacian Kingdom. The same account let us understand that the vessel was found on the edge of a hole excavated by treasure hunters. The information is credible, particularly if we take into consideration that half of a century ago, during archaeological excavations another vessel of this type was found, coming from an iron hoard identified on the terrace where a big blacksmith workshop was also found (DAICOVICIU *ET AL.* 1953, 169, fig. 20–21). Still, the place of the discovery indicated by the former owner is only probable, since his story¹ rather indicates that the find was unearthed by treasure-hunters (quite probably the donator himself could have done such illegal excavations). It is also possible that the piece was incidentally found in the forest; anyway, the real conditions of discovery for the moment remain uncertain.

The vessel (MCDR–Deva inv. no. 46294) is truncated cone-shaped with a height of 33 cm; the strait rim is inverted; the vessel is decorated outside and close to the rim by two rows of ribs. It was made by a junction of iron strips, fastened by big round headed rivets ordered slightly decoratively on some parallel ribs. The bottom is flat and it was made by a single piece attached to the vessel with rivets, in the same technique. The vessel was broken in ancient times and it was repaired, the craftsman covering the hole with a patch, intervention visible inside the vessel. The piece is severely oxidized, and some sand marks are visible on it, caused probably by the

* The artifact was earlier also acquainted in *Bulletin Instrumentum*, 30, December 2009, p. 28–29. With the resumption of the subject we intended to present the object and its context in Romania.

1 The recounting about a policeman who gave him the vessel in exchange for some hostel services is hard to believe.

environment where the vessel was preserved. Furthermore, the vessel was broken in our days, probably damaged by the discoverers and in the time while it was taken over by the museum. Because of the recent hole in the wall of the vessel the upper part of the vessel felt downwards, as a consequence now the vessel is tilt.²

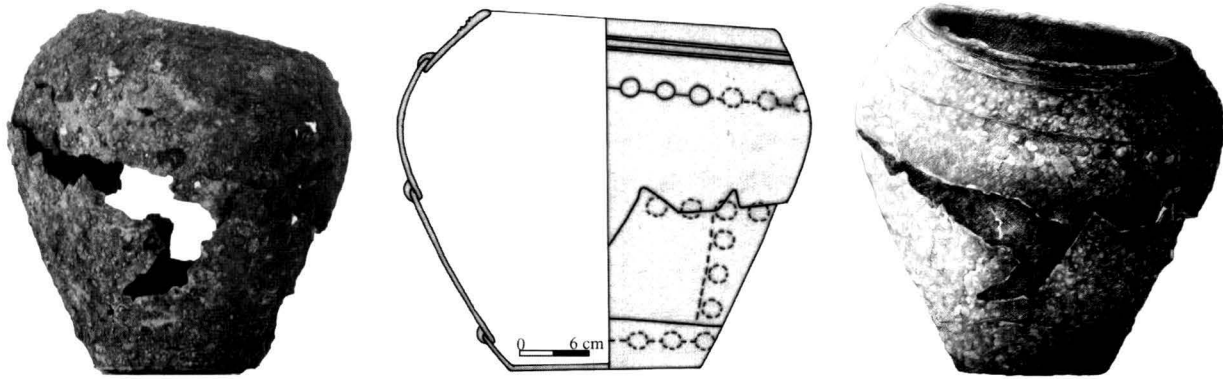


Fig. 1. The iron vessel from Sarmizegetusa Regia (drawings by C. Filcea).

The technology of metal vessel manufacturing by junction or by strips is not an innovation of the Late Iron Age, since several big vessels made with the same technique but in bronze date from the Early Iron Age (GOGÂLTAN 1991). The novelty is given by the application of the technique to iron, as the bronze works are easier to carry out. The complexity of the craft and the artistic value of these objects are emphasized by the disks with zoomorphic and vegetal representations discovered at Piatra Roşie (DAICOVICIU 1954, 119–121, fig. 40; FLOREA-SUCIU 1995, 47–61; FLOREA-FERENCZ 2007, 47–53).

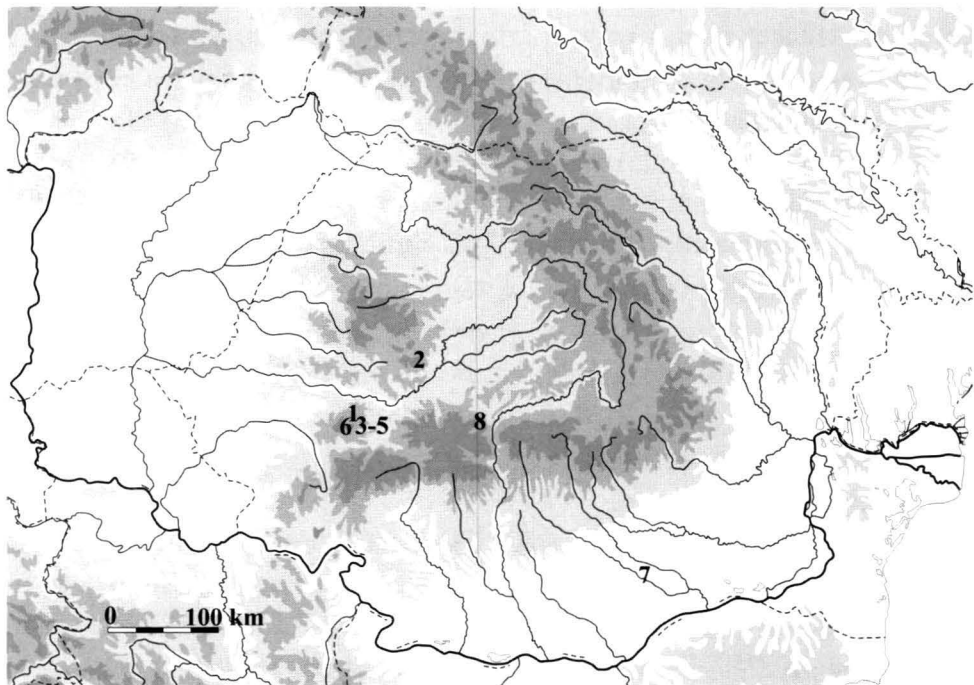


Fig. 2. Distributions of the iron vessels in Dacia.

2 It was the reason why the vessel was subject to physical and chemical analyses, which indicated that that there are enough metallic cores for restoration. The optical and microscopic examination, x-ray fluorescence spectrometry, and scanning electron microscopy were made at the laboratory of “Dimitrie Gusti” Village Museum from Bucharest by Dr. Vivian Dragomir. Because of the inaccessible financial involvements of these types of restorations the artifact is in great danger of self-destruction.

Iron vessels requiring high technological knowledge and skills are not common for the Dacian culture, only a few such recipients being registered until the present days, discovered in eight sites (Fig. 2). Unfortunately in most of the cases the fragmentary conservation of these vessels does not make possible a graphic reconstruction of their shapes (GLODARIU–IAROSLAVSCHI 1979, 120). Exception would be a vessel discovered in 1952 on the VIIIth terrace from Grădiștea Muncelului (DAICOVICIU *ET AL.* 1953, fig. 20–21), which seems to have the same shape as the one presented here (Fig. 3).

The shapes and the dimensions of these vessels, as well as the lack of information about their contexts of discoveries do not make possible the definition of their utility. The observations of C. Daicoviciu about the presence of the vessel discovered in 1952 together with other iron objects – probably an iron hoard – connected to a blacksmith's workshop could be an evidence for the use of these vessels in some processes of metal crafts, or that it was a final product of the workshop with unknown destination and utility.

Taking into consideration the analogies as well as the presumed place of discovery, the iron vessel from the collection of the museum from Deva can be dated starting with the beginning of the 2nd century AD.



Fig.3. Iron vessel from
Grădiștea Muncelului
(after DAICOVICIU *ET AL.* 1953).

APPENDIX

List of the iron vessel discovered in Dacia

1. Costești–Cetățuie, Hunedoara County (GLODARIU–IAROSLAVSCHI 1979, 120, fig. 4/5).
2. Craiva–Piatra Craivii, Alba County (BERCIU 1966, 52).
3. Grădiștea de Munte–Grădiștea Muncelului, Hunedoara County, it was found in the iron workshop investigated on the VIIIth terrace (DAICOVICIU *ET AL.* 1953, 169, fig. 20–21, GLODARIU–IAROSLAVSCHI 1979, 120).
4. Grădiștea de Munte–Grădiștea Muncelului, Hunedoara County (GLODARIU–IAROSLAVSCHI 1979, 120).
5. Grădiștea de Munte–Fețele Albe, Hunedoara County (GLODARIU–IAROSLAVSCHI 1979, 120).
6. Luncani–Piatra Roșie, Hunedoara County (DAICOVICIU *ET AL.* 1950, 146; DAICOVICIU 1954, 66; GLODARIU–IAROSLAVSCHI 1979, 120).
7. Popești, Argeș County (GLODARIU–IAROSLAVSCHI 1979, 120).
8. Sibiu–Gușterița, Sibiu County (HOREDT 1965).

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Fig. 1. The iron vessel from Sarmizegetusa Regia (drawings by C. Filcea).

Fig. 2. Distributions of the iron vessels in Dacia.

Fig. 3. Iron vessel from Grădiștea Muncelului (after DAICOVICIU *ET AL.* 1953).

THE ICONOGRAPHY OF THE ANTIQUE HERO IN THE BALKAN AREA

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The iconography of the mounted hero has deep roots in ancient art. On the Balkan territory, this iconography, during Roman times, is well attested especially through the monuments of the Thracian Rider and Danubian Riders. The analysis of the iconographical elements, typology and distribution of the artefacts highlight the fact that although we are dealing with a theme current during all through Antiquity, several local elements, at the iconographical and ideological level, might be identified.

Keywords: iconography, Thracian Rider, Hero, Danubian Rider, cult reliefs

The history of heroes dates back to ancient Greek times, when they were conceived more than men but less than gods, being usually associated with particular localities and sometimes with tombs. As regarding the etymology of the word *heros* (ἥρωας), ancient authors offer various suggestions. Thus, Plato in *Cratylus* 398 c–e derives it from ἔρως, ἐρωάν, while Hesychius defines the word as δυνάτος, ισχυρός or γενναίος, all referring to physical and moral strength. Moreover, Servius, on Vergil's *Eclogue* 4.35, connects heroes with the underworld, linking ἔρα with terra (McCAULEY 1993, 11). In Greek literature, the first occurrence of the word ἥρωας is in *Iliad*, where it seems to mean 'warrior', although it cannot be sure whether it referred strictly to aristocratic warrior (WHITLEY 1994, 218) and, being often used in the singular, it has been believed that its meaning was somehow similar to 'Lord' or 'Sir' (NILLSON 1941, 357). The *Iliad* uses the word 'hero' mainly for the combatants at Troy, more often Achaeans than Trojans, and Hesiod applies it similarly to the Seven against Thebes and to the Greek combatants at Troy. Though the word never lost the association with war and other forms of combat, the *Odyssey* also applies it to men such as the peaceable king Alcinoos. Thus, the usage of the term in Homeric epic is closer to 'Lord' than 'warrior'. Nevertheless, 'Lord', a term which designates a form of respect and at the same time social status (WILSON 2005, 352), was appropriate for ancient warriors and to others who lived in glorious past (JONES 2010, 4).

The use of the term 'hero' in a cult sense appears beginning with the law code of Draco, dated during the 7th century BC, when reference is made to local heroes (ἥρωας ἐπιχωρίους) worshipped according to ancestral custom. Beginning with this moment on, the word will be used in connection with the cult of supernatural beings who were once human, but achieved supernatural powers after death (McCAULEY 1993, 21). As regarding the origin of the hero cult, it has been demonstrated that it is connected with the rise of the

polis.¹ Moreover, the value of having a local hero whose cult serves as a unifying force may explain the colonial *oecist* cults (cults of the founder), which seems to be politically motivated from an early date (McCAULEY 1993, 66–67). The archaeological record of a hero cult derives from the deposits at the graves and grave precincts of the dead who were recipients of the cult, and also from a variety of representations of the dead, such as the 7th century BC *heroon* of a warrior buried with rich grave offerings in the grave complex at the west gate of Eretria in Euboea (ANTHONY-BROWN 1991, 23). Other examples are the reliefs from Laconia showing the heroized dead seated majestically on thrones, with snakes coiling about, indicating the chthonic character of the monument. Other reliefs, this time dated to the 6th century BC, depict a male *hērōs* reclining on a banquet couch with a *phiale* or *rython*. On the upper register of the relief are the emblems of his life: weapons, and sometimes his horse. Below the couch is a table holding offerings of bread, fruit and eggs (WILSON 2005, 353). On another *stele* from Mycenae the horse and the chariot are represented, suggesting thus that the Mycenaeans regarded the horse as a precious and sacred animal (KOMITA ND). Along with banquet scene, the 6th century art of Greece depicted hunting and warfare scenes, activities which expressed cultural values, especially aristocratic values. It has been suggested that the tradition of Thracian Rider representations, depicting the Hero during a hunting moment, resides in Greek art (KAZAROW 1938, 7). The animal most prized for hunting was the boar, whose slaying without the use of net was deemed by the Macedonians the token of manhood (LITTLEWOOD 2005, sv. Hunting, 372). It is noteworthy to mention that hunting a wild boar or a stag depicted on 6th century BC Greek vases is a collective event, and these types of representations practically disappeared from vase painting in the early 5th century BC (VASSILIEVA 2010, 43). Nevertheless, earlier scene of royal hunts and duels existed in Anatolia and Near East, where the king is depicted as hunting lions. These representations are related to the royal/aristocratic trial that led to the renewal and consolidation of the royal power. Thus, the king associated himself with the heroic past (MARAZOV 1996, 179). Noteworthy is that boar hunting is not usually performed on horseback in Attic vase painting, and one should note that boar hunting makes an appearance in Eastern Greek art (BARRINGER 2001, 185). Another point to be made is that from the 5th century BC onward, scene of a boar hunt on horseback are popular in the funerary art of Anatolia and Thrace, subject which will be incorporated in the iconography of the Thracian Rider (DELEMEN 2004, 192).

The Balkanic area is familiar to a series of representations of equestrian personages which carry a message not entirely deciphered. The most ancient are the artefacts dated to the 5th–4th century BC coming from the southern Balkans (Dušancy, Brezovo), followed by the artefacts from north-western Bulgaria, dated to the 4th–2nd century BC, while the latest are dated to the 1st century BC–1st century AD, coming from the Intracarpathian area, from Surcea and Lupu or from central and southern Moldavia from Răcătău and Moldovenești (SÂRBU-FLOREA 2000, 105–106). The representation of horses on the Thracian toreutics of the 5th–3rd century BC is attested by the discoveries from Agighiol (Pl. 1/1), or the appliqués from Lukovit (Pl. 1/2) and Letnița (Pl. 1/3–4), where the presence of another horse's head might emphasize the character of the rider, being at the same time the vehicle of the personage. Moreover, during the 5th–3rd centuries BC, the horse, as a standalone element is rarely attested, being thus an element of the horse-rider couple (NEMETI 2000, 108). On the above mentioned artefacts, one might observe

1 For a detailed overview regarding the theories on the origin of hero cult, see: McCAULEY 1993, 25–60.

that the male personage is represented in a hunting activity type – he wears a *chlamys* and holds a spear (Pl. 1/1–2), but as well as a full armed warrior (Pl. 1/3), which might suggest the fact that the two activities were somehow analogue, hunting being a metaphor of the warfare, namely a simulacrum of the activity which the male was to encounter (ALEXANDRESCU 1983, 52).

This type of rider-horse depictions is specific not only to the Gaeto-Thracian world, thus it might be encountered on the appliqué discovered in the Scythian tomb from Oguz (Pl. 1/5), but as well on the *rython* from Kerči, Ukraine (Pl. 2/1), where is depicted a rider who attacks with his spear, similarly to the one on the Agighiol helmet or on the Letnița appliqué. Moreover, for the area inhabited by the Sarmathians we mention two *phalerae* from Krivaja Luka (Pl. 2/3) discovered in a tomb dated around 100 BC, which depict two riders with spears, very similar to the ones from the Gaeto-Thracian area (SÂRBU–FLOREA 2000, 106), performing the same hunting-initiatic activity. Moreover, some images present on the coins issued by Alexander the Great illustrate the mounted rider armed with two spears, images which fall in the same symbolic area (SÂRBU–FLOREA 1997, 54).

A detailed analysis of the pieces dated to the 5th–3rd century BC suggest the fact that the representations from this period are characterized by the stereotype attitudes and attributes. The riders depicted on the artefacts from this period do not distinguish themselves, but rather mix themselves through the attitude, the garment and attributes. Thus, three moments of the myth might be identified: the rider is represented as a youth, without beard, walking his horse. We might consider that this moment represents the first phase of the initiation ritual which aimed at training the male in order to take part in battle, acquiring thus the skills needed in warfare. The next moment is exemplified by the beard rider, dressed in a princely garment (with the *cnemid*), killing the boar and the bear during an initiatic trial. Due to his strength and courage, he succeeds in obtaining a new social status. The final moment of this process is represented by the ritual procession in which the rider, represented as a full grown man, holds in his right hand a vase for libation. These three moments to which the rider was subjected might allude to a heroized dynast, hypothesis sustained as well by the Sveshtari fresco (NEMETI 2000, 124–125).

Unlike previous representations, during the 2nd century BC–1st century AD the artefacts are characterized by an inferior artistic style and, on the other hand, by a greater variety of materials and a reduction of the motives depicted. Thus, the rider is no longer represented only as a warrior, but as well as an unarmed rider (maybe hunter). Sometimes, a female personage appears depicted together with him (Lupu, Pl. 2/4; Iakimovo). An important element is the utility of the objects on which he is represented: silver *phalerae*, the *mastos* and the *kantharos* from Răcătău, pieces with a clear ritual function. Therefore, it might be possible that this time the representation allude to a divine personage, or maybe a personage which achieved a divine status. The above mentioned artefacts make reference to the fact that the hunt had heroic connotations and close links to warfare, indicating the man's skills for participation in civic and military life (BARRINGER 2001, 42). Hunting and fighting are activities of brave adult men, and they can be done heroically; that is, heroes hunt and fight, and so do real men. The latter are like heroes when facing extraordinary danger unflinchingly and successfully (SCHEIBLER 1987, 86, 88–89).

For the pre-Roman period in the Balkan area, we might distinguish several representations of an equestrian rider of divine or semi-divine nature, which later, during Roman period, have been replaced by certain deities whose name and functions are still not clearly deciphered: Thracian Hero and Danubian Riders.

It has been suggested that the origin of these representations resides in Greek art (WILL 1955, 78–79). Nevertheless, a characteristic of the Greek divine imagery is the almost total absence of equestrian divinities. During Archaic, and as well Classical period, the Greeks did not convey their gods mounted, the chariot being the vehicle for transport. Two deities, Poseidon and Athena, together served as protectors of horses and patrons of horsemanship and equestrian activities. Athena, Patron Goddess of Athens, was credited with the invention of the bridle and the use of chariots. Nevertheless, the first images which depict horses discovered in continental Greece are the ones discovered on the *stelae* from Mycenae, where the horse is depicted with the chariot and not the rider, the scene not implying the presence of a deity. The horse was a symbol of prestige, wealth and high status. Social rank has often been defined by the ability to own and maintain a horse. The Aristocratic families that ruled Athens during the 6th century BC often took pride in their nobility by starting or ending their name with the word *hippos*, horse (BOUZEK 1986, 21–22). The rider achieved a divine status in Greek imagery only beginning with the Hellenistic period, and only under the influence of Alexander the Great and the art that he promoted (MACKINTOSH 1995, 3). The idea of Near Eastern hunting as an aristocratic or royal activity had an impact on archaic Greece, but by beginning of the 5th century BC, the original Near Eastern association were muted, and thus the ideological image of the hunt was used not by kings or local rulers, but by aristocrats in a metaphorical way to express aristocratic ideology (BARRINGER 2001, 175). As J. BARRINGER (2001, 9) put it, “one must travel to Ionia or Lycia to see actual hunting scenes in the fourth century, where they adorn tombs and sarcophagi, or to Macedonia, where hunting appears in such places as the Vergina tomb paintings”. In Macedonia, even before Alexander the Great, horses had a privileged position among local population, being an item of prestige. The horse and the rider appear on Macedonian coins even from the 5th century BC, as prove of the position this animal had in society (MACKINTOSH 1995, 4). The Lycian tendency to combine Near Eastern royal hunting with Greek myths as a means to heroize, points to the way the new developments in hunting imagery developed in the latter part of the 4th century BC, when hunting becomes more mythological and less metaphorical. Alexander the Great and his followers adopted Eastern royal tradition including royal hunting, sometimes with mythological imagery, in order to fashion themselves as living heroes in the Eastern tradition (GHEDINI 1992, 74). Once the Persian military campaigns began in the Balkan area, their impact upon the local elites was to be felt, Achaemenid presence in the area being probably the original impetus for the Thracian aristocrats to emulate a similar code of royal status representations (VASSILIEVA 2010, 37).

Thus, it is less likely that the theme of the mounted hero, represented as a hunter or warrior, could be a direct influence of the Greek world. The image of the mounted hero is a current theme in funerary and as well votive art from Roman times in the Danubian territories, theme which did not appear *ex nihilo*. As S. NEMETI (2003, 204, note 1) observed, the popularity of this motive in the Danubian area in votive and funerary area suggest that they might be the illustration of particular local conceptions regarding the underworld.

The entire territory inhabited by the Thracian population is influenced, on the one hand, by the Scythians and the Celts and, on the other hand, by the Greek colonies from the Black Sea Shore. J. Bouzek identified two main areas within Thracian toreutics: the Odrysian Kingdom, where the Greek influence is more pregnant, and the area of the northern Thracians, where the Greek influences are less obvious, unlike the Scythian and the Persian ones (BOUZEK–ONDŘEJOVÁ 1987, 86–87). The most popular subjects within northern Thracian art have been represented by

the scenes where equestrian personages, most probably heroes, are engaged in an initiatory hunt, a very popular test in Macedonian art as well. This Macedonian source might have represented the model for the Greek art, being afterwards easily transported into the iconography of the Hero Rider depicted on the monuments discovered especially in the Balkan area. For the above mentioned depiction, the closest analogy in Thracian art is offered by the Letnița appliqués. Although apparently between these two types of representations there is no close analogy, the missing link might be represented by several discoveries from Anatolia, more precisely from Troy (Pl. 2/2). The artefacts dated in the 4th–3rd c. BC depict an equestrian personage and, most of the times, a snake. The presence of the snake, more than any other motif, having a profound chthonic character, indicates the heroic nature of the personage (BARR 1996, 135). This model seems more close to the representation of Hero Rider than the depiction of the heroized dead from the Hellenistic period. Furthermore, this type of representation alludes to a Hero Rider very similar to the one from the Roman Times.

The Hero Rider, known as well as The Thracian Rider, is a deity whose origins or main significance remain still unclear. The name of the deity is given by the geographic area where its monuments appeared in a significant number: on the territory of Thrace, on the neighbourhood territories (Moesiae) or in the territories where the Thracian population is attested. Of these areas, where approximately 2000 monuments have been unearthed (DIMITROVA 2002, 210), more than 65% of the monuments come from Moesia Inferior (PENȚIA ET AL. 1998, 256), which led to the conclusion that this deity had a Greek-Oriental origin (BARNEA 2006, 101).

Among the first to publish a relatively complete study regarding the monuments of the Thracian Rider was G. Kazarow who, in his study from 1938, managed to gather and classify all the available reliefs discovered on the territory of present Bulgaria. His typology became thus the standard typology in the field (see Table 1).

Type A	The horseman, rendered towards right, is facing a woman, an altar, and a snake-entwined tree. His horse is represented walking or standing still.
Type B	The horseman galloping, accompanied by a dog, sometimes by a lion, is attacking a boar.
Type C	The horseman returning from hunt.

Table 1. Typology of the Thracian Rider Monuments, after KAZAROW 1938.

The general idea regarding the iconographical origin of the monuments representing the so-called Thracian Rider is that they are based on a Greek model, namely the iconography of the funerary reliefs which depict the heroized deceased (DIMITROVA 2002, 220; GOCHEVA 1998, 123). The monuments brought as examples are the stele of Dexileos or the stele from Abdera (KAZAROW 1938, 7). Nevertheless, analyzing the reliefs discovered at Troy offer a new perspective on the problem, which lead to the idea that this type of reliefs are developed in a milieu strongly connected to the idea of hero-ruler (BARR 1996, 135). The first monuments to be identified come from Thasos, and they are dated before the 5th century BC, not to mention the representations from the Thracian-Phrygian territories, from SE of lake Manyas, conventionally named Graeco-Persian, and dated to classical period (probably the 5th century BC), which depict the Hunting Rider (PICARD 1956, 5).

Greek funerary monuments which depict the heroized deceased are attested beginning with the end of the 6th century BC, being erected for those who died on the battle field (BOARDMAN 1988, 419). Nevertheless, this type of monument will prevail during Roman times (RIDGEWAY 2000, 196). The significance of the horse on these monuments inscribes itself in the

repertory of Greek allegories regarding the protection and heroization of the deceased, carried by this vehicle to the Islands of the Blessed. According to Greek conception, heroes are nothing else than the spirits of the deceased, which live eternally, as well as gods. Greeks present offerings to them, as do for deities, having a rich repertory regarding their legends, considering them as founding ancestors, everything according to the interest that Greek population gave to intermediary powers. The iconographical expression of heroes in Greek world is materialized through the apparition of the deceased in the funerary banquet scene – an Anatolian motif which generalizes in ancient world through Greek vein as bearer of the deceased heroization message –, or through the apparition of the rider-horse group in different hypostases (NEMETI 2003, 308). Nevertheless, only beginning with the Hellenistic time did the Greeks represented their deities (or spirits) mounted, and this happened under the influence of Alexander the Great and his reforms.

The first monuments in the Pontic area of the Hero Rider appear at Histria (CONDURACHI 1981, 63), and especially at Odessos, Varna (VAGALINSKI 1997, 47), both Greek colonies. Nevertheless, as regarding Odessos, Varna, one should bear in mind the hypothesis according to which the colony was founded on an ancient Thracian settlement (GOCHEVA 1998, 122). Thus, the Greek tradition found a prepared terrain for receiving this type of representations. The reliefs of the Thracian Hero exemplify moreover the reception of Greek art by a non-Greek population, the iconography revealing the process through which this practice was perceived, being invested with a new meaning, impregnated by local beliefs and cultural preferences (DIMITROVA 2002, 214). It may be considered that the Thracian population borrowed certain schemes or iconographical elements, but these borrowings have been filtered through their own religious beliefs. The iconography of the Hero Rider on the monuments from Odessos, Varna might be explained through the Hellenistic influences and by the relatively strong Hellenization of the dedicants, probably of Thracian origin, who made a dedication to their god using Greek *formulae*, and thus leading to a diversification of the iconographical set. Nevertheless, in territories further from the urban centres, this practice is unknown; therefore, the iconography is rather simple, the large mass of population having no need of inscriptions or of details in order to represent the multiple aspects of their god (GOCHEVA 1998, 128).

Thracian Hero or Thracian Rider was a religious and funerary symbol spread on the entire area from the eastern Balkan Peninsula, and also in the territories where Thracians expanded. As a result, the deity seems to be – at least during Roman times – their main divinity, the popularity of which has not been overwhelmed by any other. This might be explained also by the fact that, for the Balkan area, rendering mounted personages was not a novelty at the moment of junction with the Greek world. Therefore, a possible hypothesis is that we are dealing with a Thraco-Phrygien deity, which came from Anatolia in the Balkan area, at a relatively early date, while his prestige developed during Hellenistic and Roman time (PICARD 1956, 17).

Along with the Thracian rider, the Balkan area is accustomed with another cult whose set of representations raised controversy among researches of history and history of religion. The cult of Danubian Riders, considered as an original example of religious syncretism (PETOLESCU 2000, 273), likewise the cult of the Thracian Rider still remains an enigma for present day research. They take their name, on the one hand, from the area on which the monuments which depict them are spread, and on the other hand, due to the fact that the central motif of the reliefs is the representation of one or, most often two mounted male personages together with a female personage (PÂRVAN 1980, 193, 295, 350). It has been considered that the model for this type of representation has been offered on the one hand, by the Thracian Rider, for the monuments which depict a

single mounted male personage, and, on the other hand, the Dioscuri, for the reliefs which represent two affronted Riders (TUDOR 1976, 50).

The Dioscuri (from Greek *Dioskouroi*) are the twin brothers of Hellen, known as well as Tyndarides (according to their Laconian origin, as son of king Tyndareus), or as Anakes at Argos and Athens, being called as well Castor and Pollux, or Castor and Polydeuces. These latter designations indicate an Indo-European origin, which has been assimilated with the Laconian one during historical times (LIMC, III, sv. Diokouroi). The term Dioscuri (sons of Zeus) indicates, on the other hand, an Ionian origin, being attested on an inscription from Théra, dated at the end of the 8th century BC–beginning of the 7th century BC. In the *Homeric hymn* (33) they have the role of aiding shipwrecked sailors (LIMC sv. *Dioskouroi*), receiving thus sacrifices for favourable winds (MERRIAM-WEBSTER's, sv. *Dioscuri*). Their invocation when on sea in times of troubles already signals a connection with the deities known as Kabiri, worshiped in the island of Samothrace (LIMC sv. *Dioskouroi*, 58–59), in Lacedaemonia – in the festival called *Dioscuria* –, and Asia Minor, especially in Phrygia, and in Macedonia and in other parts of northern, as well as southern Greece. It is also interesting to note that no profane had the right to name or to speak of them (BLAWATSKY 1892, 66). The Kabiri are said to have been worshipped by Phoenician sailors, as they were protectors of all mariners, especially when at sea, and they appeared in the form of St. Elmo's fire, that is as fireballs on the mastheads of the ships. Later, they have been identified with the constellation of Gemini, and in Rome came to be known as the Castores, and as the 'horse-tamers'.

The Dioscuri are often referred to as the 'horseman gods', and are described as riding on white horses (GARDNER 2003, 140). In Roman myths, they appear as participants in the battle from Regilla Lake, together with the Romans, being the ones which announced the victory (GRIMAL 2003, sv. *Dioscuri*). Their mounted representation is connected with their athletic and warfare activities, although this iconographical feature imposes in Greek oriental world as a particular trait, especially after the poet Alcée of Lesbos evoked the twins as mounted youth who came to rescue the sailors (LOBEL-PAGE, 1955, frag. 34, 5–6). Their maritime function might be connected with their status as tutelary heroes of a state devoted to commercial and economical expansion, possible Argos (FARNELL 1921, 183).

Another important fact related to the Dioscuri what needs to be mentioned is their occasional identification with the Kabeiroi of Samothrace, a prevalent idea beginning with the 3rd century BC. As L. R. FARNELL (1921, 184) points out, there is no identity or similarity in their iconography or their name: the first were chthonian spirits, generally imagined as an elder and a younger deity, being designated as 'The Great Gods', while the Dioscuri were known as 'Lords'. Nevertheless, one similarity might be their ability to protect and save sailors, leading thus to their mixture, as it is suggested by one shrine consecrated to the Kabeiroi during Hellenistic times, with a priest designated with as Διοσκούρω Καβείρω (Dioskouroi Kabeiroi). From the neighbourhood island Suros came coins which depict two youth twins surmounted by stars and leaning on spears, but entitled Θεωι Καβείρωι (Theoi Kabeiroi). Moreover, the Dioscuri are mentioned with a new title Θεοὶ Μεγάλοι (Theoi Megaloi), given to them in public cults from Arcadia or Attica and a certain tendency to combine with the Mother of Gods or with Demeter (FARNELL 1921, 188), as is the case of a mutilated relief from Stoboi, a Paeonian city in Macedonia. On this relief are represented the Dioscuri on horseback with the usual oval hats and between them a goddess standing with nimbus and torch, identified as Demeter (FARNELL 1921, 220). Though the evidence regarding the presence of the Dioscuri in the regions of the Black Sea is not abundant, we mention a coin of Istros type, dated to approximately 300 BC, showing two young male heads,

touching each other, but the one on the right inverted downwards, which might suggest the dual character of the deities. Moreover, the city of Dioskoria, which bears their name, north of Kolchis, was said to be a colony founded by Miletus, thus dated in the 6th century BC, a point from which the Twins came to be known (FARNELL 1921, 220).

Nevertheless, the monuments dedicated to the Dioscuri remain reduced in number for the Danubian area. It has been argued that the two warriors came from Rome as Hero-Riders in order to save the city in times of crisis but they are rarely depicted on horseback in the western territories of the Empire. Although the favoured type of representation on Republican coins is mounted Dioscuri, this feature was not perpetuated in other minor arts, where they appear near their horses (MACKINTOSH 1995, 39). On the other hand, for the eastern territories of the Empire, we see a predilection for the mounted representations, which has been considered as another argument for the existence of a tradition in the horseback depiction of heroes, even before the contact with the Roman world (MACKINTOSH 1995, 39).

As for the representations of the Danubian Riders, we might accept an influence of the cult of the Dioscuri as regarding the doubling of the Rider. But even so, the origin of the cult and its significance still remains an issue.

In order to find the answer to such questions as origins, influence and significance of the Danubian Rider cult, a corpus of the representations has been comprised by D. Tudor in 1976, the Romanian researcher proposing at that time a typology as well, based on the iconographical elements and on the form and material of the monuments (Table 2a, b). Thus, it has been considered that the model for this type of representation has been offered on the one hand, by the Thracian Rider, for the monuments which depict a single mounted male personage, and, on the other hand, the Dioscuri, for the reliefs which represent two affronted Riders (TUDOR 1976, 50). Another element that has to be bared in mind, and which represents the distinctive iconographical feature of the Danubian Rider representation (TUDOR 1976, 58), is enemy trampled under the horses' hooves. Nevertheless, as E. WILL (1955, 103) observed, this is a common pattern on Oriental, Greek and as well Roman monuments and its presence on the reliefs of the Danubian Riders give no clues as regarding the origin of the iconography.

Type A	Single Rider, having an enemy under the horse's hooves, accompanied by a female deity
Type B	Two Rider, having each an enemy under the horses' hooves, flanking a female deity
Type C	The triad represented in bust

Table 2a. Typology of the Danubian Riders Monuments, after TUDOR 1976.

Type I	Regular rectangular form, with one to four registers
Type II	Round-topped stele with a main field of composition. Later, it was added the frieze to the base and the astral symbols placed above the Riders.
Type III	Reliefs in form of an <i>aediculae</i> , with a triangular pediment.
Type IV	Reliefs in a form of an <i>aediculae</i> , borrowed from votive or funerary monuments
Type V	Stone or lead roundel.
Type VI	Stone roundels of ovoid form discovered in Lower Moesia, Lower Pannonia and Upper Pannonia.
Type VII	Pieces with ellipsoidal forms appropriate to engraved gems.

Table 2b. Subclasses of the Danubian Rider monuments according to shape, after TUDOR 1976.

As regarding the place of origin of the reliefs, it has been argued that the main zone of radiation embraces Dacia, Pannonia and Moesia, where approximately 80% of the monuments were discovered (TUDOR 1976, 52). Of these, the number of the monuments with a single Rider is much lower in the two Moesiae than in Dacia which, in turn, yields only four reproductions of metal pieces – considered to be of later date than those in marble or stone. This situation made the Romanian researcher to conclude that the province with the most ancient, most numerous and most varied representations of the Danubian Rider is the province of Dacia. This area was followed by the territory Moesia Superior and Inferior and, lastly, Pannonia where appeared monuments belonging only to class B of representations.

Another typology has been proposed by E. Will, using as main criteria the form of the monuments and the material, and only subordinated to these criteria, the iconography depicted. As regarding the origin, E. Will considered the area from the Lower Danube, namely the provinces of Moesia Superior and Inferior (WILL 1955, 89–96), and not the territory of Dacia. Nevertheless, the author considers that the model for the representations of a single rider has been represented by the monuments of the Thracian Rider, which, in turned, used the Greek model of the heroized dead (WILL 1955, 116), while the Dioscuri have been the inspiration for the doubled Danubian Riders (WILL 1955, 120).

	A	B	C
	Rectangular reliefs, with one register, made of stone or marble	Rectangular reliefs and medalions, with two registers, made of stone or marble	Pieces of bronze and lead
1	Simple rectangular reliefs, made of stone or marble	a. Rectangular reliefs with an arched upper part b. Medalions with two registers	a. Simple rectangular reliefs with one registers b. Rectangular reliefs with three registers, with an arched upper part
2	Reliefs with an arched upper part.	Rectangular reliefs and medalions, with three registers	Rectangular reliefs with multiple registers: a. With the upper part as two arcade b. With the form of aedicule c. without decor in the upper part
3			Medalions

Table 3. Typology of the Danubian Rider reliefs, according to NEMETI 2005.

A detailed analysis of these monuments highlights the fact that their classification based only on the stylistic and iconographic elements is hard to accomplish since there is no strict rule to their representation. The only elements that remain fixed are the two riders and the female personage, while the distinct element is the depiction of an enemy under the horses' hooves, element present in Etruscan and as well Hellenistic art (MACKINTOSH 1986, 1–5) considered sometimes as the main element of the representation (BÍRÓ 1996, 98). As a point towards this affirmation comes a relief discovered in 1903 on the Black Sea shore, from Chersonesus (KALASHNIK 1997, 178–179). The relief, having the shape of an *aedicula*, with the main field divided in two registers, depicts the bust of the three deities, within the well-known scheme: the female personage flanked by two male personages. The second registry depicts once again the triad, this time the male personages rendered on horseback. This monument falls in neither of the classes adopted by D. Tudor, highlighting once again the need of a reassessment of the entire material. The sole analysis of the iconography is not enough in order to get a glimpse at the message conveyed by

the monuments. Thus, it must be kept in mind that an analysis of the evolution of the reliefs' form might offer surprising results, all combined with the area of distribution and, where possible, with the identification of manufacturing centres. Using these elements, S. NEMETI (2005, 209) proposed another typology (Table 3) which led to an origin territory comprised by the area of Moesia Inferior.

In the area of Moesia Inferior appeared the simplest monuments as regarding the iconography, but as well the form in which this is conveyed. From this territory onwards, the reliefs will spread on the territory of province Dacia as well, brought by civil elements of the society.² At this moment, the cult had not a definitive ideological form, and only the contact with the troops stationed on the territory of Dacia led to the advent of the elements connected to military milieu.

Moreover, the monuments of this typological class appear especially in areas which have contact with the imperial road, reinforcing the above mentioned hypothesis. In the first place, the cult of the Danubian Riders is significant especially in civilian dominated areas, which might be explained by the model which followed, the cult of the Thracian Rider, more appealing to civilian than soldiers. Subsequently, under the influence of the military milieu, the cult will accomplish its definitive form, iconographical and as well ideological, addressing especially to military members. The hypothesis of Moesia Inferior as a place of origin is also sustained by the fact that the first monuments with the depiction of the Thracian Rider – considered as the model for the representations of a single Danubian Rider – appear as well here. As regarding the anteriority of the monuments with one Rider to monuments which depict two Riders, idea sustained by D. Tudor, it seems no longer plausible according to this typology, since we have reliefs with only one register, with a limited number of symbols, but on which appear two Riders. Given the situation, it is most probable that the two schemas rendered appeared simultaneously, but only one prevailed.

The theme of the Rider represents a pattern in the art of Antiquity and even earlier, as we have already mentioned above. The significance of this motive, clearly connected to *virtus et honestas*, will determine its appearance in all sorts of media, and the art of the relief has made no exception. As we have seen, the Greco-Roman world is accustomed to several mounted divinities: The Dioscures, the Thracian Rider, the Danubian Riders, Horus killing Seth the crocodile, mounted Mithras or Gallic Jupiter. Some of them are equestrians by definition, while others achieved this frame of representation due to the military influence – mounted Horus in Egypt due to the presence of Macedonian soldiers, or mounted Mithras in Germania, where he was considered as a deity of a male society – (NEMETI 2005, 310).

For the Balkan area, the theme of the mounted personage which achieved a divine status through the initiatic process of the symbolic hunting is a relatively common theme, which nevertheless knew a further development under the influence of the Hellenistic and Roman art. As surprisingly as might seem, the roots of this theme whose depictions came to us under the form of Thracian and Danubian Rider, might have local origins. Needless to say that the theme of the Rider and, as has been pointed above, of the double depiction of the Rider, is a common theme throughout the entire Antiquity and even earlier. The Balkan area makes no special case

2 The distribution of the military troops dislocated from Moesia Inferior in order to take part at the two Dacian wars led by Trajan, and the distribution of the artefacts belonging to the first typological class suggest the fact that, initially, these monuments were not present in military milieu, being brought in Dacia probably by colonists. Nevertheless, this situation is only a hypothesis, which will be confirmed, or not, after the mapping of the military troops present on the territory of Dacia from Hadrian onward. Even so, the place of origin is still represented by the territory of Moesia Inferior.

and during Roman times this motive will be largely diffused in area accustomed to this type of representations. The area of diffusion of both Thracian Rider and Danubian Riders might point to a clue as regarding the origin of their representation, namely the Balkan area. This motive will continue its existence long after the end of Antiquity and the popular traditions from the Romanian milieu where the image of the horse and rider appears as a decorative motif in all the media of popular art (MARINESCU 1980, 293) might make a point. At this level of representation, the horse becomes a comrade, guide and mentor for the men. The hero rider regains his forces due to this association, being thus able to accomplish all the deeds to which he is subjected, and only afterwards becoming a saviour personage (MARINESCU 1980, 298).

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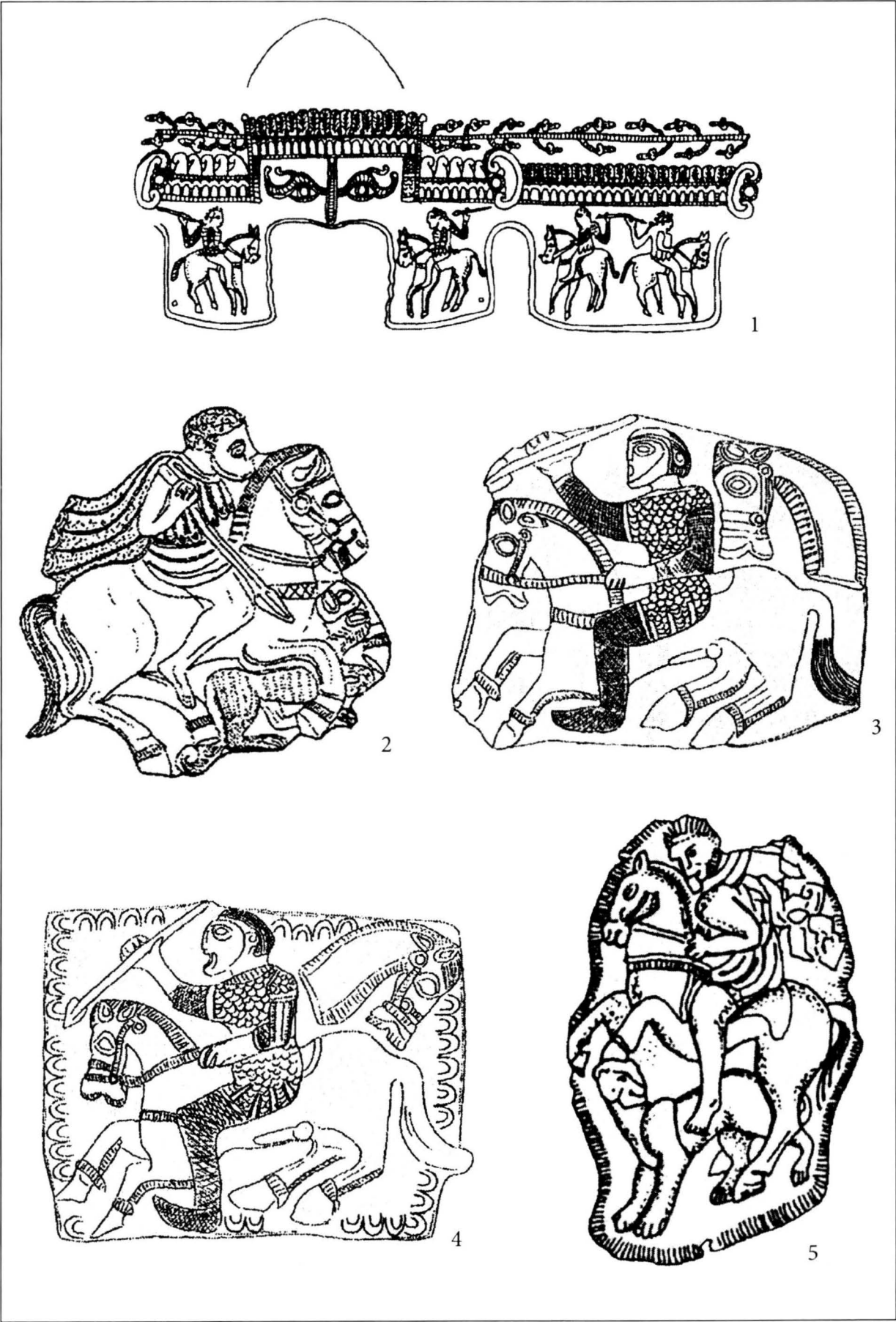
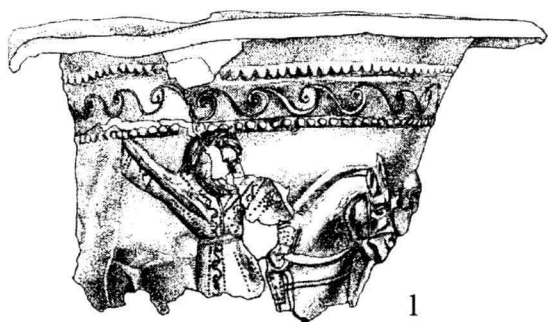
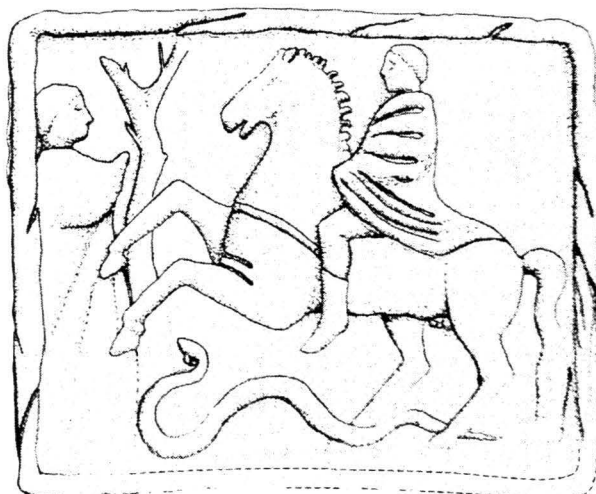


Plate 1. 1. The helmet from Agighiol; 2. The appliqué from Lukovit; 3–4. The appliqués from Letnița; 5. The appliqué from Oguz (without scales).



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Plate 2. 1. The *rython* from Kerči; 2. Relief from Troy;
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THE PRODUCTION OF PRISMATIC GLASS BOTTLES IN ROMAN APULUM

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During rescue excavations from 1911–1913 large parts of a Roman insula placed in the workshop area of Colonia Aurelia Apulense has been unearthed. Besides the evidence related to pottery production and bone working, large concentration of moulds for the production of prismatic glass bottles came to light. Most of them have been originally published as ceiling decorations but some of them remained unpublished.¹

Keywords: glass-working, Roman, Apulum, moulds, prismatic bottles

The urban sites of Roman Dacia (Fig. 1) are relatively rich in finds related to glass-working, but except *Colonia Ulpia Traiana Augusta Dacica Sarmizegetusa*, where a tank furnace used for the production of primary glass has been discovered in 2007 (BĂEŞTEAN–HÖPKEN 2009; BĂEŞTEAN 2009, 32–34), there is no clear evidence yet for glass production.

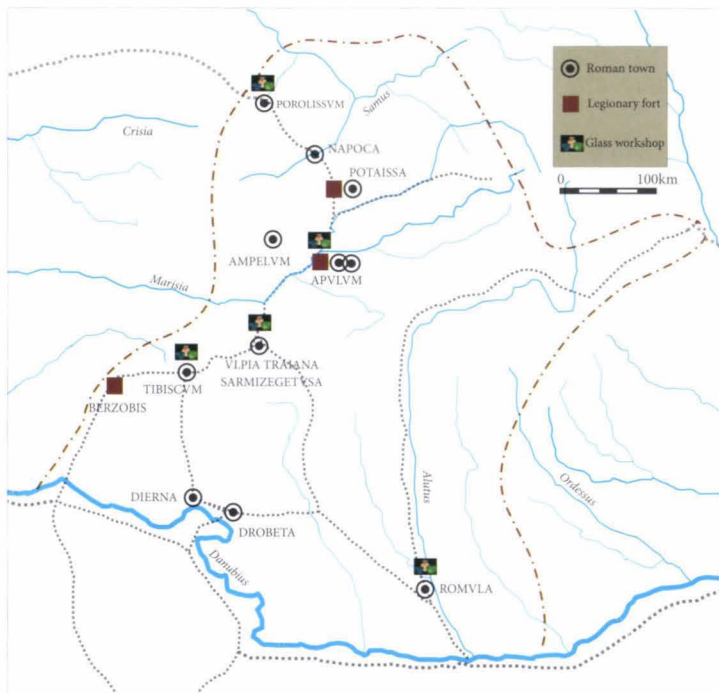


Fig. 1. Glass-working workshops from Roman Dacia.

¹ We would like to express our deepest gratitude to Dr. Vasile Moga, Anca Timofan and Dan Anghel for helping us identifying the moulds in the collections of the National Museum of Unification from Alba Iulia, and we would like also to thank Ünige Bencze, Katalin Sidó and Manuel Fiedler for the corrections made on the text.

Based on the published data, in Porolissum (GUDEA–BAJUSZ 1982, 25; STOICOVICI 1982, 41; STOICOVICI 1983, 196; GUDEA 1989, 205–206; PÁNCZÉL–LÁZOK 2003, 200–201), Tibiscum (BENEA 1983; BENEA 1997; PÁNCZÉL–LÁZOK 2003, 200–201; BENEA 2004), Ulpia Traiana Augusta Dacica Sarmizegetusa (DAICOVICIU–ALICU 1984, 130–132; ALICU 1989, 11–13; ALICU *ET AL.* 1994, 71–72; ALICU 1995, 25–26; PÁNCZÉL–LÁZOK 2003, 200–201; BENEA 2007, 55; BĂEȘTEAN 2009), Romula (TUDOR 1978, 108) and Apulum (see discussions below) we have enough evidence to take into consideration the presence of one or more glass workshops. Based on archaeometrical analyses (STOICOVICI 1978) Dierna was mentioned as a possible site for ruby glass production but due to the presented dataset we have to link it rather to metalworking. We might have a similar situation in the case of Micia, where together with finds related to domestic and industrial activity, “slag and glass paste” was discovered (PETCULESCU *ET AL.* 2004, HAMAT 2009, 48), which might be vitrified clay from a kiln, but it can be evidence for glass-working as well.

Roman Apulum (for the general overview of the site, see: MOGA–CIUGUDEAN 1995, 29–47; ARDEVAN 1998, 48–50; DIACONESCU–PISO 1993, 67–81; DIACONESCU 2004, 105–117; BĂRBULESCU 2005, 34), today known as Alba-Iulia, Alba County, Romania, became one of the largest conurbations north of the Danube during the early Severan period. This complex urban site included the fort of the *XIII Gemina* legion with the *canabae*, and two separate towns, the *Colonia Aurelia Apulense* and the *Municipium Septimium Apulense*.

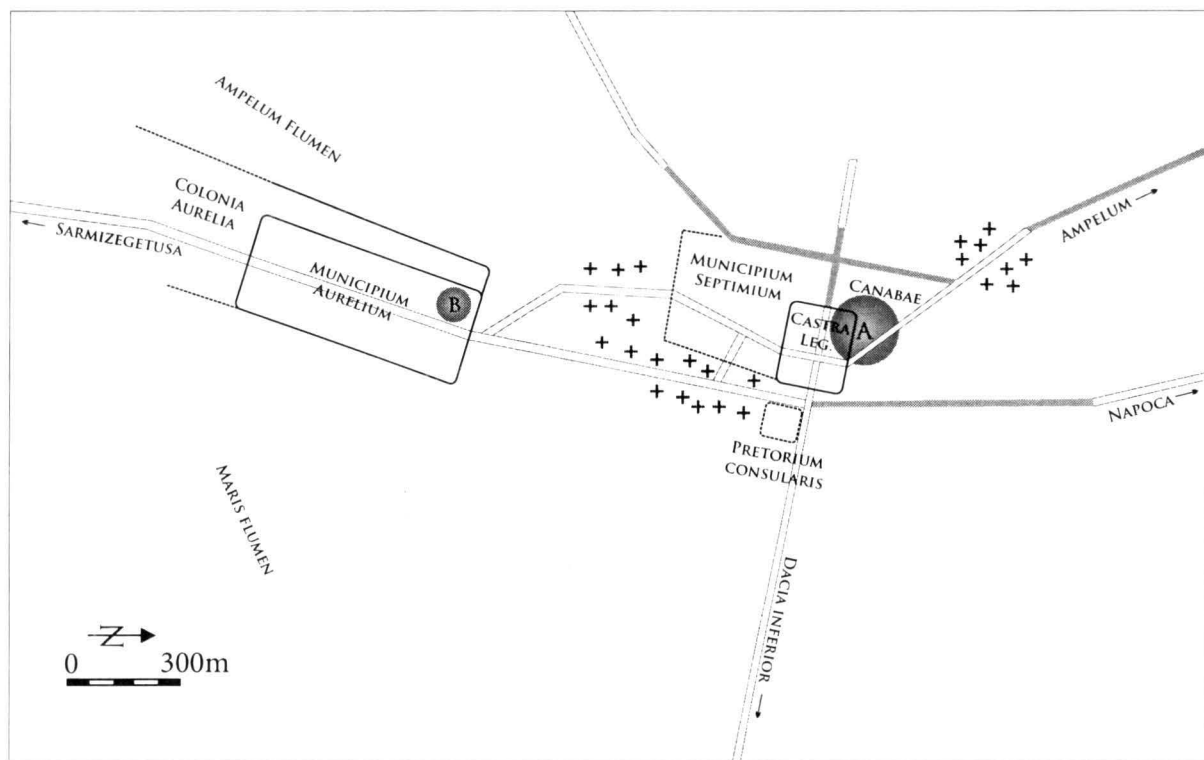


Fig. 2. Glass-working workshops from Apulum.

The glass workshop² from the area of the *canabae*/legionary fort (Fig. 2/A) of Apulum has been identified through a discovery made at the demolition in 1898 of the ‘Báthory-church’. With this occasion a mould with a Greek inscription used for the production of square bottles (Pl. 1/1–2) was found in secondary position, in the central part of the former legionary fort, overlapped

2 C. Băluță already mentioned in 1978 the hypothesis related to the existence of a local glass workshop in *Apulum* (BĂLUȚĂ 1978, 108–109; BĂLUȚĂ 1979, 199–200).

by the medieval and the 18th century fortifications (BĂLUȚĂ 1981; BĂLUȚĂ 1983).³ The decoration was carved in the rectangular ceramic mould (maximum size: 9.5 × 9.8 × 2.5 cm) without external frame and consists of a circular retrograde inscription written between two concentric circles and of four small circles in the corners and one in the centre. The text bears probably the name of *M(αρκος) Av(ρηλιος) Ιουστος* and the letters *BEBI* which clearly do not belong to it. If the *officina* owner was *Marcus Aurelius Iustus*, then *B(a)ebius* or *Bebius* could be the name of the glassworker, or just a topographic indication. The mould is to be dated rather after the *constitutio Antoniniana*, and is also an important evidence for the predisposition to use Greek names as product or workshop brands (RUSCU 2003, 29, no. 27).

More recently, a prismatic vessel fragment made with this mould (Pl. 1/3) has been discovered on the territory of the *canabae* (BĂLUȚĂ 1999, 234, no. 434), so even if we cannot locate the workshop more accurately, one can say that it was functioning inside, or around the fort and it was providing at least the *canabae* with storage bottles.

Only one vessel fragment with a base mark similar to this one (circular Greek inscription written between two concentric circles and a small central circle) is known from Dacia, which was discovered in Arutella (Bivolari, Vâlcea County, Romania).⁴ A base mould also quite similar to this one is kept in the Kocabas collection in Istanbul (Turkey).⁵ To link all these types of base marks to one workshop is tempting, but even with strong similarities in design; we must consider the fact that they bear different names. The similarities should be rather pointing out a trend in the production of the bottles, a preference for Greek brands, and an intensive exchange of 'know how' between the different workshops, rather than a common production centre.

In the Northern part of *Colonia Aurelia Apulense* (Fig. 2/B) in the area of the settlement with intensive industrial activity, during the recent excavations from the *insula* of the *Liber Pater* sanctuary a large concentration of raw glass cullets have been recovered. Some of the cullets were discovered in cultic pits and have been interpreted as possible evidence for votive offering of raw materials (HÖPKEN 2004, 251; HÖPKEN-FIEDLER 2002, 376). Even if we cannot locate this workshop accurately, we can presume that it is located in the vicinity of this *insula*, and the possibility should be considered, that similarly to the high number of pottery kilns attested and excavated in the area (CIUȘESCU 2004, 320–321), we can have several glass-working sites as well.

One of them has been excavated during rescue excavations undertaken by B. Cserni in 1911–1913 in the north-western part of the Partoș-quarter of Alba Iulia, which overlies the territory of the roman *colonia*. The author of the discoveries published a preliminary report about the excavations from 1911–1912 (CSERNI 1912a) and an overview about some of the moulds (CSERNI 1912b). In a larger paper about the activities of the Museum from Alba-Iulia he gives also a short summary about the excavation results from 1913 (CSERNI 1913, 383–387). It is difficult to establish the exact location of the building, but based on the map published in 1912 (CSERNI 1912a, 258, fig. I), we can state that it was located on the southern land strip between the main road and the railway track, in the vicinity of their junction (MOGA-CIUGUDEAN 1995, 42).

3 It is kept in the National Museum of Unification (MNUAI) from Alba Iulia, inventory no. 2641 (BĂLUȚĂ 1999, 228–229, no: 425; RUSCU 2003, 29, no. 27; AMREIN-NENNA 2006, 496, RO-M1).

4 The text bears the name *MHNOΦANT(OΣ)*, and it was discovered in 1967 in the auxiliary fort. It is kept at the Central Military Museum from Bucharest, inventory no. 30799 (FLORESCU-PETOLESCU 1977, 225, no. 583; RUSCU 2003, 34, no. 38; NENNA 2006, 425, MN-RO-39).

5 This stone mould had a frame, which was broken, and the carved decoration consists of a circular retrograde text written between two concentric circles (the external circle is more prominent) and four small circles in the corners and one in the centre. The text bears the name *APXECTPATOY* (NENNA 2006, 496, TR-M-1).

The building is well-known as a pottery production site (CIUȘESCU 2004, 319–320) and it is also mentioned in relation to bone-working (CIUGUDEAN 2001, 62; VASS 2010, 60), but until our research, it had never been identified as a glass workshop. From this building we have the largest concentration of moulds used for the production of prismatic glass bottles from the whole Roman Empire.⁶ In the two publications (CSERNI 1912a; 1912b) illustrating the moulds (Pl. 1/6–11) a total number of thirteen pieces has been originally published as ceiling-decorations. Based on the publications, we managed to re-identify seven of them in the collections of the National Museum of Unification (MNUAI) from Alba Iulia, but with regrets we had to realise that since the beginning of the 20th century six pieces belonging to the sides of the moulds were not to be found. In the same sequence of inventory numbers three unpublished moulds were identified in the museum, which have been probably recovered from room K (Fig. 3) excavated mainly in 1913 and until now their existence (CSERNI 1913, 384) was only mentioned. Based on the description from the report published in 1913 (CSERNI 1913, 384–385) we added to the plan of the building (CSERNI 1912a, 259, fig. II) the eastern and southern walls of room K (Fig. 3 marked with grey).

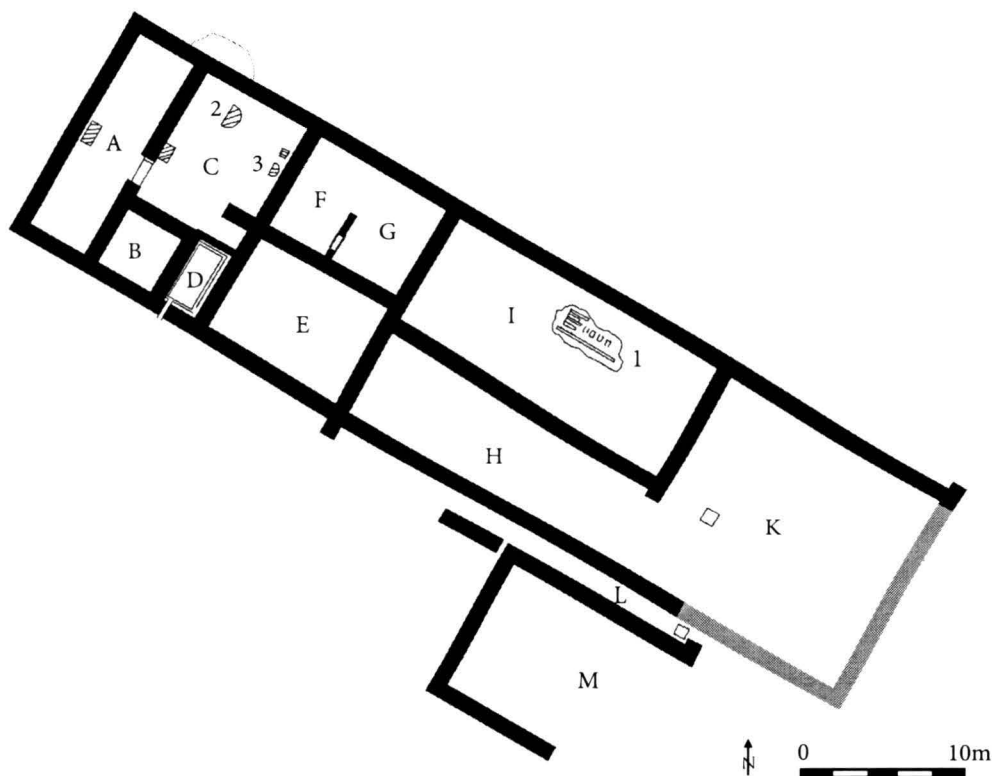


Fig. 3. The building excavated by B. Cserni.

The glass moulds were found in a destruction layer in rooms F, G and I under the floor of the latest phase (CSERNI 1912a, 278), so they cannot be linked to the last phase of the building. Data concerning the context of discovery of the moulds (5–6) and (10) discovered probably in room K in 1913 has not been published. Based on the numismatic evidence, the building seems to be in use already from the second quarter of the second century and at least until the middle of the third century (CSERNI 1912a, 271–275), so our glass workshop should be rather dated to the late Antonine–early Severan period.

6 In 2006 a total number of sixteen moulds were known from the Roman Empire (AMREIN–NENNA 2006, 495–496; SÁNCHEZ DE PRADO 2006).

A large pottery kiln (Fig. 3, structure 1) was discovered in room I (CSERNI 1912a, 267–268) and two semicircular furnaces (Fig. 3, structure 2 and 3) are known from room C (CSERNI 1912a, 262–263). The straight side of the larger kiln (Fig. 3, structure 2; Pl. 1/4) was 1.50 m, the radius was 1.20 m and the preserved height was 0.85 m, the straight side of the badly preserved smaller kiln (Fig. 3, structure 3) was 1 m and the radius 60 cm. The shape and size of the kilns, the published dataset and the fact that in room C no mould has been recovered, do not allow us to identify them with certainty as typical glass-working furnaces, but we can't exclude the fact that they might have been used as such.

From the many glass fragments discovered in the building, just a selection of the larger fragments has been published (CSERNI 1912a, 279, fig. 22; 280–281) in the form of summary description and a photographic plate (Pl. 1/5). With regrets we had to realize that the glass-material from the building was not to be found in the museum, so our observations rely only on the published data. Related to the bottle production we might link the eight glass moils (marked with red), the four glass thread fragments (marked with yellow) and the six bottle fragments (marked with green) which could be identified with a high degree of probability based on the available photo.

From the building, we have eight pieces (1–8) which might belong to mould bases (Fig. 4/a) and eight pieces (9–16) could belong to the sides (Fig. 4/b–c) of the moulds. All of the mould bases and six of the side pieces have a frame (Fig. 4/b) and only two (10 and 14) belong to the version which presents the lack of it (Fig. 4/c). We have no clear evidence how these moulds were held together, but after being assembled (for the design, see Fig. 4/d) probably a rope or a fastener made of other organic material was used. Three of the well preserved side fragments (9 and 11–12) have a narrower inner part at the bottom and a wider one at the top, allowing the completed vessel to be taken out without disassembling the mould.

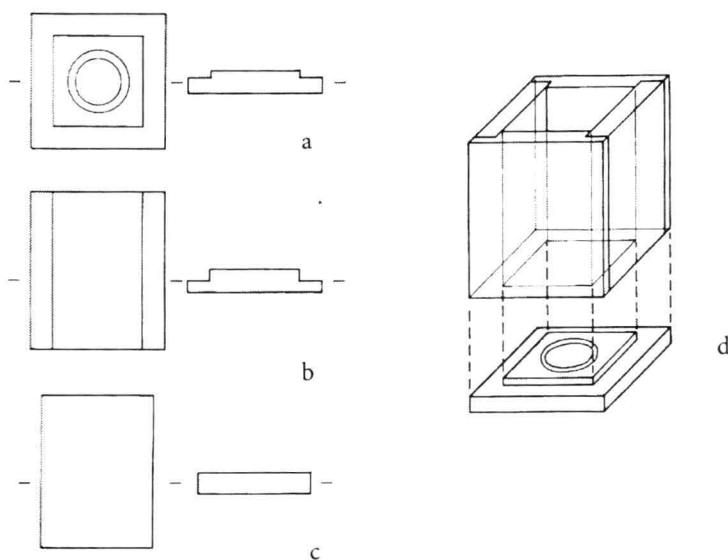


Fig. 4. Moulds for square bottles.

Twelve pieces are made of marble (1–7 and 9–13) and only four (8 and 14–16) of ceramic. About the moulds discovered in this building we can declare with high probability, that they were possibly produced from reused⁷ fragments of local marble⁸ and the available ceramic building materials in the workshop. This statement is strongly supported by the presence of at least one unfinished mould base (7) and the iconographical similarities between the moulds. Six (1–3, 5 and 7–8) of the eight moulds are decorated with rosettes, two with four petals (2, 5) and four with

7 A hint in this direction might be the roughly carved rhomboid decoration on one of the moulds (10) which could also be part of an unfinished base mould for a rectangular bottle but also a sketch for a decoration of another purpose. The second option might be more convincing, because this is the only mould fragment from our set having both sides polished.

8 Archaeometrical analysis could not be made on the moulds, but the uniformity of the greyish-white marble and its frequency in the area, would make it rather improbable to be imported.

six petals (1, 3 and 7–8). The similarities in the technical execution of four of the rosettes (1, 3, 5, and 7), the visible use of compass and sketch marks (1, 5, 7 and 8), the presence of similar decoration concepts, like the combination of rosette and circle (7 and 8) and the use of concave lines in the corners (6 and 7) seem also to be typical for this workshop.

The fact that at least some of them have been used in the workshop is proved by the presence of glass working debris, but also by the black deposit of organic origin⁹ present on all of the pottery moulds (8 and 14–16) and at least two of the marble moulds (2 and 9). If the organic material was used to prevent the glass to be stuck on the moulds or it is only a side effect of the glass working process needs further analyses. The question is interesting if we look at the seven preserved moulds, which clearly do not have this kind of deposit (1, 3–7, 10). From these, one (7) is clearly an unfinished piece and three other (3–5) have a damaged surface in the decoration area. In some cases the damage could be also the result of the excavation method, but it is rather improbable that all the three are to be included in this category. So this may indicate that they have not been used at all, and their discovery is also a result of the fact that they are wasters of the mould production process. Still we have two mould base pieces (1 and 6) and one possible side piece (10) which do not have any black deposit and are in good condition.¹⁰ We can state anyway, that both types of moulds (ceramic and marble) having the same type of design were used in this workshop. As far as the workshop concerns, we have to underline the physical and probably chronological links between at least four different industrial activities, pottery production (including local samian ware production), bone working, stone carving and glass working, in the same building, and in some cases in the same room. The strong connections between different workshop activities can offer us a deep insight in the organization of such an *officina* which needed in some cases highly specialized workforce, but still coexisted under the same roof and maybe under the same ownership.

About the distribution of the glass bottles produced in this workshop and the range of other glass vessels, which might have been produced here, it is very difficult to formulate a thesis, due to the fact that the glass material from this building is not available for analyses¹¹ and there aren't any similar bottle marks published from Dacia. We can state that probably in the moulds square (AR 156/I 50),¹² rectangular (AR 157/I 90) and hexagonal (AR 158) bottles and square jars (AR 119/I 62) have been produced as storage and transport vessels and they might be found in other provinces as well.

9 Microscopic analysis where made at the Institute of Archaeology from the University College of London by prof. Dr. Thilo Rehren.

10 One of the explanations could be that the mould 1 has a prominent compass line around the rosette which might suggest that it was not fully completed; being intended to be polished later, so they might not used it at all. The mould 6 do not has any decoration in the centre, maybe it was intended to look like 7 but it was not finished neither. This question can be answered easily if glass bottles having these marks will be recovered.

11 The most complex paper about the glass vessels from Apulum (BĂLUȚĂ 1985) presents a high number of glass *unguentaria* as possible local products, which cannot be excluded from the start, but only their good state of conservation determined the author to include them in the paper.

12 AR is for the typology of Augusta Raurica (RÜTTI 1991), and I is for the Isings typology made for the Roman Empire (ISINGS 1957). About the forms, see: PRICE-COTTAM 1998, 194–195 (square bottle); PRICE-COTTAM 1998, 198–200 (hexagonal bottle); PRICE-COTTAM 1998, 200–202 (rectangular bottle); PRICE-COTTAM 1998, 135–136 (square jars). For the functional categories of the glass bottles and jars, see: LITH-RANDBORG 1985, 416, fig. 9–10; RÜTTI 1991, 180–181, fig. 117–118. For the potential of the glass bottles to trace down interprovincial trade, see for example: PRICE 1978, 75–76.

CATALOGUE¹³

1. Mould base for hexagonal bottles (Pl. 1/8.1; 1/10.1; 2/12). MNUAI, inv. no. 4086. Grayish-white marble with polished upper surface; frame dim. 13.2 × 15.4 × 2.4–2.6 cm; base dim. 4.5 × 5.2 × 0.5–0.6 cm. Six small circles in the corners and six-petalled rosette with circular compass mark in the center. CSERNI 1912a, 273, fig. 14; 278; CSERNI 1912b, 355, fig. 3; 356.
2. Mould base for square bottles (Pl. 1/8.3; 1/10.3; 2/13). MNUAI, inv. no. 4090. Grayish-white marble with polished upper surface covered partly by blackish organic deposit; frame dim. 13.5 × 14 × 2.2–3.1 cm; base dim. 7.3 × 7.9 × 0.7–0.8 cm. Four triangular carvings in the corners and four-petalled rosette in the center. CSERNI 1912a, 273, fig. 14; 278; CSERNI 1912b, 355, fig. 3; 356.
3. Mould base for square bottles (Pl. 1/8.2; 1/10.2; 2/14). MNUAI, inv. no. 4085. Grayish-white marble with polished upper surface, one side is missing; frame dim. 6.1 × 11.1 × 2.5 cm; base dim. 8.3 × 8.3 × 0.2 cm. In the photos from 1912 the mould has a crack, since that, this part is lost. Based on the first publication (CSERNI 1912b, 356) the original frame size was 11 × 10.5 × 2.5 cm and the base size was 8.5 × 8.5 × 0.2. Six-petalled rosette in the center CSERNI 1912a, 273, fig. 14; 278; CSERNI 1912b, 355, fig. 4; 356.
4. Mould base for square bottles (Pl. 1/8.6; 1/10.4; 2/15). MNUAI, inv. no. 4084. Grayish-white marble with polished upper surface; frame dim. 15.1 × 18.6 × 3.7–3.9 cm; base dim. 9.2 × 9.3 × 0.4–0.6 cm. Two diagonal lines with damaged surface. CSERNI 1912a, 273, fig. 14; 278; CSERNI 1912b, 355, fig. 4; 356.
5. Mould base for square bottles (Pl. 2/16). MNUAI, inv. no. 4092. Grayish-white marble with polished upper surface; frame dim. 8.8 × 11.2 × 3.1 cm; base dim. 6.1 × 6.6 × 0.4–0.5 cm. Four-petalled rosette in the center and diagonal sketch marks with damaged surface. Unpublished.
6. Mould base for square bottles (Pl. 2/17). MNUAI, inv. no. 4089. Grayish-white marble with polished upper surface; frame dim. 8.8 × 11.2 × 3.1 cm; base dim. 6.1 × 6.6 × 0.4–0.5 cm. Four concave lines and small circles in the corners. Unpublished.
7. Unfinished (?) mould base for square bottles (Pl. 1/6.1; 2/18). MNUAI, inv. no. 4091. Grayish-white marble with polished upper surface, almost half is missing; dim. 7.5 × 15.7 × 1.9 cm. Two (probably from four) diagonal petal shaped carvings and concave lines in the corners, probably six-petalled rosette and circle in the center. The frame has not been carved, but was marked with carvings and sketch marks. CSERNI 1912a, 272, fig. 12; 278.
8. Mould base for square bottles (Pl. 1/7.2; 1/9.1; 2/19). MNUAI, inv. no. 4091. Orange-red ceramic with leveled surface (probably made out of a Roman brick or tile), covered partly by a blackish organic deposit; frame dim. 15.7 × 18.7 × 4.3–4.6 cm; base dim. 11.9 × 11.9 × 1.2–1.4 cm. Four L shaped carvings in the corners with sketch marks, six-petalled rosette and a circle in the center. CSERNI 1912a, 273, fig. 13; 278; CSERNI 1912b, 354, fig. 2; 355.
9. Mould side for prismatic bottles (Pl. 1/8.5; 1/11.3; 2/20). MNUAI, inv. no. 4087. Grayish-white marble with polished inner surface covered partly by a blackish organic deposit, one corner and parts of three sides are preserved; dim. ext. part 16.3 × 12.7 × 1.7–2 cm, width of inner part 8.2–8.4 cm. Carved frames on the long side. CSERNI 1912a, 273, fig. 14; 278; CSERNI 1912b, 356, fig. 5; 357.
10. Mould side (?) for prismatic bottles (Pl. 2/21). MNUAI, inv. no. 4088. Grayish-white marble with polished surfaces, shorter sides damaged; dim. 14.7 × 9 × 2.2–2.8 cm. Roughly carved rhomb. Unpublished.
11. Mould side for prismatic bottles (Pl. 1/8.4; 1/11.1). Lost. Grayish-white marble with polished inner surface, one corner is missing; dim. (after Cserni) ext. part 12 × 10 × 2–2.5 cm, width of inner part 5–5.8 cm. Carved frames on the long side. CSERNI 1912a, 273, fig. 14; 278; CSERNI 1912b, 356, fig. 5; 357.
12. Mould side for prismatic bottles (Pl. 1/11.2). Lost. Grayish-white marble with polished inner surface; dim. (after Cserni) ext. part 12.5 × 7 × 2.4 cm, width of inner part 5–5.5 cm. Carved frames on the long side. CSERNI 1912a, 273, fig. 14; 278; CSERNI 1912b, 356, fig. 5; 357.
13. Mould side for prismatic bottles (Pl. 1/11.4). Lost. Grayish-white marble with polished inner surface, only one corner and parts of two sides preserved; dim. (after Cserni) ext. part 14 × 10 × 1.8–2 cm, width

13 The catalogue was structured after: FOY–NENNA 2006.

- of inner part 8 cm. Carved frames on the long side. CSERNI 1912a, 273, fig. 14; 278; CSERNI 1912b, 356, fig. 5; 357.
14. Mould side for prismatic bottles (Pl. 1/7.1), it might be an unfinished base mould as well. Lost. Orange-red ceramic with leveled surface (probably made out of a Roman brick or tile), covered partly by a blackish deposit, only one side is preserved; dimensions have not been published. Carved lines on the surface to mark how to fit (?) to the other moulds. CSERNI 1912a, 273, fig. 13; 278.
15. Mould side for prismatic bottles (Pl. 1/7.3; 1/9.2). Lost. Orange-red ceramic with leveled surface (probably made out of a Roman brick or tile), covered partly by a blackish deposit, one corner and parts of three sides are preserved; dim. (after Cserni) ext. part $19 \times 14 \times 3$ cm, width of inner part 8.5 cm. Carved frames on the long side. CSERNI 1912a, 273, fig. 13; 278; CSERNI 1912b, 354, fig. 2; 355.
16. Mould side for prismatic bottles (Pl. 1/7.4; 1/9.3). Lost. Orange-red ceramic with leveled surface (probably made out of a Roman brick or tile), covered partly by a blackish deposit, one corner and parts of three sides are preserved; dim. (after Cserni) ext. part $12.8 \times 12.5 \times 3$ cm, width of inner part 7.8 cm. Carved frames on the long side. CSERNI 1912a, 273, fig. 13; 278; CSERNI 1912b, 354, fig. 2; 355.

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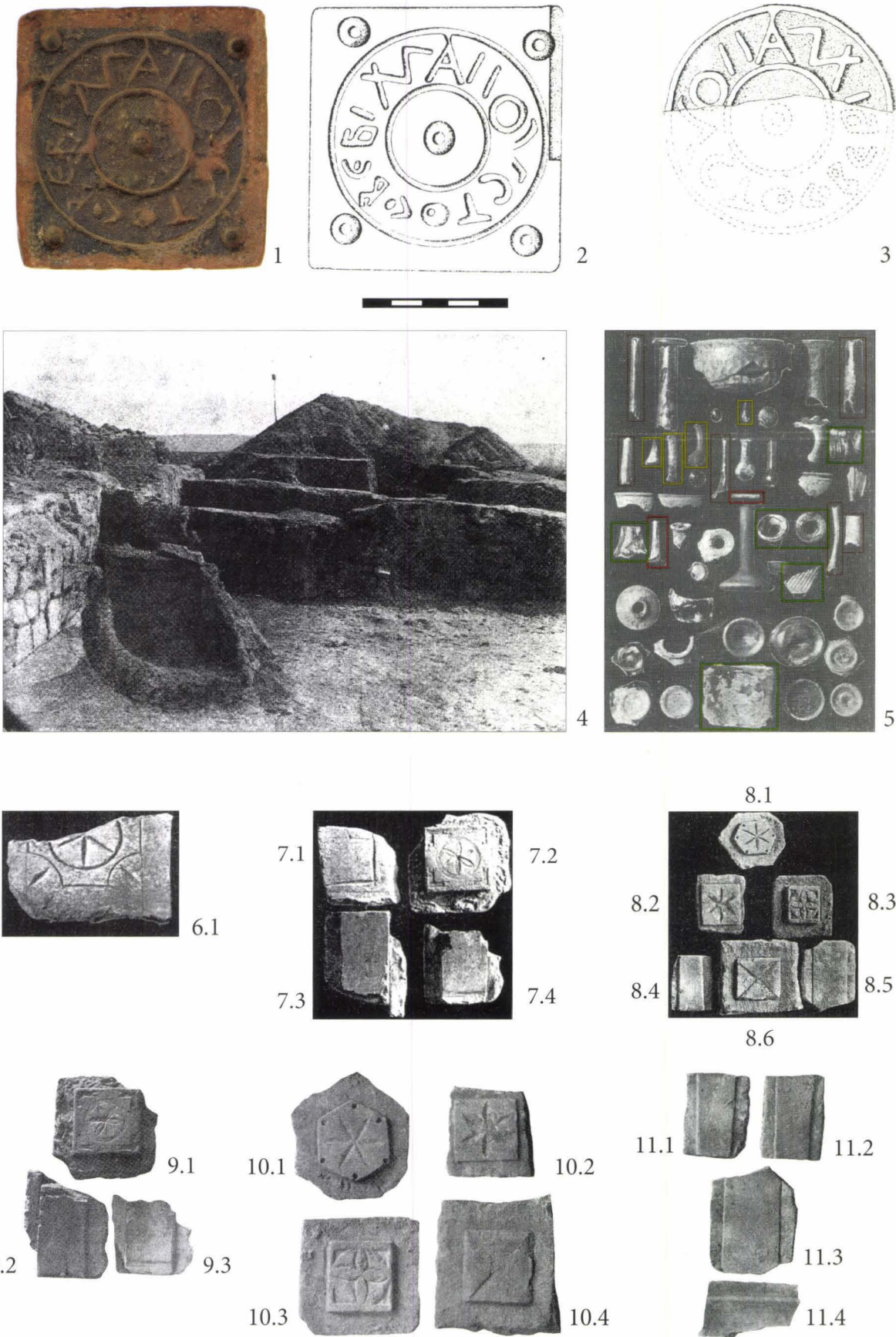


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THE FUNERARY STELAE FROM POROLISSUM. TYPOLOGICAL, ICONOGRAPHICAL AND EPIGRAPHIC ASPECTS¹

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The paper proposes a correlated typological, iconographical and epigraphic approach for the study of the funerary stelae from Porolissum. While the majority of the fragments considered here were published, they have not been subjected so far to a detailed investigation. The analysis comprises the entire sculptural record belonging to the category of Roman funerary stelae from Porolissum. The discussion offers insight into aspects related to stone carving centres and artistic influence, but at the same time the subject is approached from the standpoint of the commemorators (the family and friends of the deceased, and in many cases the deceased himself) thus offering a 'human perspective' on the issue, which is linked above all to the practice and customs of funerary commemoration.

Keywords: funerary monuments; iconography; Roman art; epigraphy; Porolissum; ethnic and social identity; stone carving centres

Among the wide range of Roman funerary monuments known today, the category of the stelae is the largest and the most varied. The stelae frequently incorporate figurative decoration in addition to the epitaph, thus making them suitable for a correlated investigation of typological iconographical and epigraphic features. By means of such analysis, the relationship between the sculpture and the epitaph has the potential of providing insight into aspects related to the social and ethnic identity of the deceased, and possibly about the dating of the monument (HOPE 1997, 251).

1 The present paper is part of a larger research project, the *Necropolis Porolissensis Project*, which proposes the multidisciplinary research of the Roman necropolis of Porolissum, found on Ursoieș hill. The most important financial support of the Project is the PN II ID_516 CNCSIS Grant "The phenomenology of space and funerary anthropology in the context of archaeological, geophysical and topographical prospections within the necropolis of the Roman town of Porolissum (2nd–3rd centuries AD)".

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The majority of the funerary monuments discovered in Porolissum, one of the most important military centres of Dacia Porolissensis, consist of stelae.² Unfortunately all of the grave memorials discussed below have been removed from their original context, either during Antiquity – a number of them were used to block one of the entrances of the auxiliary fort on Pomet hill (TÓTH 1978) –, or in more recent times. The stelae from Porolissum have benefited throughout the years from the attention of scholars, the majority of these monuments being published in a series of articles (e.g. DAICOVICIU 1940, 323–327) and catalogues. The first comprehensive work on this subject dates from 1975 and consists of a corpus of Roman sculptural monuments from the collection of the County Museum of History and Art in Zalău (GUDEA-LUCĂCEL 1975, 15–20). An overview of the funerary monuments of Porolissum can be found in the studies of L. ȚEPOȘU-MARINESCU (1982, 105, no. 12–13; 107, no. 19–20; 109, no. 27–28; 123, no. 86; 152–153, no. 218–225) concerning the funerary monuments from Dacia Superior and Porolissensis, and of L. BIANCHI (1985, 277–278, no. 180–189) regarding the funerary stelae of Roman Dacia. Both authors classify the stelae from Porolissum according to a general typology elaborated for either the entire province or for Dacia Superior and Porolissensis. The most recent overview on the subject (CRÂNGUȘ-BALACI 2008, 289–290) examines the activity of the stone carving workshop from Porolissum, but doesn't attempt a deeper analysis or a classification of the monuments.

The aim of the present paper is to present a comprehensive perspective on the stelae of Porolissum. In addition to a typological approach, the iconography and the epigraphy of the monuments will be analyzed, in the attempt of acquiring as far as possible a complete view on the customs of funerary commemoration in Porolissum, as reflected by these grave-memorials. Our investigation also intends to explore to what extent can the different ways of commemoration expressed by the monument, be tied to some form of identity, social and ethnic assumed by the deceased.³ Among the 42 monuments and fragments discussed in this paper, five have been until now unpublished (no. 22, 24, 32, 34 and 35).

In order to obtain an extensive view on the subject of the funerary stelae from Porolissum, the entire sculpted record belonging to this category will be considered, including the most fragmentary pieces for which we have the certainty that they belonged to the type of monuments discussed here. The integration of the pieces which exhibit a sufficiently high degree of preservation, into a typological system will constitute the framework of our investigation. In the second part of the discussion, the iconographical elements exhibited by the monuments will be grouped according to the nature of the depictions and analysed separately. Such an approach is necessary since it can provide insight into the ways of figural representation of the deceased, of the decorative elements employed as well as their significance with regard to funerary art and symbolism.

2 A larger study which encompasses the funerary monuments of Porolissum (D. Petruț, *The Funerary Monuments of Porolissum*), is due to appear in the volume dedicated to the results of the investigations undertaken between the years 2006 and 2009 in the necropolis of Porolissum.

3 The question is, do the displays of identity specific to grave memorials belong to the deceased, or are they determined entirely by the commemorator? The evidence shows that the construction of *ante-mortem* funerary monuments, i.e. grave memorials constructed during the lifetime, and under the supervision of the person to be commemorated, was common place in the Roman world (SALLER-SHAW 1984 126; HOPE 1997, 251). In the case of *post-mortem* commemoration, it has been noted, that for the civilian population the overwhelming majority of the commemorators belong to the nuclear family of the deceased, while in the case of the military, the commemorators are usually fellow soldiers (SALLER-SHAW 1984, 134; HOPE 1997, 251). As a result we can say that the commemorators typically have a similar status and background as the deceased, thus their interference at least theoretically should not alter the social and ethnic picture.

The epigraphic record will be included in the discussion, focusing on specific elements which can offer information regarding social or ethnic identity. The three main components of our approach, the typology, the iconography, and the epigraphy will be correlated in order to explore the possibility of detecting patterns in the customs of commemoration at Porolissum.

*The typology*⁴

Due to the general poor state of preservation, only 12 pieces out of the 42 discovered at Porolissum, can be integrated into a typological system (no. 1–12; Fig. 1).⁵ Further 20 pieces were classified on the basis of their preserved decorative features, due to the necessity of identifying the stylistic preferences of the stone carving centre and possibly of the population of Porolissum (no. 13–32). This second classification was entitled ‘relative typology’. The third category within the monuments discussed, comprises 10 fragments, which due to their extremely poor state of preservation could not be integrated in our typology (no. 33–42).

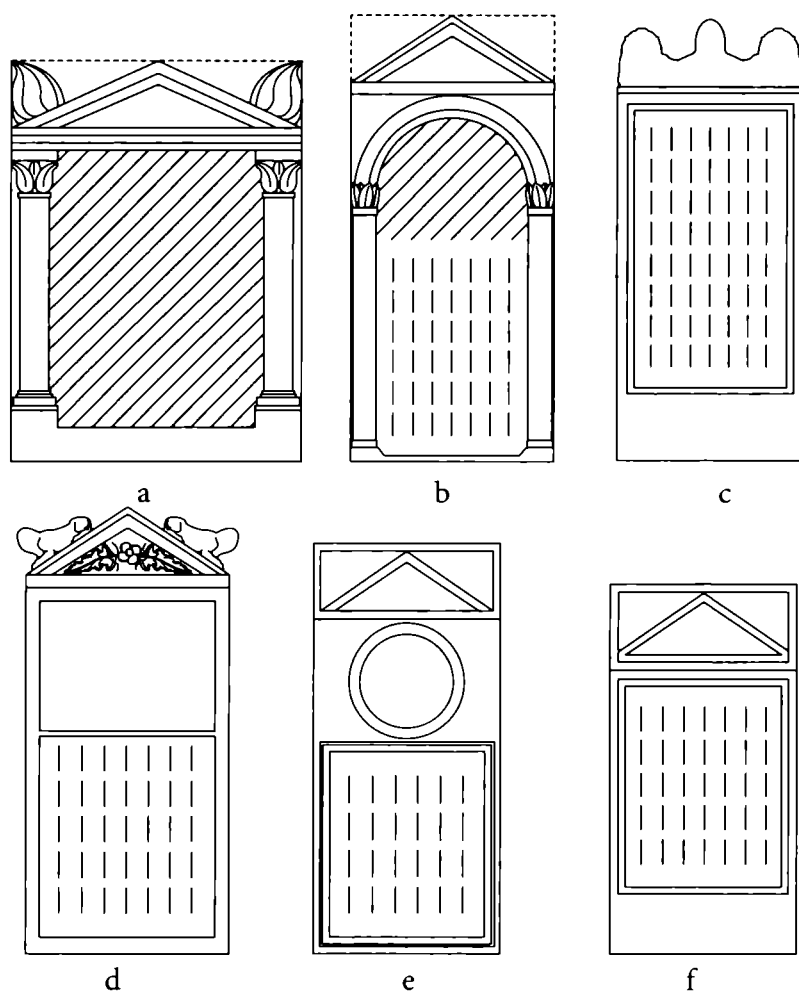


Fig. 1. The typology of the funerary stelae from Porolissum.

- 4 The typology implemented in our survey follows the system composed of two levels of classification: a structural level, consisting of: 1) architectural, 2) profiled, and 3) undecorated types, and a morphological level, defined by the combination of mostly architectural decorative elements principally characteristic to the monument. For Roman Dacia, the system is best illustrated through the work of C. Ciongradi (for a detailed description, see: CIONGRADI 2004, 167–169, fig. 6.3; CIONGRADI 2007, 41–59, Taf. 6–8; CIONGRADI 2009, 28–32, Taf. 3–4).
- 5 It is important to note that, for Dacia Porolissensis, a typology of the stelae such as the one described above is yet to be completed. The classifications carried out hitherto with regard to the entire Roman Dacia (FLORESCU 1930; ȚEPOSU-MARINESCU 1982; BIANCHI 1985), in our opinion need to be reconsidered.

The results of our investigation show the presence of all three main categories of funerary stelae: 1) architectural stelae, 2) profiled stelae, and 3) stelae without decorative elements, as well as an obvious inclination towards the profiled stelae. This situation is characteristic for Dacia Porolissensis in general, but also for stone carving centres like Micia and Ulpia Traiana Sarmizegetusa, in Dacia Superior (CIONGRADI 2007, 42, 54).

Type I. Architectural stelae

A. Aedicula-stelae: 1 (Fig. 1/a)

B. Triangular pediment and arched niche: 2–3 (Fig. 1/b)

Type II. Profiled stelae

A. Inscription field and coping consisting of funerary lions: 4 (Fig. 1/c)

B. Rectangular relief field and coping consisting of funerary lions or triangular pediment: 5–6 (Pl. 1/d)

C. Triangular pediment and medallion-shaped niche: 7–8 (Fig. 1/e)

D. Triangular pediment and inscription field: 9 (Fig. 1/f)

Type III. Stelae with no decorative elements: 10–12

Type IV. Fragments of stelae with relative typology

A. Architectural stelae: 13

B. Profiled stelae: 14–22

C. Profiled stelae with medallion-shaped niche: 23–24

D. stelae with enclosed triangular pediment: 25–26

E. Triangular pediment and acroteria: 27

F. stelae with attic: 28–29

G. Figured stelae: 30–32

H. Fragments with unknown typology: 33–42

Type I.A. Aedicula-stelae⁶

In the archaeological literature, the stela from Porolissum belonging to this category (1) benefited only from brief discussions, mainly in catalogue descriptions (GUDEA–LUCĂCEL 1975, 42–43, no. 140; GUDEA 1989, 789, no. 103, pl. CCCI). C. Daicoviciu, when publishing the piece for the first time, recognized its resemblance with the funerary aediculae, labelling it “a funerary monument in shape of an aedicula” (DAICOVICIU 1940, 324, fig. 22, “*Grabdenkmal in Gestalt einer aedicula*”). L. ȚEPOSU-MARINESCU (1982, 171, no. 46, pl. XXI), and later on L. BIANCHI (1985, 68), by virtue of the two lateral relief fields, ascribed the piece to the category of “funerary altars in shape of an aedicula”. The two adjacent relief fields placed on both sides of the monument contain the depiction of a waiting servant on the left side and of a mourning woman (*praefica*), on the right (PETRUȚ–MUSTAȚĂ 2010, 185, no. 27). This feature, correlated with the main relief field of the monument which holds the representation of the commemorated deceased, is consistent with the arrangement of the figurative decor on funerary aediculae. In our opinion, the structure of the monument shows clearly the intent to emulate the funerary aediculae, popular in the province (ȚEPOSU-MARINESCU 1982, 33–36), but

6 The term aedicula-stelae (sometimes used as ‘pseudo-aedicula’) is applied to the type of stelae which reproduce the morphology specific to the façade of aedicula type constructions. The main architectural elements that define these monuments are: triangular pediment, architrave, the relief field with the representation of the deceased flanked by two columns, and an inscription field in the lower part of the monument.

probably unaffordable for the majority of the population. The addition of the two lateral relief fields can be viewed as an adaptation of the features of 'classical' type stelae, with the intent of emphasising the connection to the funerary constructions mentioned above. Instances of this phenomenon are encountered outside the borders of Dacia, as is the case of a stela from Obernburg am Main, in the province of Germania Superior (see: VEL 6975). In Roman Dacia, besides the stela from Porolissum, only two other examples of the aedicula-stelae (without lateral relief fields) are known, in Apulum (CIONGRADI 2007, 176, no. S/A 59, Taf. 51), and Petnic, in Caraș Severin County (IDR III/1, 122–123, no. 104, fig. 81).

The only indication with regard to the dating of the monument, since the inscription field is missing, is provided by the full-figure representation of the mourning woman in the right lateral relief field, who is wearing a hairstyle ascribed to Iulia Domna, wife of Emperor Septimius Severus. On the basis of this observation, the monument can be dated in the period between the end of the 2nd century, and first part of the 3rd century AD.

Type I.B. Architectural stelae with triangular pediment and arched niche

In Porolissum, one stela belonging to this type is known (2).⁷ The monument in question exhibits a series of features which are not consistent with the variant generally present in Dacia (CIONGRADI 2007, 54–56). In the spandrel, i.e. the corner between the archivolt and the pediment, a small pilaster can be seen without suggesting any clear architectural function as we would expect on an architectural stela. This can either be interpreted as a mistake of the artisan, who initially intended to carve a pediment sustained by the columns through an architrave, either it was intended as a decorative element chosen in favour of the motifs generally used in this case (rosettes, dolphins, *Genii*). The upper part of the niche is decorated with a seashell motif, which is a typical decoration method for the medallion-shaped niches serving as background for the 'portraits' of the deceased (CIONGRADI 2007, 113). In Roman Dacia, this category is most numerous in Apulum (CIONGRADI 2007, 162), but it is also encountered in Micia, Cristești (Mureș County) and Călan (Hunedoara County), in Dacia Superior (CIONGRADI 2007, 194; ȚEPOSU-MARINESCU 1982, S 51, S 59).

The schematic rendering of some of the architectural elements (the archivolt and the pediment), the non-organic depiction of the architectural structure, as well as the fact that the enclosure of the pediment lacks the profiled frame, suggest an analogy with two stelae, from Micia, and from Apulum, both dated on stylistic grounds, in the first half of the 2nd century AD (CIONGRADI 2007, 54). If the analogy is correct, it is very probable that the piece discussed here dates from the same period.

Type II.A. Inscription field and coping consisting of funerary lions

The main feature of this type is represented by the rectangular field of inscription, which covers almost the entire surface of the monument, and the profiled frame consisting usually in a *cyma reversa* and a lintel moulding (CIONGRADI 2007, 42). The type is common to most of Dacia Superior (see: CIONGRADI 2007;⁸ ȚEPOSU-MARINESCU 1982⁹). The variant with coping consisting of lions is encountered only in Porolissum (4), but we have no reason to suppose that we are

7 Fragment no. 3 is known only through a description; therefore it is not suitable for a typological and stylistic discussion.

8 S/S 32–35 (Ulpia Traiana Sarmizegetusa).

9 S 5, S 6 (Apulum); S 7–10 (Tibiscum); S 11 (Mehadia); S 15 (Sănnicolau Mare), S 16 (Strei Săcel).

dealing with an independent type. The chronological spectrum of the stelae belonging to this type covers almost the entire period of existence of the province, consequently only the individual dating of these monuments on epigraphic grounds is possible (CIONGRADI 2007, 53). Unfortunately, the stela from Porolissum, although the text of the epitaph is intact, offers no evidence regarding its dating.

Type II.B. Rectangular relief field and coping consisting of funerary lions or triangular pediment

The rectangular relief field enclosed in a profiled frame, characteristic to this type of monument, usually contains either the depiction of the deceased, or the scene of the funerary banquet. The monuments of this type are relatively common in Dacia Porolissensis, besides Porolissum, they are encountered at Gherla, Cășei (Cluj county) and Potaissa (ȚEPOSU-MARINESCU 1982, S 118, 119). It appears that this type of stelae is representative of the military environment of northern Dacia, especially as no examples are known from Dacia Superior.

The monument of Aelia Verina (5) can be dated on the basis of the *praenomen* of the deceased, to the middle of the 2nd century AD. It is interesting to note that, except the initials from the starting formula (in this case only the letter 'D' is preserved), the letters of the inscription bear the signs of a poor quality execution, which contrasts the relatively careful carving of the morphological and decorative features of the monument. Considering other cases as well (BĂRBULESCU 2003, 82), it seems plausible that the monument was inscribed by the customer after purchase. An analogy for this monument comes from Potaissa (JUDE-POP 1972, 9, no. 6), which only differs in the fact that the pediment is enclosed.

The second stela from Porolissum, belonging to this type (6), was lost after being incorporated into the wall of a house in Ortelec near Porolissum. Unfortunately, the only photograph which exists of the monument, taken in the 1960's, is not clear enough to allow detailed stylistic observations. The analogy of the monument in question, as in the previous case, comes from Potaissa (JUDE-POP 1972, 9, no. 10).

Type II.C. Triangular pediment and medallion-shaped niche

The stelae with triangular pediment and medallion-shaped niche are considered rare in Dacia, as opposed to the variants without pediment or with attic which are represented in a larger number, especially in Dacia Superior (e.g. ȚEPOSU-MARINESCU 1982, S 173, 174, 178, 179).¹⁰ Due to the very clear stylistic connection, the two monuments from Porolissum (7, 8), although both in a fragmentary state of preservation, and exhibiting some morphological dissimilarities (the lack of a pediment in the case of fragment no. 7), in our view belong to the same type of funerary stelae, and very probably are products of the same workshop. As analogies, we can mention a fragment from Napoca dated by L. Țeposu-Marinescu on stylistic grounds to the first part of the 3rd century AD, and a stela from Orăștioara de Jos (Hunedoara county), dated by the same author to the end of the 2nd century AD (ȚEPOSU-MARINESCU 1982, S 157, 175).

The fragments from Porolissum¹¹ display a number of features which are potentially indicative of their date. We refer to the Iulia Domna type hairstyle and the signs which point to the use of the drill in shaping the eyes and the acanthus-leaf motif. This suggests that the monuments were created at the beginning of the 3rd century AD.

¹⁰ Most of the stelae of this type come from Micia.

¹¹ Of fragment no. 8, only the upper left part is preserved today, the rest is known from a photograph taken in 1943.

Type II.D. Triangular pediment and inscription field

Characteristic mainly to Dacia Superior, this type of stela is present at Ulpia Traiana Sarmizegetusa (CIONGRADI 2007, S/S 1–6) and Apulum (CIONGRADI 2007, S/A 1–2) but also in Dacia Porolissensis at Napoca (BIANCHI 1985, 275, no. 158, fig. 13). The stelae of Ἡδύλος (9), due to its austere style (not even the field of the pediment is decorated), has no exact analogies in Dacia and, because only a small portion of the inscription is preserved, any chronological observation is difficult to sustain (see: RUSCU 2003, 107–110).

Type III. Stelae with no decorative elements

The three stelae from Porolissum included in this category (10–12) share the complete lack of decorative elements.¹² The preliminary dressing and the carving of the letters is very deficient, which implies the lack of tools and technique specific to a professional stone carver. Thus it is reasonable to consider that these stelae were made by the commemorator, rather than a stone carver. The difficulty of shaping these gravestones must have been augmented by the use of hard volcanic rock. It is interesting to note that the text belonging to the gravestone of Iustina Afri (12) can also be found scratched *ante cocturam* onto a brick (see: RUSSU 1973, 332, fig. 2). The existence of the inscribed brick was interpreted as a temporary grave-marker employed prior to the manufacture of the gravestone (BĂRBULESCU 2003, 82). In our opinion it is more feasible to consider that the inscribed brick was produced by the commemorator, as part of the process which involved conceiving the epitaph and practicing its implementation. In other words, the commemorator probably recorded the text on the brick, this way also practicing its writing on an easier surface before carving it onto the monument itself.

Type IV. Fragments of stelae with relative typology

Out of the 30 fragments without accurate typological classification, 20 could be placed in relative typological categories based on the structural and morphological features retained. For the remaining 10 cases, the advanced state of fragmentation has prevented this approach, as these fragments are part of the epigraphic registers of the stelae and lack any trace of the frame, which could indicate the structural category which they belong to. Of the pieces classified according to a relative typology (no. 13–32), in 9 cases only their association to the category of profiled stelae was possible to establish, the overwhelming majority of them (8 fragments) retaining only part of the epigraphic field and fragments of the profiled frame. The exception is no. 14, which belonged to a stela with the depiction of the funeral banquet, displaying a frame decorated with a floral-vegetal motif unique among the monuments of Dacia.

Fragment 23 seems to come from an unusual variant of profiled stela with medallion-shaped niche. From the preserved part of the monument it seems that the medallion-shaped niche penetrates the upper part of the epigraphic field, which led us to believe that we are dealing with an atypical variant of the stelae with medallion. The type of stelae with attic, known in large numbers in Apulum and Micia (see: CIONGRADI 2007, S/A 19–22, S/M 2–3, S/M 16), are present in Porolissum too,¹³ as indicated by fragments 28 and 29. The distinctiveness of these monuments is given by the fact that, while the other examples known in Dacia are monolithic, the fragments from Porolissum come from attics carved separately and attached to the stelae.

¹² The stela no. 12 at the present time is lost and it is known only from the description of K. Torma (see the catalogue).

¹³ The correct interpretation of these fragments as parts of stelae with attics belongs to L. ȚEPOSU-MARINESCU (1982, 152–153, no. 220, 222, 224).

The iconography

For the iconographical analysis we have considered every type of representation displayed by the stelae from Porolissum. Most of the elements are depicted in relief, with the exception of the pine cone and lion motif which are represented in *ronde-bosse* technique. As a result of the overview of iconographical elements, the following classification has emerged:

I. Funerary symbols

- a. Everyday objects
- b. Floral and vegetal symbols
- c. Animal symbols
- d. Marine symbols

II. Mythological elements

III. Elements possibly related to funerary rituals

IV. Depictions of the deceased

I.a. Within this category, we distinguished the representations of vessels and writing instruments. Among the vessels, only two depictions of cups could be identified, both being attributes of the deceased. On stela no. 14 the cup is integrated in the scene of the funerary banquet, while on fragment no. 30 it is held in the hand of the deceased depicted as a bust. Writing instruments could be identified in one case. On fragment no. 31 the deceased holds in his left hand a scroll of papyrus (*volumen*), highlighting its presence by pointing a finger from his right hand at it. Considering the iconographical context, the *volumen* being artificially emphasized, we find it plausible that the scene suggests the idea of citizenship (see: ȚEPOȘU-MARINESCU 1982, 56).

I.b. In the case of the floral and vegetal symbols, the following types of representations can be distinguished: acanthus leaves, vine, pine cone, rosette and garland. The occurrence of floral motifs on funerary monuments has been linked to the custom of periodical flower offerings, and particularly the spreading of rose petals on the graves during the celebration known as *Rosalia* (HOPE 2007, 234–235). The vegetal motifs, especially the acanthus leaves, are interpreted as symbols of immortality, because of their ability of maintaining their green color during winter (CIONGRADI 2007, 111.) The acanthus leaf is one of the most frequent decorative elements on funerary stelae. In Porolissum it appears on five stelae (1, 5, 7, 8 and 24). In the case of two fragments (1, 5) the motif is set in the field of the pediment, for fragment no. 7, 8 and 24 it fills the spandrel, i.e. the space between the edge of the rectangular relief field and the edge of the medallion-shaped niche. On fragment no. 24 (a profiled stela with medallion), the frame is decorated with a vine motif, while for fragment no. 13, the semi column which frames the epigraphic field, displays the same design. On fragment no. 4, we find the motif of the pine cone set in the centre of the coping consisting of lions. As a funerary symbol, the pine cone is referred to both as an attribute of Liber Pater, and as a symbol of immortality and rebirth, therefore linked to the god Attis (CIONGRADI 2007, 112). A number of three stelae display the motif of the rosette (2, 9 and 28). Fragments no. 2 and 9 incorporate the motif in pairs of two, symmetrically placed rosettes in the corners outside the pediments. In the case of fragment no. 28, the rosette is attached to a garland held by Amores and a pair of bulls in the relief field of the attic.

I.c. The animal motifs are not as frequent and as varied on the stelae of Porolissum as the previous category. Two types were identified: the lion sculpted in *ronde-bosse* technique as part of the coping of stela no. 4 and the relief representing a pair of bulls, on the fragments belonging

to an attic (28). In Roman funerary art the motif of the lion, has been interpreted as both an apotropaic symbol and as a symbol for the destructive nature of time, while the occurrence of the bull – less frequent – is associated above all with the cult of Liber Pater (CHIŞ 2004, 171, 202).

I.d. Two iconographic elements can be related to the theme of marine symbols:¹⁴ the *Triton* in the corner outside the pediment on the fragment no. 26 and the seashell motif on the stela no. 2. The motif of the seashell is related to the birth of the goddess Venus, and as such can be regarded as a symbol of the deity (CONRAD 2004, 96).

II. For the mythological representations, we can mention the personification of the wind, depicted as a protome on fragment no. 24 and the depiction of Amores on the fragments belonging to an attic (26). The personifications of the winds in the context of funerary art are regarded by scholars as vehicles for the journey of the soul of the deceased to the stars (BĂRBULESCU 2003, 268–269). The composition displayed on the relief field of the attic (26) reflects the Dionysian symbolic system (CHIŞ 2004, 109).

III. In this category we included the iconographical elements that can be related in some form to any ritual activity connected to funeral commemoration. The following categories were distinguished: 1) depictions of the funerary banquet, 2) waiting servants and 3) mourning women. Hitherto, there is only one stela with the representation of the funerary banquet known from Porolissum (14). Due to its highly fragmentary state, with most of the components of the scene missing, the precise type is difficult to establish.¹⁵ The position of the woman, pressed between the edge of the register and the *kliné*, suggests that a larger number of characters were involved in the scene. The composition of the scene differs from the rest of the Dacian examples in the fact that the female character seated on the *kathedra* is placed in a lower position in relation with the male character on the *kliné*, which would suggest a composition with two symmetrically placed female participants at both ends of the scene and probably, two male participants reclined in the centre of the setting, as seen on a stela from Turkey (VEL 14184).

The waiting servants – often confused with *camilli* represented on votive monuments – are included in this category, since in our view, in the context of funerary iconography they are symbolic representations of the funerary banquet (PETRUŢ-MUSTAŢĂ 2010, 178). In Porolissum the only depiction of this type comes from the lateral relief field of the aedicula-stela (1). The representations of mourning women (*preficae*) on funerary monuments can be related to the tradition which required women to display their grief in a dramatic manner during the funeral, often hired mourners being employed to enhance the spectacle of grief (HOPE 2007, 104). In the funerary iconography, the depiction of the mourning women was probably influenced by the statuary type known as *pudicitia*, with the hand brought up to the chin. The only depiction from Porolissum comes from the right lateral relief field of the aedicula-stela (1).

IV. The depiction of the deceased on the Roman funerary stelae follows the general tendency observed in the case of Dacia (see: ŢEPOSU-MARINESCU 1982; BIANCHI 1985). The stelae of Roman Dacia display the deceased as busts or half-figures, the full figure representations being extremely rare (see: ŢEPOSU-MARINESCU 1982, 51–52). Among the figural stelae from Porolissum, we can distinguish three types: 1) sole representations (possibly fragment 29), 2) representations

14 Most of the depictions from this category have clear mythological implications; however they are usually discussed separately due to the fact that they form a homogenous category with related meaning.

15 For the typology of the funerary banquet scene in Dacia, see: BIANCHI 1974, 159–160 and ŢEPOSU-MARINESCU 1982, 47.

in pair (7, 8) and 3) family representations,¹⁶ with over two persons depicted (1, 5 and 6). This last category can be broken down into variants with 1) the busts aligned in a single row (5, 6), and 2) with the busts represented in two superimposed rows (1). Research has shown that the overlaid rows usually emphasize and distinguish the different age groups from within the portrayed family (CIONGRADI 2007, 118). In the case of stela no. 1, this distinction is only partially clear, considering that the upper row displays the busts of three persons, and an obvious age-difference between the two male figures from the right side of the relief field is difficult to point out. It is not an unfeasible hypothesis however, based on an analogy from Micia (CIONGRADI 2007, 118, S/M 4), that the two male figures depict the father and the eldest son, the mother on their left, while the lower row shows the youngest children of the family.

With regard to the posture displayed by the representation of the deceased, we can observe that the female depictions (5, 7 and 8) exhibit a clear connection with the statuary type known as '*La Piccola Ercolanese*'. The choice of clothing for the representation of the deceased can be described as being relatively homogenous. For the women, we can observe a predilection towards the *palla* (no. 5, 7 and 8), only in one case has the deceased been depicted only in a *tunica* (30). For the men, we can notice a preference for mantles worn over the *tunica*: the *sagum* (31) and the *paenulla* (1), both being representative for the clothing of the soldiers.

The epigraphy. Aspects of social and ethnic identity

The discussion of the epigraphic information will focus on the evidence related to social and ethnic identity. Beyond the intention of presenting an overview of the social and ethnic background of the owners of the funerary stelae from Porolissum, the aim is to correlate this information with the typological and iconographical data discussed above. For this type of survey to be complete, the following information is needed: 1) the name of the deceased (indicative of ethnic origin or associated with additional information of this nature), 2) information regarding the social status, 3) clearly definable typology and 4) preserved iconographical elements. Unfortunately due to the highly fragmentary state of the stelae in question, the sequence of data described above, can be acquired in a very small number of cases (see Appendix).¹⁷

The framework for the discussion of the epigraphic aspects mentioned above is given by the vague social structures in which the owners of the funerary stelae can be included. Based on the record provided by the stelae, four categories could be differentiated on social and occupational grounds:¹⁸ 1) *honestiores*: members of the municipal elite and their families 2) members of the army,¹⁹ 3) members in the *familia Caesaris*: in this case probably customs servants and 4) *humiliores* with unknown profession: in our case freedman, peregrines.

16 Many of the deceased chose to appear on the funerary relief in a family setting, in order to emphasize their role as member of a family: *pater familias*, *mater* (CIONGRADI 2007, 370). Therefore the majority of these representations, can be considered fictional, rather than 'family portraits'.

17 An extended version of this analysis, involving all of the funerary monuments, will be included in the study concerning the funerary monuments from Porolissum (see note 2).

18 The members of the large social class known from the Roman juridical sources as *humiliores* (ALFÖLDY 2000, 108–110) were grouped into occupational categories (soldiers, imperial slaves, persons without indication of profession). The categories which emerged from our classification are characterized by specific ways of manifestation, according to their social and occupational identity (Hope 1997).

19 We excluded those veterans who appear in the epitaphs as magistrates, and included them in the category of *honestiores*.

1. In the category of *honestiores* we can include five persons, whose names are distributed on four monuments. The names of three members of the municipal elite appear on the stelae of Porolissum. Only in the case of two of them is the ethnic origin definable: Aelius Thema[...] (17) who is of Palmyran descent (PAKI 1998, 223) and Livius Rufus (3) who, according to the name could be of Italic origin (PAKI 1998, 221, no. 23). The wife of the latter, Iustina Eutychia, to whom he dedicates the monument is, based on her name probably of Celtic origin (PAKI 1988, 223; HUSAR 1999, 54). Aelia Nice (13), as the mother of Aelius Vitalianus, an augur of Celtic origin (PAKI 1988, 223; HUSAR 1999, 46) known from a different funerary monument from Porolissum (GUDEA-LUCĂCEL 1975, 16–17, no. 17; GUDEA 1989, 769, no. 39, pl. CCLXXVI), can also be included in the category of *honestiores* and be ascribed a Celtic origin, by virtue of her family relations described above. Finally, in the case of M. Cocceius Alexander (16), the ethnic origin cannot be determined.

2. In total we know the names of three members of the army, distributed on three stelae: Aelius Firmus (18), a centurion in the *coh. I. Brittonum* of Celtic origin (PAKI 1988, 223), Salmas Rami (12), a soldier of undisclosed rank in the *Numerus Palmirenorum*, of Palmyran origin (PAKI 1988, 223) and Aurelius Passer (15) who is a *signifier* of Celtic origin (PAKI 1988, 223). The stelae belonging to the first two categories, due to their fragmentary state of preservation, and to the fact that a number of them have been lost, are less suitable for a correlated analysis as described above.

3. On the stela no. 4, the names of three members of the *Familia Caesaris* (i.e. Imperial slaves) are revealed: Eufemus, the person who is commemorated, and who, according to the inscription, was the *vik(arius)* of a certain Peregrinus, and thirdly Erastus who erected the monument for his fellow slave (*conservus*). The term *vicarius* (here appearing as *vik(arius)*) from the 1st century AD onward was applied to slaves employed as occupational replacements of *ordinarii*, i.e. imperial slaves who held important financial posts (WEAVER 1964, 119–120). The *vicarii* were part of the *peculium* of the *ordinarii*, in effect they were slave-owned slaves (WEAVER 1964, 117). It is interesting to note that the privileged status and importance of these slave officials is also reflected in this case in the funerary commemoration, the monument in question being the most elaborate stela preserved at Porolissum.²⁰

4. The category here referred to as *humiliores* with unknown occupation comprises four persons, distributed on three monuments. On stela no. 11, we find Iustina Afri, together with her husband Aurelius Iustinus, both being *peregrini* (PAKI 1998, 129). Based on the name, Iustina Afri might be of African origin (PAKI 1998, 129) while her husband, the dedicator of the monument has a Celtic name (HUSAR 1999, 54). Ηδύλος Θασ[ιος?], on stela no. 9, also seems to be a *peregrinus* (RUSCU 2003, 102), while Victoria Afra, also of possible African origin is, based on the inscription, a freedwoman (PAKI 1988, 223). The stelae of Iustina Afri and Victoria Afra belong to the most rudimentary type of stelae found in Porolissum.

The sculptural record shows that Porolissum was one of the most active stone carving centres from Dacia Porolissensis. Unfortunately the number of Roman funerary stelae found in a good state of preservation is smaller than we would expect. The influence of the aforementioned

20 For further monuments erected by imperial slaves (*vilici*) at Porolissum, see: GUDEA 1996, 277–278; PETRUȚ ET AL. 2010.

centre can be identified in the products of the stone carving workshops of the neighbouring roman forts (ZĂGREANU 2007, 268; COCIȘ *ET AL.* 2009, 59).

Stela no. 4 stands out among the grave-memorials of this category found at Porolissum. This type (II.A.) shows the influence of major stone carving workshops from the neighbouring provinces, such as Novae in Moesia Inferior (CONRAD 2004, 227) or Savaria in Pannonia, (see: BALLA *ET AL.* 1971, 97, fig. 80). A good example for this connection is the stela of Sextus Uttiedus. Monuments of this category were initially made in northern Italy in the 1st century AD, the archetype being the stela of Q. Manilius Cordus from Bologna (BALLA *ET AL.* 1971, 97). Starting with the first decades of the 1st century AD, this seems to be the main type employed in the Danube provinces as well (ALEXANDRESCU-VIANU, 1977, 377). In light of this, stela no. 4 from Porolissum can be considered one of the earliest examples of this type found in Dacia. The stelae from type II.B. (no. 5–6), have numerous analogies in Dacia Porolissensis at: Gherla (ȚEPOSU-MARINESCU 1982, 131, no. 118–119), Cășeu (ȚEPOSU-MARINESCU 1982, 131, no. 120), Ilișua (GAIU-ZĂGREANU, 2006, 165–166, no. 1; 167, no. 3; 167–168, no. 4). The spread of this type is usually accredited to the stone carving centre from Potaissa.

The stelae with medallion-shaped niche (type II.C.) were among the most popular types in Porolissum, represented by four monuments and fragments (no. 7, 8, 23 and 24). It seems that the main centre that propagated this type was Napoca from where it might have spread to the entire province of Dacia Porolissensis. The most eloquent analogies for our monuments come from Vindobona, Aquincum and Savaria, in Pannonia (SCHÖBER 1923, 124–125). We consider that the main source of influence for the local stone carving workshops in this case comes from Pannonia, and spreads by means of the norico-pannonian population that settled in the province of Dacia. Regarding the monuments which belong to type III, we concluded that these are instances of stelae manufactured directly by the commemorators; therefore this type cannot be linked to the activity of individual stone carving centres. These kind of rudimentary grave-memorials are reported throughout the Empire, the closest examples coming from Pannonia (NAGY 2007, 152–153, no. 168), though most often they are not interpreted as stelae. The stelae from Porolissum can be integrated in the general context of the funerary monuments from Dacia Porolissensis. Usually the monuments display certain artistic qualities, but their poor state of preservation, often hinders the typological classification.

The correlation of different aspects, because of the poor state of preservation of the material, can offer only partial results. The study of the stelae alone is not enough to observe patterns of commemoration which can be tied to social and ethnic identity, for this, all the categories of funerary monuments should be considered. We believe however that some tendencies can be recognized. The fact that the most elaborate stela known from Porolissum belongs to an Imperial slave (being set up by a fellow slave), is probably not accidental, especially as a number of other elaborate monuments, both funerary and votive linked to individuals of this category are known from Porolissum. Another fact worth mentioning is that the stelae belonging to the municipal elite appear not to reach the standards specific to sophisticated stelae.

APPENDIX

Social and ethnic background of the owners of the funerary stelae from Porolissum

No.	Name	Social status / occupation	Hypothetic ethnic origin	Connections	Function	Type of stela	Iconography	Catalogue no.
	Aelius Thema[...]	<i>vet. ex centurione, dec. col.</i>	Palmyran		D.	profiled stela		17
	Livius Rufus	<i>decurio</i>	Italic?	husband	C.	triangular pediment and arched niche		3
	Iustina Eutychia		Celtic?	wife	D.			
	Aelia Nice		Celtic	mother of Ael. Vitalianus (<i>augur</i>)	C.	architectural stela	half-column decorated with vine motif	13
	Marcus Cocceius Alexander	<i>vet. ex centurione, augur</i>		husband of Aeli(ia) [...] SIN[...]	C.	profiled stela		16
	Aelius Firmus	<i>centurio</i>	Celtic	father	C.	profiled stela		18
	Salmas Rami	<i>veteranus</i>	Palmyran	father and husband	C.	stela without decorative elements		12
	Aurelius Passer	<i>signifer</i>	Celtic		D.	profiled stela		15
	Eufemus	<i>servus vicarius</i>			D.	rectangular inscription field and coping consisting of funerary lions	pair of lions	4
	Erastus	<i>servus</i>		<i>conserves</i> (fellow slave) of Eufemus	C.			
	Peregrinus	<i>ordinarius (vilicus?)</i>			-			
	Ἡδύλος Θάσιος	<i>peregrinus</i>	Greek		D.	triangular pediment and rectangular inscription field		9
	Iustina Afri	<i>peregrinus</i>	African?	wife	D.	stela without decorative elements		11
	Aurelius Iustinus	<i>peregrinus</i>	Celtic	husband	C.			
	Victoria Afra	<i>liberta</i>	African?		D.	stela without decorative elements		10

D. = deceased; C. = commemorator

CATALOGUE²¹

1. Aedicula-stela (Pl. 1/1)

a. Limestone. Relatively well preserved, the relief depicting the deceased is damaged (especially the faces). The base with the epitaph is missing. D: 90 × 67 × 43 cm.

b. On the upper part there is a platform with a mortice (diameter: 15 cm) for the attachment of the coping. The type of the coping remains unknown. The triangular pediment is flanked by two pairs of *acroteria*, the field of the pediment displays an acanthus motif. The main relief field bordered by two semi columns contains the half-figure depictions of the deceased arranged in two rows. The upper row shows the images of three mature individuals: a woman on the left dressed in a *palla*, and two male figures on her right wearing *paenullae*. In the lower row two depictions of children can be distinguished. The right lateral relief field, contains the full figure depiction of a mourning woman (*praefica*) dressed in an ankle length *tunica* and wearing a Iulia Domna style coiffure. The opposite side displays the image of a waiting servant, represented as a young boy. He is dressed in a short *tunica*, decorated with two vertical *clavi*, and holding a jug in his right hand and a towel in his left, slung over the shoulder.

c. beginning of the 3rd century AD, on account of the hairstyle displayed by the mourning woman.

d. Found in Jibou (Sălaj County) in the Wesselényi castle. It was part of the Wesselényi-Teleki collection, its place of origin is very probably Porolissum. MJIAZ, Inv. No. 1051.

e. DAICOVICIU 1940, 324, fig. 22; GUDEA-LUCĂCEL 1975, 42, no. 140; ȚEPOSU-MARINESCU 1982, 171, no. A 46, pl. XXI; GUDEA 1989, 789, no. 105, pl. CCCI; PETRUȚ-MUSTAȚĂ 2010, 185, no. 27, pl. VII.

2. Fragment of stela with triangular pediment and arched niche (Pl. 1/2)

a. Limestone. Only the upper part is preserved: the pediment and a portion of the niche. D: 60 × 45 × 17 cm.

b. The upper part consists of an enclosed triangular pediment. In the field of the pediment a centrally placed (vegetal?) motif with volute endings can be seen. The corners outside the pediment are decorated with rosettes. Underneath the pediment a deepened arched niche, sustained by half columns, and decorated on its upper portion with a seashell motif. The spandrels are ornamented with pilaster motifs. The niche, at least on its upper half, seems to have not contained figurative decoration.

c. First half of the 2nd century AD, on stylistic grounds.

d. Porolissum, passim. MJIAZ Inv. No. 224.

e. GUDEA-LUCĂCEL 1975, 97, no. 160; ȚEPOSU-MARINESCU, 1982, 153, no. 223; GUDEA 1989, 794, no. 151.

3. Fragment of stela with triangular pediment and arched niche

b. According to the description of C. Daicoviciu, the stela in question belonged to the architectural type, with a medallion-shaped niche inside an arch. The busts of a man and a woman were depicted within the arch.

D(is) M(anibus) / [Ius]tinae / [E]utychie / [vix(it) a]n(nis) XXXXV / Livius Rufus / dec(urio) coniugi / posuit / [b(ene)] m(erenti) p(osuit).

c. Post 193 AD, after the settlement is granted the title of *municipium*.

d. The piece was found in Sighetul Marmației (Maramureș County), according to C. Daicoviciu, it was brought there from Porolissum. Lost, known from the aforementioned description.

e. DAICOVICIU 1940, 324, no. 2; AÉ 1944, no. 48; ȚEPOSU-MARINESCU 1982, 123–124, no. S 86; BIANCHI 1985, 278, no. 185; GUDEA 1989, 772, no. 54.

21 The following criteria have been employed for the description: a. The material; state of preservation; the dimensions of the piece (D); b. Description, inscription; c. Dating; d. Information regarding place and circumstances of discovery, place of custody, inventory number; e. References.

Abbreviations of institutions: MJIAZ: Muzeul Județean de Istorie și Artă, Zalău (County Museum of History and Art, Zalău); MNIR: Muzeul Național de Istorie a României, București (National History Museum of Romania, Bucharest); MNIT: Muzeul Național de Istorie a Transilvaniei, Cluj-Napoca (National History Museum of Transylvania, Cluj-Napoca).

4. Stela with inscription field and coping consisting of lions (Pl. 1/4)

a. Limestone. Well preserved piece, the lower left corner of the inscription panel is damaged. D: 197 × 75 × 25 cm.

b. On the top side, two antithetically placed lions, with a pine cone in the middle. The inscription panel is enclosed by a frame with an elaborate moulding. Both the decoration and the letters bare the marks of a skilled stone carver.

D(is) M(anibus) / Eufemus vik(arius) / Peregrini vix(it) / ann(is) XXXV / Erastus con / servo posuit.

d. Discovered in 1934, on the territory of the Roman necropolis. MNIR Inv. No. 54120.

e. DAICOVICIU 1940, 325, no. 5, fig. 23; AÉ 1944, 49; ȚEPOSU-MARINESCU 1982, 107, no. 19, fig. 2; BIANCHI 1985, 278, no. 181; GUDEA 1989, 771, no. 50; GUDEA 1996, 77–78; PETOLESCU 2005, 267, no. 699.

5. Stela with rectangular relief field and triangular pediment (Pl. 2/5)

a. Limestone. Only approximately the left half of the *stela* is preserved on the photograph. D: 90 × 35 × 13 cm.

b. The upper part consists of a triangular pediment decorated with acanthus leaves. Underneath the pediment, a rectangular relief field with two busts in its left half. The right portion of the niche must have contained the bust of at least one additional person.

D(is) [M(anibus)] / Ael(ia) Ver[ina? vi] / xit ann[is ---] / PEIVAIV[---] / annis VXX.

c. Second part of 2nd century AD, on onomastic grounds.

d. Discovered during the excavation of the *porta principalis sinistra* of the fort on Pomet hill, by A. Radnóti in 1943. Lost.²²

e. TÓTH 1978, 31, no. 26, pl. VII; AÉ 1979, 497; GUDEA 1989, 769, no. 43; PETOLESCU 2005, 270, no. 709.

6. Stela with rectangular relief field and coping consisting of lions (Pl. 2/6)

a. Limestone. According to the photograph, only the upper right corner was preserved.

b. The coping consists of antithetically placed lions. Beneath the coping there is a rectangular niche with the partially preserved busts of two individuals. Considering the proportions, at least two more persons must have been represented.

d. Porolissum, passim. In 1965–1966, the stela was incorporated into the wall of a house in Ortelec. The photograph was taken in that period by V. Lucăcel.

e. GUDEA 1982, 70–71, no. 3, fig. 3.

7. Stela with medallion-shaped niche (Pl. 2/7)

a. Limestone. The left upper part of the stela is preserved. D. 54 × 56 × 26 cm.

b. In the centre of the relief field there is a medallion enclosed in a laurel wreath. Inside probably the busts of a couple, of which only the woman dressed in a *palla* is visible today. The corners between the medallion and the edge of the monument are decorated with acanthus motifs.

d. Porolissum, passim. MIAZ. Inv. No. 1019.

e. GUDEA-LUCĂCEL 1975, 42, no. 138; ȚEPOSU-MARINESCU 1982, 140, no. 159; BIANCHI 1985, 278, no. 183; GUDEA 1989, 786, no. 83.

8. Stela with triangular pediment and medallion-shaped niche (Pl. 2/8)

a. Limestone. Initially four fragments were discovered, today only the upper left fragment is preserved. D: 150 × 82 × 17 cm.

b. The upper part consists of a triangular pediment decorated with an acanthus leaf motif. In the centre of the relief field there is a medallion enclosed in a laurel wreath, containing the busts of a couple. The woman is dressed in a *palla*, which covers her head. The corners between the medallion and the edge of the

²² The photographs of the funerary monuments discovered by A. Radnóti, were published by E. TÓTH (1978). These photographs along with the descriptions are for most of these pieces the only surviving sources.

monument are decorated with acanthus motifs. A portion of the epigraphic panel is preserved. The letters of the inscription are elaborately executed.

D(is) [M(anibus)] / Ostili[a? ---] / vix(it) a[nn(is)] [---] / Ostil[ius?] / TA [---].

d. Discovered during the excavation of the *porta principalis sinistra* of the fort on Pomet hill, by A. Radnóti in 1943. MJIAZ, Inv. No. 1726 (the preserved fragment).

e. GUDEA-LUCĂCEL 1975, 42, no. 139 (only the preserved fragment); TÓTH 1978, 32–33, no. 30, pl. VII; AÉ, 1979, 500; ȚEPOSU-MARINESCU 1982, 140, no. 159; BIANCHI 1985, 278, no. 184; GUDEA 1989, 772–773, no. 57, 787, no. 94; PETOLESCU 2005, 272, no. 713.

9. Stela with triangular pediment and inscription field (Pl. 2/9)

a. Limestone. The upper left corner of the *stela* is preserved. D: 39 × 22 × 6 cm.

b. The upper part consists of an enclosed triangular pediment. The two corners are decorated with rosettes, while the inside of the pediment is undecorated. The epigraphic panel is placed subsequently below the pediment. Only the beginning of the first three rows is preserved of the epitaph. The start of the text is marked by an ivy leaf.

Χα[ιρε] / Ηδουλ[ος?] / θασ[ιος?]---

d. Discovered in the south-eastern tower of the fort, during the excavation of M. Moga in 1949. MJIAZ, Inv. No. 243.

e. MACREA 1956, 116–117, no. 15, fig. 11; GUDEA-LUCĂCEL 1975, 18–19, no. 21, fig. 21; GUDEA 1989, 771, no. 51, pl. CCLXXVII; RUSCU 2003, 64; PETOLESCU 2005, 269, no. 705.

10. Stela with no decorative elements (Pl. 2/10)

a. Volcanic rock. D: 225 × 55 × 54 cm.

b. Only the front side of the slab is levelled where the inscription is. The carving of the letters shows lack of skill, the text contains multiple errors. Among these, the most notable are the repetitions of words in the 4th and 5th (*patronus*), as well as in the 6th and 7th rows (*libertae*).

D(is) M(anibus) / Victo<p=r>iai (!) / Afr<a>e vix(it) / an(is) XX PAT / [---]A patro / nus liber / libert<a>e b(ene) / m(erenti).

d. Discovered in 1864 in the area of the Roman necropolis. It was part of the L. Szikszay collection, and was donated to the Museum by the Wesselényi College in Zalău. MJIAZ Inv. No. 261.

e. CIL III, 6249=7640; GUDEA-LUCĂCEL 1975, 15, no. 15, fig. 15; ȚEPOSU-MARINESCU 1982, 105, no. 13; GUDEA 1989, 773, no. 59, pl. CCLXXIX.

11. Stela with no decorative elements (Pl. 2/11)

a. Volcanic rock. D: 80 × 38 × 30 cm.

b. All four sides are evened in a rudimentary manner. The shape of the letters is specific to the cursive writing.

D(is) M(anibus) / Iustin(a)e / Afri vix(it) (annos) / XXX A(urelius) Iust / i(nus) (coniugi?) b(ene) m(erenti) p(osuit).

d. Discovered at the beginning of the last century in the auxiliary fort from Pomet hill. It was part of the Wesselényi-Teleki collection, entering the collection of MJIAZ in 1956. MJIAZ Inv. No. 1038.

e. CIL III, 7638; RUSSU 1973, 330, fig. 1; AÉ 1974, 549; GUDEA-LUCĂCEL 1975, 17, no. 18, fig. 18; ȚEPOSU-MARINESCU 1982, 105, no. 12; GUDEA 1989, 771–772, no. 53, pl. CCLXXVIII; PETOLESCU, 2005, 270, no. 706.

12. Fragment of stela without decorative elements (Pl. 2/12)

a. Volcanic rock. D: 69 × 61 cm.

b. There is no detailed information regarding its characteristics, other than the facts that it lacked any decorative elements and that it was roughly carved.

[---] / an(nis) X [---] / [---] f(ilius) vix(it) an(is) VIII / Salmas Rami [---] / ex n(umero) p(almyrenorum) coniugi / et filio b(ene) m(erentibus) p(osuit).

d. Discovered in 1855. In 1861 it was part of the Andrásy collection and in 1879 it was in the property of A. Dobay. Lost.

e. TORMA 1864, 19; TORMA 1880, 129, no. 4; CIL III, 837; TÓTH 1978, 38, no. 51; GUDEA 1989, 773, no. 58.

13. Fragment of architectural stela (Pl. 2/13)

a. Limestone. Only the lower left portion of the inscription panel is preserved. D: 55 × 34 × 14 cm.

b. The epigraphic field is flanked by two half columns. The shafts of the half columns are decorated with vine-leaf motifs.

D(is) M(anibus) / [---]a vix(it) / [---] Nice / [mater fi]liae / [beneme]ritae.

d. Porolissum, passim, acquired by MJIAZ in 1951. MJIAZ Inv. No. 235.

e. MACREA 1956, 112, no. 12, fig. 8; AÉ 1958, 288; AÉ 1971, 390; GUDEA–LUCĂCEL 1975, 17–18, no. 19, fig. 19; GUDEA 1989, 769, no. 41, pl. CCLXXVI; PETOLESCU 2005, 268, no. 702.

14. Fragment of profiled stela (Pl. 2/14)

a. Limestone. Only a fragment from the right side of the relief field is preserved. D: 50 × 47 × 17 cm.

b. The relief field contains the depiction of the funerary banquet. Three persons can be distinguished: a woman seated on the *kathedra* on the right end of the scene with an infant in her arms. A male character, probably in a reclining posture is placed to the left of the woman. The man holds a cup in his left hand. Both seem to be wearing *tunicae manicatae*.

c. Second half of the 2nd century, on account of the Faustina Minor type hairstyle displayed by the woman.

d. Discovered in 1986, outside of the walls of the fort on Pomet hill. MJIAZ, without Inv. No.

e. TAMBA 1987, 163–168.

15. Fragment of profiled stela (Pl. 3/15)

a. Limestone. A portion of the inscription panel is preserved on the photograph. Today only the lower fragment is preserved. D: 40 × 32 × 20 cm.

b. The letters are coarsely carved; the inscription field is enclosed in a simple frame.

[D(is) M(anibus)] / [---]us [---] / [--- vix(it) an(nos)] XXXV mil(itavit) / [ann(os) ? Aur(elius) P]asser sig(nifer) / [--- vix(it)] an(nos) XXXIII Ael(ia) / [?Sura vix(it) a]n(is) XVIII Aur(elius) / [---] mil(es) n(umeri) P(almyrenorum) P(orolissensium) vix(it) / [an(nos) --- Au]r(elia) Sabina et Au / [rel(ius) ---] us actarius [---].

d. Discovered during the excavation of the *porta principalis sinistra* of the fort on Pomet hill, by A. Radnóti in 1943. It was acquired by MJIAZ in 1951 from G. Tamba. MJIAZ, Inv. No. 219.

e. MACREA 1956, 112–114, fig. 8 (drawing); GUDEA–LUCĂCEL 1975, 18, no. 20, fig. 20; TÓTH 1978, 39, no. 52, pl. VII; GUDEA 1989, 770, no. 48; PETOLESCU 2005, 269, no. 704.

16. Fragment of profiled stela (Pl. 3/16)

a. Sandstone. Three connecting fragments of the epigraphic panel were discovered (see photograph), today only the fragment from the right is preserved. D: 64 × 49 × 20 cm.

b. The epigraphic field is enclosed by a frame with complex moulding. The letters are carefully carved and bore signs of *minium* dye.

Ael(ia) [---] SIN [---] vix(it) / an(nis) XL M(arcus) Coc[c]eius / Alexander vet(eranus) / ex c(enturione) augur m(unicipii) Sep(timii) / Por(olissensis) coniugi.

c. Post 193 AD, on account of the fact, that Porolissum was granted the rank of *municipium* during the reign of Septimius Severus.

d. Discovered during the excavation of the *porta principalis sinistra* of the fort on Pomet hill, by A. Radnóti in 1943. MJIAZ Inv. No. 1830 (for the preserved fragment).

e. GUDEA–LUCĂCEL 1975, 20, no. 25, fig. 25 (only the fragment from the right); TÓTH 1978, 32, no. 29, pl. VIII; AÉ 1979, no. 499; GUDEA 1989, 774, no. 64, pl. CCLXXX.

17. Fragment of profiled stela (Pl. 3/17)

a. Limestone. The lower left portion of the inscription field is preserved on the photograph. D: 64 × 49 × 20 cm.

b. The inscription field is enclosed in a simple frame. The letters are relatively carefully carved. The person mentioned in the epitaph was probably a decurion in Napoca, which is the closest settlement with the rank of *colonia*.

Ael(ius) Thema[rsa? vet(eranus) ex] / c(enturione) dec(urio) co[l(oniae) ---] / LAMAT PAT[(er) filio posuit?].

c. Post 168 AD, the probable date when Napoca was granted the rank of *colonia*.

d. Discovered during the excavation of the *porta principalis sinistra* of the fort on Pomet hill, by A. Radnóti in 1943. Lost.

e. TÓTH 1978, 30, no. 24, pl. VII; AÉ, 1979, 495; GUDEA 1989, 770, no. 45; PETOLESCU 2005, 270, no. 707.

18. Fragment of profiled stela (Pl. 3/18)

a. Limestone. A portion of the epigraphic field is preserved. D: 50 × 40 × 19 cm.

b. The carving of the letters shows lack of skill, the text is mixed with elements from the cursive writing.

[--- vix(it)] / ann(is) X Aelius / Firmus c(enturio) / coh(ortis) I Brit / tonum fil / i<a>e piis[i]ma[e] / -----.

d. Discovered in 1910 during the excavation conducted by Á. Buday in the area of the *municipium*. MNIT, Inv. No. 1524.

e. BUDAY 1915, 71, fig. 14; ȚEPOSU-MARINESCU 1982, 111, no. 37; GUDEA 1989, 770, no. 47; PETOLESCU 2002, 87–88; PETOLESCU 2005, 267, no. 697.

19. Fragment of profiled stela (Pl. 3/19)

a. Limestone. On the photograph, a portion of the epigraphic panel is shown. D: 35 × 48 × 13 cm.

b. The letters are poorly executed.

Aelia Ia[nuaria vix(it) ann(is)] / XIII m(ensibus) IIII [et Aelia ---] / THE vix(it) [an(is) ---].

d. Discovered during the excavation of the *porta principalis sinistra* of the fort on Pomet hill, by A. Radnóti in 1943. Lost.

e. TÓTH 1978, 30, no. 25, pl. VII; GUDEA 1989, 769, no. 42; PETOLESCU 2005, 270, no. 708.

20. Fragment of profiled stela (Pl. 3/20)

a. Sandstone. The photograph shows three fragments of the inscription field.

b. The letters are relatively carefully carved and were painted red. The rows are marked.

D(is) [M(anibus)] / Aur(elius) / PR [---] / V [---] / [---]ia vix(it) / [ann(os)---]III Ael(ius) / [--- vi]x(it) an(nos) / [--- V]alerius / [--- p]ater f(iliae) et filio / [---] / [---]s pueri / R[---]N[---].

d. Discovered during the excavation of the *porta principalis sinistra* of the fort on Pomet hill, by A. Radnóti in 1943. Lost.

e. TÓTH 1978, 31–32, no. 28, pl. VII; AÉ 1979, 498; GUDEA 1989, 772, no. 55; PETOLESCU 2005, 271, no. 711.

21. Fragment of a profiled stela (Pl. 3/21)

a. Limestone. Only a portion of the right side is preserved. D: 29 × 27 × 20 cm.

b. The inscription field is 27 cm high, from which only two lines of text have survived. The letters are 5.5 cm high.

[---]or / [pie]nti / [ssimo ---].

d. MJIAZ, Porolissum, passim, Inv. No. 256.

e. MACREA 1956, 112, no. 11; GUDEA–LUCĂCEL 1975, 19, no. 24, fig. 24; GUDEA 1989, 775, no. 67, pl. CCLXXVII; PETOLESCU 2005, 274, no. 721.

22. Fragment of a profiled stela (Pl. 3/22)

a. Limestone. The left upper part of the monument is preserved. D: 32 × 30 × 21 cm.

b. The epigraphic field is enclosed in a simple frame. The lines are ruled, the letters show traces of *minium* dye.

[---]IAO / vet(eranus) ex [c(enturione)?] / [coh(ortis) I Hispan?]orum.

d. Discovered in 1984 in the fort from Pomet hill. MJIAZ Inv. No. P 84 A 114.

e. Unpublished.

23. Fragment of funerary stela with medallion-shaped niche (Pl. 3/23)

a. Limestone. D: 65 × 45 × 22 cm.

b. The fragment comes from the middle and left part of the monument. Only the first five rows of the epigraphic field are preserved. The text is bordered by a simple frame. Above the inscription field there is a curved border that marks the edges of the medallion.

D(is) M(anibus) / Aelia Ca[---] / XERE[---] / cum Faces ADMO[---] / [---] VOOVED [---].

d. Discovered in the Roman necropolis from Ursoieș hill. MJIAZ without inv. No.

e. GUDEA 1982, 71, no. 4, fig. 4; AÉ 1983, 855; GUDEA 1989, 775, no. 71; PETOLESCU 2005, 272, no. 715.

24. Fragment of funerary stela with medallion-shaped niche (Pl. 3/24)

a. Limestone. D: 26 × 36 × 10 cm.

b. The fragment represents the upper right corner of a funerary stela with medallion. The frame is decorated with an elaborate vine motif, while the spandrel displays an acanthus motif. The niche is likely to have represented the portrait of the deceased.

d. Porolissum, passim. MJIAZ, without Inv. No.

e. Unpublished.

25. Fragment of a stela with enclosed triangular pediment (Pl. 3/25)

a. Limestone. Only the upper right corner is preserved. D: 35 × 30 × 32 cm.

c. Under the border a protome is represented in profile. Specific features are well rendered: face, eyes, ears, nose and mouth, the hair is short. The character is a representation of one of the four winds; he is shown while symbolically blowing air from his mouth.

d. Porolissum, passim. MJIAZ, Inv. No. 467.

e. GUDEA-LUCĂCEL 1975, 45, no. 154, fig. 154; ȚEPOSU-MARINESCU 1982, 152, no. 218; BIANCHI 1985, 278, no. 187; GUDEA 1989, 786, no. 85; BĂRBULESCU 2003, 268–269, fig. 17; CHIȘ 2003, 338–339, no. 8, fig. 4.

26. Fragment of a stela with enclosed triangular pediment (Pl. 3/26)

a. Limestone. The right corner from the upper part of the stela is preserved. D: 30 × 16 × 16 cm.

b. Inside the field of the spandrel a Triton is represented. With his right hand he leads a trumpet to his mouth while he holds a paddle in his right hand.

d. Porolissum, passim. MJIAZ, Inv. No. 468.

e. GUDEA-LUCĂCEL 1975, 47, no. 163, fig. 163; ȚEPOSU-MARINESCU 1982, 153, no. 225; BIANCHI 1985, 278, no. 186; GUDEA 1989, 794, no. 154.

27. Fragment of a stela with triangular pediment and *acroteria* (Pl. 4/27)

a. Limestone. Only the top right corner of the pediment with one of the *acroteria* and an edge of the inscription field is kept. D: 50 × 65 × 25 cm.

d. Porolissum, passim. MJIAZ, Inv. No. 1724.

e. GUDEA-LUCĂCEL 1975, 43, no. 142; GUDEA 1989, 787, no. 91.

28. Fragment of a stela with attic (Pl. 4/28)

a. Limestone. Two fragments are preserved; the first one is severely damaged. D: 55 × 44 × 13 cm (I.); 53 × 63 × 12 cm (II). The first fragment comes from the central part of the attic. In the relief field from left to right we can distinguish: Amor leaning on his right leg, his left leg bent behind him. On the right shoulder sustains a garland, held with his right hand. The physiognomy is damaged. His long hair falls over the right shoulder to the chest. The left side of the wreath goes on the left shoulder of another Amor. In the middle of the garland, there is a rosette. The second fragment is part of the right end of the attic. The upper part of the relief and a consistent area of the field are broken. In the field, we can notice the left half of an Amor in the same posture and the same attributes as the one described above. A third Amor is placed on the right end of the scene. A garland appears from the left shoulder and goes to the right shoulder of the last Amor, after that it falls into a 'basket' supported by the horns of a bull. The bull is represented in motion.

The fragments come from the same monument, representing the attic of a funerary stela.

d. Porolissum, passim. MJIAZ, Inv. No. 251 (I.), 229 (II.)

e. GUDEA-LUCĂCEL 1975, 38-39, no. 121, fig. 121, no. 122, fig. 122; ȚEPOSU-MARINESCU 1982, 53, no. 222, 224; GUDEA 1989, 785, no. 79, 80.

29. Fragment of a stela with attic (Pl. 4/29)

a. Limestone. The fragment is severely damaged. D: 55 × 85 × 26 cm.

b. In the relief field the representation of a head and upper body of an Amor can be seen. The Amor carries a garland on his shoulders. Above the garland we can notice a wing.

d. Porolissum, passim. MJIAZ, Inv. No. 1037.

e. GUDEA-LUCĂCEL 1975, 39-40, nr. 125, fig. 125; ȚEPOSU-MARINESCU 1982, 53, no. 220; GUDEA 1989, 785, no. 84.

30. Fragment of figured stela (Pl. 4/30)

a. Volcanic tuff. Fragment of a niche with two busts. D: 46 × 40 × 20 cm.

b. In the niche two busts can be seen: a woman in right, a man on left. The woman displays a coiffure typical of Faustina Minor and globular earrings. Both the woman and the man are wearing *tunica manicata*. She is holding what seems to be a globe (possibly an apple), while the man is holding a cup, or possibly a scroll of papyrus (*volumen*).

d. Porolissum, passim. MJIAZ, Inv. No. 225.

e. POP ET AL. 1968, 418, no. 10, fig. 7; GUDEA-LUCĂCEL 1975, 39, no. 123; ȚEPOSU-MARINESCU 1982, 152-153, no. 221; GUDEA 1989, 785, no. 81.

31. Fragment of a figured stela (Pl. 5/31)

a. Limestone. D: 28 × 19 × 18 cm.

b. The central part of the niche is preserved which displays a man's bust. The head is missing. The dress is composed of a tunic and a cape (probably a *sagum*) bound on the right shoulder with a brooch. His right hand is bent at the elbow and the index finger is pointing to the left hand holding the *volumen*.

d. Porolissum, passim. MJIAZ, Inv. No. 1732.

e. GUDEA-LUCĂCEL 1975, 41, no. 135, fig. 135; GUDEA 1989, 787, no. 91.

32. Fragment of a figured stela (Pl. 5/32)

a. Limestone. Heavily damaged. D: 28 × 23 × 20 cm.

b. The preserved part shows the bust of a character. The head is missing; in the left hand he is probably holding a cup.

d. Porolissum, passim. MJIAZ, Inv. No. P 880 L.

e. Unpublished.

33. Fragment (Pl. 5/33)

a. Limestone. D: 21 × 17 × 8 cm.

b. Fragment belonging to the inscription panel of a stela.

[---]Aelia[---] / [---]XIII[---].

d. Porolissum, passim. MJIAZ, Inv. No. 1103.

e. GUDEA-LUCĂCEL 1975, 21, no. 31, fig. 31; GUDEA 1989, 775, no. 40, pl. CCLXXVI; PETOLESCU 2005, 273, no. 717.

34. Fragment (Pl. 5/34)

a. Volcanic tuff. The fragment is broken in two pieces D: 77 × 36 × 25 cm.

b. A portion of the right corner of the monument with the outer frame, which is 15 cm wide, is preserved.

d. Porolissum, passim. MJIAZ, Inv. No. P82 Pm 120, P82 Pm 103.

e. Unpublished.

35. Fragment (Pl. 5/35)

a. Limestone. D: 51 × 46 × 10 cm.

b. Fragment belonging to the inscription panel of a stela. The frame is 13 cm wide. Only three rows are kept from the inscription field. The letters are 5 cm high; the space between rows is 1.5 cm.

[---]A[---] / [---]V[---]D[---] / [---]vix(it) [---].

d. Porolissum, passim. MJLAZ, without Inv. No.

e. Unpublished.

36. Fragment (Pl. 5/36)

a. Limestone.

b. Probably part of the inscription field of a stela.

D(is) [M(anibus)] / M[---] / ---.

d. Discovered during the excavation of the *porta principalis sinistra* of the fort on Pomet hill, by A. Radnóti in 1943. Lost.

e. TÓTH 1978, 33, no. 32, pl. VII; GUDEA 1989, 776, no. 74.

37. Fragment (Pl. 5/37)

a. Limestone. D: 40 × 30 × 20 cm.

b. Probably part of the inscription field of a stela. The word *STERTI*, preserved in the inscription could be part of a formula involving some kind of pecuniary matter, related maybe to an offering or inheritance.

[---] NAP [---] / [---]STERTI VE[---] / et mensis X po / suit pa[tri? ---]

d. Discovered in the area of the Urşoieş necropolis during excavations in 1958 (section III). Lost, known only from the drawing made by I. Mitrofan.

e. GUDEA 1982, 71, no. 5, fig. 5; AÉ 1983, 856; GUDEA 1989, 775, no. 72; PETOLESCU 2005, 272–273, no. 716.

38. Fragment (Pl. 5/38)

a. Limestone. D: 20 × 35 × 12 cm.

b. Only a part of the inscription field with a wide frame at the bottom is preserved.

[---] vixi[t?].

d. Discovered during the excavation of the *porta principalis sinistra* of the fort on Pomet hill, by A. Radnóti in 1943. Lost.

e. TÓTH 1978, 35, no. 37; GUDEA 1989, 776, no. 78.

39. Fragment (Pl. 5/39)

a. Limestone. D: 40 × 26 × 25 cm.

b. The letters show traces of *minium* dye.

[---] TAS / [---]NIA / [---]VL.

d. Discovered during the excavation of the *porta principalis sinistra* of the fort on Pomet hill, by A. Radnóti in 1943. Lost.

e. TÓTH 1978, 35, no. 37; GUDEA 1989, 776, no. 77.

40. Fragment (Pl. 5/40)

a. Limestone. D: 23 × 34 × 12 cm.

b. Probably part of the inscription field of a stela.

[---]VSIN / [---]MA / [---]I?].

d. Discovered during the excavation of the *porta principalis sinistra* of the fort on Pomet hill, by A. Radnóti in 1943. Lost.

d. TÓTH 1978, 35, no. 38; GUDEA 1989, 776, no. 79.

41. Fragment (Pl. 5/41)

a. Limestone. D: 14 × 12 × 15 cm.

b. Probably part of the inscription field of a stela.

[---] XIII [---] / [---] M ---.

d. Discovered in 1914 during the excavation conducted by Á. Buday in the area of the *municipium*. Formerly it was registered at MNIT Inv. No. IV 259. Lost.

e. BUDAY 1915, 73, no. 2; GUDEA 1989, 774, no. 65.

42. Fragment

a. Limestone. D: 60 × 40 × 25 cm.

b. Probably part of the inscription field of a stela.

d. Porolissum, passim. Formerly it was registered at MJIAZ with Inv. No. 1725. Lost.

e. GUDEA-LUCĂCEL 1975, 43, no. 143; GUDEA 1989, 787–788, no. 95.

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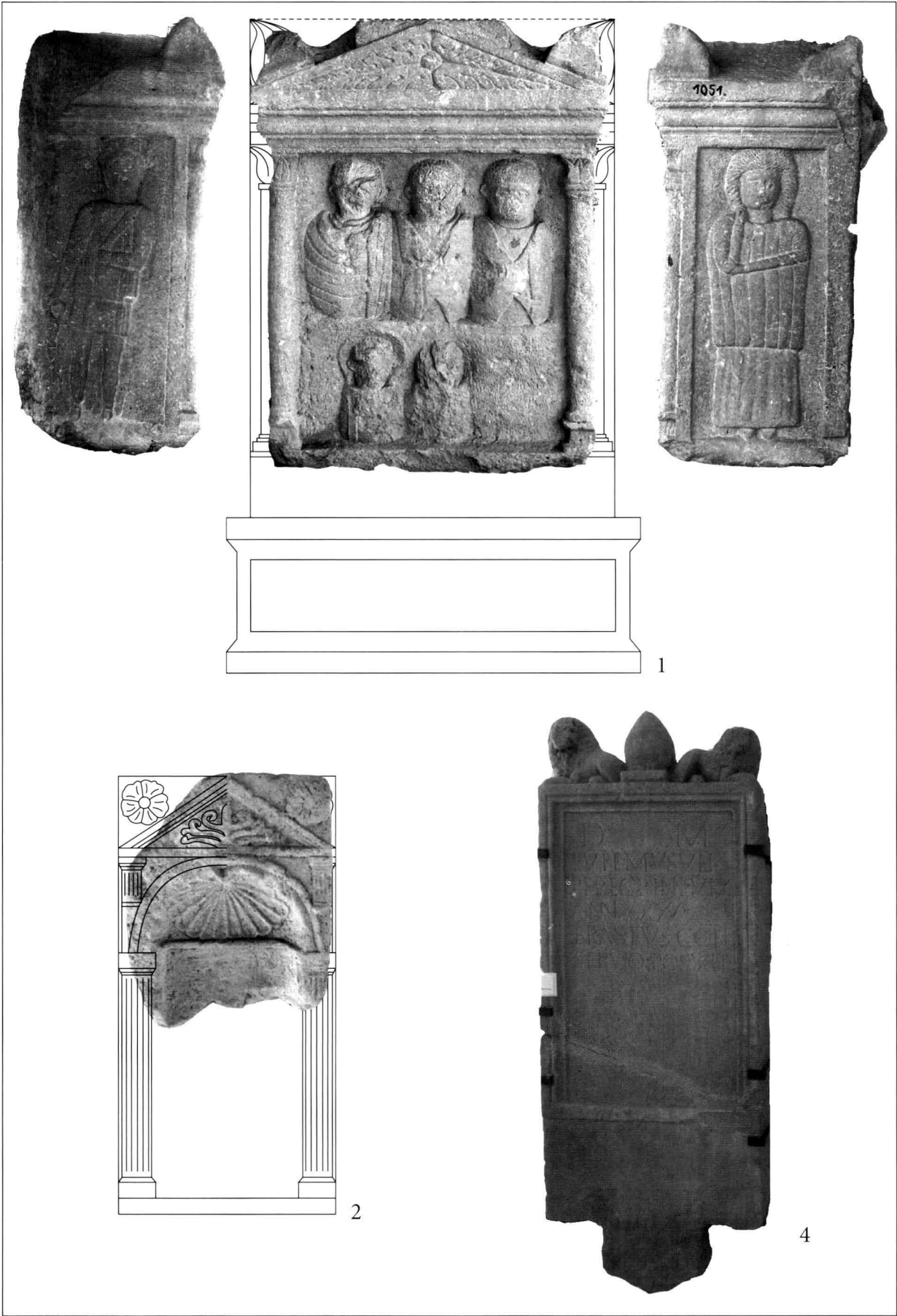


Plate 1. Funerary stelae from Porolissum.

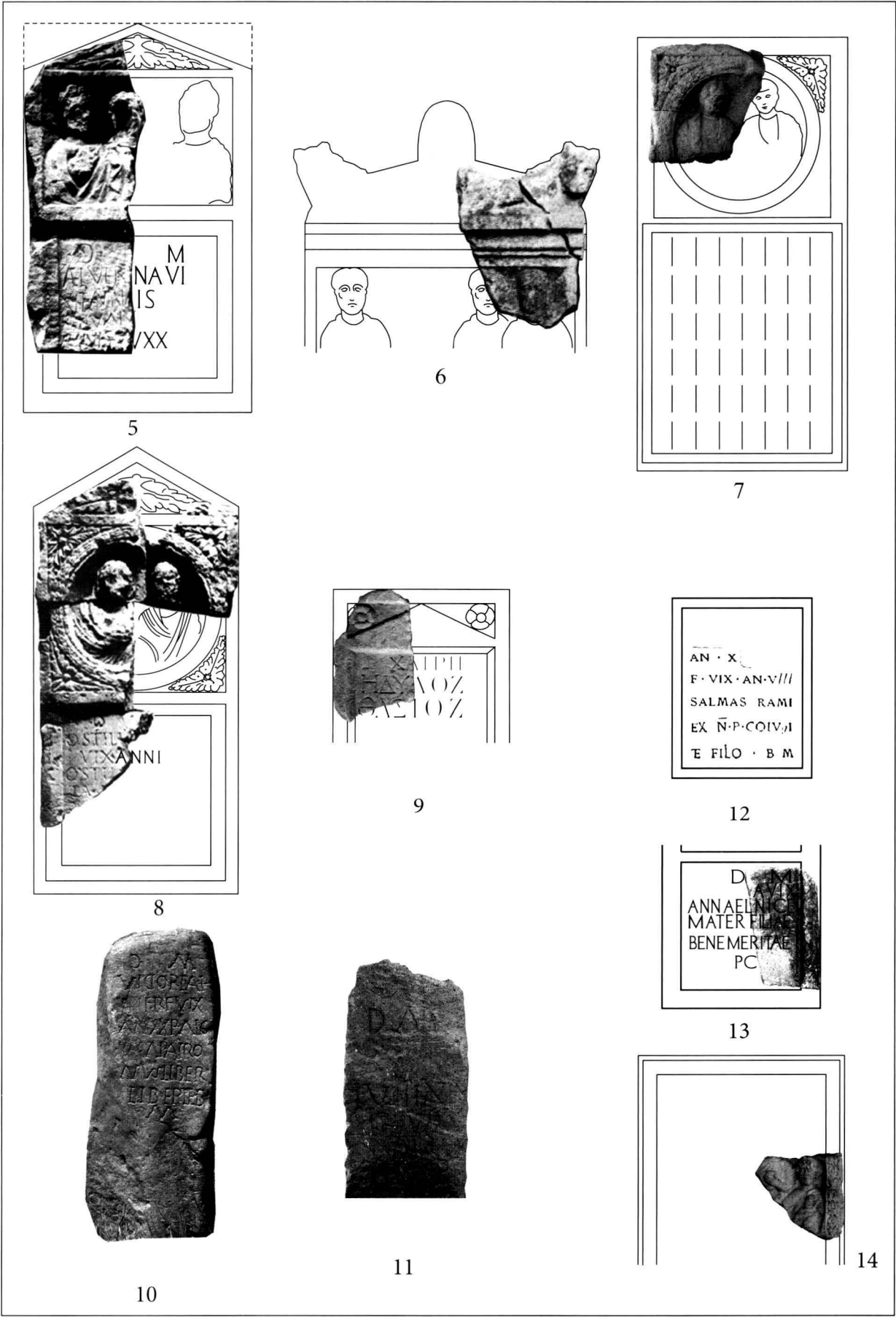
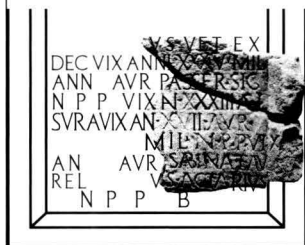


Plate 2. Funerary stelae from Porolissum.



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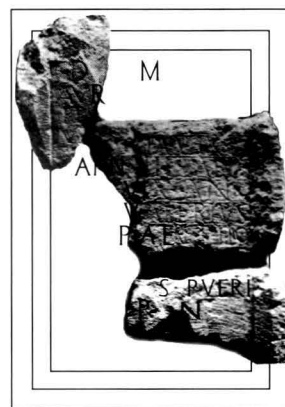
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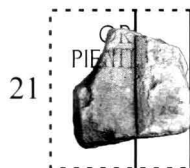
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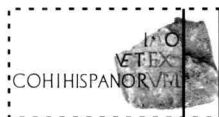
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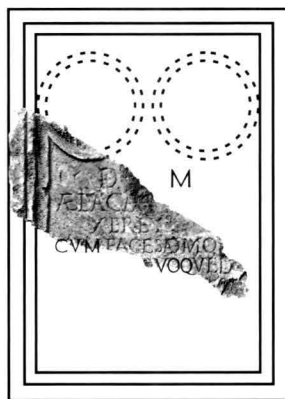
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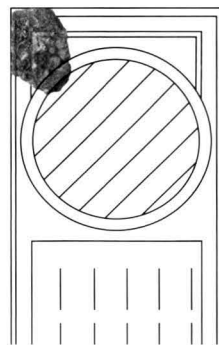
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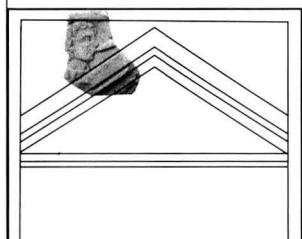
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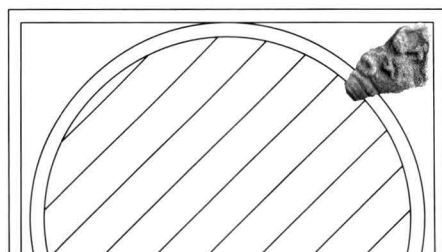
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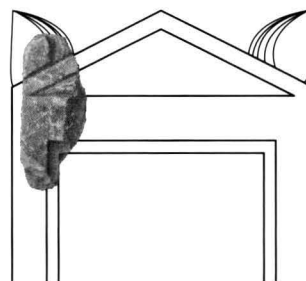
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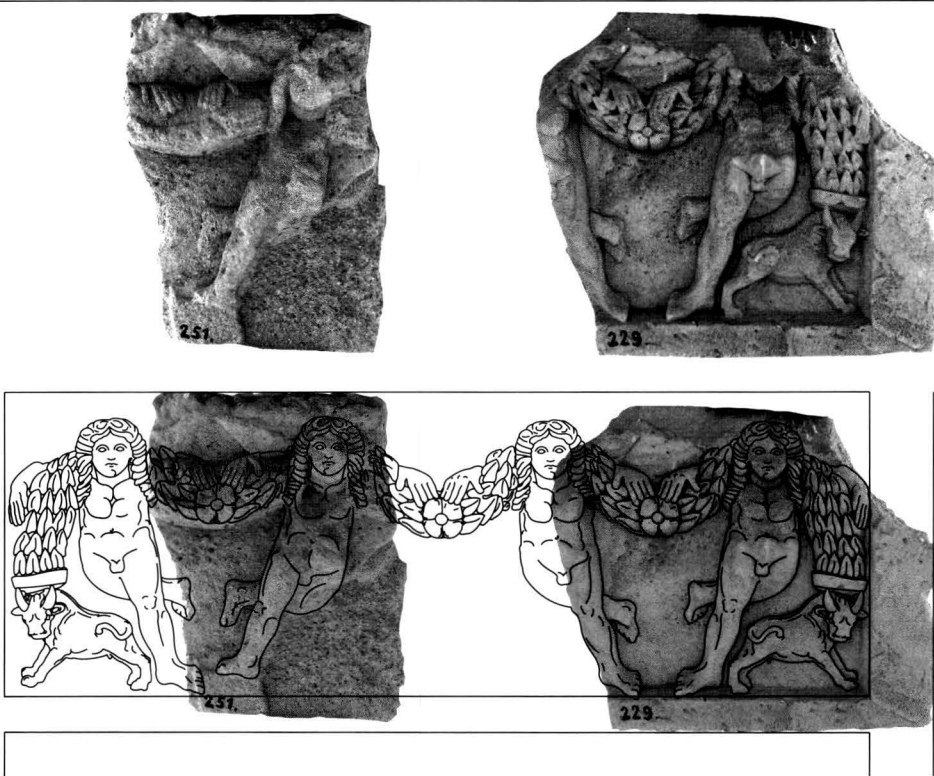


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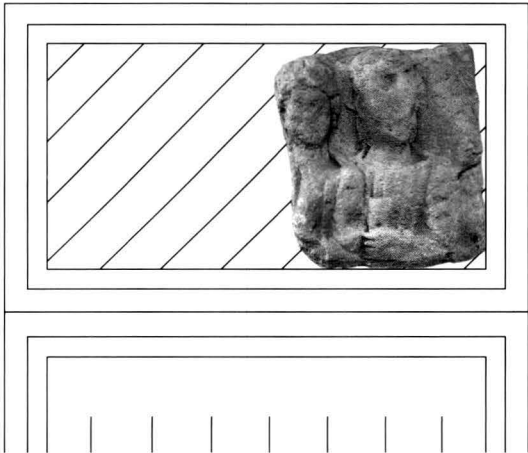
Plate 3. Funerary stelae from Porolissum.



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Plate 4. Funerary stelae from Porolissum.

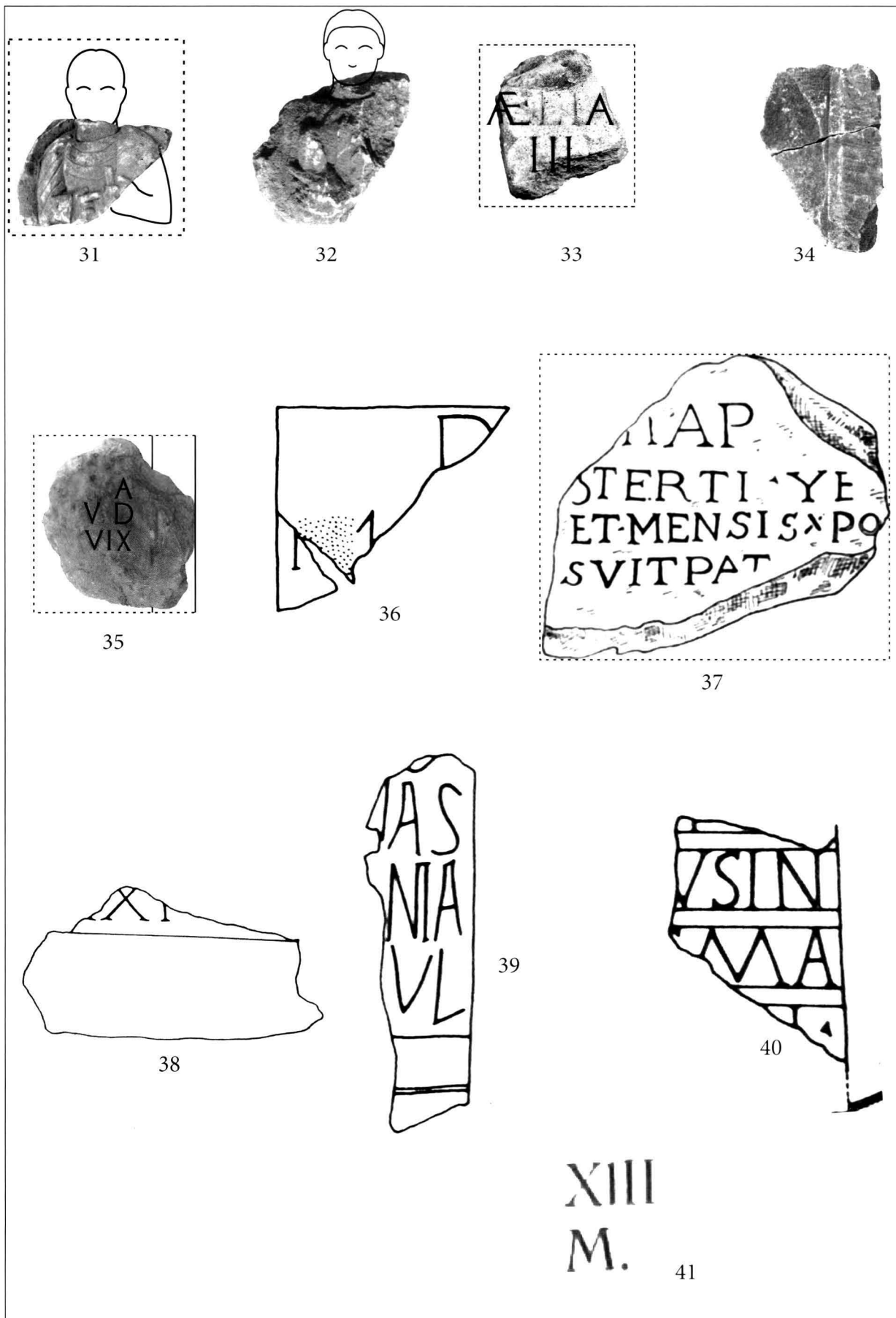


Plate 5. Funerary stelae from Porolissum.

NEW DATA ABOUT THE ROMAN SETTLEMENT FROM ODORHEIU SECUIESC

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The paper proposes a new approach upon the intriguing problem of the existence of a roman fort or a roman settlement at Odorheiu Secuiesc based on the new discoveries. Unfortunately all these discoveries are without any archaeological stratigraphic information and lots of material was collected in a private collection. Most of the Roman materials considered here are unpublished. Also, it has not been subjected so far to a detailed investigation. The analysis of the material shows a strong roman settlement with a rich activity somewhere between the second part of the 2nd century and in the 3rd century AD. The discussion offers an insight view into aspects related to roman civilisation: pottery production, the identification of a blacksmith centre, roman buildings and roman funerary customs. The most successful achievement of the study was chartering all the discoveries. In the same time, we tried to create a map of the area of spreading of the Roman materials in Odorheiu Secuiesc.

Keywords: limes; roman fort; pottery; iron tools; thermae; coins; brooches

The Eastern Limes of Dacia, known in archaeological literature since the last century, has scarcely been researched, and much of the available information comes from field researches or from accidentally discovered artefacts. Such example is the roman centre from Odorheiu Secuiesc (Hu. Székelyudvarhely), where only scarce discoveries have been found, but the exact place of the presumed roman fort is unknown; it is considered that it was under the actual walls of the medieval city (PAULOVICS 1944, 48). The locality, situated in the South-Eastern part of Transylvania, on the shores of the Târnava Mare river, in the Odorhei depression after 106 AD belonged to the province Dacia, after 118–119 AD to Dacia Superior and after 168 AD to Dacia Apulensis (PISO 1993, 32, 94). The eastern border of the province was crossing here, and it was guarded by several forts: the valley of the Târnava Mică river was guarded by the fort from Sărăteni (SZÉKELY 1961, 186; SZÉKELY 1962a, 332) from here the border turned south; between the superior courses of the Târnava Mică and the Târnava Mare rivers was the fort of Inlăceni (GUDEA 1979, 152), here the border turned east, towards Odorhei. From Odorhei the border turned south again, along the valley of Homorod, guarded by the fort from Sânpaul (FERENCZI–FERENCZI 1967, 401).

The roman period is poorly researched in this area. Archaeological researches have been conducted at the roman forts from Inlăceni (GUDEA 1979, 149–275), Sânpaul (FERENCZI–FERENCZI

1967, 401–405; FERENCZI 2002, 23–31), Sărățeni (SZÉKELY 1961, 185–186) and Sighișoara (MITROFAN–MOLDOVAN 1968, 99–108). Beside the forts, the area has been researched through a few archaeological surveys.¹

The forts were connected through a network of roads, along which there were the guarding towers. Some have been researched archaeologically, such as the tower of Homorod (FERENCZI–FERENCZI 1958, 26–27), near Odorhei, the one from Szarkakő (FERENCZI–FERENCZI 1978, 91), or Ocland–Hagymásvár, and others have been researched through field surveys (TÉGLÁS 1896b, 384–389). The first descriptions of these sites were made by B. ORBÁN (1868, 58); and G. TÉGLÁS (1896b, 384–389), verified by I. PAULOVICS (1944, 43–59), while researches were carried out later by N. GUDEA (1977, 97–113). In the last years the survey of the limes was realised also by air photography, done by the ‘Pécsi Régészeti Téka’ (VÍSY 2009b, 107–110) from Hungary in collaboration with local museums from the area. According to these studies, several towers are known from Șiclod–Siklódi kő (CAVRUC 2000, 67), at Tibod (CAVRUC 2000, 124), at Chinușu–Lörincbükke (FERENCZI–FERENCZI 1978, 92), at Păuleni–Nyílastető, where several traces of towers have been observed (SZABÓ 2009, 118–119). The literature also mentions erroneously the remains of a guarding tower at Dealu–Kápolnadomb, with a diameter of 8 m, made of stone and mortar, described by I. PAULOVICS (1944, 51–53) and quoted by other researchers (CAVRUC 2000, 123), but the archaeological excavations pointed out that these walls are the remains of a catholic chapel (FERENCZI–FERENCZI 1978, 97–98) appearing on the first military map of the area from 1769–1773.

The road connecting the roman fort from Sighișoara to the one from Odorhei passed along the Târnava Mare valley. During building a bridge in 1963 near Porumbenii Mici, at a depth of 120–130 cm the remains of a gravel road have been found, dated to the roman period (BENKŐ 1992, 88). It is possible that it was guarded from the *Galat*, where, during the roman period, the defending moat of the Bronze Age fortification was improved (BENKŐ 1992, 88). The excavations of these sites (SZÉKELY 1959a, 523–529; SZÉKELY 1959b, 233–237; SZÉKELY 1962b, 25–33; HOREDT *ET AL.* 1962, 633–641; SZÉKELY 1970, 304) led to the discovery of a household, where a bronze coin of Commodus and a coin of Vespasian were found along with many pieces of roman ceramics. It seems that there was a wooden roman tower, watching the roman road leading to Odorhei, strengthened with a ditch and a rampart, which barred the plateau. At the foot of the hill the traces of settlements from the roman period have been identified in several places: at *Telek*, on the left bank of the Mota creek; at *Bolhás-Hídja*, on the left bank of the Bolhás creek, where roman ceramics have been found, some of them painted (BENKŐ 1992, 85). The traces of roman roads have also been noticed at Ulcani–*Colina lupului*, where big stone slabs – some of them 6 m wide – were cut out of the rock (FERENCZI–FERENCZI 1978, 91).

Because the region was the border of the Roman Empire, the population tended to gather in the operating area of the troops, therefore the discoveries outside the roman forts are few and scarce. Remains of *villae rusticae* have been found at Filiaș, where during a land survey at the site of *Alsókövesföld* fragments of bricks, stones, concrete and roman ceramics were unearthed. Materials from the roman period were found at *Nagyerdő földje* (BENKŐ 1992, 194). Other traces of roman settlement are known from Simonești–*Bethlen* (BENKŐ 1992, 195). Buildings have also been discovered at Cădăciu Mic–*Katona-kert*, where cut stone-blocks and a terracotta statuette of the goddess Libera appeared (FERENCZI–FERENCZI 1978, 92). Following the survey at Forteni,

1 The area near Cristurul Secuiesc was researched by E. Benkő, the Odorhei Depressions by I. and G. Ferenczi, and in recent years by A. Sófalvi and Zs. Nyárádi.

in the centre of the village, south-west from the church, painted roman ceramic and provincial materials have been found.² From Cristurul Secuiesc–Zata the remains of an incineration grave are known, where two bronze brooches, a spear tip, a knife-blade and a bronze buckle were discovered (SOROCEANU 1971, 499–502).

The marcomanic wars seem to have strongly affected the basin of the Târnava Rivers. The events are marked by the hiding of monetary treasures. 3200 denarii were hidden at Sălașuri around 158 AD (MOLNÁR–WINKLER 1965, 269–294), the thesaurus of Tibod had coins as late as 167 AD (PROTASE 1969, 509–513), other smaller treasures from the same time have been found at Sânpaul, Cristur, Orășeni, Odorhei (BENKŐ 1992, 16). This part of the limes probably collapsed around 260 AD, following the attacks of the gothic tribes. These Germanic tribes populate intensely the south-eastern part of Transylvania; so far about 150 settlements from this period are known (KÖRÖSFÖI *ET AL.* 2010, map A). The largest researched settlement lies near Odorhei. The site is away from the roman settlement, but the barbarian inhabitants re-use materials from the roman buildings: cut stones for the ceramic-burning ovens, bricks for the out-door ovens, cut stones for the hearths, etc.³ After the end of the roman domination in the upper valley of the Târnava Mare new, smaller settlements appear and grow significantly in a short period of time, which suggests that this might be due to a new population (BENKŐ 1992, 17).

Concerning the discoveries from the territory of Odorheiu Secuiesc, the newer literature only quotes the older writings (VISY 2009a, 109; VISY 2009b, 593), with a few exceptions. The first descriptions of discoveries from Odorheiu Secuiesc date from the middle of the 19th century. The roman settlement of Odorhei has first been found by Gy. M. Szigethy in 1828, when remains of roman walls, coins, ceramics, goddess statues, incineration urns, road-traces were discovered, all of them completely disappearing by the end of the 19th century. Gy. M. Szigethy considered that the roman settlement from Odorhei might be *Utidava* (PAULOVICS 1944, 49). Later the remains and the roman monuments of this region have been studied closer by B. ORBÁN (1868, 58–62), then by C. GOOSS (1875, 316). Between 1847 and 1848 M. Ackner and Neigabauer (TÉGLÁS 1896b, 384), the Prussian consul in Bucharest and in 1850 the protestant bishop F. MÜLLER (1859, 165) visited and searched for the roman history on the eastern limes. The research was taken over by G. and I. Téglás, who on repeated occasions did field research on the eastern limes. Téglás described completely the eastern limes for the first time, performing field researches in every roman fort and in the border area (TÉGLÁS 1896, 412–427; TÉGLÁS 1897, 257–268; TÉGLÁS 1900, 261–269). Among the discoveries made by G. Téglás here, we observe several information concerning the roman thermae, which we will describe bellow.

I. Paulovics resumed all the information known on the roman discoveries from Odorheiu Secuiesc, noticing the strategic importance of the place of the presumed fort. Analysing from a topographic point of view the place of the *Csonkavár* fortification he considered that Hungarians built their own fortification exactly over the roman fort (PAULOVICS 1944, 48). Later on, the bibliographic sources make no reference to other Roman discoveries from Odorheiu Secuiesc; they only review the older ones, as well as the editors of the synthesis works did (IDR III/4 261, 262), where the bronze medallion discovered in 1874 and the drawings of the printed bricks from G. Téglás are published. In 1955 in the Town Hall Square (Piața Primăriei) Roman discoveries were made, where several iron artefacts have been found, representing the arsenal of a roman

2 Field research done in the spring of 2007 by A. Sófalvi and Zs. Nyárádi, material stored in the Haáz Rezső Museum in Odorheiu Secuiesc.

3 The material is being processed for publication.

blacksmith's workshop (FERENCZI–FERENCZI 1958, 25). Some of the intact Roman pots were erroneously dated to the 13th–14th century (FERENCZI–FERENCZI 1958, 28).

In the south-eastern part, outside the city, under the *Szarkakő* the traces of roman towers were discovered. The old roman road and the medieval road left the city in this direction. A few hundred meters away, at the beginning of the hillside descending to the city, a small hill with a diameter of 8 meters has been observed. Strongly burned wall seams (adobe from walls) were found, but no ceramic fragments. A few hundred meters further east, in a similar position, a slightly larger mound was found. On its surface, rock blocks were identified, also without any archaeological material (FERENCZI–FERENCZI 1958, 91–92). These two roman *burgi* probably were in touch with the ones from Băile Homorod.

In October 1987, during the excavation of the foundation of a building on the 1 Mai Boulevard in the southern area of the *municipium*, behind the 'Olimpia' movie theatre, an inscribed lime-stone funerary stela was found (ARDEVAN ET AL. 1992, 195; PETOLESCU 2005, 183, no. 437) (Pl. 17/10–11). The piece was in a secondary position, probably being re-used in modern times as material in one of the buildings. So far it is the only roman lapidary inscription discovered in this area. The text has been strongly corroded. The monument is dedicated to a veteran, a former centurion, Aelius Equester, and to his wife, Aurelia Iuiunus, taken as a virgin; they lived together for 60 years (ARDEVAN ET AL. 1992, 198). We are probably dealing with a veteran of the *Cohors I Ubiorum*, roman citizen and former centurion. His wife must have also been a Roman citizen; the name Aurelia and the general data suggest a family that received the citizenship through *Constitutio Antoniniana*. The authors date the stela earliest in the second quarter of the 3rd century AD (ARDEVAN ET AL. 1992, 198). The cognomen *Iuiunis* (HUSAR 1999, 64) is unique in Dacia. The only mention of this cognomen in the Roman Empire is in Pannonia (CIL III 12034). This name of possibly Celtic origins shows the original region of the troops camped here, recruited from the Rhine area, a territory of interference between Celts and Germans. It was supplemented in the 3rd century AD with troops from Dacia and the neighbouring provinces (FALILEYEV 2007, 94),⁴ the inscription being a proof that the Pannonian and Celtic-Noric colonists were integrated in the provincial society (KRAFT 1951, 50; PROTASE 1980, 133–134; MITROFAN 1981, 108–109).⁵

In 2008 Zs. Nyárádi in a study regarding the history of Odorheiu Secuiesc analyzed a private collection of archaeological materials originating from the territory of the city, including every historical era and culture known in this region (NYÁRÁDI 2008, 75–98). The pieces reviewed in this article completed the Roman discoveries from Odorheiu Secuiesc and helped us to form a historical view on the roman settlement. In 1995–2006, when introducing the sewer-system and on the occasion of digging the foundations of buildings, rich archaeological materials were found. In this time the museum had no archaeologists, therefore these excavations were made without archaeological supervision. The only available data are due to V. Szász, passionate by history and archaeology.⁶ He took a stand against the multiple disturbances of the archaeological layers and he saved a part of the excavated archaeological material. With these artefacts an archaeological collection was grounded, which has been analysed scientifically in 2005–2007 (NYÁRÁDI 2008, 75–98). The fragments were taken from already disturbed piles of dirt, therefore they are mixed and there is no information

4 The author is not convinced that this name is Celtic, rather suggesting *Tuiuni* for reading.

5 It seems that across the Târnave valley abounds settlers who came from Pannonia and Noricum with a strong provincial feature.

6 On this occasion we would like to thank again to V. Szász, true passionate for archaeology; without his contribution this paper would not be complete.

about the layers. For a small part of the material even the place of origin remained unknown. Since these artefacts were divided considering the discovery places, they have little meaning, but correlated among them, and considering other findings, they might indicate the territorial borders in a certain period. Another drawback of this data is the lack of field-control, but without archaeological excavations, these remain the only sources for the city's historical topography.

Cohors I Ubiorum

The information on *cohors I Ubiorum* in Dacia are poor. This troop is mentioned in a series of military diplomas from Moesia Inferior (PETOLESCU 2002, 124 with all the bibliography). Another mention is from Capidava about a *praefect* of the troop, C. Iunius Tertius (CIL X, 6015), there is a funerary inscription of a *signifier* (AÉ 1950, 46) of the troop, and a stamp with the inscription *Coh(ors) I Vbior(um)* (OPRIȘ 1997, 227–228). The troop takes part in the Dacian wars, and in 120–130 AD it was among the units stationed in Dacia Inferior (ECK ET AL. 2001, 27–28) transferred later in Dacia Superior, according to the diplomas from Micia (136/138), Nova Zagora (144), Tibiscum (157), and Drobeta (179) (PETOLESCU 2002, 125, footnotes 1–4 with all the bibliography). A *praefect* of the cohort, L. Pompeius Celer, raises an altar to *Hercules Invictus* at Băile Herculane (CIL III 1571; IDR III/1, 63), and one possible soldier from the troop, Antoninus [?Pri]m[i]genianus, is buried at Apulum (CIL III 1187; IDR III/5, 494).

There are only a few mentions regarding the stamps of the troop, the drawings of seven pieces were done by G. TÉGLÁS (1888, 243; TÉGLÁS 1895, 40) (Pl. 18/7), also analyzed by D. PROTASE (1962, 507),⁷ (Pl. 18/2, 8, 9) and four other appear in IDR (III/4, 262) (Pl. 18/4, 6, 7, 12). The stamped bricks (GOOSS 1875, 174; CIL III, 8074, 25; TÉGLÁS 1895, 40; TÉGLÁS 1902, 151; IDR III/4, 262; PROTASE 1962, 507) are fragmentary, the text in the cartouche is 7 X 3.5 cm, and the letters are 1.5–2 cm tall. From Târnăveni, G. TÉGLÁS (1888, 243; CIL III, 8074) mentions two stamps from the Bethlen College collection from Aiud, with the text *C IV* (Pl. 18/3–5); there is no mention whether the cartouche is complete, but they are similar to those from Odorhei. They are not similar to the stamp of the brick-maker C(aius) I(ulis) V(alerius) from Sarmisegetuza (IDR III/2, 560), but it may also be *cohors I Vindellicorum* (GUDEA 1997b, 34), therefore they cannot be included in the list of stamped bricks of *C(ohors) I Ub(iorum)*. Furthermore, the troop is mentioned on two stamps found at Ozd (IDR III/4, 132). The second stamp has a complete cartouche: *C(ohors) I Ub(iorum)* (VLASSA 1965, 25; PROTASE 1962, 507, footnote 21). Therefore, the stamps from Odorheiu Secuiesc and Ozd date from post AD 136/8 or little prior, when the troop is attached the numeral. Hence, it is not certain that the troop was camped in the fort at Odorheiu Secuiesc from Moesia Inferior or Dacia Inferior already; there is also possible that the border between Dacia Inferior and Dacia Superior changed at some point (MARCU 2009, 146).

A fragment of a brick-stamp was discovered in 2008 in a provisions' pit in the site of *Kadicsfalvi rét/Alsó-Lok*, in the immediate vicinity of the city Odorhei (Pl. 17/7–8). On the 3 x 3.5 cm cartouche only the first two letters – *C I* – are preserved. Because all the stamped bricks are lost, it is impossible to determine surely their types. The recently discovered fragment retains only two letters, therefore including it into the type II is approximate.⁸

7 D. Protase mentions that these stamps were brought from Odorheiu Secuiesc at Sighișoara after the Second World War and they were part of the collection of the local Saxon High school.

8 Based on the known drawings (GUDEA 1997b, 60–61) it seems that there were at least three types: I. *CO[hl] VBIOR(um)* (Pl. 18/7), like the one found at Capidava; see www.capidava.ro/unitati_militare.unit_mil_06; II. *C(ohors) I Ub(iorum)* (Pl. 18/2, 4, 8–12 and probably the one from Ozd); III. *C(ohors) I Ub(iorum)* mirror inscription (Pl. 18/6).

Roman discoveries from Odorheiu Secuiesc mapped by streets⁹

1. Attila Str.

Between 1999 and 2003 on the street located on the eastern part of the *Székelytámadt* fortress, from different sewage works, constructions and levelling of land, mixed artefacts dating from several periods came to the surface. The roman materials from this point consist of fragments of pots, plates, jugs and bowls. (Pl. 1/1–10).

2. Bethlen Gábor Str. no. 1

In the years 2001–2003, with the occasion of the Court building renovation, drainage and sewerage works were made, levelling the court. Following these works, different levels of previous settlements have been disturbed. Some holes have reached 1.5 m in depth. Numerous archaeological materials were recovered from the mixed soil. From the Roman period fragments of pots, bowls, lids, cups or mugs, plates, handles from undeterminable pots were unearthed (Pl. 1/11–20; 2/1–2).

3. Bethlen Gábor Str. no. 49–51

At the intersection of Tamási Á. and Bethlen G. streets, in 2004 and 2005 sewerage and building activities for a parking lot took place. On the occasion, without any proper archaeological observation, materials from the Roman period, including a fragment of a pot and a plate (Pl. 2/3–4) as well as an undeterminable worn roman coin (Pl. 11/19) came to surface.

4. Bethlen Gábor Str. no. 72

During the renovation of the local hospital between 2003 and 2006 several archaeological materials were incidentally discovered. The 40–50 cm wide trenches were dug to a depth of 1 m. The archaeological material discovered came in a private collection. From the Roman period fragments of pots, bowls, cups or mugs, plates were recovered (Pl. 2/5–22). This place also lacks proper archaeological survey.

5. Budvár (Cetatea Bud)

The strategically well placed conglomerate block that stands on the south-east part of the city, on the right bank of the Târnava Mare river, from where one can watch most of the Odorhei Depression, was populated for several periods. The plateau was reinforced with a ditch and an earth-wall in the Iron Age (FERENCZI–FERENCZI 1972, 59–63); then a medieval fortress was built on the same place (FERENCZI 1997, 208–232). The first archaeological artefacts were found in 1893, when the army carried out here an exercises artillery field. These materials – which have disappeared until today – have been collected and described by E. JAKAB (1894, 13–14). On the northern side, during land levelling of the site a skeleton was found. Since it was poorly recovered, only information about a skull and some blue glass beads were mentioned, chronologically assigned to the Roman period.

⁹ At the end of the study, there is a catalogue with all the roman pottery finds arranged by their places of discovery. Our main inspiration for the information on the processing method of ceramic material and how to interpret the information were the PhD theses of C. CUPȘA (2010). On this occasion we would like to thank for the given help and advices.

In 1969 on this site with a strategic role an archaeological excavation took place, when three survey trenches and a section were opened. The materials date from eight different periods from late Neolithic to the Middle Ages. From Roman times some pottery and roof tiles were found (FERENCZI 2002, 49). The tiles are missing from the Haáz Museum's collection, while a part of the Roman pottery from the site is in a private collection. These are fragments of bowls, pots and plates (Pl. 2/23–28; 3/1–2). Archaeological materials are probably related to a structure built of wood, showing similarities with the construction from Porumbenii Mici–Galat (BENKŐ 1992, 85).¹⁰ It still is an intriguing problem the female skeleton found in 1893.

6. Görbe Str. (Strada Strâmbă)

At the crossroad of Attila and Görbe streets, in the spring of 2001 a sewage pit was dug to 60 cm depth. The recovered Roman artefacts consisting of fragments of pots and bowls (Pl. 3/3–6) arrived in a private collection. Among these a pot with distinct signs is remarkable (Pl. 3/3). The *graffitto* characters are 2.5 cm high, apparently the inscription was on three rows, the end is missing: [...] I [...] / ... [.V] CO I (orL) VIN(um?) PIM../ ...IO ?¹¹ It might refer to the owner's name, it may mean the name of the product or a simple notice of its user.

Another fragment also had *graffitto* (Pl. 3/5) with a single set of three letters of 4 cm height above the maximum diameter, which seems to come from a name: ... DA[.]M[...] or DAVV. In this way were marked the names of the owners on the vessels, therefore the shard might preserve for us the proper name of the user of the pot, and the inscription could refer to a sort of short Celtic names like: *Daminius* (CIL XIII 5911, in Belgica a *civis Lingonus*; RIB 1952, in Britannia); *Damis* (CIL XII 842, in Narbonensis); *Damio* (CIL V 1310; AÉ 1915, 101, in Italy; CIL III 5150, in Noricum; RIB 2213 in Britannia); *Damo* (CIL XIII 7535, in Belgica); *Damonus* (CIL XIII 1364, in Aquitania); *Damus* (CIL XIII 5751, in Belgica). It can reproduce the names *Damale*, *Damalis*, *Damas*, *Danae*, *Danaïs*, or if the last letter is a V or U, it could be *Davius*, *Davto*, *Davus* (LOERINCZ 1999, 92, 94).

From the site comes a damaged iron mandrel, dated to the 2nd–3rd centuries AD (Pl. 11/5), L. 5.5 cm; l. 2.8 cm; made from a massive iron bar, triangular in section; and a tip of a possible iron spearhead in precarious state of preservation dated to the 2nd–3rd century AD (Pl. 11/6), L. 7.6 cm.

7. Kornis Ferenc Str. no. 26

In 2006, when digging the foundations of the Jehovah's House of prayer, between Kornis F. Str. and Görbe Str., from a black, compact layer Roman materials appeared, of which we mention two pieces of stamped pottery (Pl. 3/7–8).

8. Kornis Ferenc Str. no. 31

In the area researched by G. Téglás in the 19th century, who supposedly identified the *therma* of roman camp, while constructing the store Texal, archaeological layers have been disturbed. Because of the lack of special assistance the rich material got in a private collection. The earth wares consists of various forms of plates, handles of jugs, cups, bowls and fragments of

¹⁰ The Roman material coming from here was studied and will be published.

¹¹ The inscriptions from those two fragments of pots were read by Professor R. Ardevan, whose kind help we would like to thank.

large pot (Pl. 3/9–14; 4/1–24; 5/1–8). One fragment has an inscription engraved under the rim with a group of about 5 cm high three letters: ...TVR... (Pl. 5/7). From the same site a few metal objects were also revealed. The leg of the 5.7 cm long trumpet brooch with the bow arching into the trumpet head was triangular in section with a frontal central ridge. It has a flared head with a ridge around its perimeter and a central loop on the reverse. The head curves inwards to form the bow of the brooch which is decorated by developed petal moulding at the centre of the bow. There are approximate six leaves at the top and bottom of the button which extend all around the bow. The loop on the reverse of the head would have contained the spring which along with the pin is missing. There is a small chip out of the top of the catch-plate. It is similar, but not the same with to the Cociş-21b1a type (Cociş 2004, 112), a new variant for Dacia, analogous to Jobst-VIa type (Jobst 1972, pl. 7/48–49), dated to the 2nd century AD. A small curved iron chisel dating from the 2nd–3rd century AD was 5.8 cm long and 2.2 cm wide, it was sharpen at both ends, probably used for carpentry (Pl. 11/7). The similarly dated small 4 cm long curved bronze bar (Pl. 11/8) maybe belonged to a shackle.

9. Márton Áron tér (Márton Áron square)

In 1955, on the occasion of the excavations made for the sewer system on the south side of the local market, along with materials from other periods (Wietenberg culture, migration period, and Middle Ages) Roman pottery came to the surface (FERENCZI–FERENCZI 1958, 18), unfortunately lost later. In 2000 in the same place, this time on the northern side of the market a 1.50 to 2 m deep and 50–60 cm wide S–E oriented ditch was dug. The ceramic materials were rather sporadic and very mixed up, they were recovered in a private collection, where a fragments of a Roman bowl was identified (Pl. 5/9).

10. Mihály udvar (Curtea lui Mihai)

Mihály udvar (Michael's Court) is a plot of land in the Beclean Str. Between 2000 and 2001, two buildings were built here, archaeological observations being made by V. Szász, pointing out a consistent deposit of the modern age materials, with a yellow silty layer underneath. Under this layer a black compact soil was observed, filled with pieces of coal and archaeological materials, among which some Roman coins and brooches, earrings fragments and bronze harness. The human bones found here along with inventory reveals the possibility of the existence of a Roman necropolis.

A piece of a 1.3 cm long bronze brass wire (Pl. 11/9) with a knitting part and a curl with 3 mm diameter dating from the 2nd–3rd centuries AD was found broken. A fragment of a strongly profiled bronze brooch (Pl. 11/10), with a length of 4 cm was made of two metal pieces, bears a disk knob, rendered on the upper part, the bow is curved and decorated with small triangles in the shape of 'wolf teeth'. The needle of the Cociş-8b2a1 type brooch (Cociş 2004, 65) is missing; analogies dated from the 1st c. to the third quarter of the 2nd century AD can be mentioned from Porolissum (Cociş 2004, 175, no. 374). The bronze fragment of a *carabiniera* (?) (Pl. 11/11) with a length of 1.8 cm, dated to the 2nd–3rd century AD was damaged at its lower part. From this place two coins were revealed: a silver antoninianus (Pl. 11/17). Avers: *M OTACIL SEVERA AVG* Bust, diadem, a crescent; Reverse: *CONCORDIA AVGG*, only some letters can be identified certainly Concordia seated to the left, in the left hand with a *patera*, and the Fertile Crescent in the right, in front an altar below. Bibliography: RIC IV/3, 83, no. 126 (Rome, not dated). The second was

a silver denarius¹² (Pl. 11/18). Avers: *IMP MAXIMINVS PIV [S AVG]*. Bust laureate and draped on the right. Reverse. *SALVS AVGVSTI*. Salus seated to left. *Patera* from which a snake is eating. Bibliography: RIC IV/2, 141, no. 14 (Rome, undated¹³).

11. *Református temető (Cimitirul reformat)*

Between the years 2000 and 2004 on the north-eastern part of the reformed cemetery while digging new graves in late November a considerable quantity of archaeological materials were recovered, all getting in a private collection. The potsherds date from several periods; from the 2nd–3rd centuries fragments of pots, bowls and lids could be identified, along with an 5.5 × 9.4 × 4.5 cm wide and 4.3 × 3.5 cm wide, severely damaged and corroded iron sledge hammer (Pl. 11/16), with a hole for handle, dating from 2nd–3rd century AD, used probably for smithy. The piece also could be medieval. A 4.2 cm long bronze trumpet brooch (Pl. 11/15) had faceted head, the also faceted bow is bent in the shape of letter 'S', the spring had 8 windings, damaged today; the catch plate is also broken. It can be included to the type 4, made of two metal pieces, very well preserved. It is similar to the Cociş-21c1 type (Cociş 2004, 115) with a good analogy at Porolissum (Cociş 2004, 204, no. 1386, pl. IV/XCIX); dated to the second half of the 2nd century AD.

12. *Régi marhapiac (Târgul vechi de vite)*

The Roman *therma* (TÉGLÁS 1897, 257–268) was identified during the land levelling at the cattle market in 1874,¹⁴ on the northern part of the settlement, currently the Uzinei Str., where the foundations were largely destroyed. Topographically, this building is at the intersection of Kornis Ferenc and Uzinei streets. These first excavations were published by E. JAKAB (1894, 214–215), based on information provided by J. Kovács and by the wife of K. Vánky. They found traces of a building made of bricks and large portions of stone walls were uncovered, identifying traces of rooms with *hipocaustum* and simple or inscribed *tegulae*. The inventory consists of weapons (spearheads and arrowheads), household tools (cutter plow, hammers, axes, chisels, knives and nails). The small finds consist of rings, brooches, key rings, combs and hairpins. Coins from the republican and imperial period were found, from the reign of Marcus Antonius, Vespasian, Trajan and Philip the Arab. From this place stamped bricks with the inscription C IVB (CIL III. 8079, 1) and a bronze disk with the inscription *Fronto Paulini F (ecit)* (Gooss 1875, 175; CIL III, 8079; TÉGLÁS 1897, 262) are known (Pl. 18/6). A *gema* of the goddess Diana was found (TÉGLÁS 1902, 150) along with two roman lamps, one stamped with the inscription *FORTIS*. Unfortunately all the material has been lost. A part of the material was taken to the local town hall, from where it disappeared. Also, traces of a Roman road were observed having S–E direction which, according to the engineer's remarks was so hard to break, that they had to use gunpowder. The most valuable pieces were saved in a collection of the Secondary School in Sighişoara, which have been taken and described by K. Gooss (1875, 175).

Documentation and verification on the site were made by G. TÉGLÁS (1897, 257–268) with the help of teacher E. Solymosy, while in 1894 under J. Ugron's surveillance excavations

12 Because the coins are in private collection we were not able to measure them properly, only to make a photo. On this occasion we would kindly like to show our gratitude for Prof. R. Ardevan for helping us to determine them properly.

13 It seems to be 236–238, because the epithet *GERMA* is not in the title.

14 In that year excavations were made in the south-east part of the city for a sewer canal and for leveling the land. The engineer K. Vánky was in charged with the project.

were conducted.¹⁵ These excavations have been mainly limited to documenting the traces of walls (Pl. 8/1); archaeological materials have not been really surfaced. Despite the damages, the stone entry was preserved on the west side of the building. During the excavation several rooms of the Roman baths were identified. After the entry, there was a smaller room where the *capsarius* stood. Beyond the entrance was the *apodyterium*, where people used to undress. From here one could enter a rectangular room with a length of 11.9 m, 6.1 m wide, which was the *frigidarium*. The basin walls were covered with brick tiles with crossed wave ornaments, found during excavation. The next room was the *tepidarium*. In its northern part a heating system was installed which was totally destroyed during land levelling. From this place one could enter the *caldarium*, which was 8.7 × 4.7 m. In the northern part of the place was the cold watered, semicircle *labrarium* of 3.7 m width and 1.9 m in diameter. This room was heated from the north-west. Here they found traces of a vaulted *prae-furnium* with a length of 4.7 m and width of 1.25 m. In this area a large quantity of coal and ash was found. This facility was warming up also the *laconicum*, which was largely destroyed. Once there was a steam room, before the *unctorium*, from where one could return in the *apodyterium*. In the north-east of the complex a small room paved with river stones was found which probably was the *curator's* home. The heating system was largely destroyed. Over the pressed clay layer, a brick floor was placed. Over this was erected a rectangular shaped 0.68 m long and 0.2 m wide brick column. The space between the bricks was filled with cement mixed with animal fur. These columns were covered with bricks of 45 cm width. The *suspensura* thus created was filled with cement and then *maltha* was placed over this, creating a resistant surface. The heater was located in the walls but nothing survived, only different tubes were found during land levelling. These had a length of 29 cm, 10.5 cm in diameter on top and 6 cm at the bottom. Rooms were painted with white lime, traces of frescoes have not been found. Near the entrance stone pillars were placed, were parts of the interior decoration, fragments of stucco were found. Outside, on the south-eastern part a draining-system covered with bricks was identified. I. PAULOVICS (1944) resumes all the information known about *thermae* excavations in the area, and he also talks about bricks stamped with the remark that it mentions a stamped brick of *Legion XIII Gemina*.¹⁶

Between the years 2000 and 2005 in this area the archaeological layers have been repeatedly disturbed. During repairs at the sewer system of the Kornis Ferenc Str. traces of mortar walls and fragments of clay pipes were found. Four pieces have been recovered, another three pieces from the Haáz Rezső museum's collection are without any information, but their early inventory number suggests that they come from the same area. These seven pieces seem to belong to an elaborate Roman sewer system, but unfortunately only one is kept in perfect condition (Pl. 16/16), while two of them seem to be from the same pipe line (Pl. 16/18–19). Even though they seem to be different, it is very plausible that they are from the same pipe (BĂEȘTEANU 2007, 60). Three types of pipes could be identified (see Appendix): 1.) pipes with sockets at both ends (Pl. 16/16, 20?); 2.) pipes with just one socket (Pl. 16/15, 17–19); 3.) pipes used in construction or reused (Pl. 16/15).

In the collection of the Haáz Rezső Museum three roman lamps were found that might also come from the same area. All three of them are *Firmalampen*, only one has a stamp with

15 Because the earlier presentation of this site was made only in Hungarian we considered useful to present them in details.

16 It remembers about the stamps from CIL III, 8074, pointing out that in the MNS register it is noted that the brick stamped *C IVB* from the Imeni collection was bought from a Székelyudvarhely.

the name *ATIMETI* (Pl. 18/15), known in Dacia on several lamps (GOSTAR 1961, 158; MAN 2000, 48 with all the bibliography). Atimetus was a north-italic manufacturer with discoveries at Pompei, Vindonissa, Poetovio (LOESCHKE 1919, 296) and in Pannonia two pieces dated in the Antonine period (IVÁNY 1935, 333). Some new discoveries of roman lamps, stamped with *ATIMETI* inscription were discovered lately at Roşia Montană (DAMIAN *ET AL.* 2007, 298). The lamp is rough modelled, it has red-yellowish colour, without angobe; it is likely a local product, probably from a centre like Apulum from where 5 pieces are known (GOSTAR 1961, 158). A second piece (Pl. 18/14) could come from a bigger centre from the province, such as Ulpia Traiana Sarmisegetuza (ROMAN 2006, 546, fig. 1–2). A third one (Pl. 18/16) seems to be as well the product of a local workshop. Lamps like this could be made in a potter-workshop, possibly as an additional product.

Some of the ‘sweet biscuit’ shaped brick-coloured paving stones from the same collection with an early inventory number might also come from one of the building of the *thermae*. We identified two main types: 1.) large sized – $5 \times 4 \times 3$ cm – pieces made of clay, well burned, red-brick colour (Pl. 10/17, four pieces); MHR inv. no. 57. 2.), small sized – $4.5 \times 3.5 \times 2$ cm – pieces (Pl. 10/16, 3 pieces); MHR inv. no. 55.

Two *pilae* from a *hypocaustum* system and a *tegula* with fingerprints (Pl. 16/13), can have the same place of discovery. The first had 6 cm height and 20 cm in diameter, it was well burned, red-brick coloured, circular shaped, well preserved (Pl. 18/17). The second measured 8 cm in height and 17 cm in diameter, it was well burned, red-brick coloured, circular shaped, damaged at the upper part (Pl. 18/18). Both are kept in the collection of MHR, without inv. no.

13. Székelytámadt/Csonka vár (Cetatea Ciuntită)

The Medieval citadel is the current centre of the city on the eastern side of the Varga River. Here is the alleged location of the roman camp. The first description of the city is made by B. ORBÁN (1868, 41), who gives detailed information prior to the construction of the school building, and drawing the plan of the locality. G. TÉGLÁS (1895, 40) believed that the roman camp situates under the medieval city, and the builders of the citadel reused some of its foundations and ditches. These assumptions have been taken over by I. Paulovics, who noted at the northern and eastern sides the remains of a Roman ditch, while between the groups of households from Kornis Ferenc Str. no. 5 he found traces of Roman walls (PAULOVICS 1944, 50). He mentions that the first to identify the Roman ruins was J. Szeles, in the 18th century, while in the 16th century, when the city was rebuilt, many Roman ruins have been found (PAULOVICS 1944, 49, note 104).¹⁷ Based on the roman coins discovered J. Szeles believed that a ‘colony or a Roman city’ was here. I. Paulovics believed that the Csonkavár citadel is also built according to the plan and size of a smaller roman camp, with the ancient fortification ditches visible in the north-eastern part (PAULOVICS 1944, 50). The author considered the place a perfect strategic position for a Roman camp, since in this area local rivers meet; from here the road splits toward Dealu (Oroszhegy), Zetea (Zetelaka) or Băile Homorod (Homoródfürdő). If no Roman ruins had been on *Csonkavár*, then the medieval fortress would have been built on Budvár; all the roads led to the camp and later they were diverted; the shape and the plan is very similar to that of a roman fort, but with smaller dimensions, it corresponds roughly to the size of the roman fort from Inlăceni (Ėnlaka);

17 I. Paulovics also mentions a manuscript dated at the end of the 18th century, kept at the Reformed College in Székelyudvarhely.

regarding the other roman forts from the limes and their purpose, and the fact that it is not an *ala* fort, it was not necessarily a large camp; and if there were no ancient ruins, maybe the medieval fortress would have been built larger.

The first excavations inside the fortress were made in 1981 (30 July and 8 August) by I. and G. Ferenczi, who studied two areas. The first one was opened in the western bastion and had a size of 6 × 10 m, reaching a depth of 3.5 m. For safety reasons the excavations were suspended. The second trench with the dimensions of 5 × 10 meters was opened in the central court. At the depth of 1.5 m were found traces of several graves and cloister walls. Because of the medieval graves stratigraphic observations could not be made here. From these two trenches rich Roman ceramics and some imperial coins were collected, lost from the museum's collection.

In 1982 the research was carried on by four trenches. S3 was opened at the old entrance, S4 on the eastern part of the western bastion, S5 in the eastern bastion on the right side of the entry and S6 on the north-eastern side of the southern bastion. In the next year only S5 and S6 were excavated. In 1984 the research extended in the south-eastern bastion, and later this work was continued also in this trench (FERENCZI 2002, 60–63). The finds consisted of roman period pottery: pitchers, pots, bowls, cups, glasses, caps, plates and broken handles (Pl. 5/16–20; 6/1–9; 7/1–12). The investigations were resumed in 2002, when a restorations project was done at the bastion, including archaeological researches consisting of six trenches. Roman materials have emerged very sporadically (MARCUSZŐCS 2002). In 2009 a small archaeological research focused on the original entry of the citadel. Trenches of 3 × 6 m were drawn on the outside of the fortress. The layers of padding were removed to a depth of 2.25 m. In these levels were not found Roman materials (SÓFALVI 2009).

After these researches no clear evidence about the location of the Roman camp was found under the medieval city. Instead rich archaeological materials were unearthed, including many tiles (Pl. 16/1–12) and hypocaust fragments (Pl. 16/8), indicating the existence of nearby Roman buildings. The medieval fortress has 105 × 120 m and an entire Roman fort could not fit under it. Normally a part of the Roman fort should lie outside the medieval walls and one can correlate these assumptions with the walls observed by I. Paulovics on Kornis Str. The setting of these medieval buildings on the site suggests that the earlier Roman buildings were overlapped by the Dominican cloister and the city fortress, built after 1562 (SÓFALVI 2007, 64–65). In this location three pieces of bronze harness were accidentally discovered. An oval shaped, 4 cm long bronze buckle dated to the 2nd–3rd century AD was broken (Pl. 11/12). The 1.2 cm in diameter and 4.5 cm long bronze strap terminals were plate with a split in the side where the belt was introduced, which is not preserved, continuing with a ring and a part of the body part (Pl. 11/13). An analogy dated to the 2nd–3rd century AD can be mentioned from Porolissum (GUDEA 1989, 657, no. 36, pl. CCXIII; BISHOP-CLOUSTON 1993, 183, fig. 118), Răcari (BONDOC–GUDEA 2009, 210, no. 516, pl. XCVI). A 4.5 cm long bronze belt fitting (Pl. 11/14) with rectangular mounting link and body thickened towards the end and finished with a button has also analogies at Porolissum dated to 2nd–3rd century AD (GUDEA 1989, 659, no. 28, pl. CCXIII).

14. Szoborpark (*Parcul statuiilor*)

On 21–22 April 2004 during the erecting of foundations for statues, pits of 60 × 70 cm width and 50–60 cm depth were dug. From these pottery from various periods was collected without proper archaeological observations, among which a Roman vessel and several pot handles. In the present this material is in a private collection.

15. Tamási Áron Str. no. 75

Roman materials emerged on the right bank of the Târnava River; therefore the Roman settlement might have a larger extent than previously thought. At the house no. 75 in 1976a water pipe trench was excavated at 6 m distance from the main road and with a depth of 1.80 m. From the filling of the trench the remains of a large roman vessel were discovered (Pl. 7/13), along with fragments of grey pots, animal bones and pieces of coal. The material collected by Z. Miklós arrived by donation in the museum's collection.

16. Tompa László Str. no. 23

In front of *Csonkavár* the archaeological layers were disturbed during the foundation works made at Lilla hostel, as well as at the cellar of the nearby house. The materials are in a private collection, mixed, without any archaeological record, among which Roman fragments of pots, bowls, plates and storage vessels (Pl. 7/14–16; 8/1–20).

From the same place comes a 5.5 cm long T-shaped bronze brooch with knobbed head, curved bow, trapezoidal in section, the 5.3 cm long foot is short and sharp, the catch plate is type 21, the bow ornaments are two double rows of longitudinal lines (Pl. 11/1). It belongs to the Cociş-39a3a2 type; with analogies at Ilişua (Cociş 2004, 223, no. 2015, pl. CXLVIII); dated to the first half of the 3rd century AD. The spring of a 5.4 cm long severely damaged bronze brooch (Pl. 11/2) has 8 wires left, it was broken in the middle part and it dates from the 2nd–3rd century AD; no classification is possible. From the 2.1 cm long severely damaged bronze link (Pl. 11/3) only the inferior part is preserved, no classification is possible; the piece dates from the 2nd–3rd century AD.

17. Vásártér Str. no. 2 (Piaţa Târgului)

In 2004, when digging the foundation of the Zöld Arany store, Roman pottery fragments were recovered. The wares made of well mixed red and reddish paste were come from the bottom of a vessel, which arrived in private collection.

18. Városháza tér (Piaţa Primăriei)

In 1955 while excavating for a water pipe from the trench, rich archaeological materials were recovered. Unfortunately the stratigraphy could not be determined and documentation is also missing. The Roman pottery was found together with shards from the Bronze Age and Migrations period (FERENCZI–FERENCZI 1958, 25). In the same year an impressive hoard of iron tools was revealed, which come from a local workshop. An intact vessel from the same place was dated erroneously in the 13th–14th century (FERENCZI–FERENCZI 1958, 28). In the same location three other vessels two pots and a cup with handle were discovered (Pl. 12/1–3). The iron hoard consists of farm tools, carpenter tools, craft tools, weapons, household items and undeterminable objects.

Blacksmith workshops are archaeologically documented both in the military and civilian sites. Although structurally different, a *fabrica* from a roman fort focuses mainly on production of military weapons, harness parts, equipment or the repair of objects. Even though their priorities are the daily needs of the camp which requires a standardized production, their products are similar to the production of the civilian workshops (BENEA 2008, 31). Workshops from forts in Dacia are known at Buciumi, two at Porolissum and one at Copăceni, other are mentioned from the *vicus* at Tibiscum, Bumbesti and Mehadia (BENEA 2008, 32).

The iron artefacts discoveries at Odorheiu Secuiesc are quite numerous and very interesting. Unfortunately there is no information – stratigraphic notes, drawings or pictures – regarding the conditions of the discovery. There are no specific elements for a closer dating, except for the three vessels which can be dated to the 2nd–3rd century AD. It is not known if the artefacts were found inside the vessels as a hoard, or near it, or probably from a different spot of the area. The only available way to analyse them was by their analogies. The majority of the artefacts were carefully restored. Its presence should be related to the general idea of the existence of a Roman fort at Odorheiu Secuiesc and a local workshop which served the needs of the army and the settlers from the nearby settlement.

The farming tools were: six share plows, one coulter of a plow, three sickles, two brush axes and one vine knife (see Appendix). Although not identical, the share plows are the product of the same workshop made in the same technique. They have close analogies in Dacia and except one they can be include to the Henning-H1 type. The brush axes, the sickles and the vine knife seem to be the products of the same workshop.

Carpenter tools consisted of tree axes, three adzes, two chisels, two froes and one socket iron axe. These were all tools used for wood processing; probably one of the most common works in the area. Except one of the froes and a chisel, all the tools are well preserved, like they have not been used at all, probably new products done for a future possible costumer.

The craft tools certify the existence of a local blacksmith workshop. The beak shaped anvil is an artefact which is very rare in Dacia, with only two other finds from Mărculeni (GLODARIU *ET AL.* 1970, 216, fig. 15/4; 27/14) and Răcari (TUDOR 1965, fig. 5/18). The other tools – a chisel and two awls – were used for crafting metal boards. Pieces that can be classified in this category are few and show their high value for craftsmen who perhaps have generally passed them down from generation.

The local blacksmith workshop was specialized to produce weapons and harness components. We have three spear heads and a *ballista* bolt-head. An interesting artefact is a fragment of a bit. The two-link snaffle was used beginning with the Iron Age till the Roman period. Complete examples are rare but the distinctive form of the links makes possible to identify fragments with a high degree of certainty. A typical link is relatively short rod with a loop at each end; the loops of one link are set in the same plane, those of the other at right angles to each other. The loops holding the side rings are often widened into short tubes (MANNING 1985, 57). Rings without attached links can rarely be identified as coming from bits, possible the present links could be from a bit as well.

Household tools are represented by knives, keys and a big number of links, hold fasts and nails. All of them were used at various constructions. Some of the holdfasts and the nails are in very good condition while others seem to be used, maybe at the construction of the workshop. Anyway, their presence along with artefacts that seem to be unfinished could prove that the whole discovery comes from a blacksmith workshop.

If it can be admitted that these objects consist a hoard, it should be noticed that hidden storage deposits with a heterogeneous content like the present one, were mainly collected for recycling metal and that could explain the different states of preservation of the objects. They may be the collection of locals, or even of barbarians, who have never had the opportunity to recover the deposit (BENEA 2008, 41). But usually the artefacts from these types of discoveries are badly preserved, while a part of the pieces from Odorheiu Secuiesc are in well kept and others seem to be worn-out by intensive use.

19. Városháza tér, no. 4 (Piața Primăriei)

In 2004 a 0.5 m deep and 3 m wide ditch was dug, starting from the wall of the building, next to the sewer pit. From the removed earth lots of potsherds were collected, found in secondary position, among them fragments of Roman pots and bowls were unearthed (Pl. 8/25–29). All these materials now are in a private collection.

20. Városháza tér, no. 5 (Piața Primăriei)

In front of City Hall sewerage works took place, when a 1.20–1.50 m deep and 0.50 m wide trench was dug, several fragments of Roman pottery – lids, bowls, pots, handles (Pl. 9/1–4) – being recovered, kept now in a private collection.

21. Városháza tér, no. 15 (Piața Primăriei)

In August 2002 in the courtyard of the Franciscan Cloister while levelling the land to create the support of floors, Roman pottery – pots and bowls (Pl. 8/21–24) – was found mixed with prehistoric and medieval shards, gathered in a private collection.

22. Villanytelep Str. (Strada Uzinei)

Between the years 2000 and 2005 the archaeological strata was repeatedly disturbed, on the one hand by sewage works, but also because of the renovation of the headquarters of Radio Star. It is located at the intersection of Kornis Ferenc and Uzinei streets. This area is within the building remains found in 1874, here fragments of clay pipes were found, and traces of walls with mortar was also observed. The ceramic material collected over many years is mixed, and now is in a private collection. The majority of shards are from Roman bowls, pots, plates and jugs (Pl. 9/5–12).

23. Discoveries with unknown location

From the territory of Odorheiu Secuiesc a series of Roman discoveries from unknown points emerged, the materials consisting of fragments of stamped bowls, cups and pots (Pl. 10/1–15), square bricks and roof tiles.

24. Discoveries with roman material reused

24a. Kadicsfalvi rét/Alsó-Lok

In 2008 on the right bank of the Târnava Mare river, on the river meadow, placed parallel to the river, on the territory of Cădișeni village (annexed to Odorheiu Secuiesc), on an area of 1.2 ha an archaeological research was carried out, and 682 archaeological features were revealed. Most of the finds from the settlement belonged to the Visigoth population, but in different assemblages several roman reused materials were found. The most common pieces were the bricks, even pieces with traces of mortar. In some cases they were used in the structure of fireplaces, which were made of river stone and dark earth. On a piece of brick – already mentioned earlier – a part of a military stamp with the letters *CI* from *C(ohors) I*. In the structure of a pottery kiln Roman building stones were used. A fragment from a Roman limestone pediment of 32 × 22 × 25 cm (Pl. 10/19) was decorated with beads and pirouettes, and on the upper part a fragment of a medallion. The slab has 14 cm frame width, under a simple moulding of about 9 cm. Most probably the piece kept at MHR (inv. no. 2911) dating from the 2nd–3rd century AD belonged to

the central body of a funerary construction (KÖRÖSFŐI *ET AL.* 2010, 61, no. 104). The fragment from a Roman granite handle (Pl. 10/18) dated to the 2nd–3rd century AD was 6.1 cm long and 1.5 × 1.6 – 1.4 × 1.5 cm wide, octagonal in section, which thins to the top, with a hole at one end (MHR, inv. no. 9630; KÖRÖSFŐI *ET AL.* 2010, 58, no. 97).

24b. Rákóczi Ferenc Str. no. 5

In 1987 while digging the foundation of a dwelling an inscribed funeral stela of limestone emerged (Pl. 17/10–11), without archaeological materials in the area. The monument was in a secondary position, used in modern times as construction element in a house that was later also demolished.

24c. Puszta (Pustiu), Biserică Pustiită

In 2006, at the place of the church, which is on the edge of an arable land on the southern border of the locality excavations were carried out. Two sections of 5 × 5 m were opened. During the cleaning of debris, in the northern wall of the choir structure built in the early 16th century bricks, tiles and *tegula mamantae* were found (Pl. 17/1–9) possible coming from the *thermae*.

The impressive number of Roman materials currently found at Odorheiu Secuiesc evidences the existence of a considerable roman settlement under the modern town. Almost all the findings were collected without archaeological surveillance, therefore the information is scarce. Taking into consideration all the places where roman materials were found until now, a densely occupied area resulted. This can be noticed in today's centre of the town, occupying an area of 700 × 450 m. Pottery fragments, brooches, coins and metalwork, reveal a strong activity, but there has never been any evidence of buildings, except the buildings of the *thermae*, unfortunately destroyed in 19th century.

The vessels discovered at Odorheiu Secuiesc represent a significant archaeological material. Often the ceramic material was mixed with archaeological material from other eras, so it was almost impossible to identify any features. For each vessel and shard a standard note was made with the following information: design, state of preservation, shape, sizes, particularity of the paste and techniques, archaeological context, decoration. The majority can be included to the common use wheel made ceramic wares. Vessels for cooking and auxiliary action made out an important percentage. The study of the ceramic vessels point out an industrial production of provincial ceramics provided by the workshops which activated near the settlement or fort, along with a local sale market which was supplied by merchants with different products of food and vessels. From the same market, the Roman provincial vessels also reached the civil environment of the nearby settlement, supporting the Roman way of life.

One of the most representative discoveries would be the blacksmith workshop or deposit of iron tools and weapons, excavated very close to the presumed area of the roman fort, with close analogies at Mărculeni, Mureş County, where similar artefacts emerged. Their dating was suggested by the analogies, their typology and the fact that the pieces came from a known Roman site. However, since there was no iron slag and just a few semi-finished objects were found, it is not certain that the place functioned as a workshop. On the other hand it has to be taken into consideration that that it was an accidental discovery and maybe some of the materials were lost.

Based on the plans made by G. Téglás the *thermae* – significant building for the status of the settlement – could be reconstructed, built near a natural spring, showing a complex building, with separated rooms, like the *apodyterium*, *tepidarium*, *caldarium* etc., rich in archaeological materials.

Roman materials mainly dating from the 2nd–3rd centuries AD came to surface on large areas from Odorheiu Secuiesc and the neighbouring localities. A closer dating could be defined for the brooches and the coins, as well as for the lamp with the *ATIMETI* inscription stamp. Out of the five brooches two had an early dating before the middle of the 2nd century. The *ATIMETI* lamp dates from the same period. The coins indicate a later habitation in the area, at the middle of the 3rd century AD. So far the only roman lapidary inscription discovered in this area, probably a veteran of the *Cohors I Ubiorum*, a Roman citizen and former centurion is dated also in the second quarter of the 3rd century AD. The discovery of the coins along with other artefacts and lots of human bones, but unfortunately without any proper archaeological surveillance, may prove the existence of a cemetery in the south-east part of the settlement. Based on the analysis of the materials from the roman settlement from Odorheiu Secuiesc, the site can be dated beginning with the 2nd century till the middle of the 3rd century AD. By recording all the discoveries and in the same time by charting the area of the Roman materials on the territory of Odorheiu Secuiesc a reconsideration of the importance of the region in the Roman period was possible.

APPENDIX

Catalogue of Roman finds from Odorheiu Secuiesc¹⁸

1. Attila Str. [mixed layer, col. part. V. Szász]

- Bowl, restorable fragment, dg. 19 cm, df. 6 cm, h. 12 cm, rough paste, colour: orange, with red angobe, oxidizing fire, decorated with groove bellow the neck, fast wheel-made, mixed layer, col. part. V. Szász (Pl. 1/1).
- Bowl, rim fragment, dg. 16 cm, fine paste, colour: orange, with red angobe, oxidizing fire, decorated with groove on the rim, fast wheel-made, (Pl. 1/2).
- Pot, rim fragment, rough paste, colour: orange, with red angobe, oxidizing fire, fast wheel-made (Pl. 1/3).
- Pot, rim fragment, dg. 12 cm, fine paste, brown colour, oxidizing fire, fast wheel-made (Pl. 1/4).
- Plate, rim fragment, fine paste, colour: orange, red angobe, oxidizing fire, fast wheel-made (Pl. 1/5).
- Bowl, rim fragment, fine paste, colour: orange with brown angobe, oxidizing fire, hull bellow the neck, fast wheel-made, mixed, col. part. V. Szász (Pl. 1/6).
- Pot, rim fragment, dg. 14 cm, fine paste, orange colour, oxidizing fire, hull bellow the neck, fast wheel-made (Pl. 1/7).
- Plate, rim fragment, fine paste, colour: orange, red angobe, oxidizing fire, fast wheel-made (Pl. 1/8).
- Bowl, restorable fragment, dg. 21 cm, df. 7 cm, h. 12 cm, rough paste, orange-reddish colour, oxidizing fire, two grooves in the dmax. area, fast wheel-made (Pl. 1/9).
- Jug, rim and handle fragment, dg. 16 cm, fine paste, colour: orange, red angobe, oxidizing fire, hull on the exterior of the rim, fast wheel-made (Pl. 1/10).

2. Bethlen Gábor Str. No. 1 [mixed layer, depth of 0–150 cm, col. part. V. Szász]

- Bowl, rim fragment, dg. 12 cm, fine paste, grey colour with black angobe, oxidizing fire, fast wheel-made, (Pl. 1/11).

18 L.: length; d.: diameter; h.: height; dg.: diameter of the rim; df.: diameter of the bottom; db.: lid button diameter; dmax.: maximum diameter. Regarding the colour of the pottery the Munsell colour chart was used.

- Bowl, bottom fragment, df. 6 cm, fine paste, colour: orange, with orange angobe, oxidizing fire, fast wheel-made (Pl. 1/12).
- Bowl, rim fragment, dg. 18 cm, fine paste, grey colour with grey angobe, oxidizing fire, fast wheel-made (Pl. 1/13).
- Lid, rim fragment, dg. 16 cm, fine paste, grey colour, oxidizing fire, fast wheel-made (Pl. 1/14).
- Pot, bottom fragment, dg. 14 cm, fine paste, colour: orange with brown angobe, oxidizing fire, fast wheel-made (Pl. 1/15).
- Pot, rim fragment, dg. 16 cm, rough paste, light grey colour, reductive fire, fast wheel-made (Pl. 1/16).
- Bowl, rim fragment, dg. 18 cm, fine paste, orange colour with orange angobe, oxidizing fire, fast wheel-made (Pl. 1/17).
- Plate, rim fragment, dg. 21 cm, fine paste, oxidizing fire, decorated with two grooves on the exterior, fast wheel-made (Pl. 1/18).
- Mug/cup, rim fragment, dg. 10 cm, fine paste, orange colour with red angobe, oxidizing fire, decorated with impressions on the top of the rim and two grooves on the neck, fast wheel-made (Pl. 1/19).
- Pot, rim fragment, dg. 16 cm, fine paste, colour: orange with orange angobe, oxidizing fire, fast wheel-made (Pl. 1/20).
- Bowl, rim fragment, dg. 24 cm, fine paste, orange colour with orange-reddish angobe, oxidizing fire, decorated with two grooves under the rim, fast wheel-made (Pl. 2/1).
- Jug, handle fragment, fine paste, orange colour, oxidizing fire, fast wheel-made (Pl. 2/2).

3. *Bethlen Gábor Str. No. 49–51* [mixed layer, depth of 0–50 cm, col. part. V. Szász]

- Pot, rim fragment, dg. 12 cm, rough paste, brownish-grey colour, oxidizing fire, fast wheel-made (Pl. 2/3).
- Plate, body fragment, very fine paste, orange colour with red angobe, oxidizing fire, terra sigillata (Pl. 2/4).

4. *Bethlen Gábor Str. No. 72* [mixed layer, depth of 0–100 cm, col. part. V. Szász]

- Bowl, rim fragment, dg. 20 cm, very fine paste, orange colour with orange angobe, oxidizing fire, stamped ornament copying terra sigillata, fast wheel-made (Pl. 2/5).
- Mug/cup, rim fragment, fine paste, orange colour, orange angobe, oxidizing fire, fast wheel-made (Pl. 2/6).
- Bowl, rim fragment, dg. 12 cm, fine paste, orange colour with orange angobe, oxidizing fire, fast wheel-made (Pl. 2/7).
- Pot, flat bottom fragment, df. 10 cm, fine paste, orange colour with red angobe, oxidizing fire, fast wheel-made (Pl. 2/8).
- Pot, bottom fragment, df. 8 cm, fine paste, orange colour, oxidizing fire, fast wheel-made (Pl. 2/9).
- Plate, rim fragment, dg. 19 cm, fine paste, orange colour, oxidizing fire, fast wheel-made (Pl. 2/10).
- Bowl, rim fragment, dg. 21 cm, fine paste, orange colour with orange angobe, oxidizing fire, ornamented with groove on the outside, fast wheel-made (Pl. 2/11).
- Bowl, rim fragment, dg. 18 cm, fine paste, grey colour, reducing fire, fast wheel-made (Pl. 2/12).
- Bowl, rim fragment, dg. 16 cm, fine paste, orange-grey colour, oxidizing fire, fast wheel-made (Pl. 2/13).
- Bowl, rim fragment, dg. 18 cm, fine paste, grey colour, reducing fire, fast wheel-made (Pl. 2/14).
- Bowl, rim fragment, dg. 17 cm, rough paste, orange colour, oxidizing fire, fast wheel-made (Pl. 2/15).
- Pot, rim fragment, rough paste, dark grey colour, reducing fire, fast wheel-made (Pl. 2/16).
- Pot, rim fragment, dg. 14 cm, rough paste, black colour, reducing fire, fast wheel-made (Pl. 2/17).
- Bowl, rim fragment, dg. 19 cm, rough paste, grey colour, reducing fire, fast wheel-made (Pl. 2/18).
- Pot, rim fragment, dg. 14 cm, rough paste, black colour, reducing fire, fast wheel-made (Pl. 2/19).
- Bowl, rim fragment, dg. 16 cm, rough paste, black colour, reducing fire, fast wheel-made (Pl. 2/20).
- Pot, rim fragment, dg. 14 cm, rough paste, black colour, reducing fire, fast wheel-made (Pl. 2/21).
- Bowl, rim fragment, dg. 19 cm, fine paste, orange colour, orange angobe, oxidizing fire, fast wheel-made (Pl. 2/22).

5. Budvár

- Shallow bowl, bottom fragment, df. 6 cm, fine paste, grey colour, reducing fire, fast wheel-made, excavation 26.06.1969, trench 1, MHR, without inv. no. (Pl. 2/23).
- Pot (?), rim fragment, dg. 14 cm, fine paste, grey colour, reducing fire, ornamented with register of waves incised on the rim and one on the neck, grooves on the neck, fast wheel-made, 10.07.1969, trench 4, MHR, without inv. no. (Pl. 2/24).
- Pot, rim fragment, rough paste, brown colour, oxidizing fire, a groove on the neck, two grooves on the body, slow wheel-made, excavation 04.07.1969, trench 2, MHR, without inv. no. (Pl. 2/25).
- Pot, rim fragment, rough paste, brown colour, oxidizing fire, decorated with a groove on the neck, two grooves on the body, slow wheel-made, excavation 04.07.1969, trench 2, MHR, without inv. no. (Pl. 2/26).
- Shallow bowl, rim fragment, dg. 8 cm, fine paste, orange colour, orange angobe, oxidizing fire, fast wheel-made, survey, col. part. V. Szász (Pl. 2/27).
- Bowl, rim fragment, fine paste, grey colour, grey angobe, reducing fire, fast wheel-made, survey, col. part. V. Szász (Pl. 2/28).
- Shallow bowl, restorable, dg. 21 cm, df. 6.5 cm, fine paste, grey colour with grey angobe, reducing fire, fast wheel-made, excavation 26.06.1969, trench 1, MHR, without inv. no. (Pl. 3/1).
- Pot, fragment from the lower part, df. 8 cm, rough paste, brown colour, oxidizing fire, fast wheel-made, excavation 04.07.1969, ditch 2, MHR, without inv. no. (Pl. 3/2).

6. Görbe Str. [mixed layer, depth of 0–200 cm, col. part. V. Szász]

- Pot, neck fragment, fine paste with pebbles, orange colour, oxidizing fire, decorated with vertical lines incised on the neck's exterior, fast wheel-made (Pl. 3/3).
- Bowl, whole, dg. 14 cm, df. 5.5 cm, fine paste, orange colour with reddish-orange angobe, oxidizing fire, three grooves under the neck, fast wheel-made (Pl. 3/4).
- Pot, fragment from the upper part, dg. 18 cm, rough paste, orange colour, oxidizing fire, three grooves under the neck, fast wheel-made (Pl. 3/5).
- Pot, fragment of the upper half, dg. 14cm, rough paste, orange colour with traces of smoke on the outside, oxidizing fire, fast wheel-made (Pl. 3/6).

7. Kornis Ferenc Str. 26 [found in the black, compact humus, col. part. V. Szász]

- Bowl, fragment of the upper half, dg. 10 cm, fine paste, orange colour with red angobe, oxidizing fire, decorated with two rows of different ornaments with vegetal pattern made by stamping, fast wheel-made (Pl. 3/7).
- Bowl, fragment of the upper half, fine paste, grey colour, black angobe, reducing fire, decorated with a groove below the rim, two rows of ornaments: one vegetal and one with rosettes, made by stamping, separated by a groove, fast wheel-made (Pl. 3/8).

8. Kornis Ferenc Str. 31 [from the mixed layer, col. part. V. Szász]

- Handle fragment, fine paste, orange colour with brown angobe, oxidizing fire, fast wheel-made (Pl. 3/9).
- Pot, rim fragment, dg. 16 cm, fine paste, orange coloured, orange angobe, oxidizing fire, decorated with two grooves on the rim, a row of wavy lines, painted on the body, fast wheel-made (Pl. 3/10).
- Goblet, rim fragment, fine paste, orange colour, red angobe, oxidizing fire, decorated with a groove on the interior of the rim, fast wheel-made (Pl. 3/11).
- Shallow bowl, rim fragment, dg. 12 cm, fine paste, orange colour, brown angobe, oxidizing fire, fast wheel-made (Pl. 3/12).
- Goblet, rim fragment, dg. 16 cm, fine paste, orange colour with orange angobe, oxidizing fire, decorated with a groove on the rim, fast wheel-made (Pl. 3/13).
- Bowl, rim fragment, dg. 14 cm, fine paste, orange colour with orange angobe, oxidizing fire, fast wheel-made (Pl. 3/14).

- Pot, fragment of the upper half, dg. 14cm, fine paste, orange colour, red angobe, oxidizing fire, painted ornament, fast wheel-made (Pl. 4/1).
 - Pot, bottom fragment, dg. 8 cm, fine paste, grey colour, reducing fire, fast wheel-made (Pl. 4/2).
 - Bowl, rim fragment, dg. 11 cm, fine paste, grey colour, reducing fire, fast wheel-made (Pl. 4/3).
 - Pot, rim fragment, dg. 12 cm, rough paste, brown colour, oxidizing fire, with traces from the smoke on the outside, fast wheel-made (Pl. 4/4).
 - Bowl, rim fragment, fine paste, grey colour, reducing fire, decorated with a groove on the exterior of the rim, fast wheel-made (Pl. 4/5).
 - Plate, fragment, dg. 26 cm, fine paste, orange colour, red angobe, oxidizing fire, ornament made with a small wheel on the rim, fast wheel-made (Pl. 4/6).
 - Pot, rim fragment, dg. 17 cm, rough paste, orange colour, oxidizing fire, traces of smoke on the rim, fast wheel-made (Pl. 4/7).
 - Pot, rim fragment, dg. 15 cm, rough paste, orange colour, oxidizing fire, traces of smoke on the rim, fast wheel-made (Pl. 4/8).
 - Bowl, rim fragment, dg. 14 cm, rough paste, orange colour, oxidizing fire, traces of smoke, fast wheel-made (Pl. 4/9).
 - Bowl, rim fragment, dg. 16 cm, rough paste, orange colour, oxidizing fire, traces of smoke, fast wheel-made (Pl. 4/10).
 - Pot, rim fragment, rough paste, brown colour, oxidizing fire, fast wheel-made (Pl. 4/11).
 - Pot, rim fragment, dg. 12 cm, rough paste, orange colour, oxidizing fire, fast wheel-made (Pl. 4/12).
 - Bowl, restorable, dg. 14 cm, rough paste, orange colour, oxidizing fire, fast wheel-made (Pl. 4/13).
 - Bowl, rim fragment, dg. 14 cm, rough paste, grey colour, reducing fire, fast wheel-made (Pl. 4/14).
 - Bowl, rim fragment, dg. 12 cm, rough paste, brown colour, oxidizing fire, decorated with a groove on the body, fast wheel-made (Pl. 4/15).
 - Pot, rim fragment, dg. 14 cm, rough paste, grey colour, reducing fire, fast wheel-made (Pl. 4/16).
 - Pot, rim fragment, dg. 10 cm, rough paste, grey colour, reducing fire, traces of smoke on the outside, fast wheel-made (Pl. 4/17).
 - Pot, rim fragment, rough paste, brown colour, reducing fire, traces of smoke on the outside, fast wheel-made (Pl. 4/18).
 - Bowl, rim fragment, dg. 18 cm, rough paste, grey colour, reducing fire, decorated with a line of oblique incised rows, between two grooves, on the rim, fast wheel-made (Pl. 4/19).
 - Shallow bowl, rim fragment, dg. 14 cm, rough paste, grey colour, reducing fire, fast wheel-made (Pl. 4/20).
 - Bowl, rim fragment, dg. 16 cm, rough paste, grey colour, reducing fire, decorated with two grooves on the rim, fast wheel-made (Pl. 4/21).
- Bowl, rim fragment, dg. 16 cm, rough paste, grey colour, reducing fire, two grooves on the rim, fast wheel-made (Pl. 4/21).
- Storage pot, rim fragment, dg. 18 cm, rough paste, orange colour, oxidizing fire, grooves on the body, fast wheel-made (Pl. 4/22).
 - Lid, rim fragment, dg. 12 cm, fine paste, orange colour, oxidizing fire, fast wheel-made (Pl. 4/23).
 - Pot, rim fragment, dg. 18 cm, fine paste, grey colour, black angobe, reducing fire, decorated with a groove on the exterior of the rim, fast wheel-made (Pl. 4/24).
 - Plate, rim fragment, dg. 19 cm, fine paste, orange colour, reddish-orange angobe, oxidizing fire, fast wheel-made (Pl. 5/1).
 - Bowl, rim fragment, dg. 14 cm, fine paste, orange colour, orange angobe, oxidizing fire, fast wheel-made (Pl. 5/2).
 - Bowl, rim fragment, dg. 12 cm, fine paste, orange colour, reddish-orange angobe, oxidizing fire, fast wheel-made (Pl. 5/3).
 - Bowl, rim fragment, dg. 12 cm, fine paste, orange colour, red angobe, oxidizing fire, fast wheel-made (Pl. 5/4).

- Plate, rim fragment, dg. 22 cm, fine paste, orange colour, red angobe, oxidizing fire, stacked ornament on the rim, fast wheel-made (Pl. 5/5).
- Plate, bottom fragment, df. 8 cm, fine paste, orange colour, reddish-orange angobe, oxidizing fire, fast wheel-made (Pl. 5/6).
- Bowl, rim fragment, dg. 14 cm, fine paste, orange colour, orange angobe, oxidizing fire, with letters inscribed on the body, fast wheel-made (Pl. 5/7).
- Mug/cup, rim fragment, dg. 6 cm, fine paste, orange colour, red angobe, oxidizing fire, three grooves on the exterior of the rim, a row of impressions on the body, fast wheel-made (Pl. 5/8)

9. Márton Áron square [mixed layer, depth 0–200 cm, col. part. V. Szász]

- Bowl, rim fragment, dg. 14 cm, fine paste, grey colour, reducing fire, fast wheel-made (Pl. 5/9).

11. Reformed Churchyard [black humus, depth: 0–50 cm, col. part. V. Szász]

- Bowl, fragmentary restorable, dg. 18,5 cm, df. 16 cm, rough paste, grey colour, reducing fire, 2 grooves on the rim, fast wheel-made (Pl. 5/10).
- Pot, rim fragment, dg. 16 cm, fine paste, orange colour, oxidizing fire, fast wheel-made (Pl. 5/11).
- Bowl, rim fragment, rough paste, black colour, reducing fire, fast wheel-made (Pl. 5/12).
- Bowl, rim fragment, dg. 12 cm, rough paste, brown colour, oxidizing fire, traces of smoke on the outside, a groove on the rim, one right under it, fast wheel-made (Pl. 5/13).
- Stopper/small lid, fragmentary restorable, dg. 4.5 cm, db. 3.5 cm, fine paste, orange colour, brown angobe, oxidizing fire, fast wheel-made (Pl. 5/14).
- Pot, fragment of the upper half, dg. 16 cm, rough paste, orange colour, oxidizing fire, traces of smoke outside on the rim, decorated with a groove on the rim's exterior and two grooves on the body, fast wheel-made (Pl. 5/15).

12. Régi marhapiac (Târgul vechi de vite)

- Water pipe fragment, only the lower part is preserved with a short socket, L. 14 cm, d. 3.5 cm, l socket 2.5 cm, ceramic, fine sandy paste, brick-red colour, on the body there are several grooves determining a wave like aspect, the interior is stuffed with mortar and this might suggest its use in the construction of a building with arches or its reuse, MHR inv. no. 7929/3, dated to the 2nd–3rd century AD (Pl. 16/14).
- Water pipe fragment, only the lower part is preserved, the socket is broken, L. 14 cm, d. 3.5 cm, ceramic, fine sandy paste, brown colour, there are several grooves on the body determining a wave like aspect, MHR without inv. no., dated to the 2nd–3rd century AD (Pl. 16/15).
- Water pipe, L. 33 cm, mouth d. 5 cm, bottom d. 3.5 cm, l. socket 2.5 cm, ceramic, fine sandy paste, brick-red colour, sockets at both ends, probably a distributor, MHR inv. no. 7929/1, dated to the 2nd–3rd century AD (Pl. 16/16).
- Water pipe fragment, only the upper part is preserved, L. 14 cm, mouth d. 5 cm, ceramic, fine sandy paste, brick-red colour, on the body there are several grooves determining a wave like aspect, MHR inv. no. 7929/3, dated to the 2nd–3rd century AD (Pl. 16/17).
- Water pipe, broken at the upper end, and also the socket is damaged, L. 28 cm, mouth d. 5 cm, bottom d. 3 cm, l. socket 4 cm, ceramic, fine sandy paste, brick-red colour, on the body there are several grooves determining a wave like aspect, MHR inv. no. 2272/1, dated to the 2nd–3rd century AD (Pl. 16/18).
- Water pipe, broken at the upper end, and also the socket is damaged, L. 28 cm, mouth d. 5 cm, bottom d. 3 cm, l. socket 4 cm, ceramic, fine sandy paste, brick-red colour, on the body there are several grooves determining a wave like aspect, MHR inv. no. 2272/2, dated to the 2nd–3rd century AD (Pl. 16/19).
- Water pipe fragment, broken at the upper part, L. 25 cm, bottom d. 6 cm, l. socket 4 cm, ceramic, fine sandy paste, brick-red colour, on the body there are several grooves determining a wave like aspect, MHR inv. no. 7929/4, dated to the 2nd–3rd century AD (Pl. 16/20).
- Lamp, L. 6.5 cm, d. 2.5 cm, h. 2 cm, clay, fine fabric, reddish slip, polished, moulded, smooth discus, shoulder with two prominences, central filling hole, the beak is destroyed, type IX–Loeschcke, with

analogies at Ulpia Traiana Sarmisegetuza (ALICU 1994, 170, no. 442, pl. VIII; fig. 14/442), dated to the 2nd century AD (Pl. 18/14).

- Lamp, L. 6.5 cm, d. 2.5 cm, h. 2 cm, clay, fine fabric, yellowish-red colour, corroded slip, moulded, smooth discus, shoulder with two prominences, central filling hole, the beak has a small vent hole, slightly concave base with stamp *ATIMETI*, type IX–Loeschcke, with analogies at Cristești (MAN 2000, 59, no. 26), dated to the 2nd century AD (Pl. 18/15).
- Lamp, L. 6.5 cm, d. 2.5 cm, h. 2 cm, clay, fine fabric, ochre-brick red, reddish colour coat, moulded, concave discus delimited of the border by two concentric circles, central filling hole, border decorated with a row of ovoid shapes, small handle and a beak, type VIII–Loeschcke, with analogies at Ulpia Traiana Sarmisegetuza (ALICU 1994, 167 with all the types), dated to the 2nd century AD (Pl. 18/16).

13. Székelytámadt castle

[excavation 1981, MHR, without inv. no.]

- Vessel, fragment, fine paste, orange colour, red angobe, oxidizing fire, with two rows of ornaments made by small wheel, fast wheel-made, ditch 4, depth 140 cm (Pl. 5/16).
- Jug, body fragment, fine paste, orange colour, orange angobe, oxidizing fire, with grooves on the neck and body, fast wheel-made, ditch 2 (Pl. 5/17).
- Pot, rim fragment, fine paste, orange colour, red angobe, oxidizing fire, fast wheel-made, ditch 4, depth 165 cm (Pl. 5/18).
- Bowl, bottom fragment, fine paste, grey, reducing fire, fast wheel-made, ditch 2 (Pl. 5/19).
- Bowl or plate, fragment, dg. 12 cm, rough paste, grey colour, reducing fire, fast wheel-made, ditch 4, depth 140 cm (Pl. 5/20).
- Pot, fragment, dg. 14 cm, fine paste with pebbles, reddish-orange colour, oxidizing fire, with grooves under the neck, fast wheel-made, ditch 4, depth 165 cm (Pl. 6/1).
- Mug or cup, fragment, dg. 4 cm, fine paste, brown colour, oxidizing fire, with a groove in the area of the maximum diameter, fast wheel-made, ditch 4, depth 165 cm (Pl. 6/2).
- Jug, rim fragment, dg. 12 cm, fine paste, grey colour, grey angobe, reducing fire, with a groove on the exterior rim, fast wheel-made, ditch 4, depth 180 cm (Pl. 6/3).
- Mug or cup, fragmentary, restorable, dg. 12 cm, df. 4 cm, fine paste, grey colour, grey angobe, reducing fire, fast wheel-made, ditch 4, depth 180 cm (Pl. 6/4).
- Bowl, fragment, fine paste, orange colour, red angobe, oxidizing fire, with a groove in the area of the maximum diameter, fast wheel-made, ditch 4, depth 220 cm (Pl. 6/5).
- Jug, bottom fragment, df. 8 cm, fine paste, orange colour, oxidizing fire, fast wheel-made, ditch 4, depth 220 cm (Pl. 6/6).
- Shallow bowl, fragment, upper half is kept, dg. 14 cm, fine paste, grey colour, reducing fire, with a hull under the rim, fast wheel-made, ditch 4, depth 220 cm (Pl. 6/7).

[excavation 1983, MHR, without inv. no.]

- Smoker, rim fragment, dg. 19 cm, rough paste, reddish-orange colour, oxidizing fire, fast wheel-made, extension ditch 4 (Pl. 6/8).
- Pot, bottom fragment, rough paste, brown colour, oxidizing fire, fast wheel-made, A, stratum X (Pl. 6/9).
- Shallow bowl, rim fragment, dg. 12 cm, fine paste, grey colour, reducing fire, fast wheel-made, A, stratum X (Pl. 6/10).
- Pot, rim fragment, dg. 10 cm, rough paste, black colour, reducing fire, with a groove on the body, fast wheel-made, B, group 1 (Pl. 6/11).
- Pot, rim fragment, dg. 12 cm, rough paste, grey yellow colour, reducing fire, fast wheel-made, B, stratum 11 (Pl. 6/12).
- Pot, rim fragment, dg. 14 cm, fine paste, grey yellow colour, reducing fire, fast wheel-made, B, stratum 11 (Pl. 6/13).

- Jug, neck fragment, fine paste, reddish-orange colour, oxidizing fire, with a row of impressions on the neck, fast wheel-made, B, stratum 11 (Pl. 6/14).
- Lid, fragment of the button, db. 4 cm, fine paste, orange colour, red angobe, oxidizing fire, fast wheel-made, B, stratum 11 (Pl. 6/15).
- Bowl, fragment, dg. 18 cm, rough paste, reddish-orange colour, oxidizing fire, with row of impressions on the exterior of the rim, fast wheel-made, B, stratum 11 (Pl. 6/16).
- Plate, fragmentary, restorable, dg. 12 cm, fine paste, orange colour, oxidizing fire, fast wheel-made, B, stratum 11 (Pl. 6/17).
- Mug or cup, fragment, fine paste, grey colour, reducing fire, with a groove on the outside, fast wheel-made, B, stratum 6 (Pl. 6/18).
- Bowl, fragment, fine paste, orange colour, orange angobe, oxidizing fire, fast wheel-made, B, stratum 6 (Pl. 6/19).
- Bowl, fragment, dg. 16 cm, rough paste, reddish-orange colour, oxidizing fire, row of impressions on the exterior of the rim, fast wheel-made, B, stratum 12 (Pl. 7/1).
- Pot, fragment, dg. 20 cm, rough paste, brown colour, oxidizing fire, traces of smoke on the outside, with grooves on the body, fast wheel-made, trench 6, bastion SV (Pl. 7/2).
- Bowl, fragment, dg. 16 cm, fine paste, grey colour, reducing fire, with two hulls inside the rim, fast wheel-made, trench 6, depth 0–100 cm (Pl. 7/3).

[excavation, MHR, without inv. no.]

- Pot or shallow bowl, fragment, dg. 18 cm, rough paste, brown colour, oxidizing fire, fast wheel-made, with traces of smoke, two grooves on outside body (Pl. 7/4).
- Bowl, fragment, dg. 15 cm, fine paste, orange colour and grey surfaces, oxidizing fire, fast wheel-made (Pl. 7/5).
- Bowl, bottom fragment, df. 8 cm, fine paste, grey colour, reducing fire, fast wheel-made (Pl. 7/6).
- Mug or cup, bottom fragment, df. 10 cm, fine paste, light orange colour, oxidizing fire, fast wheel-made (Pl. 7/7).
- Pot, bottom fragment, dg. 16 cm, fine paste, brown colour, oxidizing fire, fast wheel-made, with traces of smoke on the outside (Pl. 7/8).
- Pot, fragment, dg. 18 cm, fine paste, grey colour, reducing fire, fast wheel-made, with a groove on the outside (Pl. 7/9).
- Bowl, fragment, dg. 8 cm, fine paste, orange colour, red angobe, oxidizing fire, fast wheel-made (Pl. 7/10).

[col. part. V. Szász]

- Pot, fragment, dg. 8 cm, rough paste, grey colour, reducing fire, traces of smoke on the outside, fast wheel-made (Pl. 7/11).
- Handle, fragment, fine paste, orange colour, oxidizing fire, fast wheel-made (Pl. 7/12).

16. Tamási Áron Str. No. 75

- Pot, body fragment, fine paste, orange colour, red angobe, painted ornament above the maximum diameter, fast wheel-made, mixed layer, depth: 180 cm, 1976, MHR without inv. no. (Pl. 7/13)

17. Tompa László Str. No. 23 [black, mixed, compact humus, col. part. V. Szász]

- Pot, fragment, dg. 14 cm, rough paste, brown colour, oxidizing fire, fast wheel-made, with traces of smoke on the outside rim (Pl. 7/14).
- Bowl, bottom fragment, df. 8 cm, fine paste, brown colour, oxidizing fire, fast wheel-made (Pl. 7/15).
- Bowl, bottom fragment, df. 6.5 cm, fine paste, brown colour, oxidizing fire, fast wheel-made (Pl. 7/16).
- Pot, rim fragment, dg. 12 cm, rough paste, brown colour, oxidizing fire, fast wheel-made (Pl. 8/1).
- Bowl, fragment, dg. 16 cm, rough paste, black colour, reducing fire, fast wheel-made, with three grooves on the rim (Pl. 8/2).

- Bowl, fragment, rough paste, grey colour, reducing fire, fast wheel-made, with two grooves on the rim, an incised wave between two grooves on the body (Pl. 8/3).
- Pot, fragment, dg. 12 cm, rough paste, brown colour, oxidizing fire, fast wheel-made, with traces of smoke on the outside, with two grooves on the body (Pl. 8/4).
- Plate, fragment, rough paste, grey colour, reducing fire, fast wheel-made, with traces of smoke on the outside (Pl. 8/5).
- Bowl, fragment, rough paste, grey colour, reducing fire, fast wheel-made, with two grooves on the rim (Pl. 8/6).
- Bowl, fragment, dg. 16 cm, fine paste, grey colour, reducing fire, fast wheel-made, with two grooves on the rim (Pl. 8/7).
- Bowl, fragment, rough paste, grey colour, reducing fire, fast wheel-made (Pl. 8/8).
- Bowl, fragment, dg. 18 cm, rough paste, grey colour, reducing fire, fast wheel-made, with three grooves on the rim (Pl. 8/9).
- Bowl, fragment, dg. 16 cm, rough paste, grey colour, reducing fire, fast wheel-made, with grooves on the rim (Pl. 8/10).
- Bowl, fragment, fine paste, orange colour, red angobe, oxidizing fire, fast wheel-made (Pl. 8/11).
- Shallow bowl, fragment, dg. 14 cm, fine paste, brown colour, brown-black angobe, oxidizing fire, fast wheel-made (Pl. 8/12).
- Pot, fragment, dg. 15 cm, rough paste, grey colour, reducing fire, fast wheel-made (Pl. 8/13).
- Pot, fragment, rough paste, grey colour, reducing fire, fast wheel-made (Pl. 8/14).
- Lid, fragment, fine paste, orange colour, oxidizing fire, fast wheel-made (Pl. 8/15).
- Pot, fragment, dg. 14 cm, rough paste, grey colour, reducing fire, fast wheel-made (Pl. 8/16).
- Pot, fragment, dg. 12 cm, rough paste, grey colour, reducing fire, fast wheel-made (Pl. 8/17).
- Storage pot, fragment, fine paste, orange colour, oxidizing fire, fast wheel-made (Pl. 8/18).
- Pot, fragment, dg. 10 cm, rough paste, grey colour, reducing fire, fast wheel-made, with a groove on the body (Pl. 8/19).
- Pot, fragment, dg. 14 cm, rough paste, grey colour, reducing fire, fast wheel-made, with a groove on the body (Pl. 8/20).

18. Városháza tér [mixed layer, 0–150 cm, MHR, without inv. no.]

- Pot, whole, dg. 13.5 cm, df. 9 cm, h. 23 cm, rough paste, brown colour, oxidizing fire, fast wheel-made, traces of smoke on the outside, with grooves on the body (Pl. 12/1).
- Pot, whole, dg. 12 cm, df. 8 cm, h. 19.5 cm, rough paste, brown colour, oxidizing fire, fast wheel-made, traces of smoke on the outside, with grooves on the body (Pl. 12/2).
- Cup with a handle, whole, dg. 11.5 cm, df. 6 cm, h. 13.5 cm, rough paste, black colour, reducing fire, fast wheel-made, one groove on the outside, other grooves on the superior half of the body (Pl. 12/3).

The iron hoard

A. Farm tools

- Iron share plow, L. 21 cm, L. blade 13 cm, width blade 11 cm, width of the inner sleeve 10 cm, triangular blade, slightly rounded, which widens toward the top. On the upper part, by widening and bending the plate the fins-sleeve were made for the cutter to be mounting to the wooden plow. The body is slightly curved longitudinally and transversally, Henning-A1 type (HENNING 1987, 49–57), MHR, without inv. no. (Pl. 13/1).
- Iron share plow, L. 20 cm, L. blade 13 cm, width blade 11 cm, width of the inner sleeve 10 cm, triangular blade, slightly rounded, which widens toward the top. Blade edges are reinforced by applying a strip of iron of 2 cm. The body is slightly curved longitudinally and transversally, Henning-A1 type, MHR, without inv. no. (Pl. 13/2).
- Iron share plow, L. 22 cm, L. blade 14 cm, width blade 15.5 cm, width of the inner sleeve 14.5 cm, triangular blade, rounded, expands at the top. At 1/3 from the total length two notches were executed and the plate is bending on both sides, for two fins-sleeves to be made. Blade edges are reinforced by applying a strip of iron of 3 cm. The body is slightly curved longitudinally and transversally, Henning-A1 type, MHR,

without inv. no., with analogies from Dedrad (GLODARIU-CÂMPEANU 1966, 21, no. 5, fig. 2/1; 4/1) and Mărculeni (GLODARIU *ET AL.* 1970, 204, no. 1, fig. 3/1), dated to the 2nd-3rd century AD (Pl. 13/3).

- Iron share plow, L. 25 cm, L. blade 13.5 cm, width blade 15 cm, width of the inner sleeve 12 cm, triangular blade, slightly rounded, which widens toward the top. On the upper part, by widening and bending the plate the fins-sleeve were made for the cutter to be mounting to the wooden plow. The body is slightly curved longitudinally and transversally, Henning-A1 type, dated to the 2nd-3rd century AD, MHR, inv. no. 562 (Pl. 13/4).
- Iron share plow, L. 25.5 cm, L. blade 18.5 cm, width blade 16 cm, width of the inner sleeve 11 cm, triangular blade with a sharp tip, slightly rounded, which widens toward the top, from the middle part, by widening and bending the plate the fins-sleeve were made, Henning-A1 type dated to the 2nd-3rd century AD, MHR, inv. no. 7496 (Pl. 13/5).
- Iron share plow, L. 27 cm, L. blade 9 cm, width blade 14 cm, foot 14 cm, solid bar flattened and bent at one end, an finished in a hook at the other one, where the bar was widened is bent on the long axis alike a spoon with a median nervure, Henning-B2 type (HENNING 1987, 58-60) with analogies at Mărculeni (GLODARIU *ET AL.* 1970, 214, fig. 12/2; 25/3), dated to the 2nd-3rd century AD, MHR, inv. no. 7495 (Pl. 13/6).
- Coulter of an iron plow, L. 31 cm, L blade 15 cm, width blade 6 cm, strongly curved blade, with the axis perpendicular to the blade, body widens at the top, Henning-E1 type (HENNING 1987, 61-63), with analogies at Dedrad (GLODARIU-CÂMPEANU 1966, 21, no. 6, fig. 2/2; 4/2) and Ilișua (GAIU 2001, 103, fig. 1/3), dated to the 2nd-3rd century AD, MHR, inv. no. 560 (Pl. 14/6).
- Iron brush axe, L. 28 cm, L. blade 4.5 cm, L. socket 8 cm, curved blade, triangular in section, with the peak in the sharpen area, it has a half-circular socket tube where the wooden handle was attached, broken at both ends, used for cutting reed, Henning-G1 type (HENNING 1987, 93-96), dated to the 2nd-3rd century AD, with analogies at Ciomăfaia (HENNING 1987, 120, no. 98), Ormeniș (HENNING 1987, 139, no. 372) and Mărculeni (GLODARIU *ET AL.* 1970, 209, fig. 6/3; 23/15), MHR, without inv. no. (Pl. 14/15).
- Iron brush axe, L. 31 cm, L. blade 3.5 cm, L. socket 12.5 cm, almost identical with no. 13 but with a smaller blade, MHR, without inv. no. (Pl. 14/16).
- Iron sickle, L. 30.5 cm, L. blade 3.5 cm, with a long curved blade, triangular in section, with a handle broken for fastening, restored, Henning-H1 type (HENNING 1987, 86-90), dated to the 2nd-3rd century AD, with analogies at Mărculeni (GLODARIU *ET AL.* 1970, 209, fig. 7/1; 23/16), MHR, inv. no. 560 (Pl. 14/17).
- Iron sickle, L. 26 cm, L. blade 14 cm, with a long curved blade, triangular in section, with a handle for fastening, restored, Henning-H1 type, with analogies at Kecel (HENNING 1987, 129, no. 240, Taf. 40, no. 21), dated to the 2nd-3rd century AD, MHR, inv. no. 560 (Pl. 14/20).
- Iron sickle, L. 23 cm, L. blade 18 cm, d. socket 9 cm, with a long curved blade, triangular in section, with the peak in the sharpened area, it has a half-circular socket tube where the wooden handle was attached, broken at both ends, restored, Henning-H1 type, with analogies at Mărculeni (GLODARIU *ET AL.* 1970, 209, fig. 6/3; 23/15), dated to the 2nd-3rd century AD, MHR, inv. no. 560 (Pl. 14/18).
- Iron vine knife, L. 21 cm, L. blade 4 cm, hooked blade, broken at both ends, triangular in section, it has a half-circular socket only a small part left, the lower part is broken, restored, it might belong to Henning-G1a type (HENNING 1987, 92-95), with analogies at Manning (MANNING 1985, 55, F34), dated to the 2nd-3rd century AD, MHR, inv. no. 560.

B. Carpenter tools

- Iron axe, L. 20 cm, L. blade 5 cm, d. socket 3 cm, thick edge, rectangular neck, fixing hole tail, reinforced by a heavy oval right edge and wide, flattened and curved edge near the tail, excellent state of preservation, Ilieș-II type (ILIEȘ 2001, 340), with analogies at Mărculeni (GLODARIU *ET AL.* 1970, 213, fig. 14/2; 27/3) and Zlatna (ILIEȘ 2001, 340, pl. III/9, with further analogies), dated to the 2nd-3rd century AD (Pl. 14/8).
- Iron axe, L. 12.5 cm, L. blade 4.5 cm, d. socket 2.5 cm, concave blade edge profile, convex edging, the blade is progressively thinned and enlarged, handle has an oval shaped hole, excellent state of preservation, Ilieș-I type (ILIEȘ 2001, 340), with analogies at Mărculeni (GLODARIU *ET AL.* 1970, 213, fig. 14/1; 26/2), Ilișua (GAIU 2001, 105, no. 22, fig. 3/1) and Napoca (ILIEȘ 2001, 340, pl. I/4, with further analogies), dated to the 2nd-3rd century AD (Pl. 14/4).

- Iron axe, L. 8.5 cm, L. blade 3.5 cm, d. socket 2.5 cm, concave blade edge profile, convex edging, the blade is progressively thinned and enlarged, handle has an oval shaped hole, excellent state of preservation, same as the previous one only smaller, dated to the 2nd–3rd century AD, MHR, inv. no. 7483, V 581 (Pl. 14/55).
- Iron adze, L. 19 cm, L. cutter 4 cm, narrow trapezoid body, slightly flattened blade, oval shaped hole, it was bent by stretching the bar at the higher end and then welded the body spud, Ilieș-II type, with analogies at Ilișua (GAIU 2001, 105, fig. 3/7), dated to the 2nd–3rd century AD (Pl. 14/1).
- Iron adze, L. 19 cm, L. cutter 4 cm, identical with the previous one (Pl. 14/2).
- Iron adze, L. 23 cm, L. cutter 4 cm, the blade was curved at the edge, with an oval mouth, Ilieș-II type (ILIEȘ 2001, 344), with analogy at Aiud (WINKLER *ET AL.* 1968, 64), dated to the 2nd–3rd century AD, MHR, inv. no. 560 (Pl. 14/3).
- Iron socket axe, used for peeling wood (BRÂNBY 2005, 7), L. 13 cm, L. blade 16 cm, d. socket 7 cm, made by hammering, cut from a lateral iron bar, widened at the top, the longitudinal shank tube was obtained by folding and welding the heads, considered hatchet in the autochthonous bibliography, Ilieș-I type (ILIEȘ 2001, 341, with further analogies), with analogies from Romita (MATEI-BAJUSZ 1997, 235, pl. LXI/1a–1b), dated to the 2nd–3rd century AD, MHR, inv. no. 560 (Pl. 14/9).
- Iron chisel, L. 30 cm, L. blade 3 cm, d. socket 2.5 cm, solid, with a longitudinal socket, high body, square section, which thins gradually to the narrow blade, with analogies at Ilișua (GAIU 2001, 105, no. 25, fig. 5/1) and Hoghiz (HOREDT 1953, 786), Ilieș-IIIa type (ILIEȘ 2001, 346, with further analogies), dated to the 2nd–3rd century AD, MHR, inv. no. 560 (Pl. 15/27).
- Fragment of an iron chisel, L. 18 cm, L. blade 3 cm, d. socket 2.5 cm, solid, with a longitudinal socket, high body, squared section, which thins gradually to the narrow blade, broken and severely damaged, similar to the previous one, inv. no. 560 (Pl. 15/28).
- Iron foe, L. 11 cm, l. blade 4 cm, a solid 'L' shaped bar, straight blade, with a vertical handle, poor state of preservation, damaged by use, restored, used for cracking wood and shingles, dated to the 2nd–3rd century AD, MHR, inv. no. 560 (Pl. 15/22).
- Iron froe, L. 19 cm, L. blade 4 cm, identical with the previous one, MHR, inv. no. 560 (Pl. 15/23).

C. Craft tools

- Iron beaked anvil, L. 18 cm, pyramidal shape, triangular head, with a flat face tapering into a pointed beak, a part of the face and the stem below it are broken and the tip of the beak has been flattened and deformed, both apparently being the result of heavy use, the curved foot was stabilized by sticking it in a piece of wood, on the exterior it has traces of use, analogies can be mentioned from Mărculeni (GLODARIU *ET AL.* 1970, 216, fig. 15/4; 27/14) and Răcari (TUDOR 1965, fig. 5/18), dated to the 2nd–3rd century AD (Pl. 15/26).
- Iron chisel, L. 11 cm, L. blade 2.5 cm, a cross-section bar which thins to the top head, it has a battered head flattened by use, with analogies at Ilișua (GAIU 2001, 105, fig. 3/7), dated to the 2nd–3rd century AD, MHR, inv. no. 560 (Pl. 14/7).
- Iron mandrel, L. 6 cm, L. blade 2.5 cm, broken, a circular section bar which probably thins to the top head, it has a battered head, flattened by use, dated to the 2nd–3rd century AD, MHR, without inv. no. (Pl. 14/6).
- Iron awl, L. 8.5 cm, it has a tapering pyramidal head and a stem which thins, broken from the middle, with analogies at Hod Hill, Dorset (MANNING 1985, 40, no. E8, pl. 10), dated to the 2nd–3rd century AD, MHR, without inv. no. (Pl. 15/17).
- Iron awl, L. 9.5 cm, rectangular sectioned tapering head with a thin, tapering stem and a slightly bent point, with analogies at Hod Hill, Dorset (MANNING 1985, 40, no. E10, pl. 10), dated to the 2nd–3rd century AD, MHR, without inv. no. (Pl. 15/18).

D. Weapons and harness

- Fragment of an iron spear, L. 14.5 cm, only a part of the leaf shaped top is preserved, blade with oval section, socket tube round in section, the edges of the blade are completely destroyed, poor state of

preservation, restored, with analogies at Buciumi (GUDEA 1997a, 28), dated between 106–118 AD, Gudea-LAI-5 type (GUDEA 1991, 72), MHR, without inv. no. (Pl. 15/32).

- Iron spear, L. 17 cm, d. socket 2 cm, leaf shaped blade with oval section, socket tube round in section, the edges of the blade are damaged, it has a mounting hole, badly preserved, restored, with analogies at Buciumi (Gudea 1991, 79, Abb. 7), dated between 118–200 AD, Gudea-LAI-5 type (GUDEA 1991, 72), MHR, without inv. no. (Pl. 15/31).
- Fragment of an iron spear, L. 8 cm, only a part of the top is preserved, the section of the blade is squared, the round sectioned socket is kept only partially, damaged, dated to the 2nd–3rd century AD, MHR, without inv. no. (Pl. 15/30).
- Iron *ballista* bolt-head, L. 11.3 cm, d. socket 1 cm, pyramidal shape with a flat, twin-edged blade connected to a socket, restored, analogies can be mentioned at Buciumi (GUDEA 1997a), dated in the 3rd century AD (BISHOP–COULSTON 1993, 139), MHR, without inv. no. (Pl. 15/29).
- Iron bit link, L. 6.5 cm, single link with simple loops, one of which approximates to a collar, comes from a two linked snaffle-bit, analogies are known from Hill Dorset (MANNING 1985, 57, no. H17), dated to the 2nd–3rd century AD, MHR, without inv. no. (Pl. 15/47).

E. Household tools

- Iron knife, L. 28 cm, l. blade 2.5 cm, l. handle 5 cm, long blade, pyramidal profile, short handle, strongly corroded tip, Gudea-II type (GUDEA 1989, 283, fig. 78), with analogies at Porolissum (GUDEA 1989, 550, no. 14, pl. CXXXVI), dated to the 2nd–3rd century AD, MHR, inv. no. 560 (Pl. 14/10).
- Iron holdfast, L. 9.5 cm, d. head 3 × 1.5 cm, flattened head, stem square in section, Gudea-I type (GUDEA 1989, 287, fig. 80), dated to the 2nd–3rd century AD, MHR, without inv. no. (Pl. 15/1).
- Iron holdfast, L. 8 cm, d. head 1 cm, flat head, stem square in section, Gudea-I type, MHR, without inv. no. (Pl. 15/2).
- Iron holdfast, L. 8 cm, d. head 1.5 cm, flat head, stem square in section, bent to the top, Gudea-I type, MHR, without inv. no. (Pl. 15/11).
- Iron holdfast, L. 14.4 cm, d. head 2.5 cm, flat head, split in two, stem square in section, bent to the top, Gudea-I type, MHR, without inv. no. (Pl. 15/12).
- Iron holdfast, L. 8 cm, d. head 3 × 1.5 cm, flat head, stem square in section, Gudea-I type, MHR, without inv. no. (Pl. 15/13).
- Iron holdfast, L. 9.5 cm, d. head 3 × 1.5 cm; MHR, without inv. no.
- Iron holdfast, L. 7 cm, d. head 1 cm, flat head, stem square in section, bent to the top, Gudea-I type, MHR, without inv. no. (Pl. 15/15).
- Iron holdfast, L. 13 cm, d. head 3 × 1.5 cm, flat head, stem square in section, Gudea-I type, MHR, inv. no. 2911 (Pl. 15/16).
- Fragmentary iron holdfast, L. 17 cm, stem square in section, bent to the top, the head is broken, dated to the 2nd–3rd century AD, MHR, without inv. no. (Pl. 15/33).
- Iron nail, L. 1 cm, d. head 2 cm, flat head, stem square in section, broken by the head, MHR, without inv. no. (Pl. 15/4).
- Iron nail, L. 5 cm, d. head 2 cm, stem square in section, broken, the head is missing, MHR, without inv. no. (Pl. 15/3).
- Iron nail, L. 3.5 cm, d. head 1 cm, rhombic head, stem square in section, Gudea-IV type (GUDEA 1989, 287, fig. 80), dated to the 2nd–3rd century AD, MHR, without inv. no. (Pl. 15/8).
- Iron nail, L. 6.5 cm, d. head 1.5 cm, cupola head, stem square in section, Gudea-III type (GUDEA 1989, 287, fig. 80), dated to the 2nd–3rd century AD, MHR, without inv. no. (Pl. 15/9).
- Iron nail, L. 6 cm, d. head 1 cm, rhombic head, stem square in section, Gudea-IV type, MHR, without inv. no. (Pl. 15/10).
- Iron nail, L. 2.5 cm, d. head 1 cm; cupola head, stem square in section, Gudea-III type, MHR, without inv. no. (Pl. 15/14).
- Bronze link, d. 4 cm, rectangular section, MHR, without inv. no. (Pl. 15/5).
- Bronze link, d. 3.5 cm, rectangular section, MHR, without inv. no. (Pl. 15/6).

- Bronze link, d. 2 cm, rectangular section, MHR, without inv. no. (Pl. 15/7).
- Iron made double spike loop with ring, L. 8 cm, d. ring 1.5 cm, only a fragment of the head is kept, dated to the 2nd–3rd century AD, MHR, without inv. no. (Pl. 15/19).
- Iron slide key, L. 7.5 cm, the handle has a semi-circular bow, short and wide stem, the active part is massive and consists of three teeth, dated to the 2nd–3rd century AD, MHR, without inv. no. (Pl. 15/48).
- Iron lock bolt, L. 5 cm, rectangular-shaped body, dated to the 2nd–3rd century AD, MHR, without inv. no. (Pl. 15/54).

F. Unidentified objects

- Iron bar, L. 17 cm, shape of a blade that wasn't finished (Pl. 15/48).
- Iron bar, L. 11 cm, poorly preserved, shape of a blade that wasn't finished, MHR, inv. no. 560 (Pl. 15/21).
- Iron bar, L. 11 cm, poorly preserved, shape of a blade that wasn't finished, MHR, inv. no. 560 (Pl. 15/25).
- Fragment of an iron board, L. 11 cm, width 9 cm, poorly preserved, possible part of a share plow, MHR, inv. no. 560 (Pl. 15/20).

19. Városháza tér No. 4 [mixed layer, 0–50 cm, col. part V. Szász]

- Pot, bottom fragment, df. 6 cm, rough paste, brown colour, oxidizing fire, traces of smoke on the outside, fast wheel-made (Pl. 8/25).
- Pot, fragment, dg. 14 cm, rough paste, brown colour, oxidizing fire, traces of smoke on the outside, fast wheel-made (Pl. 8/26).
- Bowl, bottom fragment, df. 8 cm, fine paste, orange colour, orange angobe, oxidizing fire, fast wheel-made (Pl. 8/27).
- Bowl, fragment, dg. 14 cm, fine paste, grey colour, grey angobe, oxidizing fire, fast wheel-made (Pl. 8/28).
- Bowl, fragment, dg. 14 cm, fine paste, orange colour, red angobe, oxidizing fire, fast wheel-made (Pl. 8/29).

20. Városháza tér No. 5 [mixed layer, 0–150 cm, col. part V. Szász]

- Lid, fragment with knob, db. 4 cm, fine paste, orange colour, red angobe, oxidizing fire, fast wheel-made (Pl. 9/1).
- Bowl, fragment, dg. 16 cm, fine paste, orange colour, orange angobe, oxidizing fire, fast wheel-made (Pl. 9/2).
- Pot, body fragment, fine paste, orange colour, orange angobe, oxidizing fire, fast wheel-made (Pl. 9/3).
- Handled pot body and bottom fragment, fine paste, orange colour, orange angobe, oxidizing fire, fast wheel-made (Pl. 9/4).

21. Városháza tér No. 15 [mixed layer, 0–50 cm, col. part V. Szász]

- Pot, fragment, dg. 14 cm, rough paste, brown colour, oxidizing fire, traces of smoke on the outside, fast wheel-made (Pl. 8/21).
- Shallow bowl, fragment, dg. 13 cm, fine paste, orange colour, oxidizing fire, fast wheel-made (Pl. 8/22).
- Pot, fragment, dg. 14 cm, rough paste, brown colour, oxidizing fire, fast wheel-made (Pl. 8/23).
- Shallow bowl, fragment, dg. 12 cm, fine paste, orange colour, oxidizing fire, fast wheel-made (Pl. 8/24).

22. Villanytelep Str. [mixed layer, col. part V. Szász]

- Bowl, fragment, dg. 16 cm, fine paste, brown colour, brown angobe, oxidizing fire, fast wheel-made (Pl. 9/5).
- Pot, fragment, rough paste, grey colour, reducing fire, two grooves on the body, fast wheel-made (Pl. 9/6).
- Lid, fragmentary, restorable, dg. 17 cm, db. 4 cm, h. 8 cm, rough paste, grey colour, reducing fire, fast wheel-made (Pl. 9/7).

- Jug or pot with handle, fragment, fine paste, orange colour, orange angobe, oxidizing fire, painted decoration, fast wheel-made (Pl. 9/8).
- Bowl, fragment, fine paste, orange colour, oxidizing fire, rows of rosettes made by stamping, on the body, fast wheel-made (Pl. 9/9).
- Pot, fragment, dg. 12 cm, rough paste, brown colour, oxidizing fire, three grooves on the rim, fast wheel-made (Pl. 9/10).
- Bowl, fragment, rough paste, grey colour, reducing fire, two grooves on the rim, fast wheel-made (Pl. 9/11).
- Bowl, fragment, dg. 14 cm, rough paste, grey colour, reducing fire, three grooves on the rim, fast wheel-made (Pl. 9/12).

23. Unknown discovery place

- Shallow bowl, fragment, dg. 20 cm, fine paste, orange colour, orange angobe, oxidizing fire, with two grooves on the exterior of the rim and one on the body, fast wheel-made MHR, inv. no. 3073 (Pl. 10/1).
- Shallow bowl, fragment, dg. 10 cm, fine paste, orange colour, red angobe, oxidizing fire, with two rows of rosettes made by stamping, on the body, fast wheel-made, MHR, inv. no. 694 (Pl. 10/2).
- Shallow bowl, fragment, dg. 14 cm, fine paste, orange colour, red angobe, oxidizing fire, with two rows of rosettes made by stamping, on the body, fast wheel-made, MHR, inv. no. 6630 (Pl. 10/3).
- Shallow bowl, fragment, dg. 16 cm, fine paste, orange colour, orange angobe, oxidizing fire, with two rows of ornamental elements inspired by *terra sigillata*, made by stamping on the body, fast wheel-made, MHR, inv. no. (Pl. 10/4).
- Shallow bowl, fragment, fine paste, orange colour, red angobe, oxidizing fire, with two rows with different ornaments of vegetal pattern, made by stamping on the body, fast wheel-made, MHR, without inv. no. (Pl. 10/5).
- Shallow bowl, fragment, fine paste, orange colour, red angobe, oxidizing fire, with a row of rosettes made by stamping on the body, fast wheel-made, MHR, without inv. no. (Pl. 10/6).
- Shallow bowl, fragment, fine paste, orange colour, red angobe, oxidizing fire, with two rows of ornamental elements inspired by *terra sigillata*, made by stamping on the body, fast wheel-made, MHR, without inv. no. (Pl. 10/7).
- Shallow bowl, fragment, dg. 10 cm, fine paste, orange colour, red angobe, oxidizing fire, with two rows with different ornaments of vegetal pattern, made by stamping on the body, fast wheel-made, col. part. V. Szász (Pl. 10/8).
- Shallow bowl, fragment, very fine paste, orange colour, red angobe, oxidizing fire, with pattern ornament, fast wheel-made, col. part. V. Szász (Pl. 10/9).
- Shallow bowl, fragment, fine paste, orange colour, brown angobe, oxidizing fire, with stamped ornament, fast wheel-made, col. part. V. Szász (Pl. 10/10).
- Shallow bowl, fragment, fine paste, grey colour, black angobe, reducing fire, fast wheel-made, col. part. V. Szász (Pl. 10/11).
- Shallow bowl, fragment, fine paste, orange colour, red angobe, oxidizing fire, with a number of stamped decorative items on the body, fast wheel-made, col. part. V. Szász (Pl. 10/12).
- Goblet, fragmentary, restorable, dg. 6 cm, df. 4.5 cm, h. 2.5 cm, fine paste, orange colour, orange angobe, oxidizing fire, with many grooves on the body, fast wheel-made, col. part. V. Szász (Pl. 10/13).
- Shallow bowl, fragment, dg. 10 cm, fine paste, grey colour, grey angobe, oxidizing fire, with a row of vegetal ornaments and a row of rosettes made by stamping on the body, fast wheel-made, col. part. V. Szász (Pl. 10/14).
- Pot, fragment of the upper half, dg. 12 cm, fine paste, brown colour, brown angobe, oxidizing fire, fast wheel-made, col. part. V. Szász (Pl. 10/15).

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- Pl. 11. 1. T-shaped brooch; 2. Spring of a brooch; 3. Link; 5. Iron mandrel; 6. Spearhead (?); 4. Trumpet brooch; 7. Chisel; 8. Bronze bar; 9. Brass wire; 10. Profiled brooch; 11. Bronze fragment; 12. Buckle (?); 13. Strap terminals; 14. Belt fitting; 15. Trumpet brooch; 16. Sledge hammer; 17. Antoninianus; 18. Denarius; 19. Coin (1–3. Tompa László Str. no. 23; 5–6. Görbe Str.; 4, 7–8. Kornis Ferenc Str. no. 31; 9–11. Mihály udvar; 12–14. Székelytámadt castle; 15–16. Reformed Churchyard; 17–18. Bethlen Gábor Str. no. 49; 19. Bethlen Gábor Str. no. 49–51).
- Pl. 12. Pots. Városháza tér.
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- Pl. 16. 1–12. Tiles, Székelytámadt castle; 13. Tile from Városháza tér; 14–19. Water pipes, Városháza tér.
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- Pl. 18. 1. Plan of the *thermae* (after TÉGLÁS 1896b); 2–13. Types of stamps of *cohors I Ubiorum*; 14–16. Roman lamps; 17–18. *Hipocaustum pilae*.
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- Pl. 20. Roman finds on the territory of Odorheiu Secuiesc.

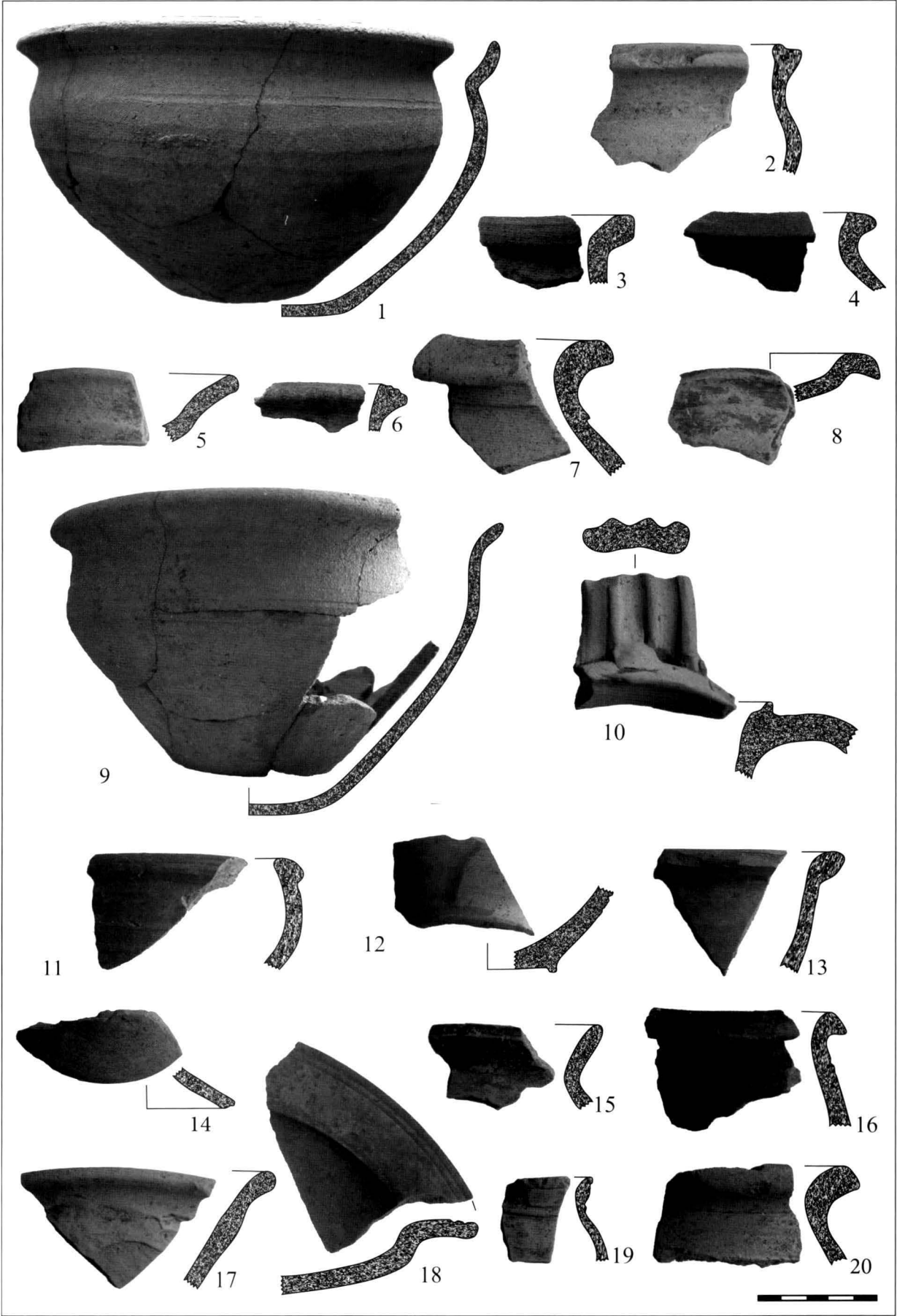


Plate 1. Pottery. 1-10. Attila Str.; 11-20. Bethlen Gábor Str. no. 1.

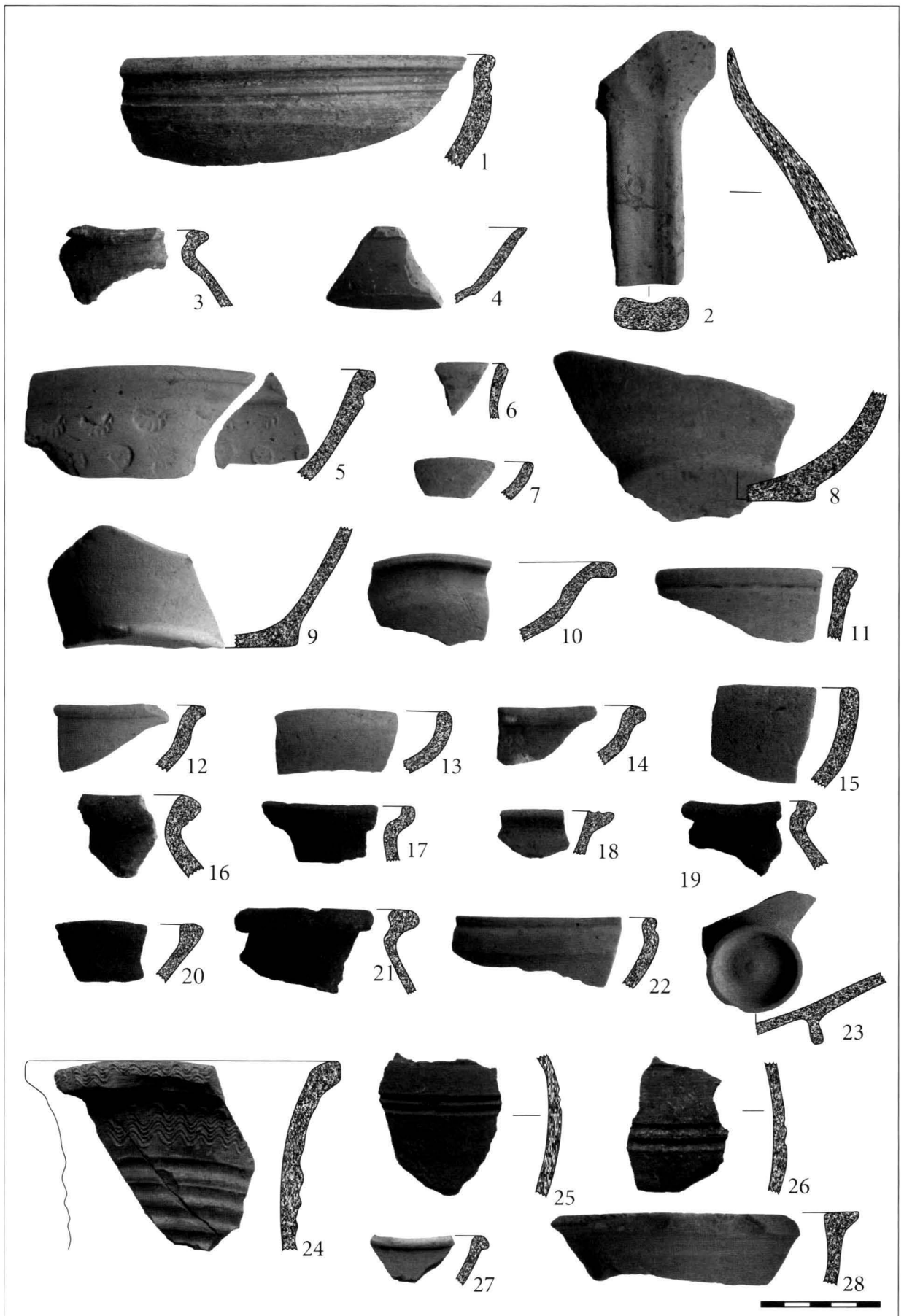


Plate 2. Pottery. 1–2. Bethlen Gábor Str. no. 1;

3–4. Bethlen Gábor Str. no. 49–51; 5–22. Bethlen Gábor Str. no. 72; 23–28. Budvár.

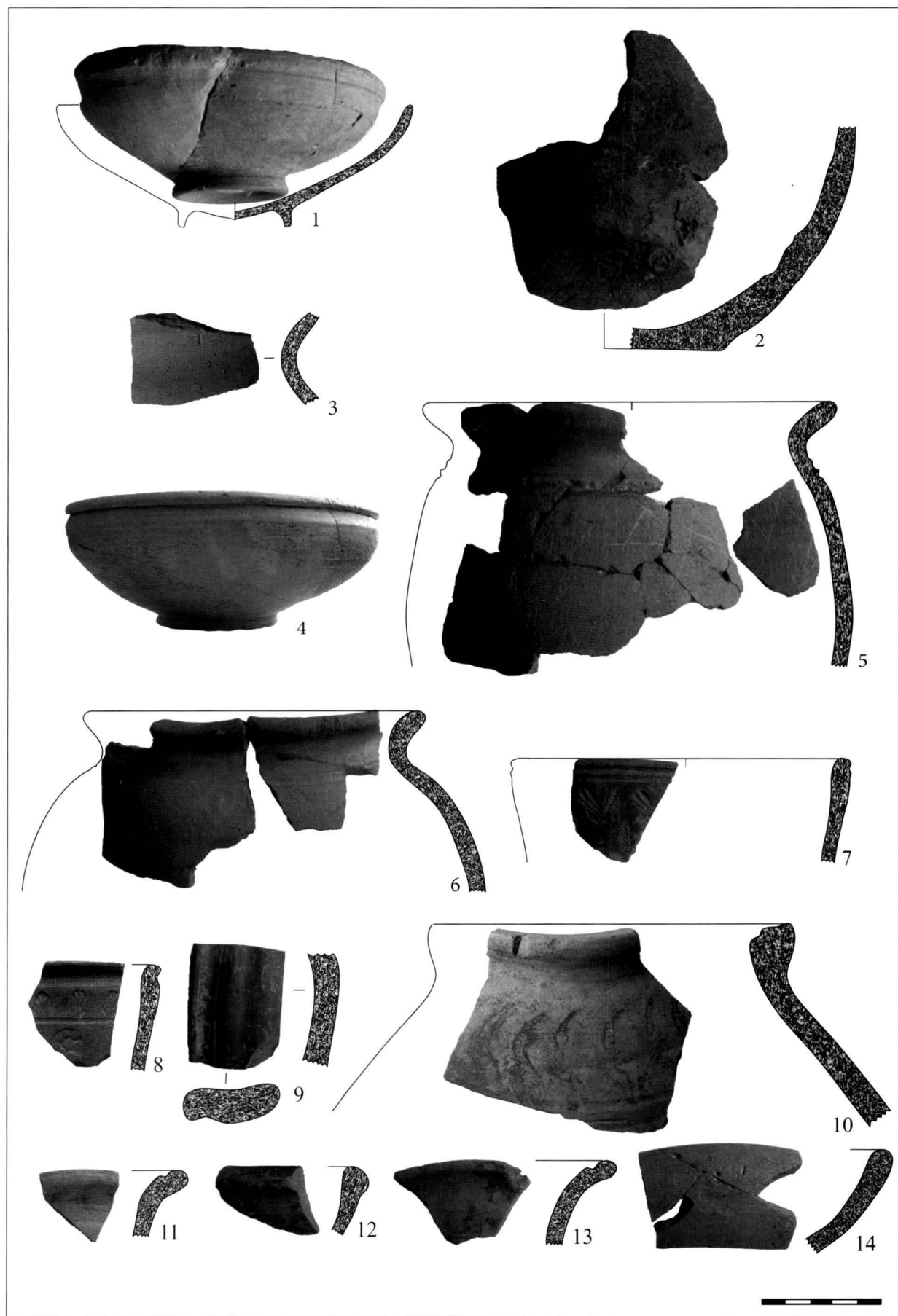


Plate 3. Pottery. 1-2. Budvár; 3-6. Görbe Str.; 7-8. Kornis Ferenc Str. no. 26; 9-14. Kornis Ferenc Str. no. 31.
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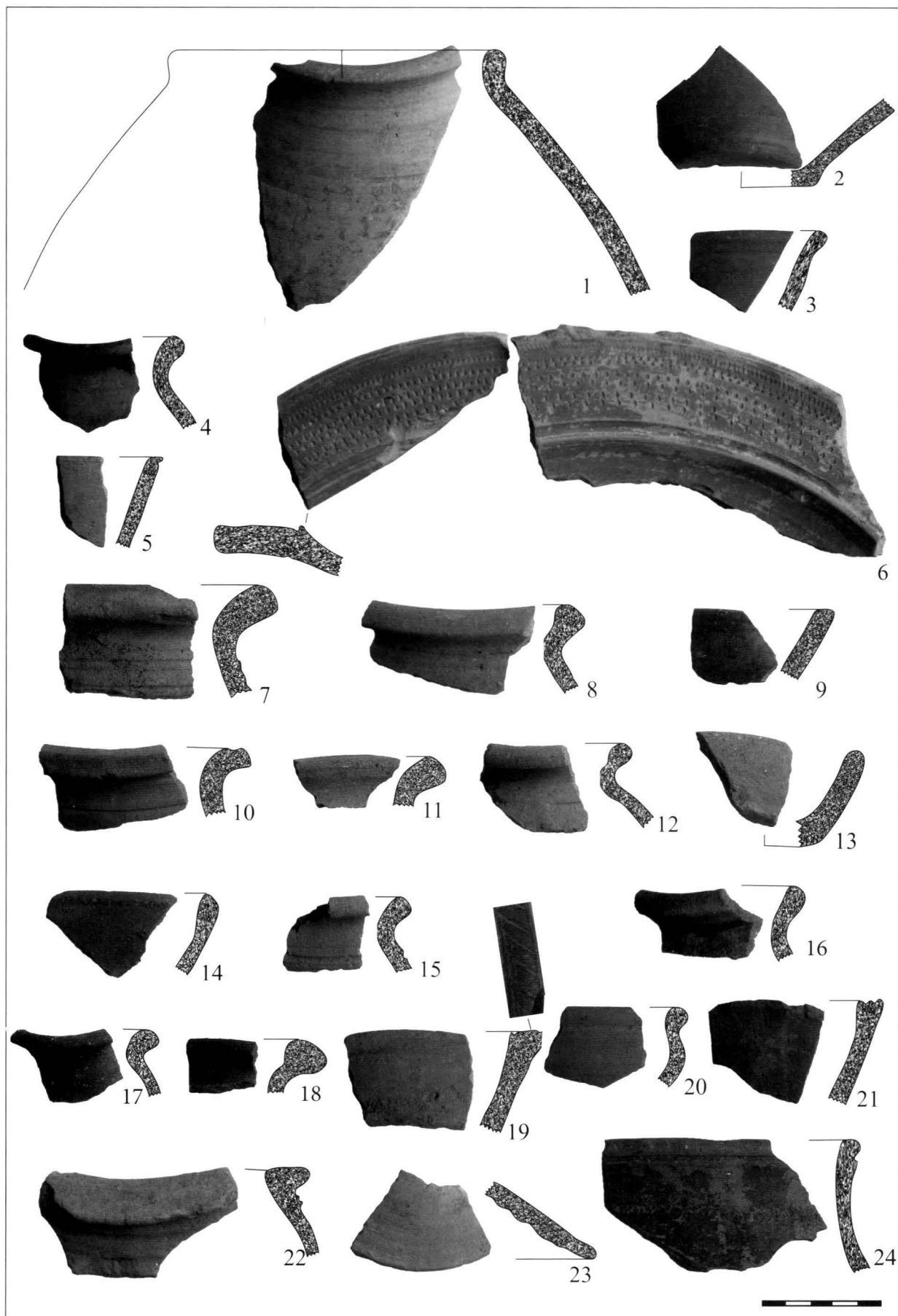


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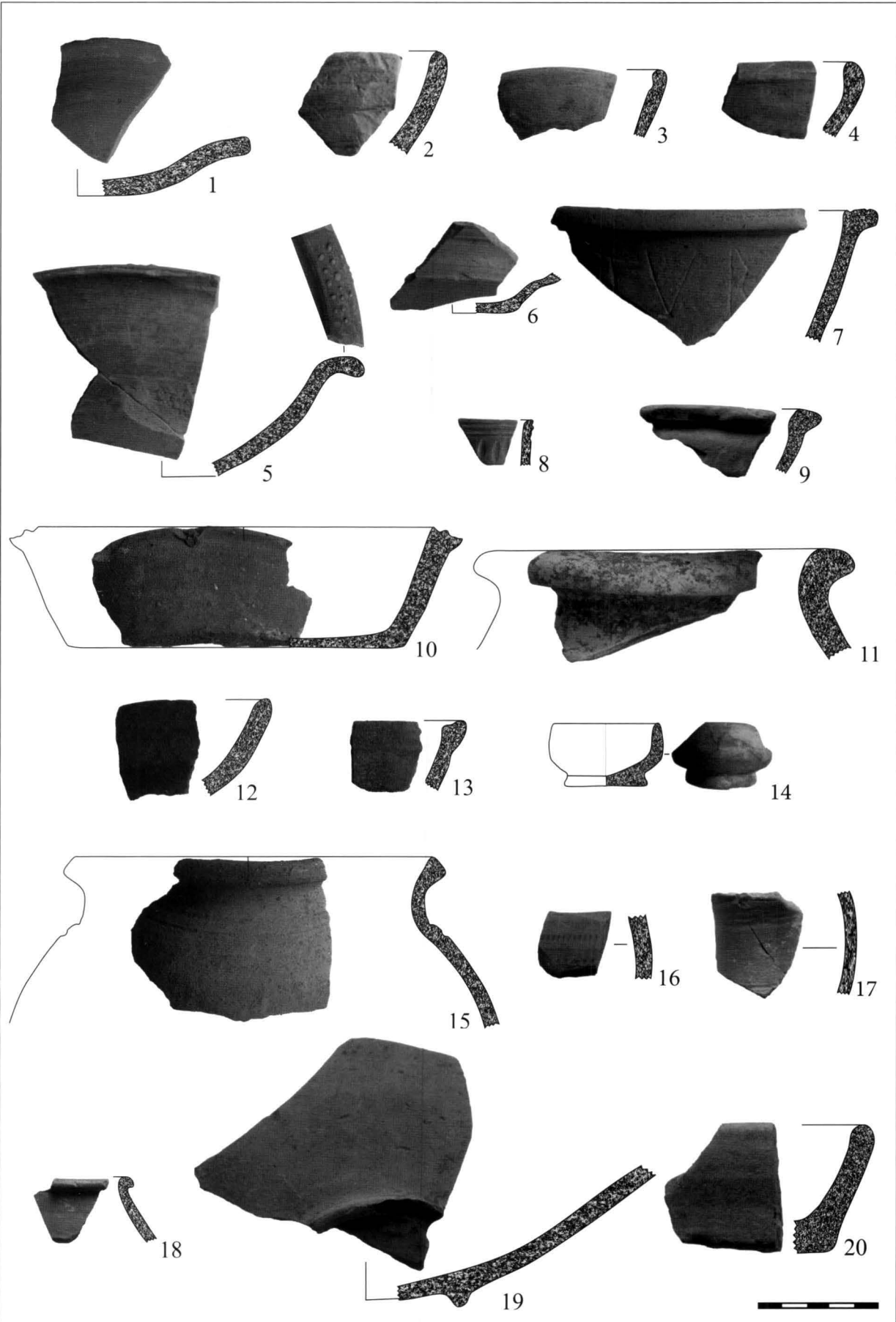


Plate 5. Pottery. 1–8. Kornis Ferenc Str. no. 31;
9. Márton Áron tér; 10–15. Reformed Churchyard; 16–20. Székelytámadt castle.
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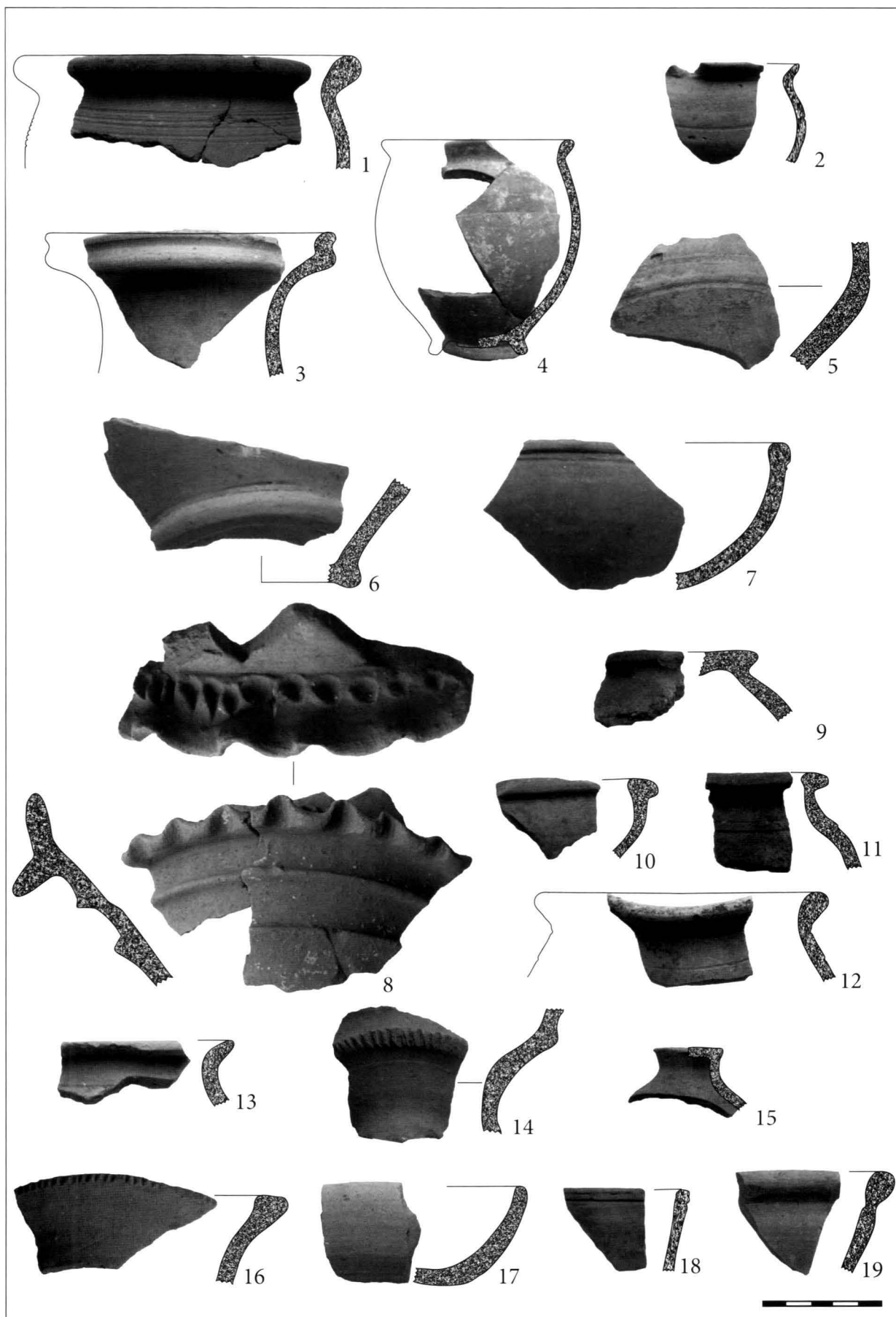


Plate 6. Pottery. Székelytámadt castle.

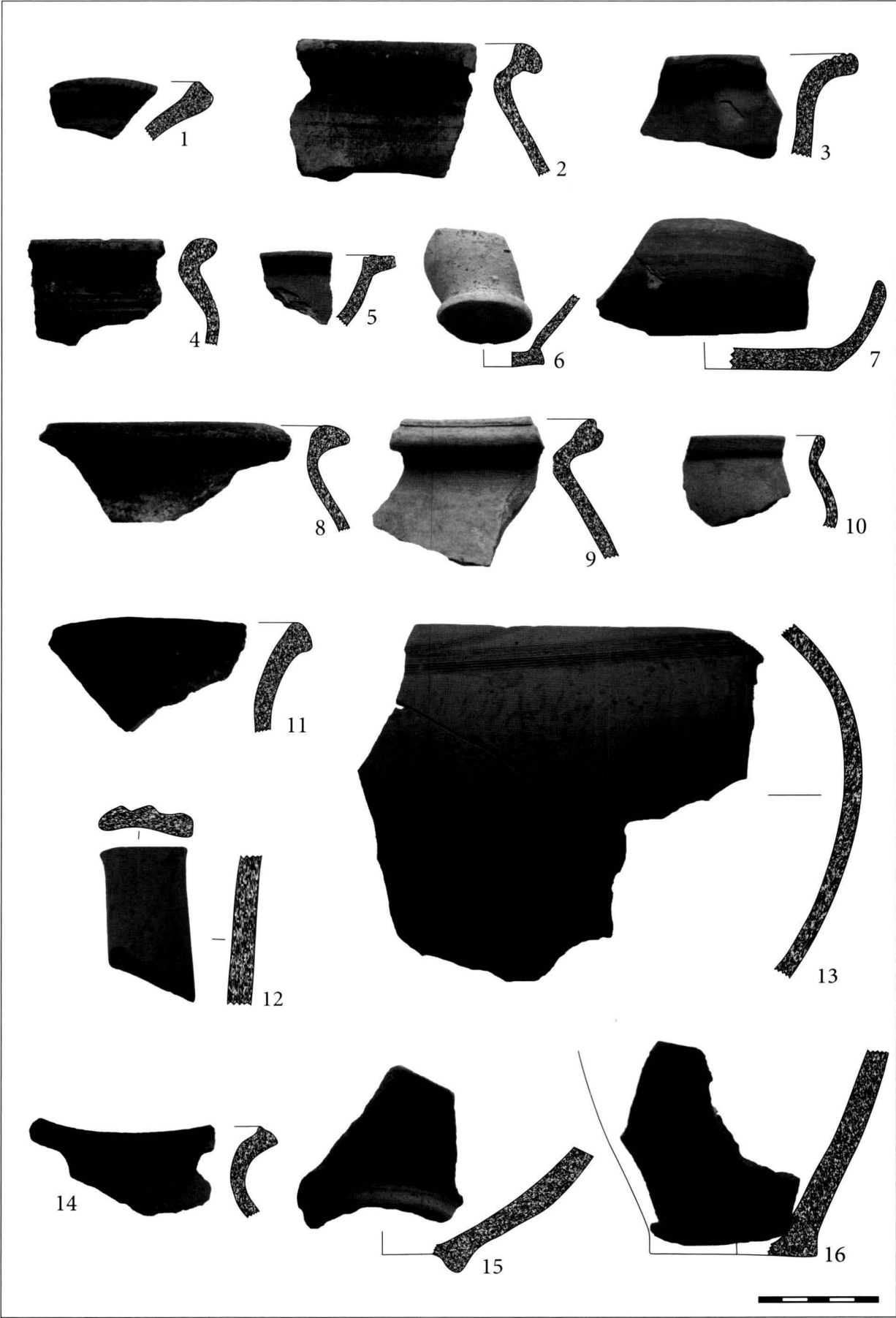


Plate 7. Pottery. 1–12. Székelytámadt castle; 13. Tamási Áron Str. no. 75; 14–16. Tompa László Str. no. 23.
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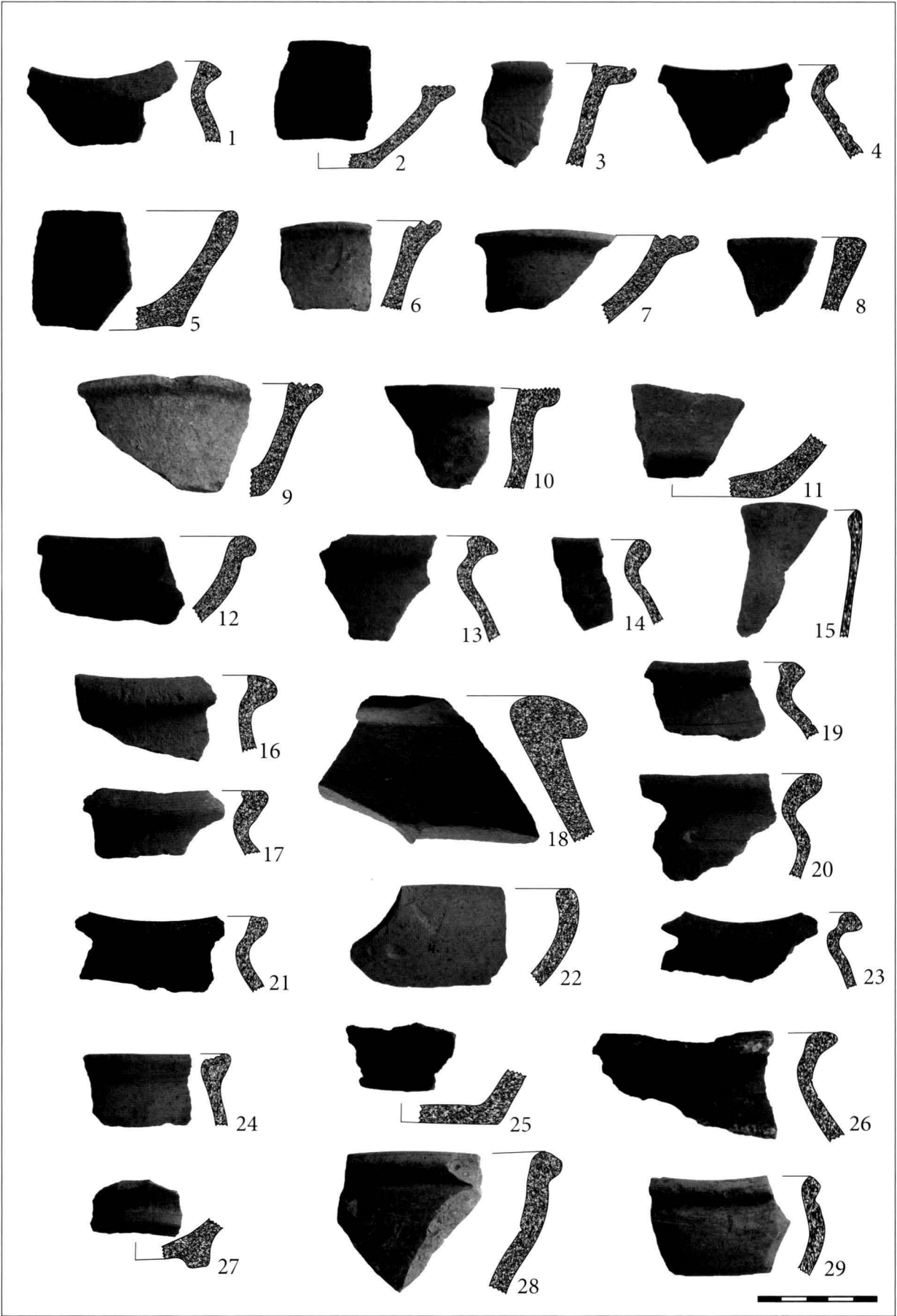


Plate 8. Pottery. 1–20. Tompa László Str. no. 23; 21–24. Városháza tér no. 15; 25–29. Városháza tér no. 4.

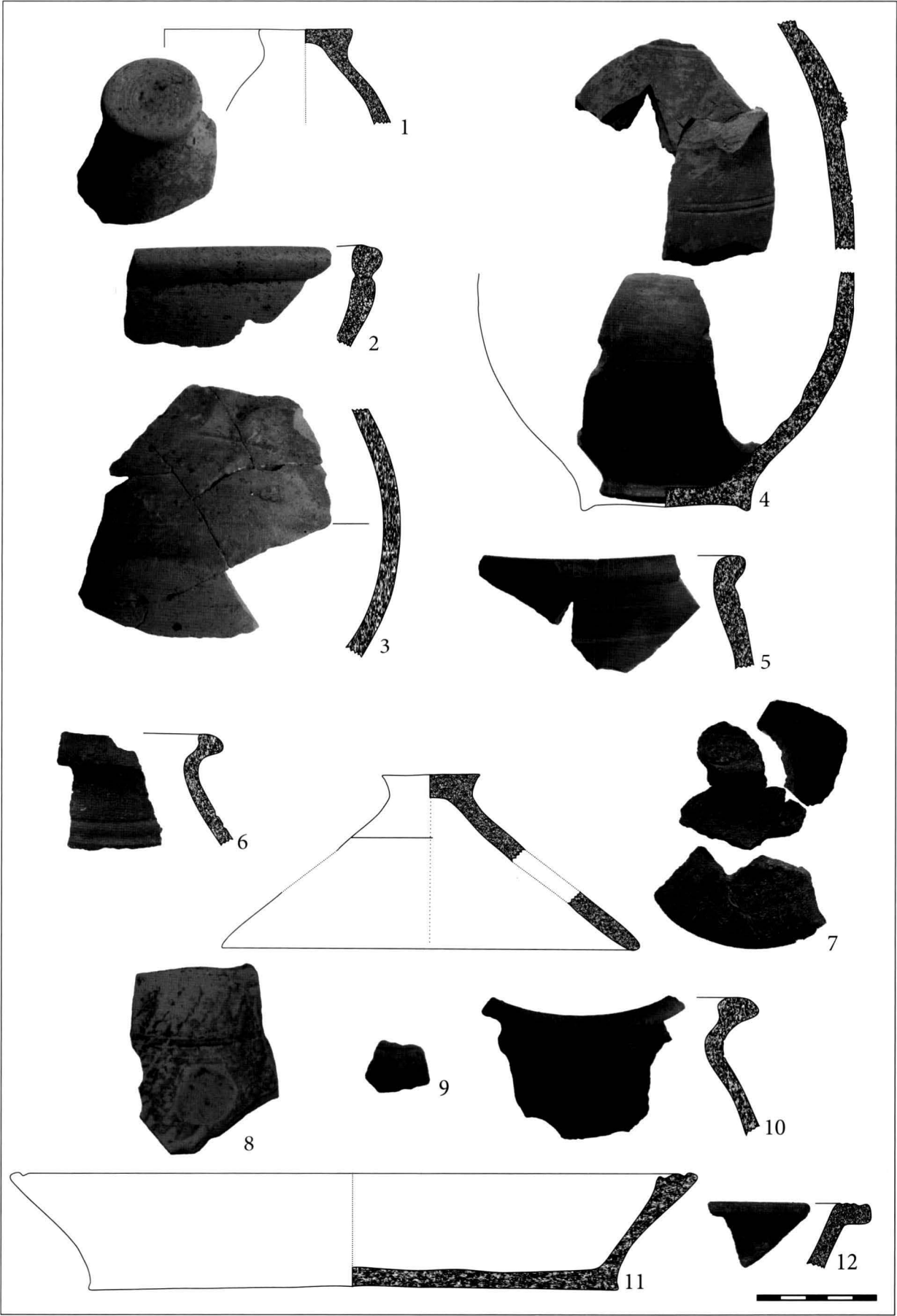


Plate 9. Pottery. 1-4. Városháza tér no. 5; 5-12. Villanytelep Str.

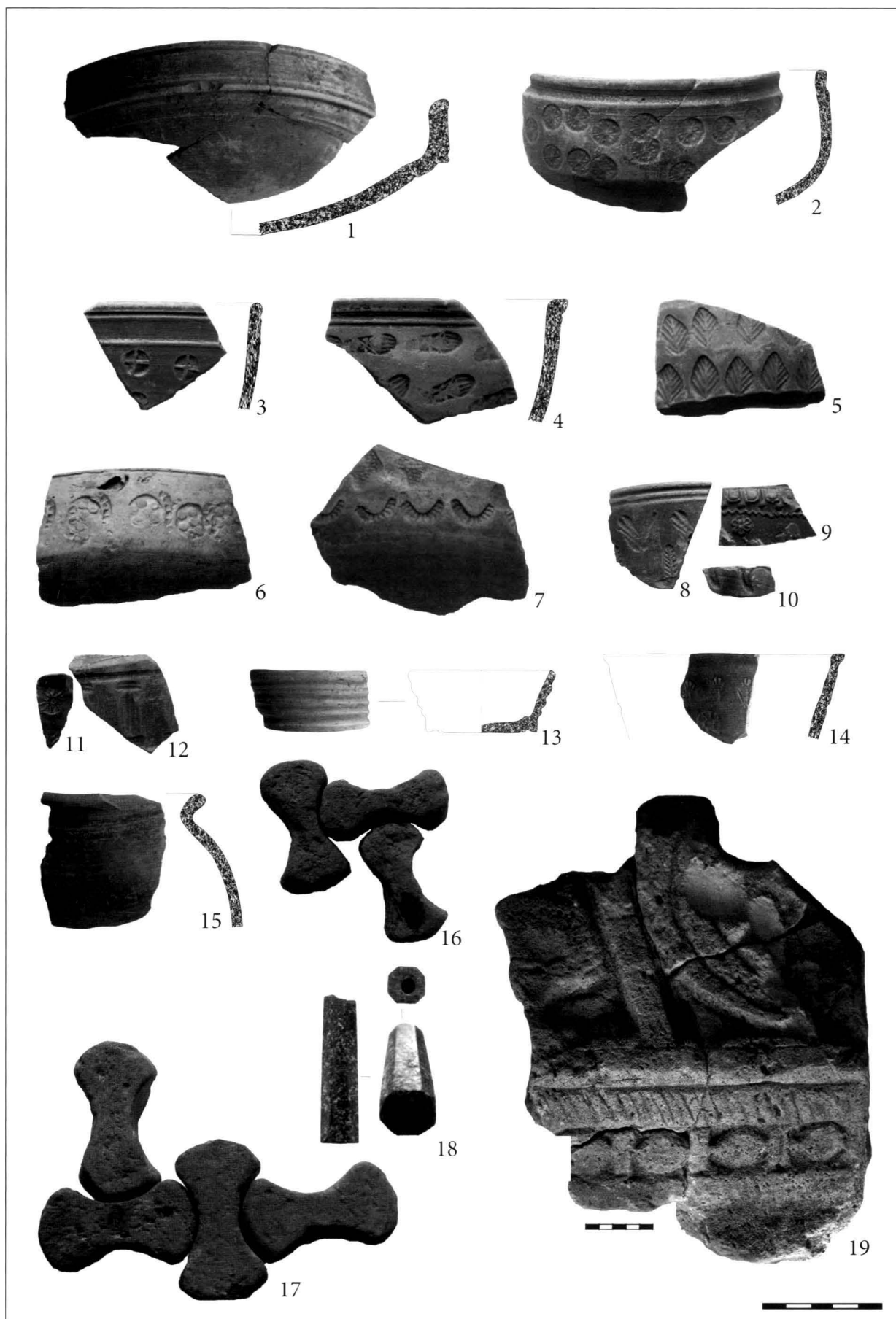


Plate 10. Pottery. 1–15. Unknown place of discovery; 16–17. Pavement pieces; 18. Granite handle; 19. Fragment from the pediment of a sculptural monument.

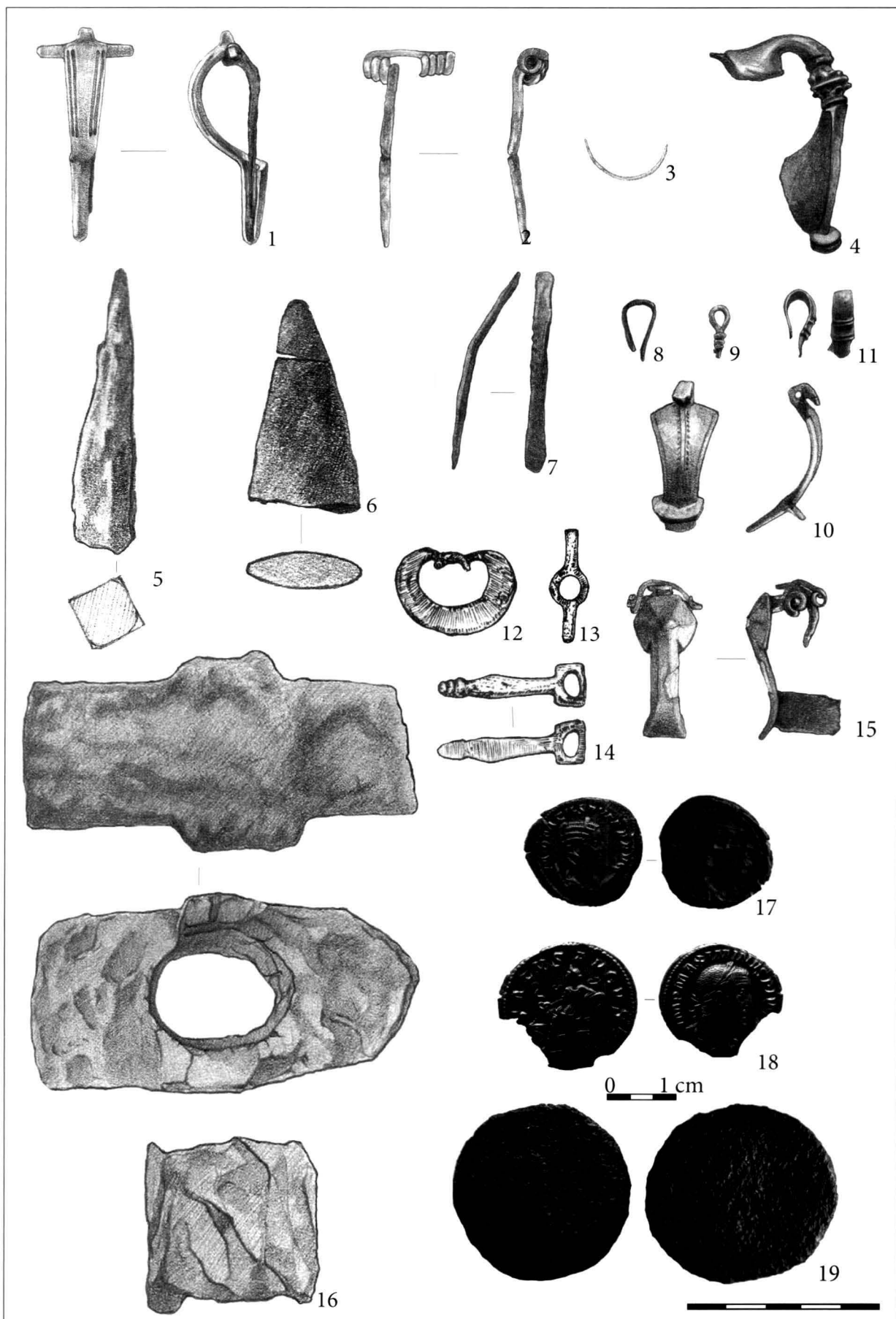


Plate 11. 1. T-shaped brooch; 2. Spring of a brooch; 3. Link; 5. Iron mandrel; 6. Spearhead (?);

4. Trumpet brooch; 7. Chisel; 8. Bronze bar; 9. Brass wire; 10. Profiled brooch; 11. Bronze fragment;

12. Buckle (?); 13. Strap terminals; 14. Belt fitting; 15. Trumpet brooch; 16. Sledge hammer;

17. Antoninianus; 18. Denarius; 19. Coin.

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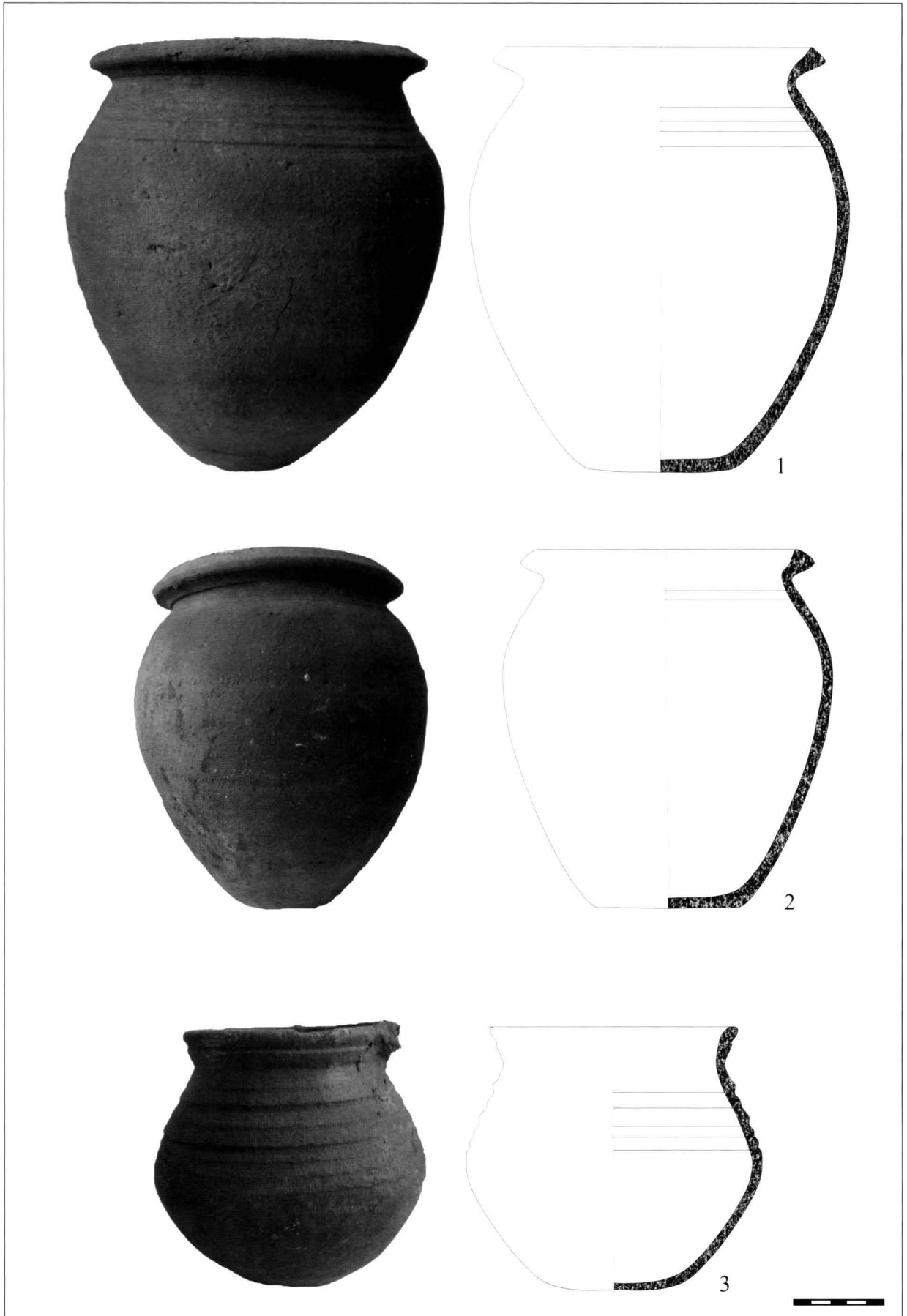


Plate 12. Pots. Városháza tér.

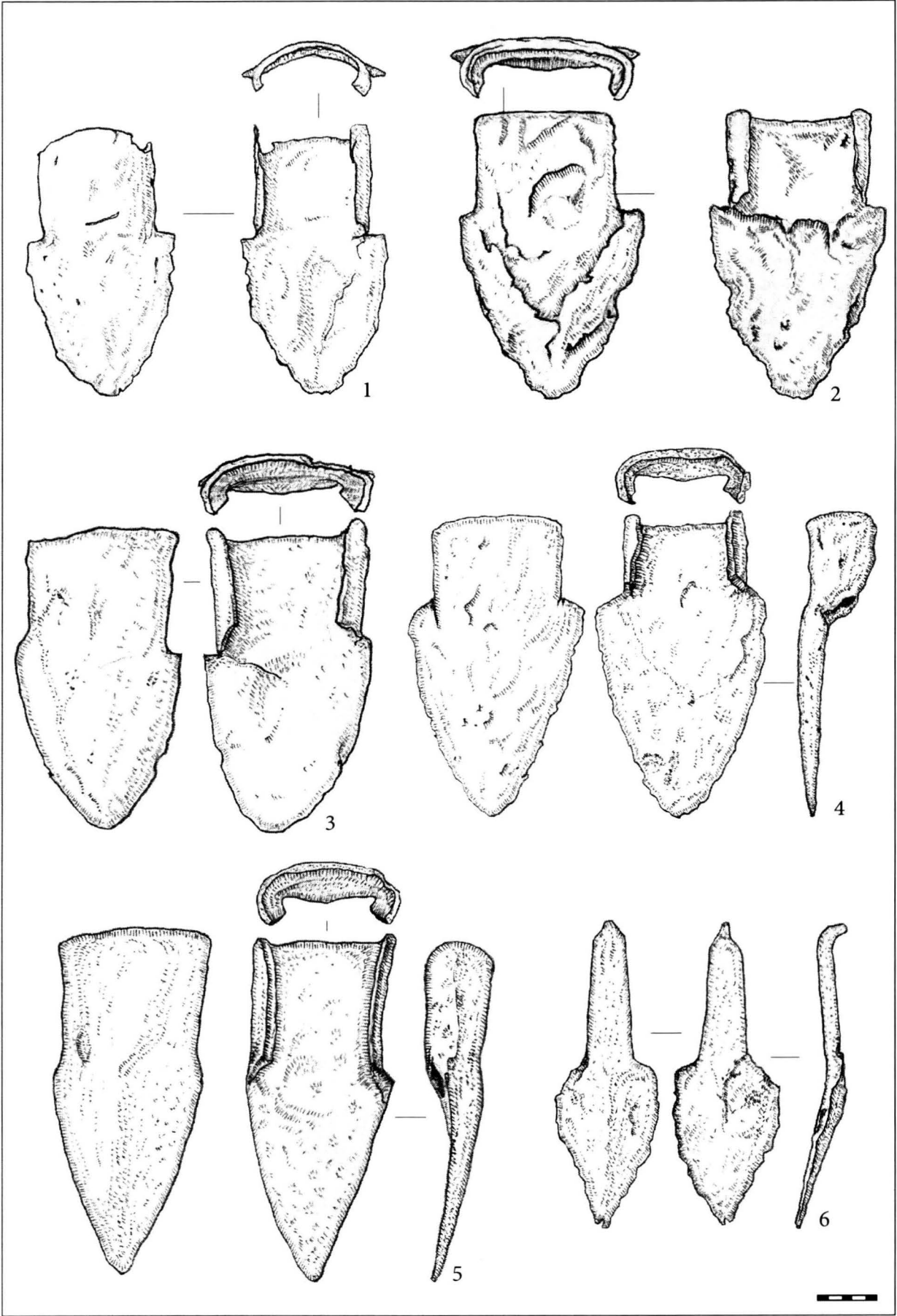


Plate 13. Farming tools. Városháza tér.

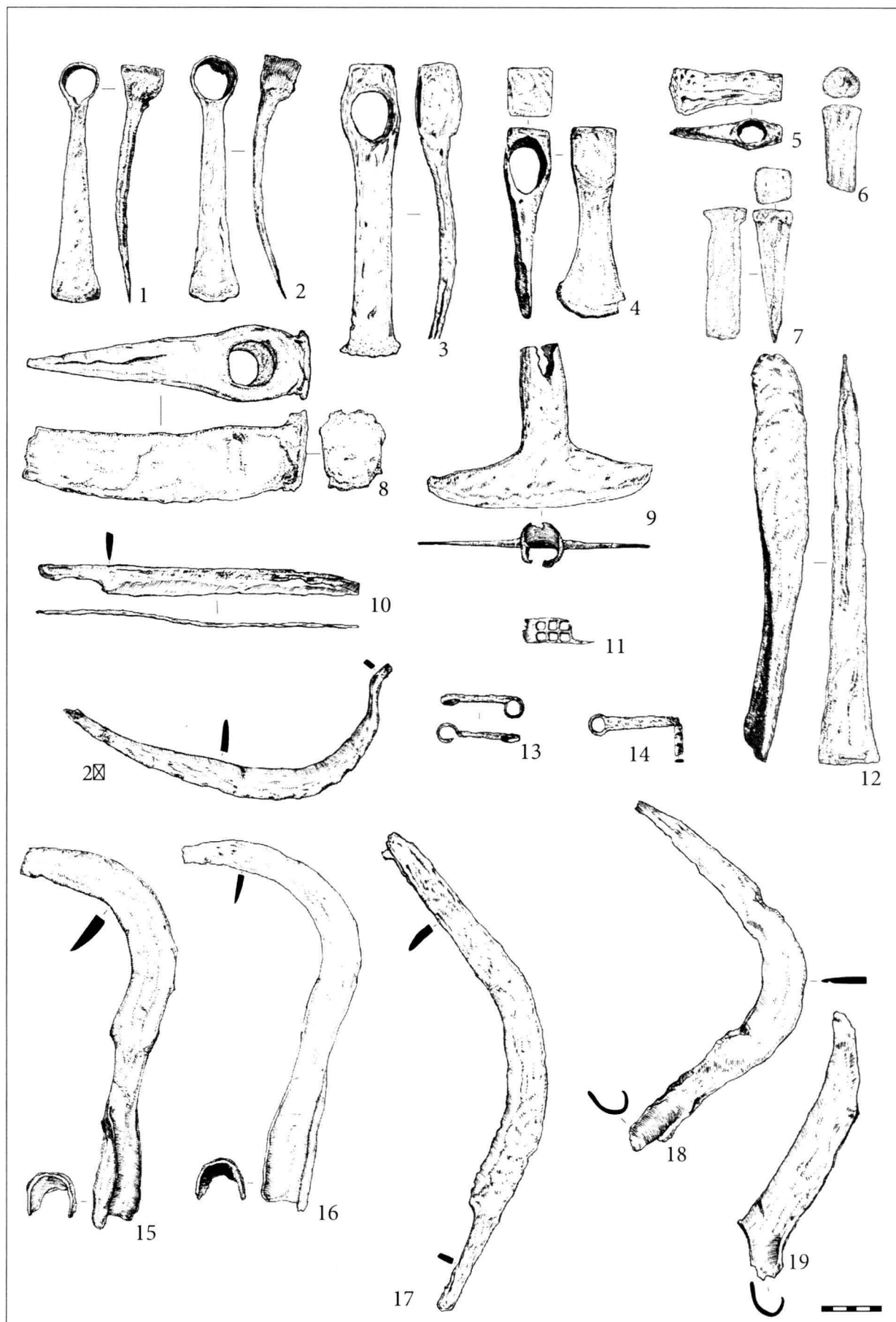


Plate 14. Iron tools. Városháza tér.

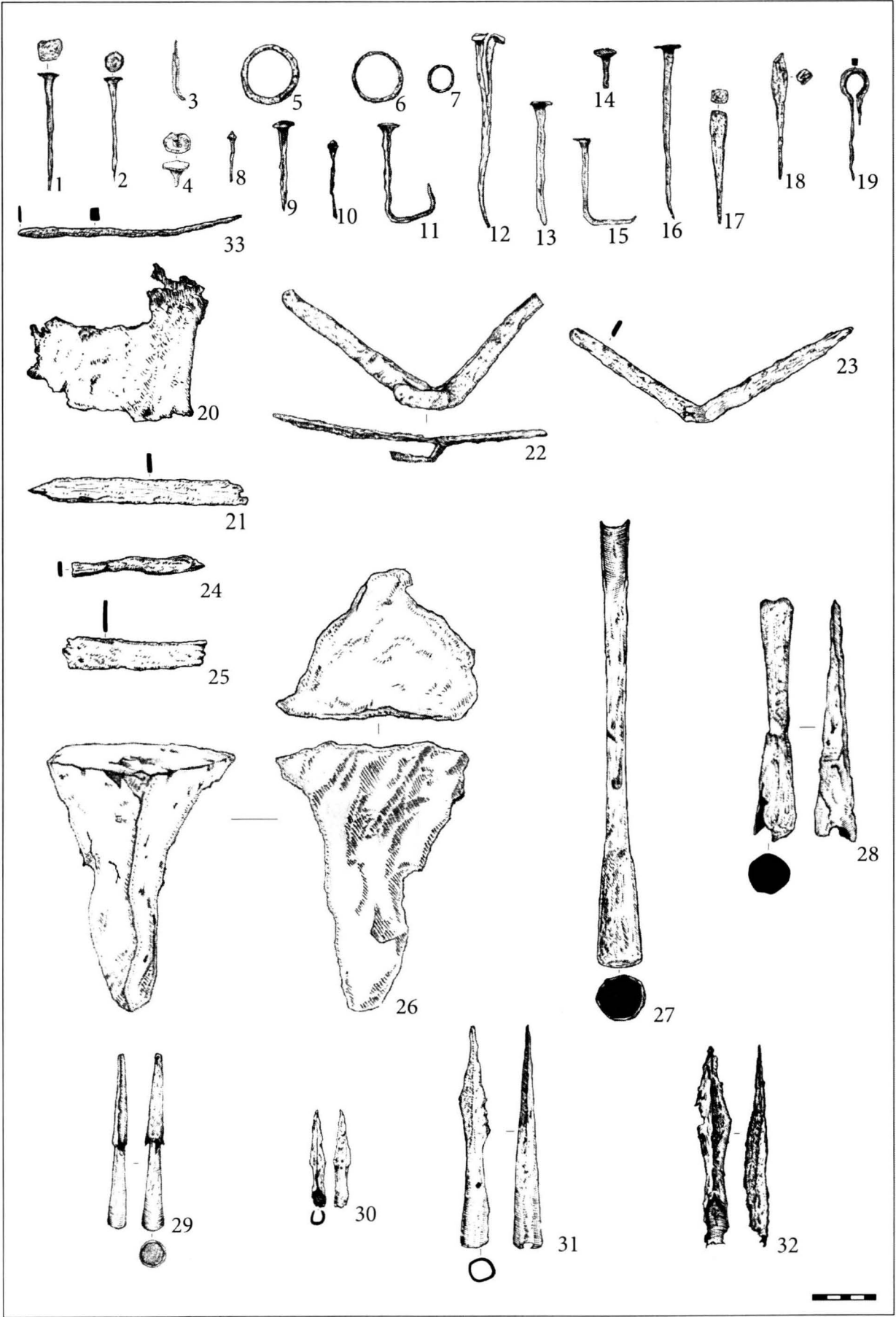


Plate 15. Iron tools and weapons. Városháza tér.

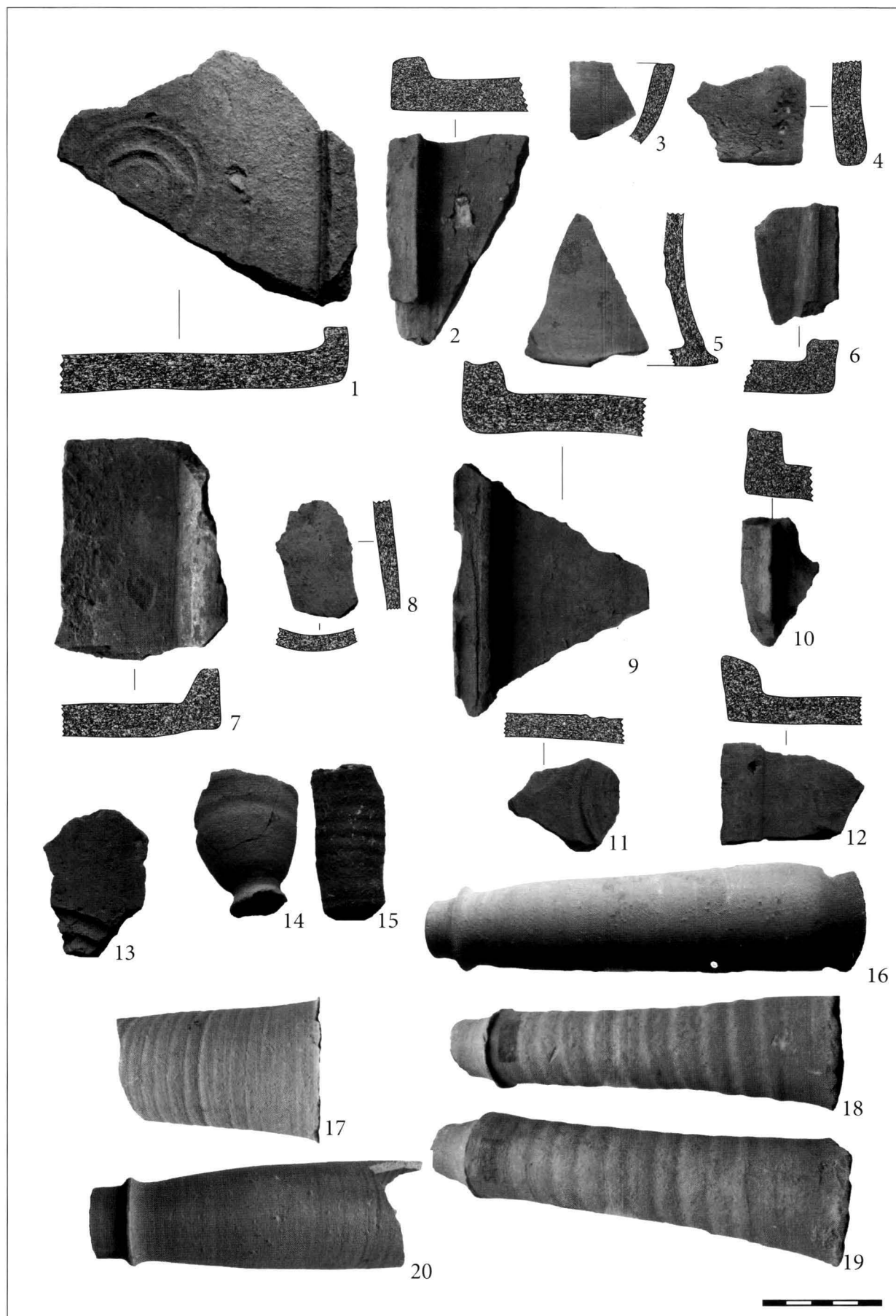


Plate 16. 1-12. Tiles, Székelytámadt castle; 13. Tile from Városháza tér; 14-19. Water pipes, Városháza tér.

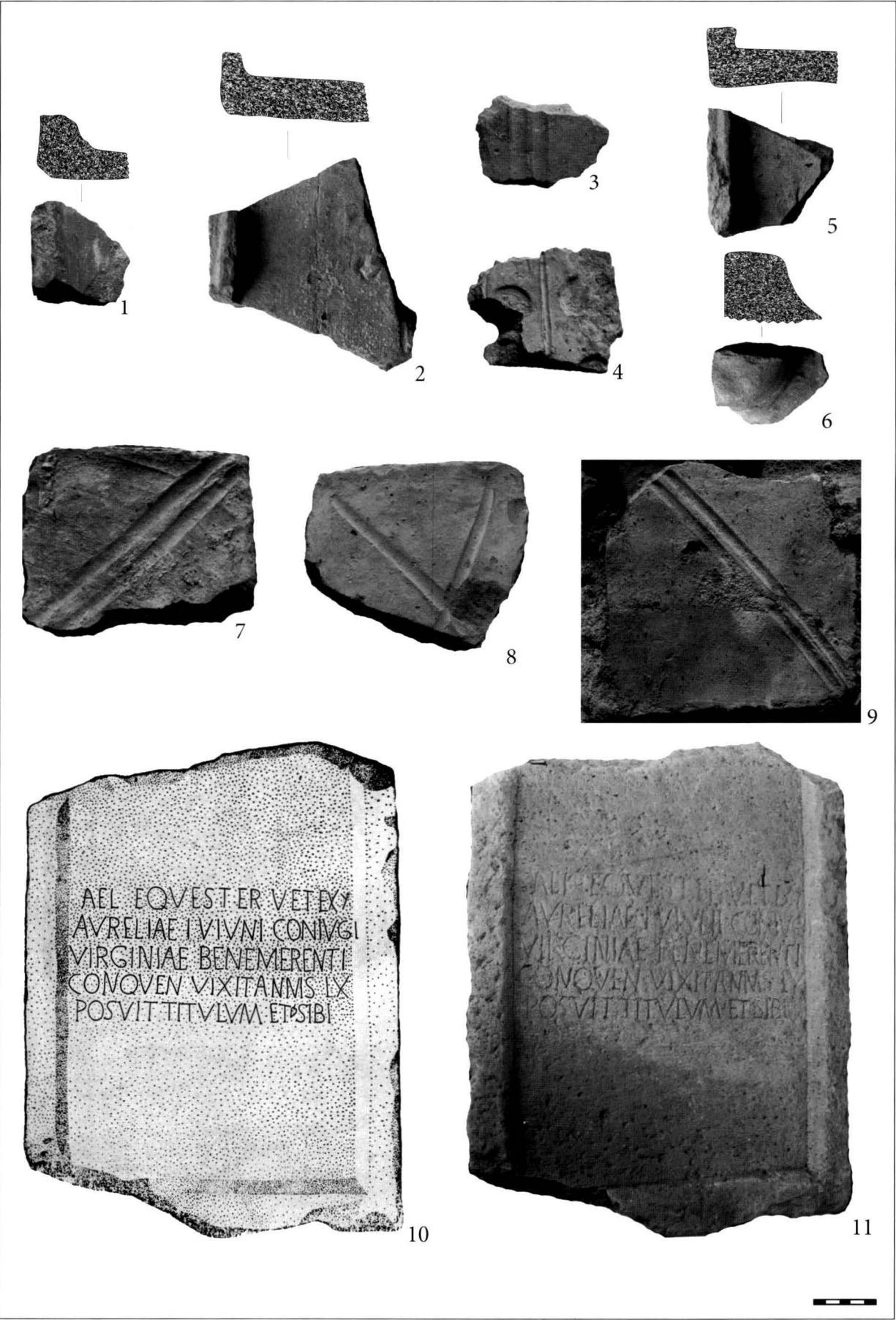
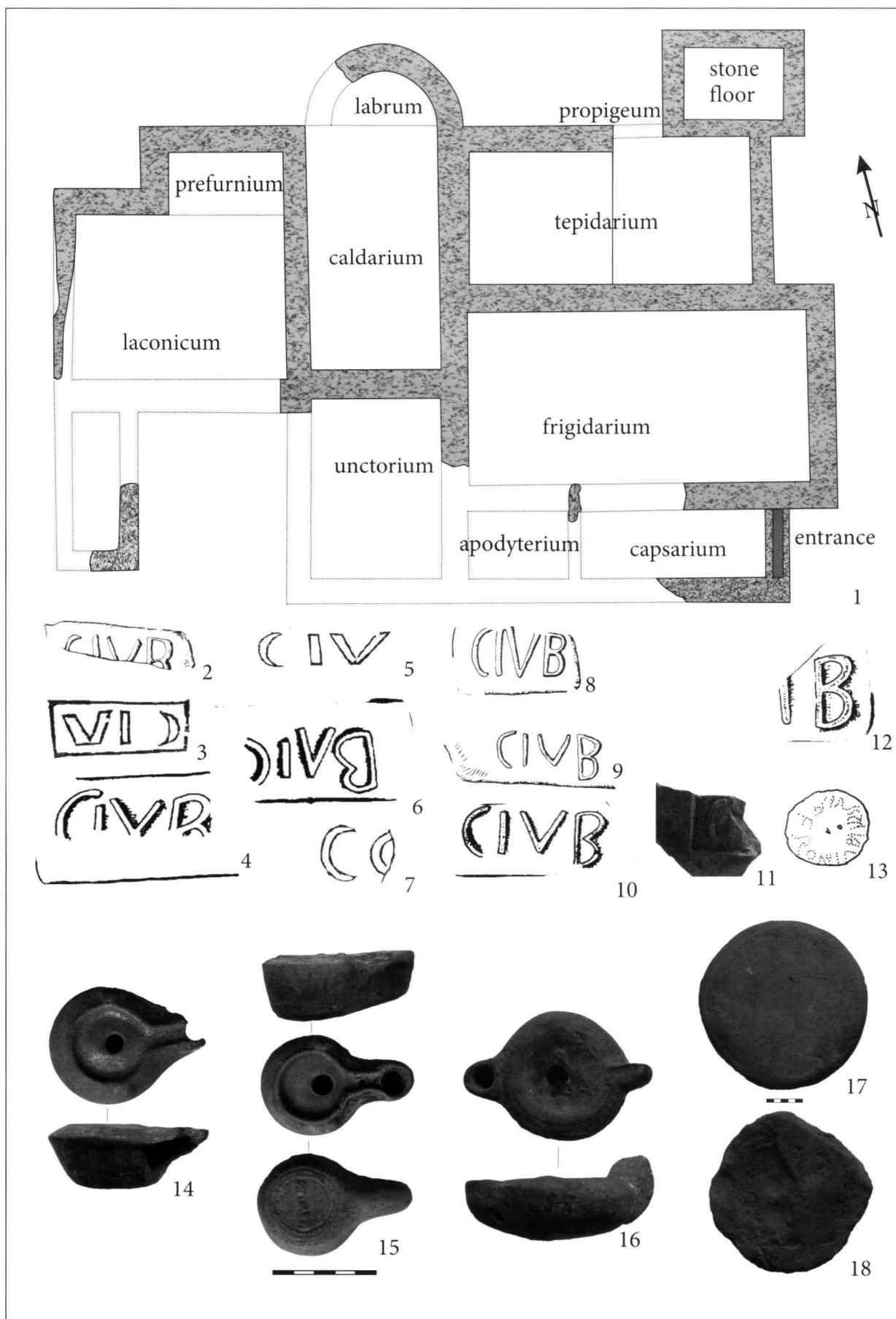


Plate 17. 1–9. Tiles and bricks from Szentimre–Pusztá; 10–11. Funerary stela (Rákóczi Ferenc Str. no. 5).

Plate 18. 1. Plan of the *thermae* (after TÉGLÁS 1896b);2-13. Types of stamps of *cohors I Ubiorum*; 14-16. Roman lamps; 17-18. *Hipocaustum pilae*.



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Plate 19. 1. Bethlen Gábor Str. no. 1; 2, 4. Attila Str.; 3, 5–7. Mihály udvar.



Plate 20. Roman finds on the territory of Odorheiu Secuiesc.

NOTES ON A DOLICHENIAN RELIEF AT MEHADIA

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The Roman cult of the Syrian god from Doliche, Iuppiter Dolichenus was one of the most widespread 'oriental' cults of the Roman Empire, largely propagated by the army. Becoming an official god of the soldiers, its popularity reached its peak in the age of the Severan dynasty (193–235 AD). The main evidence of the popularity of the cult is the rich and various cultic objects and votive reliefs, especially in the highly protected provinces, such as Dacia. The oriental God appears in a large iconographical variety, many times represented with his female companion, Iuno Regina (Dolichena). This dual representation of the Dolichenian god – having ancient archetypes – appears also in Dacia. This paper analyzes the religious contents of a Dolichenian relief represented on a votive column discovered in Mehadia (Praetorium) Romania, in a sanctuary dedicated to Iuppiter Dolichenus, near a military vicus. The object was first published by D. Benea and her team in 2008, but the iconographical explanations were laconic. The eagle with a laurel wreath standing on a deer are a unique representation of a Dolichenian scene in Dacia, where the symbol of the animals and the symbolic relation between them proposes many ways of interpretations, reflecting the ambiguous connection between religious syncretism and provincial art and workshops.

Keywords: Dacia, Iuppiter Dolichenus, Mehadia, Roman Religion, syncretism

Religious syncretism is an omnipresent phenomenon in the Roman Empire, with a significant role in spiritual and cultural relations in a multicultural and multiethnic society, having a well-defined role not only in individual, Hellenistic religiosity of the Roman man, but also in the official politics of conqueror Rome.¹ This syncretic phenomenon is reflected even in the variety of the archaeological material of Roman Dacia, showing not only a conventional phenomenon, but also one specific to the province.

An eloquent example of this religious manifestation is the archaeological material from the cultic edifice in the military *vicus* at Mehadia, Praetorium, which was discovered through systematic archaeological research between the years 2000 and 2003 (BENEA 2008). One of the unearthed pieces is a votive column, having an atypical iconography on its relief, with religious

¹ For scientific coordination and gentle help we want to thank to D. Benea, C. Timoc, S. Nemeti, and Sz. P. Pánczél. There were several works that served us in working this study. The basic monograph of Pierre MERLAT (1960), the Corpus of the cult of Jupiter Dolichenus (CCID), the Lexicon Iconographicum Mythologiae Classicae (LIMC) and the inventory published by R. NOLL (1980) of the sanctuary in Mauer an der Url, one of the largest and most well kept Dolichenian sanctuaries in the Roman Empire.

interpretation and visual message raising problems in interpreting the scene, but also in regarding the role and nature of the sanctuary. The aim of this study is reinterpreting the iconography of the relief, with the aid of analogies in the context of Roman religious syncretism.

First manifestations of Iuppiter Dolichenus in the Roman Empire appeared in Pannonia Superior and in Africa, in dated inscriptions in the year 125, during the reign of Emperor Hadrian, and then in the Severan dynasty this cult sees an astounding spread amongst civilian and military spheres (SPEIDEL 1978, 4–12). Iuppiter Dolichenus is a syncretic god (FLOCA 1935, 204–239). The worship of Iuppiter came to syncretic contact with an ancient eastern deity of cosmic aspect, known as Ba'al, from the city of Doliche (today Dülük in Turkey), former Commagene kingdom. The wide spreading of the synergetic god in Roman environment starts with annexing the kingdom of Commagene to the Syrian province during the reign of Vespasian (72 BC). The association of these two deities gave the syncretic god numerous qualities, such as cosmic character, universal power, being considered universal saviour. Soldiers worshiped him as god of victory, merchants as god of success, common people adored him as god of salvation, political leaders as a god who orders and manages the world. He assumed the following epithets: *Optimus* and *Maximus*, *praestantissimus*, *exuperantissimus*, *exibitor*, *nutritor*, *invictus*, *sanctus*, *Augustus*, *aeternus*, *conservator totius poli*, *conservator totius mundi* (NEMETI 2005, 226.) It is considered that Dolichenus was one of the widest spread oriental divinities amid soldiers, called protector god by them, and then he became official god of the Roman army, who benefited official support in the Severan dynasty (193–235).

There is no information regarding the myth of this god (CARBÓ GARCÍA 2010, 185–187; ISAC 1971a, 571–576). We don't know his autochthonous name, not one literary source mentions him, except for this formula: *nato ubi ferrum exoritur* (NEMETI 2005, 225), Dolichenus is thus a god: “where the iron is born” (CIL VI 30947 = ILS 4302), or “born where iron is forming” (CIL III 11927 = ILS 4301; CIL III 1128 = ILS 4303).² This expression appears on one of the most well known Dolichenian inscriptions in Dacia, at Apulum. Interesting considerations were born regarding different interpretations. Belgian scientist F. Cumont assumes that the formula comes from a ritual of the Commagenian cult, Ba'al of Doliche being to his followers “born where iron is forming” (SANIE 1981, 38). S. Sanie reminds of the existence of a population that in their beliefs linked the birth of a god with the birth of a metal. It is thought that the divinity was not only governing genius of a source, but also a replica of the mithraic *rupe natus*. The expression isn't referring to the place where the inscription was discovered, or to the iron mines, but to the “native country of iron”. At Doliche the expression *nato ubi ferrum nascitur* in primitive form was not only of local origin, but probably applied to a Hittite-Hurrite divinity.³ Commagenian concept of a god who is divinity of storm and mountain at the same time might have existed in populations remaining loyal to Hittite culture. T. Mommsen completed the inscription: [*Genio loci*] / *nato ubi ferrum exoritur*... to which “the birth of the god of fortunate” results is also added. The historian considers that the dating of the dedication is linked to the opening of the iron mines around Apulum, during the reign of Antonius Pius.

The iconography of the cult gives us more information. The god appears dressed in a Persian costume or as a Roman soldier. On his head he wears a *tiara* or a Phrygian cap. On his legs he wore sandals or short boots. He holds a double hatchet in a hand and a bundle of lightings in

2 S. SANIE (1981, 37–39) analyzed in detail problems regarding this formula.

3 See also the role of iron in Hittite-Mesopotamian mythology and Nergal's iconography.

the other and is standing with his legs on the back of a bull (symbol of genesis force). The associated animal is an eagle.

The iconography of Dolichenian artefacts highlight the existence of a *paredra* of the god known epigraphically as Iuno, Iuno Regina, Iuno Isis, or Iuno Regina Augusta. Identified with Hera, wife of Zeus, she also bears a series of epithets similar to the husband's: *aeterna*, *Augusta*, *sancta*, having a varied iconography – the *Dolichena* and *Assyria* epithets being modern inventions (NEMETI 2005, 225; CCID, no. 430). Being of Hittite-Assyrian origin,⁴ the goddess inherited the attributes of Ba'al's *paredra* from Doliche, such as master of animals, of beasts or of the earth (TURCAN 1998, 188; IŞIK 2000, 117–129). Iuno from Doliche stands on the back of a deer, a goat, a cervidae, even a bovine, and exceptionally a lioness. She holds a sceptre and a mirror, the latter being interpreted by some as a pan for libations. In easterner's eyes, this attributes brought her close to the Syrian Goddess. Besides her, a series of gods and divine figures – Luna, Sol Invictus, Castores, the Dadofores, Mercurius, Apollo Citharoeus or Diana Lucifera – associated with the Dolichenian cult also appear; their presence reflects the syncretic nature of the cult, resembling other oriental cults (SPEIDEL 1978, 24.)

The sanctuary at Mehadia was at the exit of the city, 3 km north towards Plugova village, where important ancient ruins can be found, composed of a war camp and a civil settlement. The cult edifice is to the west from the camp, roughly in front of the fortification's main gate, having three phases of construction (2nd–4th c. AD). First researches took place in 2000, when a section and a cassette were opened; both were 8 × 2 m in size. Archaeological researches didn't reveal the whole building, thus the results are partial. The analyzed relief was found in the 1/2000 section, sector IVB of the *vicus*, from small depth (40–50 cm), in the company of other fragments of broken columns, with the relief facing downwards, indicating that the votive objects were reused in phase III of the building. The fragment is part of a chalk column's shaft (d. 40 cm, H. 65 cm); having in its centre a fragmentary yet well kept relief (H. 38 cm, l. 31 cm). The piece is held at the Muzeul Banatului from Timișoara (CSIA Tim, inv. no. 74/2000). The object is dated to late 2nd and early 3rd century, when the edifice was getting a new form (IInd phase).

The relief (Fig. 1) shows a sanctuary with a fronton (*naiskos*, *aedicula*), with two pillars decorated with vegetal elements with schematic capitals formed of stylized acanthus leaves. The tympanum is decorated with two rows of acanthus leaves arranged around a *globus*. The rich, vegetal style and the two *acroteria* delimitating the tympanum indicates a provincial style, elaborated in a modest manner, following imperial and oriental conventions. In the centre of the relief the main scene can be seen: an eagle with stretched wings holding a bay leaf crown in its beak. Under the eagle there is a stag with circular antlers, imitating the shape of the Sun. The animal scene is placed on the left part of the scene, being disproportionate. It is important to note the proportion of the animals: the stag is much larger than the eagle, whose position although signifies not only a symbiosis and a religious syncretism, but also a status of hegemony and power. This proportion we can interpret as being a naturalistic-realistic representation, but also as an elaboration technique of provincial art.

First interpretation of this scene was given by D. BENEĂ (2008), who gave the following explanation: the stag and the eagle are well known artistic motifs in the oriental world; from where through Scythian pathway came in circulation in the northern and western areas of the Black Sea and from here onward to the Balkan region. We know manifestations in Getic and

4 The iconography of Iuno resembles the Hittite and Hurrian goddesses Hapat or Meter Hipta.

Thracian environment, where the stag is associated with the eagle. The Roman conquering had consequences still difficult to reconstruct on a spiritual plane, one of them being the votive relief at Mehadia. The authors propose a quite interesting interpretation, which leads to explaining the politico-social relations. The stag was a terrestrial animal, dominant in woodland, and the eagle's significance should be viewed as a symbol of the cult of Iuppiter's supreme divinity, at the same time a symbol of the imperial power; proving this is the bay leaf crown in the bird's beak. Basically, the representation could be viewed as a symbol of the Imperial House, associated with the universal power of the Roman State.

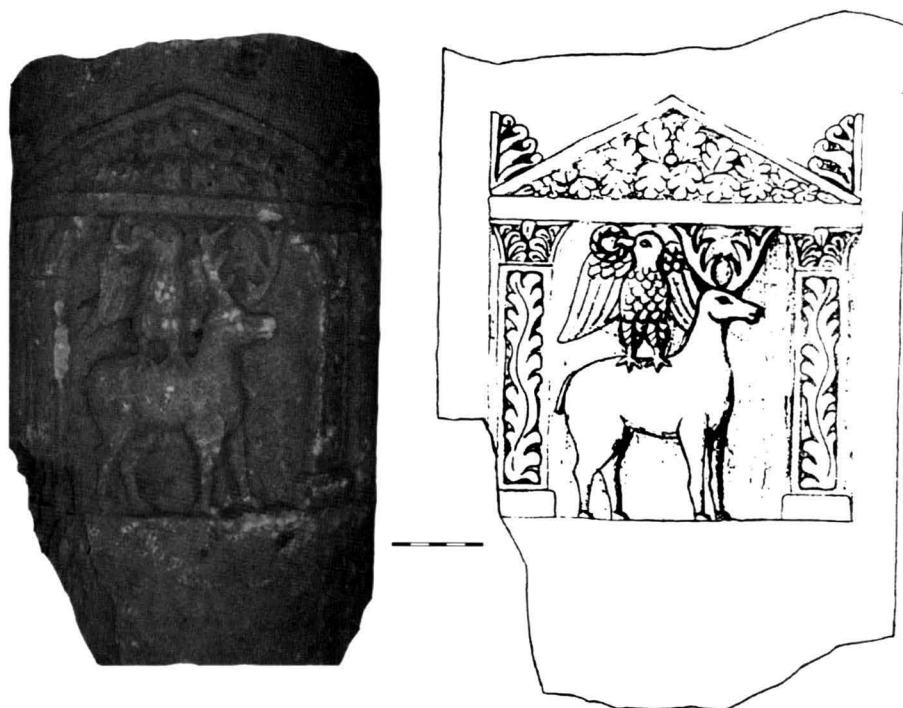


Fig. 1. Dolichenian Relief from Mehadia (photo: C. Timoc).

We wish to provide an interpretation from the stylistic and religious point of view, fitting the object in the syncretic, Dolichenian cult. To achieve this goal, we searched for analogies throughout the Empire, as well as in Dacia province, where Iuppiter Dolichenus appears on monuments with – or as – an eagle, with his *paredra*, Iuno, associated with a deer.

The interpretation of the relief appears as a central element even in the archaeological monograph of the excavation, because the object's rich symbolic – being the only interpretable relief – poses a central problem in the sanctuary's affinity and in the correct identification of the cults practiced here during its different stages. From the archaeological material we can see that the edifice served as a cult sanctuary from the beginning and in first stage (2nd century AD) it was probably dedicated to the god Apollo (BENEA 2008, 101–103). In the second phase modifications appear, by the adding of a new *cella*, indicating a change in the religious life of the edifice, signalling the appearance of a new deity. To this archaeological context belongs an inscription (Fig. 2), a representation of an eagle (Fig. 3), and the actual relief. These sources collectively show – according to the archaeologists – that the newly appeared divinity is Iuppiter Dolichenus.

The association of Apollo with Dolichenus is not an unusual phenomenon, analogies being present in the Empire: Britannia (BENEA 2008, 107), Dura Europos (CCID, no. 36), Rome (CCID, no. 380) and also in Dacia (GUDEA–TAMBA 2001). It is however, harder to determine the iconographic relation of these deities, many of their attributes being similar, from the apollonian

and Dolichenian circle, due to the cosmic, solar, soteriological and also *salutifer* aspect of the divinities (SZABÓ 2008, 99–111). Both gods have military attributes as well, that indicates their presence within the same edifice, which simultaneously indicates an unusual syncretic aspect.

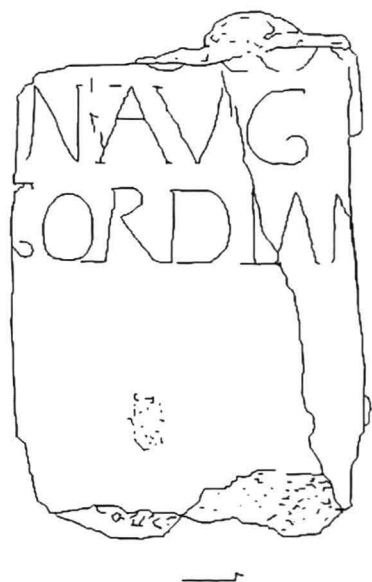


Fig. 2. Inscription from Mehadia (after BENEÀ 2008).



Fig. 3. Eagle from Mehadia (after BENEÀ 2008).

Interpreting the relief requires not only a detailed analysis of the transmitted visual language, but also the archaeological context, out of which through other votive sources – inscriptions, figured monuments – it seems that we can exclude the profane or the purely decorative side of the relief. Being part of a votive column, it probably also had a votive inscription and a distinguished position within the sanctuary's structure, having as analogy the Dolichenian votive column from Apulum (CCID, no. 153). The two animals – the eagle with bay leaf crown and the stag – are ever-present in Dolichenian iconography, but not in this odd combination, which makes this object almost unique in provincial and also imperial art. The edifice surrounding the two animals has a purely decorative purpose, not helping in identifying the holiness of the holies, but it indicates the religious side of the object. Vegetal elements and eastern shapes are schematic and typical to provincial art, with no specific Dolichenian character (however, the *aedicula*-shape of the edifice appears on other Dolichenian reliefs as well).

The displayed element dominating the scene of the relief is the stag, represented in a provincial style, bit schematic with circular antlers. In Dolichenian iconography, the stag appears in three hypostases. First of all, it appears as one of Iuno Regina's (Dolichena) zoomorphic symbols (CCID, no. 23, 43, 80, 89, 295, 364, 371, 405), usually the goddess standing on the back of the animal. The animal appears always with goddess Iuno, standing frontal with her companion, Iuppiter Dolichenus, who stands on a bull, very rarely accompanied by an eagle, that stands at the foot of the bull. The symbolic of these animals represents a largely debated theme in the professional literature, it is certain though that the frontal position of the animals and their nature shows not only the magical-mythical powers of these gods, but also the influence of classical Greco-Roman mythology. The cervidae associated to Iuno – quite rarely compared to other animals like donkey, ox or lion – is the deer, and not a stag (one exception being the relief from Villa Ludovisi in the sanctuary at Aventin).

From Dacia we know a single representation of Iuno Dolichena (Fig. 4), a votive plate from Porolissum, where Iuppiter Dolichenus appears with his companion and acolytes. The piece has a broad blade. On the upper side of this, corresponding to the planetary images, there are seven round orifices, through which probably a bronze plate with inscriptions was fixed, or certain 'sacred' days were being marked. In the superior field the main characters, IOMD and Iuno are shown, companions of Luna and Sol, two altars and an eagle. In the upper left corner is Sol. The bust appears in the shape of a semicircle, the head surrounded by a halo. In the upper right corner is Luna. On her semicircular bust a crescent is distinguished. IOMD is standing. Her long hair is combed, falling sideways. The upper part of the body is nude. A mantle falls over her left shoulder. In the right hand, stretched downwards she holds a mirror, leaning on an altar. Iuno is also standing; her head exceeds the upper limit of the field. Her hair is combed; elements of the face are not distinguished. In the lower part long clothes are distinguished. Over these clothes a mantle appears, thrown over the left shoulder. In her right hand she holds a mirror leaning on an altar. Between the two persons stands an eagle in resting position, with wings unfolded, the head is raised with the beak upwards, looking at IOMD (GUDEA–TAMBA 2001, Moigrad, Roman city, sector LM, building LM 1-S, room b., MIAZ, Inv C.C. 230/2000). Other analogies of this iconographic type we can find in the Dolichenian thesaurus in the sanctuary from Mauer an der Url, where the *paredra* of the god appears in the company of several gods or heroes (NOLL 1980, 44–49, fig. 15–17, SPEIDEL 25, fig. 11) that were part of the Dolichenian myth – Apollo, Luna, Sol, Castores, Isis, Serapis (Fig. 5).

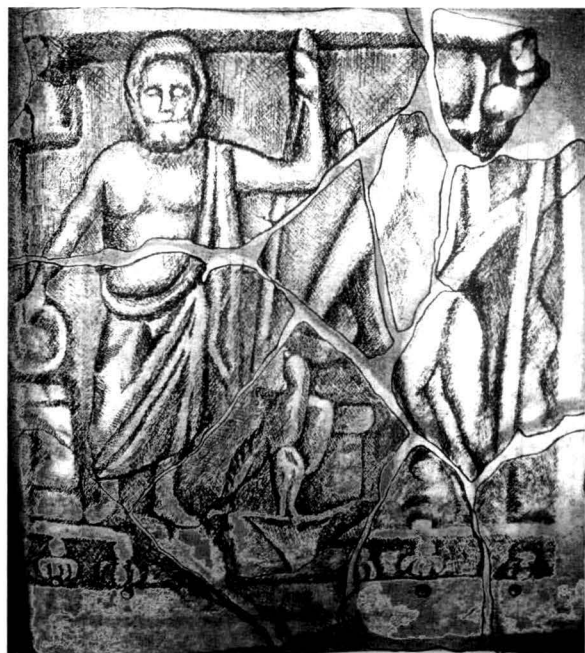


Fig. 4. Votive relief from Porolissum
(after GUDEA–TAMBA 2001).



Fig. 5. Votive triangle from Mauer an der Url
(after NOLL 1980).

The stag also appears in the iconography of the Dolichenian cult associated to a Syrian Ba'al, probably from Commagene: Iuppiter Turmasgades. The god – considered an avatar of Iuppiter Dolichenus (GILLIAM 1974, 309–314; NEMETI 2005, 235–238) – is known only through a few inscriptions and representations, especially outside the area of origin, associated almost always with Dolichenian dedications (Rome, Micia, Romula, Dura Europos, Trier, Caesarea Maritima). The god is shown in the form of an eagle, holding a bay leaf crown in its beak, subduing

a cervidae, or holding the head of an animal (horse, snake or cervidae). In the opinion of J. F. Gilliam, the animal under the eagle represents the omnipresent power of the heavenly god and his dominance over living nature. Figured examples of Turmasgades shows a small cervidae, hard to identify, in a humble position, where the eagle appears more proportionate. The 'eagle standing on stag' iconography is hard to identify and differentiate, especially in provincial art, many analogies existing when in these hypostases Iuppiter or Turmasgades appears.

The relief at Romula (Fig. 6) is one of the most beautiful and interesting concerning the iconography of Syrian cults in Dacia (Isac 1971b, 111–120). The fragmentary monument with inscription shows an eagle with unfolded wings, standing on an animal, most likely a stag. The head of the bird and part of a wing is missing. The animal's snout is ajar, tongue hanging, legs stretched in a last effort to flee (SANIE 1981, 101) it is the image of a victim. The dimension of the eagle reported to the stag can be very well noticed. This aspect suggests the eagle's victory. The inscription is dedicated to Turmasgades by two persons with Roman names: *Turmasgada / Max(imus) Maximinus et / Iulianus Maximinus / ex voto pos(uerunt)* (CIL III 8027; ILS 4074; SANIE 1981, 38, pl. III/5). In the temple at Dura Europos, one of the two *naoi* is dedicated to Dolichenus, the other to Turmazgades. This archaeological discovery underlined the tight association of these two Commagenian cults (NEMETI 2005, 236–237).

The closest topographical analogy is given by a piece from Ulpia Traiana Sarmizegetusa, kept at the Museum of Lugoj, similar in way of representation with the piece from Mehadia. The sculpture represents an eagle with wide unfold wings, standing on the head of a cervidae. From the sculpture the head of the bird and part of the animal's head is missing. The base of the monument has a rectangular shape, and the back side of the sculpture shows no sign of processing (Fig. 7). S. SANIE (1981, 70–71), interpreting the research done by F. Cumont and H. Seyrig, states that the couple formed by the eagle and cervidae could be the symbolic representation of the celestial god and the goddess of earth.

In these two reliefs the triumph of the eagle over the cervidae is displayed. The relation between them is not of the same status, we can't talk of subordination. In our opinion, the symbol in which the Syrian god triumphs over his enemy should be seen here, an ancient motif in oriental iconography and mythology. The monument analyzed by us depicts other relation between the eagle and cervidae. A subordinate relation cannot be categorically seen here. Through analysis of the visual language, we observe a victory of the celestial god (eagle with bay leaf crown),



Fig. 6. Relief with Turmasgades inscription from Romula (after SANIE 1981).



Fig. 7. Dolichenian sculpture from Ulpia Traiana Sarmizegetusa (after SANIE 1981).

together with his companion (the stag being the associated animal). The size of the stag is noteworthy; it is much bigger than the eagle, whose position shows a status of hegemony, power. In these conditions the relief at Mehadia is unique not only by iconography but also due to the relation of Iuppiter Dolichenus and the god's *paredra*.

A different explanation of unusual proportionality is the erroneous interpretation and development of the artist, a general phenomenon in provincial art, which leads to the appearance of typical iconographies, which are hard to identify. The two animals can thus symbolically represent the attributes of two divinities from the Dolichenian cult circle (Iuppiter Dolichenus and Iuno Regina), or of a single god associated to the Syrian cult of Iuppiter Turmasgades.

The votive columns (or colonettes) represent a frequent form of *ex votos* (altars, plates, slabs, reliefs, etc.) of Greco-Roman temples and sanctuaries even since the archaic era, widespread in Hellenistic era. The material, size and development of the object are determined by the local trait and the regional art, architectural type and votive image – relief or statuary placed on the capital. Sometimes these columns have not only a votive, decorative role within the sacred geography of the temples, but also a pragmatic architectural one. It is hard to define the role and position of these votive columns in the settings of the sanctuaries, especially in Dolichenian cult. According to the authors' opinion, the votive column at Mehadia was placed in front of the edifice, a theory hard to accept, considering the soteriological and cosmic feature of the cult. It is more likely that a votive column was placed inside the building.

From Roman Dacia we know a series of monuments of this type (monuments of provincial art, with no grooves and a simplified capitol), many of them being associated with eastern deities (IDR III/1 – 140, 144, IDR III/2 – 134, 204, 263, 281, 293, 298, 299, 307, 342, 344 (?), 358, IDR III/3 – 89, 142, 146, 289, 299, 311, 336, IDR III/4 – 49, IDR III/5 – 89, 113, 117, 136, 145, 164, 188, 191, 218, 279, 380). From the Dacian examples there are information about three Dolichenian votive columns from Tibiscum, Ulpia Traiana Sarmizegetusa and Apulum (IDR III/2 – 204, IDR III/3 – 299; CCID, no. 153); and from imperial analogies (CCID, no. 52, 60) we can see that the most widespread is the votive column with inscriptions. The example at Mehadia is thus an exception, the column being marked by the Dolichenian relief.

Besides interpreting the relief another problem arises: the affinity of the sanctuary, who set it and under what circumstances. Analyzing the archaeological material, the inscriptions that could aid us in this issue are missing. In these conditions we have to look for the adepts of the cult within the auxiliary troops stationed at Mehadia war camp. Of course, we do not exclude the possibility that the depositor was a follower with social, not military function. However, as it was proven in many cases, the cult of Iuppiter Dolichenus was prevalent mainly in military spheres. The votive relief we studied was found in the cult edifice.

To know who laid down the monument, we must analyze the troops stationed in the castrum at Mehadia. These troops are the following: *cohors Ulpia I Brittonum*, *cohors III Delmatorum*, *cohors VIII Raetorum*, and *legio XIII Gemina*. The symbolism of the relief must be linked to the military unit who raised the cult edifice. The temple was most likely built by the *III Delmatarum*, who came from an area of the Balkans inhabited by Illyrians, where the deity was particularly adored (BENEA 2008, 99–105). But a direct epigraphic invocation is missing; the name of the unit appears only as stamps on some roof tiles (COH III DEL, CO III D).

The 'Dolichenian' inventories are as follow: temples and sanctuaries; votive monuments, altars and reliefs with inscriptions; reliefs with representation of the god or the deities from his

pantheon (Iuno, Victoria, Apollo, Sol, Luna, etc.); eagle; bull statues and statuettes; votive hands of stone or bronze, life-size or miniatures; triangular silver or bronze plates with representations of multiple scenes from the god's cult; and silver blades. Analyzing the 'Dolichenian' inventory from Porolissum (GUDEA-TAMBA 2001), respectively from Mehadia (BENEA 2008), it is revealed that most of the representations were made out of marble, rock or volcanic tuff. Regarding the places where the eagle appears it is noted that three monuments appeared from Ulpia Traiana Sarmizegetusa, two from Mehadia, one from Porolissum (respectively three more of bronze), which shows the spreading of the cult not only in military, but also in civil spheres. In conclusion it can be declared that this iconography concentrates particularly in the Sarmizegetusa, respectively Porolissum area.

Out of the Syrian and Palmyran cults, Iuppiter Dolichenus was the most important divinity amongst the population in Dacia. Why was it Ba'al the one who experienced such a spread on western territories? The answer cannot be found in iconography, because Iuppiter Heliopolitanus, Iuppiter Hieropolitanus, Zeus Hadados, Iuppiter Damascenus or the Palmyran triad also shared these qualities. Just because of these qualities Iuppiter Dolichenus does not really extend outside Commagene. We should rather seek the answer in the rapid expansion on the respective territory and the importance of the pervasive army in the spreading of the cult. Analyzing the eastern cults present in Roman Dacia (cult of Mithras, Syrian and Palmyra, Microasian and Egyptian cults), regarding their monuments, we can affirm that the cult of Iuppiter Dolichenus holds the second place in this classification, overcame only by Mithras. The monument we presented represents a particular and unique analogy in the iconography of the god, which is proof not only of the widespread of the cult, but also of diversity in provincial art, and relation of artists and workshops with the flow of ideas, and standard iconographic forms.

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TIMIȘOARA–FREIDORF OSTEOLOGICAL ANALYSIS OF HUMAN REMAINS

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In the 1990's at Timișoara–Freidorf three partially disturbed graves dated to the period of Huns were discovered. The physical anthropological analysis identified a case of artificial cranial deformation. The investigations also pointed out the Germanic character of the skeletons, outlining the importance of the Gepids in the political structure of the Hunnic Empire.

Keywords: Timișoara–Freidorf, cemetery, artificial cranial deformation, Huns, Gepids

Up to now, in Banat, south-western Romania only a few archaeological finds from the 5th century AD were discovered, and only one archaeological site – *Freidorf* – was scientifically investigated, while the other discoveries were collected incidentally. In 1988 three graves were unearthed, and two other graves were found in 1992 and 1995, all of them are already published (MARE 2000). Four more graves were discovered during a preventive archaeological research in 2006.¹ From the first three graves only two had archaeological inventory dated in the first half of the 5th century AD, the third one was disturbed and only small fragments from the skull, a few phalanges and fragments of a corroded metal object could be recovered. The fourth grave was considered a cenotaph, probably contemporary with the others. The inventory of these graves reflect the rite and ritual burial customs of common people from the Hunnic period, ages known especially by the famous treasures and prince graves discoveries of the elite.

The human osteologic remains have relatively good preservation conditions. During the anthropological analysis macroscopic and morpho-taxonomic methods were applied. The main investigations referred to: age estimation (based on NEMESKÉRI *ET AL.* 1960; ACSÁDI–NEMESKÉRI 1970; STLOUKAL–HANÁKOVÁ 1978; ÎȘCAN *ET AL.* 1984; 1985; MEINDL–LOVEJOY 1985), sex determination (based on ÉRY *ET AL.* 1963; SJØVOLD 1990; RÖSING 1988; BERNERT 2005), dental analysis (based on MILES 1963), anthropometric and osteometric analysis (based on MARTIN–SALLER 1957; ALEKSEEV–DEBETS 1964) and pathology (after JÓZSA–PAP 1994; LIPTÁK–MARCSIK 1976).

Grave no. 1

The state of the skull is precarious. Small fragments from the mastoid process (internal acoustic pore), small fragments from the parietal bones, temporal bones and occipital bone were recovered. The ecto-and endocranial sutures are open. Dental formula: 2102 (II.DM1; IV.DM1;

¹ Summary of communication was submitted on A.R.A 12, April 2011.

IV.DM2). Only one fragment from the rim of a canine is preserved. From the thorax small fragments from thoracic vertebrae are kept, the rest of the skeleton is missing. The eruption phases of the teeth indicate a young child (Infans I, 18 months), whose sex, stature cannot be determined. No traces of pathology could be observed.

Grave no. 2

The skull is preserved fragmentary: only small fragments of the parietal bones are kept, the occipital bone and cranial base are missing. The skull was artificially deformed: it shows marks of circular distortion type, in frontal-occipital direction (LIPTÁK–MARCSIK 1976; NEMESKÉRI 1944, CZIGÁNY 2008). From cephalometric point of view, according to the cranial indexes after the method of R. Martin in ALEKSEEV–DEBETS (1964) classification, the deceased had a very short skull (hyperbrachicefal 8:1), with higher orbits (hyperhypsikonch 52:51) and small nasal cavity (chamaerrhin 54:55). The skull is very short (hyperbrachicefal) because of the deformation. Beside the deformation of the skull, the differences in the structure of the facial bones can be related to the skull evolution. The defunct was a small child, with higher orbits, small nasal cavity in comparison with the full face (see Appendix 1). On the frontal bone marks of the bandage could be observed and the *praebragmaticus* bulge on the frontal bone is eaten; because of the distortion procedure the cortical layer becomes thin. Since the cranial base and the *nuchalis* region are missing we could not apply the LIPTÁK–MARCSIK (1976) method of calculation of basion–antibasion distance, distortion indicator – the relationship between basio–antibasion distance and glabella–inion length – or the inclination of forehead's profile and distortion angle. Dental formula: 2102 (I.M1; I.DM2; I.DM1; II.DM1; II.DM2; II.M1; III.DM1; III.DM2; III.M1; IV.M1; IV.DM2; IV.DM1). The remaining teeth have fallen *post mortem*. From the thorax an axis vertebra, 5 cervical vertebrae, 4 thoracic vertebrae and 3 lumbar vertebrae are preserved; and from the pelvis the iliac bone fragments, ischium and the sacrum bone. From the upper and lower limbs there are kept the clavicle (81 mm), the left humerus (length of bone 176 mm), the left and right femur without the lower parts, the right and left tibia (length of bone 195 mm), left and right fibula without lower parts, left and right calcaneus (length of bone 45 mm). The epiphysis ends are not ossified. The eruption phases of teeth, the ecto- and endocranial sutures, the epiphyses of



Fig. 1. Timișoara–Freidorf. Grave no. 2.

long bones and the size of long bones indicates a young child (Infans I, 6–7 years old). The sex could not be determined. According to the T. Sjøvold and F. W. Rösing methods, in the classification of R. Martin the deceased had small stature of 110.5 cm. Regarding the pathological marks, the most obvious is the head flattening; on the area of frontal, parietal and occipital bones the tire tracks could be observed. The frontal bone is affected by infection: the cortical layer is eaten on the medial area of the bone. On two of the lumbar vertebrae (vertebral body) traces of bronze were observed.

Grave no. 3

The skull is relatively well preserved; parts of the parietal bone, temporal bone (right part), cranial base and part of the zygomatic bone are missing. The facial bones are relatively well preserved; part of the orbit (right part) and the edge of the zygomatic bone (right part) are missing. Cephalometrically, based on cranial indexes according to the method of R. Martin, in the classification of ALEKSEEV–DEBETS (1964), the deceased had a very long skull (hyperdolichocefal 8:1), elongated facial area (hyperleptoprosop 47:45), relatively small orbits (mesoconch 52:51) and large nasal cavity (mesorrhin 54:55). The occipital bone is curved, but the occipital protuberance is not pronounced. In superior sight the skull has oval shape (See Appendix 1). Dental formula: 2123 (r. M3, PM2, PM1, C, I2, I1; l. PM1, PM2, I1, I2, PM1, PM2, M2, M3). The teeth are heavily worn, M2, M3 (2), M1 (3), and M1, M2 (4) teeth have fallen during life and the alveolus was resorbed. The root of the 2nd incisive (2) was affected by pus and *prognathia alveolaris* could be observed. From the thorax the atlas vertebra, axis vertebra, fragments of thoracic and lombar vertebrae and the diaphysis part of ribs were recovered. From the upper and lower limbs right the following bones were kept: clavicle (length of bone 122 mm), left clavicle (without lateral epiphysis), left and right scapula, left humerus (length of bone 296 mm, head diam. 41 mm, l. tr. 27 mm, l. sagit. 29 mm, l. tr. inf. 25 mm, l. sagit. inf. 15 mm), right humerus (length of bone 293 mm, head diam. 41 mm, l. tr. 28 mm, l. sagit. 26 mm, l. tr. inf. 18 mm, l. sagit. inf. 15 mm), left radius (length of bone 212 mm), left and right ulna without lower epiphysis, left femur (length of bone 395 mm, head diam. 40 mm, l. tr. 30 mm, l. sagit. 28 mm, l. tr. inf. 35 mm, l. sagit. inf. 25 mm), right femur (length of bone 393 mm, head diam. 40 mm, l. tr. 36 mm, l. sagit. 30 mm,



Fig. 2. Timișoara–Freidorf. Grave no. 3.

l. tr. inf. 34 mm, l. sagit. inf. 28 mm), right tibia (length of bone 320 mm, l. tr. 35 mm, l. sagit. 36 mm, l. tr. inf. 34 mm, l. sagit. inf. 28 mm), right fibula (length of bone 317 mm), left and right calcaneus (length of bone 71 mm). From the pelvis there are the iliac bones (*crista iliaca* is not developed), pubian bone (*facies ossis pubis* in 3rd phase), sacrum, ischion bone (*incisura ischiatica maior* in ‘V’ shape).

Martin No. (mm)	Clavicle		Humerus		Ulna		Radius		Femur		Tibia		Fibula		Calcaneus	
Graves. M3	s. 122	d. 122	s. 296	d. 296	s.	d.	s. 212	d. 212	s. 395	d. 395	s. 320	d. 320	s. 317	d. 317	s. 71	d. 71

Table 1.

Since the ecto- and endocranial sutures are relatively closed, teeth are heavily worn – however the tooth decay does not mean an old age –, consequently the sutures of the skull, epiphysis part of long bones and *sulcus preaericularis* show an adult person (38–40 years old). The skull traits (shape of frontal bone, traits of glabella, mastoid process, occipital protuberance and mandible angle), the pelvis (shape of sacrum, ventral arch of the pubis bone, *incisura ischiatica maior* in ‘V’ shape), the dimensions of long bones (length of bones, head diam. of humerus and femur, *linea aspera* in the case of the femur, etc.) show signs of a female (-1, 2 after K. Éry). According to the Sjøvold and Rösing methods, in the classification of R. Martin the deceased had a medium-high stature (152.62 cm).

On the dorsal side of the iliac bone (right part) and on the dorsal side of the right femur (area of femoral neck) and traces of bronze could be identified. Regarding the pathological signs, an abnormal ossification on the left clavicle (medial area) could be observed, probably because of an infection. Further, dental cavities and *paradontosis* could be identified, on the left orbits another anomaly, *cribra orbitalia*, could be observed which is considered the incipient phase of PH – *Poroticus Hyperostosis* – anaemia. The disease PH – a good lifestyle indicator for ancient people – is in connection with irregular nutrition of the communities. On thoracic vertebrae the signs of *arthritis* in incipient phase could be observed.

On the territory of Romania the archaeological and anthropological discoveries belonging to Huns – civilization followed up to the 6th century (BÓNA ET AL. 1993) – are very scarce (SZATHMÁRY 1986), since this population spent only a brief period in the Central Danubian Basin. The anthropological analysis of the cemetery from Timișoara identified two adults and a young child. The dolichocranic deceased from grave no. 3 had a regular and high face construction, signs of the Nordic and East-Baltic skull type, variant spread among Gepids in the 5th–6th centuries AD. The pathological marks – *cribra orbitalia* PH, arthritis and heavily worn teeth (using primitive grindstones in food production) – indicate a primitive lifestyle.

The most interesting skeleton came from grave no. 2. The deceased was a child with artificial cranial deformation (circular type with fronto-occipital direction). Had flattening was a widespread custom, a complex procedure of un-elucidated origin. It was realized by applying two bandages; the wider bandage runs down from the forehead via the temple to the occiput and surrounded the head ring-wise. The narrower bandage ran from the dome of the cranium down and under the chin (FÓTHI 2000). The procedure was realized in two phases: at the first time two

bandages were put in fronto-occipital direction on the head (the skull was elongated backward and upward), in the second phase, from 9–10 months of age, a circular bandage was applied. During nutrition the bandage was taken off (RENFREW–BAHN 1999). According to F. ALTHEIM (1975) – thesis accepted by the Hungarian anthropologist P. Lipták – this peculiar custom was spread in Europe by the Alans. On the other hand, based on the Gepidic cemeteries from Kiszombor B, in the Lower Tisa area, L. BARTUCZ (1939) stated that this custom came with the Huns, considering that the Gepids from Kiszombor formed a special conglomerate made up of elements of Nordic, Mediterranean, East-European, Turanoid, Mongolid and Palaeo-Asiatic races. Analyzing the discoveries from Keszthely–Fenékpuszta, I. Pap marked out that the custom of artificial cranial deformation probably is not an ethnic marker (JÓZSA–PAP 1994).

Data regarding the stature of the community from Timișoara–Freidorf could be obtained only from grave no. 3, where based on the measurements made on the skeleton its height was established to 152.62 cm. Because of the low number of archaeological finds and low anthropological representation the cemetery from Timișoara is one more case for the lack of useful information regarding the anthropological study of the Huns. Only the skeleton from grave no. 3 could be fully analysed. The defunct had Nordic and East-Baltic character, typical for the Germanic populations of the Gepids. Accordingly, the population from Timișoara–Freidorf had Europoid characters (Nordic and East-Baltic), without mongoloid traits on the skulls, which would connect the skeleton to the Huns. The archaeological discoveries from the Carpathian Basin indicated that Germanic populations – namely Gepids – had an important role in the leadership of the Huns (BÓNA *ET AL.* 1993), observation sustained by the discoveries from Vinkovci, Croatia (RAPAN PAPEŠA 2010). The cultural-ethnic classification of the finds is also sustained by the artificial skull distortion, a common custom among Alans, Huns and Gepids.

APPENDIX 1
Anthropometry

Martin no.	Grave no. 3	Grave no. 2
1	183	156
5	-	-
8	131	134
9	90	87
10	111	112
11	-	-
12	108	111
17	141	151
20	-	-
38	453	436
40	103	-
43	-	-
45	107	107
46	-	-
47	115	90
48	68	56
51	38	35
52	32	34
54	26	24
55	54	44
60	57	48
61	57	54
62	37	30
63	34	27
65	-	-
66	-	80
69	30	24
70	55	44
71	30	34
8:1	71.58	85.90
17:1	77.05	96.79
17:8	107.63	112.69
20:1	-	-
20:8	-	-
9:8	68.70	64.93
47:45	107.48	84.11
48:45	63.55	52.34
52:51	84.21	97.14
54:55	48.15	54.55
63:62	91.89	90.00
Classification after Alekseev-Debets		
8:1	Hd	Hbr
17:1	Hyp	Hhyp
17:8	Hakr	Hakr
20:1	-	-
20:8	-	-
9:8	Metr	Sten
38	Olig	-
47:45	Hlepp	Eup
48:45	Hlept	Mese
52:51	Meso	Hhyps
54:55	Meso	Ch
63:62	Br	Meso

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Fig. 2. Timișoara–Freidorf. Grave no. 3.

THE MEDIEVAL FORT AT MOREȘTI BASED ON GEOPHYSICAL SURVEYING AND FORMER ARCHAEOLOGICAL EXCAVATIONS*

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In 2010, on the territory of the hillfort of Morești (Hu. Malomfalva) we managed to undertake a series of non-invasive surveys, the purpose of which was to establish the limits of the hillfort as well as the identification of new possible archaeological features. Concerning the extent of the fort the geophysical survey brought to light new results and at the same time it marked the beginning of a new archaeological research.

Keywords: Morești, medieval fort, Árpadian period, magnetic measurements, geoelectric measurements

After more than fifty years of K. Horedt's excavations (1951–1955) numerous questions remained unanswered connected to the hillfort from Morești. This is why we think that it is important to re-open the research and to gain new information about the fort, which is considered by the scholarship a grid-structured border fortification (BÓNA 1998, 47). The fort in the 11th and 12th centuries was probably a dependency of the early Árpadian period Torda County. Based on its location it was erected for the control of the traffic on the Mureș Valley and possibly it was the center of the castle district encompassing the eastern part of the royal county (BÓNA 1989, 148; BENKŐ 2010, 222). The territory of the hillfort was exposed to intensive agricultural destruction for several decades. As a first step our aim was to pursue a series of non-invasive surveys, the scope of which was to clarify the accurate limitations of the fort and to identify new, uncharted

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fig. 10; HOREDT 1958, 49–50), dated to the 11th century denoted the starting point of the research. Later, the origin of the sword, as a find from Morești, was questioned.¹ In the six years of archaeological research, on the territory of the medieval fort excavation was conducted only four times.

In 1951 three sampling trenches – I, II, IV – were opened (Fig. 2), which clarified the situation of the northern and western defensive system of the triangle shaped hill fort. The northern defensive system, which runs across and separates the fort from the *Podei* plateau in a west-east direction, consists of an outer moat and an 8–9 m wide rampart. This, on its inner side is supported by a burnt red clayish earth stripe. Right next to the inner side of the rampart a 6–7 m wide fluvial stone paving was found, which in certain places was disturbed by a wooden structure. On the western part of the fort the burnt red earth strengthened the rampart on its outer side (HOREDT 1952, 329–331). During the excavation in 1952 only one trench was opened (XV) in which no structures were found that could be connected to the fort (HOREDT 1953, 298). The XXXVIII trench, opened in 1954 confirmed the observations made in 1952 about the northern defensive system (HOREDT 1955, 655–656). The seven trenches opened in 1955 (XLV, XLVI, XLVII, XLVIII, XLIX, L, LI) were meant to elucidate the exact ground plan of the fort. It turned out that the stone paving continued on the eastern side but the burnt earth and the rampart, if it



Fig. 2. The ground plan of the medieval fort with K. Horedt's trenches (1951–1955) and the measured area (after the map of K. Horedt from 1957).

1 Regarding the debates concerning the sword from Morești, see: HOREDT 1967, 509–510 and VLASSA 1967, 511–512.

ever existed, disappeared probably because of landslide. This burnt red earth stripe from the western side continued until the southern corner. In the inner part of the fort fragments of a stone based surface construction were identified (HOREDT 1957, 176–179). The 90 × 60 m fort is limited on its eastern and western side by steep slopes, probably with this can be explained the fact that on the western side, only the burnt earth stripe appears, while on the eastern side, only the stone pavement was found. The research in 1956 concentrated on the plateau outside the fort and with this the six-year long excavations ended for quite a long time. After the processing of the finds, the results of the excavations were published by K. Horedt in two separate volumes (HOREDT 1979; HOREDT 1984). The excavation done by D. Protase in 1985–1986 and 1989–1991 in Morești did not affect the hillfort (PROTASE *ET AL.* 1988, 287–297; PROTASE 1999, 265–272).

Geophysical methods

The most frequently used geophysical method in archaeological research is the magnetic surveying (DAVID 1995; SCHMIDT 2007). In general, magnetic measurements aim to determine the location and depth of buried magnetic objects (TELFORD *ET AL.* 1990). The materials most suitable for magnetic prospecting are the volcanic rocks, brick, potteries and other types of burned clay, and of course iron. The soil also contains magnetic minerals, and if the structure of soil is disturbed, then it results in the change of its magnetic properties. Therefore, trenches, graves, foundations of walls can also be detected by magnetic measurements. The magnetic field of an object has simultaneously a positive and a negative part, both belonging to the same object, similarly to a magnetic compass (Pl. 1/3). Very often the vertical gradient of the magnetic field is measured. The vertical gradient gives the rate of the change of the magnetic field in vertical direction. The vertical gradient is more sensitive to the field of near surface objects, and it results in a sharper picture than the magnetic field itself. The magnetic anomaly field or the vertical gradient is shown in maps.

In many cases it is worth to apply different geophysical methods, because they are sensitive to different material properties. The results can support each other and help the interpretation. The geoelectric methods aim to determine the electric resistivity or conductivity of the subsurface materials (TELFORD *ET AL.* 1990). In Morești we applied the direct current geoelectric method to obtain the resistivity distribution along a vertical section. This method is more time consuming than the magnetic method, therefore it is mainly applied after the magnetic survey in order to clarify some details. Its other advantage is that it provides the depth of the objects in a more direct way than the magnetic method.

Field work

The survey area was delineated based on the map of K. HOREDT (1957) showing the structure of the fort (Fig. 2). We did not know the exact position of the fort; therefore a larger area was prospected. We were not able to measure until the edge of the slopes, because these sides were covered by dense bushes. The survey area was restricted to the open areas, which are still under use. Therefore the tip of the hill, where the centre of the fort was located, was left out of the survey. We used Overhauser magnetometers to measure the vertical gradient of the magnetic field in a rectangular grid with spacing of 1 m. Based on the results of the magnetic survey one geoelectric section was measured. Its location was established to cross the main structures visible in the magnetic map (Pl. 1/3).

Results and interpretation

The most striking feature on the vertical gradient is the 6–7 m wide curved shape stripe of strong magnetic anomalies, which borders the fort from the northeast. According to the interpretation of K. HOREDT (1952) it is a pavement or a 'flaster' consisting of pieces of stones. The discontinuous magnetic anomalies are in agreement with this interpretation because a solid wall would have a continuous anomaly. Some stones of few tens of centimetres in size can be found on the surface above the pavement, but K. HOREDT (1952) mentions larger ones built into the pavement. K. BENKŐ (1869) wrote that the local people collected and sold a lot of stones suitable for construction works from the hills nearby Morești and the bank of the Mureș River. We note that these stones have been transported by the river from the Călimani Mountains. Their material is andesite, which explains the high magnetic anomalies. At a 6–7 m distance in front of the pavement the outer trench can be seen by greenish light blue colour. Its width is about 10 m. An inner trench can also be observed, but its magnetic anomaly is less evolved. The magnetic anomaly stripe and thus the pavement is missing in a 15 m long section in the northern side. In front of this section the outer trench is faint and the inner trench is missing. The reason of this gap is not known.

The entrance to the fort was probably in the north-western corner (Pl. 1/2). There the terrace is in a lower elevation. In the western side of the plateau parallel to the slope a linear anomaly, shown by yellow and red colours, is found. It might be caused by burned clay. According to K. HOREDT (1952) the sides of the fort on the slopes were strengthened by burning the soil. In the south-western corner, close to the centre of the fort many small magnetic anomalies are detected. They very likely belong to the ruins of the buildings of the fort, but they do not reveal regular shape or structure. These anomalies might be caused by piles of stones, brick or tiles. One smaller anomaly can be explained. It is shown by a short and narrow blue line perpendicular to the pavement at its eastern end. This anomaly indicates K. Horedt's XXXVIII sampling trench (Fig. 2).

The resistivity in the upper 2.5 m is homogeneous and its value ranges between 10 and 20 ohm (Pl. 1/4). These values are typical for clay. The pavement is located at a distance of 30 m and it is characterized by resistivity of 30–40 ohm. Its base is in less than 30 cm depth. In case of a solid stone wall the resistivity would be higher and the foundation would be deeper. All these observations are in accordance with the results of the magnetic survey and the interpretation of K. HOREDT (1957) that the pavement consists of a loose stone layer near the surface. Other structures made of stone are not detected along the section.

The outer and inner trenches are not visible in the resistivity. They have been filled up with the material of their neighbourhood, thus the resistivity of the fill and the wall of trench is the same. At 2.5–3 m depth the resistivity increases over 200 ohm due to change in the type of the sediments. It indicates that in larger depth dry sand or gravel can be found.

The magnetic surveying was suitable to detect the location and to map the structure of the fort at Morești. It was possible to identify the defence system surrounding the fort from north-northeast. It consists of an outer trench and a 'pavement' in its inner side constructed from stones. A 15 m long section in the north is missing from the system. An inner trench inside the fort and possible ruins of buildings in the central part are new features, which have not been discovered by the excavations of K. Horedt. Field investigation together with the geophysical survey suggests

that the entrance to the fort was in the north-western corner. A new series of excavations are planned on the basis of the results presented in this article in order to verify these results.

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Fig. 1. Moreşti and the plateau above it on the Second Military Survey (1806–1869).

Fig. 2. The ground plan of the medieval fort with K. Horedt's trenches (1951–1955) and the measured area (after the map of K. Horedt from 1957).

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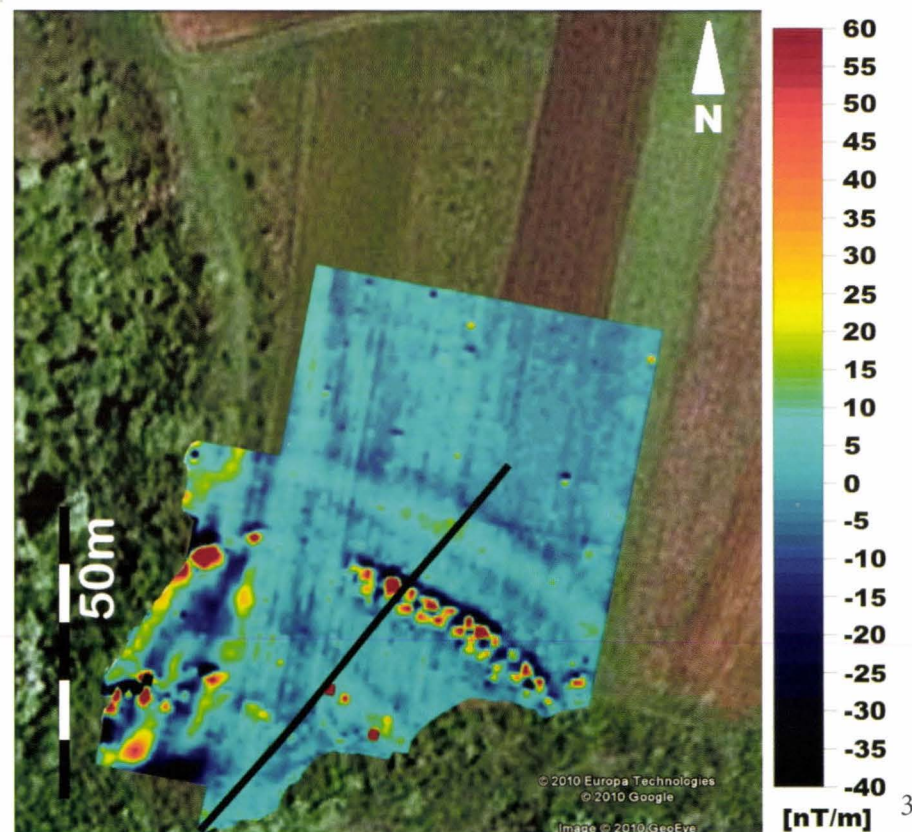
Pl. 1. 1. The Mureș plateau (photo: Z. Czajlik, June 2010); 2. The road, that leads to the fort and the presumed entrance; 3. Vertical gradient of the magnetic field in the area of the fort at Morești. The curved shape stripe of strong magnetic anomalies (large red dots with blue stripe north of them) corresponds to the pavement identified by K. Horedt (1957). North to it the outer trench can be seen. The magnetic anomalies on the south-western corner are due to the buildings of the fort. The black line indicates the location of the geoelectric section; 4. Electrical resistivity distribution along the geoelectrical section. The only archaeological object visible in the section is the pavement at ~30 m. It is in shallow depth, and it has slightly higher resistivity (40 ohm) than the surrounding clay (10–20 ohm). The high resistivity in 2.5–3 m depth is due to sand.



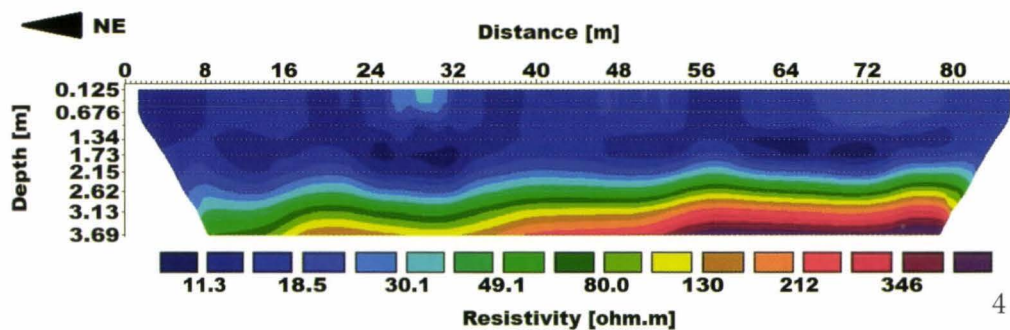
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Plate 1. 1. The Mureș plateau (photo: Z. Czajlik, June 2010); 2. The road, that leads to the fort and the presumed entrance;
3. Vertical gradient of the magnetic field in the area of the fort at Morești; 4. Electrical resistivity distribution along the geoelectrical section.

MEDIEVAL FINDS FROM COTORMAN

ISTVÁN BOTÁR

Muzeul Secuiesc al Ciucului, Miercurea Ciuc, RO

In memoriam Gábor Kasza

Cotorman is a small village in Csík-seat, which appears in the written sources in the 16th century. There were no information about archaeological finds or sites from the territory of the village, but the place name suggested that the settlement is much earlier than the written mentions. Field survey confirmed the supposition, the collected material proved the existence of such a settlement in the 13th century. During this work also a reliquary pectoral cross was delivered by one inhabitant, therefore we decided to make a control excavation. The first year's (2007) main achievement was the identification of an oven with three layers, each containing more ceramic fragments dated to the 14th century. At this point it is uncertain if the oven was placed in a house with three rooms (suggested by wooden remains) or in an intermediary building. The analogies of the ceramic finds appear only in distant towns, castles and manors. Close to the oven, in a 13th century pit beside ceramic fragments a sword pommel was collected. It is highly possible that in the 13–14th century we have to count with the presence of a family (!?) with superior material culture and wider connections than the local rural communities. The question if these finds belonged to the local elite prior the immigration of the Székelys, to the milites of the former frontier organisation, or they were connected to a early Székely 'aristocrat' remains unanswered.

Keywords: settlement archaeology, medieval material culture, pottery, Árpadian period, reliquary cross, Székely Land

Until the recent times, the archaeology of the medieval period in Csík Seat was almost totally neglected (BENKŐ 1993; BOTÁR 1999). In the last decade there were several excavations in the medieval churches of the region which produced important results regarding the beginnings of the ecclesiastical system in Székely Land and building periods of the researched churches (BOTÁR 2009a). This development is surely not valid for the archaeology of the settlements. The situation is well characterised by the fact that the last published materials – houses from the Árpadian period and late Middle Ages – were excavated in Sâncrăieni in the 1950s (PREDA 1959, 831–832, 845–853). Since then, the results and materials of the different excavations made in late medieval sites – mostly manor-houses (Gheorgheni–Lázár mansion, Sâncrăieni–Bors- and Andrásy-mansion, Miercurea Ciuc–Kőrösi Csoma Sándor Str., Miercurea Ciuc–Mikó fortress and Ciomortan) –, are kept in drawers of the local museum. A unique exception is the catalogue of the medieval tiles of Csík Seat written by M. KÉMENES (2005). Due to this situation there is very scarce information about the medieval material culture from Csík Seat.

Therefore, the development is conditioned by several factors. The first would be the publication of medieval materials from the archaeological deposits of the Muzeul Secuiesc al Ciucului. These materials were collected almost exclusively from undocumented field work, and in many

Therefore the present paper wishes to be a first item of a longer (?) series aiming to publish the intermediary results and new archaeological material even if further researches may change the actual opinions.

Cotorman is a small village, part of Ciucsângeorgiu in a side valley of Fiság creek. The settlement appears in the written records from the 16th century, and according to these the village belonged ecclesiastically to Ciucsângeorgiu, but it was an independent settlement (SzO, II, 221, 1567: *kotorman*; II, 262, 1569: *kothormanij*; II, 298, 1570: *kotorman*). The village is missing from the archaeological databases; the single important site/monument was thought to be a 17th century chapel from the cemetery (BÁRTH 2007, 296–297). The chapel is dedicated to *Sarlós Boldogasszony* and an attentive inspection can easily define that it is a rebuild construction which was originally shorter and lower, and surely without tower on the western side. The simple polygonal plan without buttresses as well as the dimensions – its original length was about 7 m – rates it within the ‘early type’ of chapels (BOTÁR 2011). The presumed earlier dating is supported also by yet unused records which relate about freshly bought bells in 1614 (VESZELY 1860, 145). This is a sure proof for the existence of the chapel by the end of the 16th century, but we suspect even a much earlier date of building, probably in the 14th century. The surrounding cemetery was probably formed in the 18th century.

Beside the supposed earlier phase of the chapel there is another aspect which argues for a much earlier formation of the village than the period of the first appearance in the records, namely the place name. There are some intentions to explain the place name from the geographical characteristics of the village hidden in a small, ‘closed’ valley (Hu: *kotor*, *kotorék*), others thought of place name transfer from western Hungary (BENKŐ 1990, 117), but more probably it derives from a personal name used in the Árpadian period: *Kotorman* (FEHÉRTÓI 2004, 451),¹ therefore this archaic name, formed without any affix suggests also a formation in the Árpadian-period (BOTÁR 2008). This ‘Kotorman’ could have been the founder, the possessor or just a remarkable person of the village.

Returning to the archaeological information regarding the settlement, the aim of our field survey was the on-site ‘material’ control of this presumption. During the field works we collected archaeological finds from several gardens inside the village, including ceramics from the Árpadian period, so the hypothesis about the origins of the village was validated. Beside the ceramics, regularly found on archaeological sites, during the field work a local inhabitant, Mr. G. Kasza delivered a bronze cross (Fig. 2), which he found in his garden (no. 496) during ploughing.

The two-piece cross made of bronze is absolutely intact, it is 7.8 cm high (9.4 cm with the lower locking part and 10.7 cm with suspensor), 6.8 cm width, and 1–1.4 cm thick. In the medallions of the round ended stems there are figures of apostles. The edges of the stems are decorated with rope, on the face there is the crucified Christ and on the back side Madonna with the child. On both sides blurry Cyrillic characters can be seen. The piece belongs to the series of reliquary crosses produced in the 11–12th century in Kiev (KORZUKHINA–PESKOVA 2003, 70, II.1.1/73 type;² LOVAG 1999, 133/21–22). They were wide spread trade wares in the Carpathian Basin, including Transylvania, and the surroundings without any ethnical or confessional character.³ The artefact has small deviations which are missing on the analogies, therefore it is very

1 The name: *Katurman*, or *Kotorman* appears in records from 1249/1291.

2 We would like to thank Maxim Mordovin for his help.

3 Different opinion were asserted by SPINEI –COROLIUC 1976; SPINEI 1992.

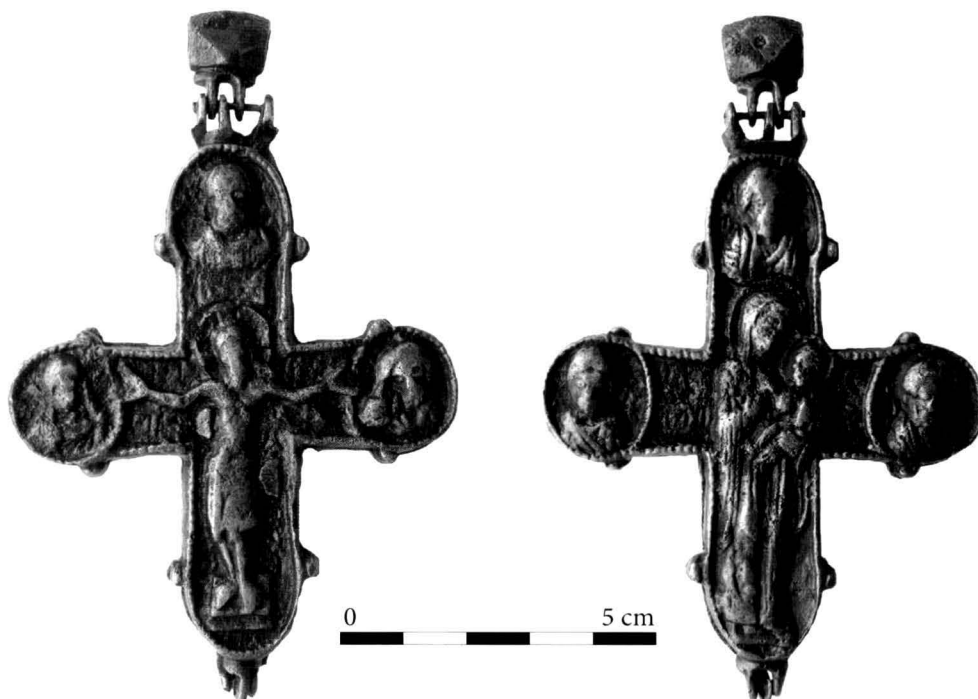


Fig. 2. Reliquary cross from Cotorman.

probable that this is not an original cross, but a later copy cast. Such deviations are the two bulges near Christ, which can be seen also inside, remains of a casting defect.⁴ Therefore, despite its analogies, we presume that the reliquary cross from Cotorman is not dating from the 11–12th century, but more probably belongs to those similar crosses which appear in the treasures hidden during the Mongol invasion in 1241–1242. Even so, the cross confirms the existence of the settlement in the Árpáadian period, and it is also a clear proof that the inhabitants of the Csík Basin were not living in an ‘isolated reservation’ somewhere on the periphery of the Hungarian Kingdom. They took part in commercial or military relations during which such pieces could reach even in a small village. There were persons among them who had the exigency to wear and also the possibility to acquire such crosses. This hypothesis needed a control; therefore in 2007 we started a small verifying excavation on the plot where the cross was found (Fig. 3).

In the section 1 a large oven was found (length 180 cm, width 120 cm), mounted on the surface (Fig. 4). The baking surface of the oven had three layers, each containing within the clay fragments from ceramic pots. The wood remains and the yellow clay pigmentation around the oven suggest a square-shaped building above the oven. Based on the orientation of the wood remains a plan of a building with three rooms can be reconstructed. However, the slight wood remains (sleepers, beams?) were not put on stones, not even on the corners, and the sloping level of the clay pigmentation did not formed a solid, continuous layer, so it is questionable to interpret as a step level. Therefore, even if the reconstruction of a wood house built on the surface is very attempting, further research – north to the oven – has to decide if we have to deal with such, heavily disturbed house, or the oven was build in a temporary building. If the existence of such a construction is proven, this could be the missing link in the typology of medieval houses from Székely Land. Until the present day there is no published plan of a surface-built house with three rooms in Székely Land.

4 We would like to thank the friendly help of Zs. Lovag, E. Kis, E. Benkő and M. Mordovin.

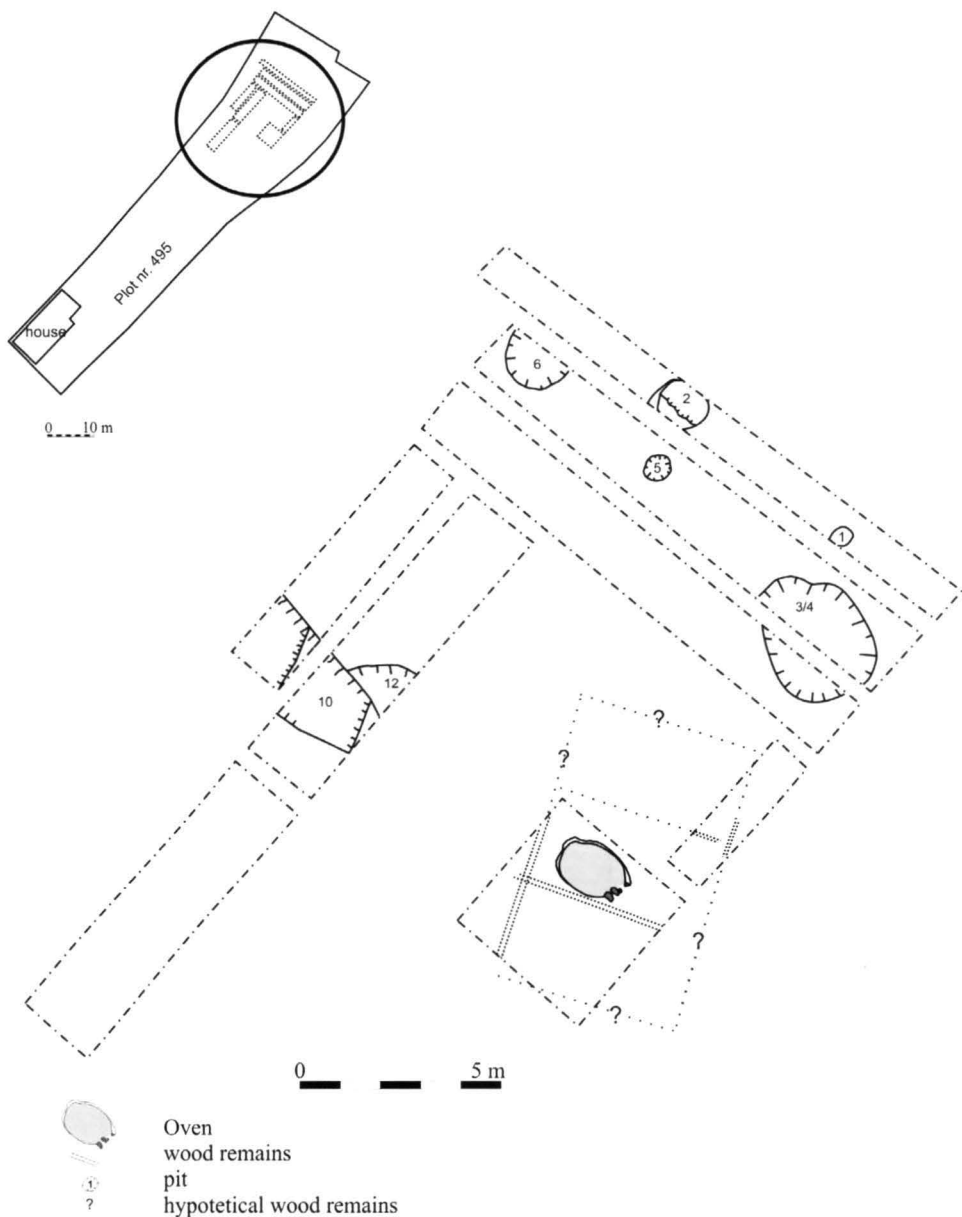


Fig 3. Plan of the excavation (2007–2008).

From the upper (A) layer beside other fragments (Pl. 1) we could eke out a pot (h. 23 cm, rim diameter 14.5 cm), a jug with handle (h. 26 cm; rim diameter 16 cm), and two fragments from a mug shaped stove (rim width 11 cm). The middle (B) layer contained fragments (Pl. 2) from a jug, several pots (rim widths 14.5, 23 cm), and more mug shaped stoves. More of these probably belong to each other, but during the restoration we could not match them. One of the pot bottoms had a potter's stamp (Pl. 3/4). In the inferior (C) layer we found fragments (Pl. 3) from more mug shaped stoves, fragments of four jugs, three of them were fine, red coloured pieces, with spaded finish, the other, a larger one, made less exigently. Some pieces from an archaic pot were also found. The list is incomplete, there is very probable that more pots could have been assembled from the fragments by a restoration specialist.

Regarding the interpretation, it is very important that occasionally fragments from different layers were matching. This is a clear sign that the oven was made from stored material.⁵ The only decoration on the pots was a shallow furrow; the jugs have the same decoration along with

5 We would like to thank J. Ács for her work regarding the restoration of the material.

a rib on the shoulder. Although the bottoms were lifted and not cut from the wheel (one even preserved the bottom mark), the pots were made on heavy wheel clearly shown by the signs of throwing visible inside the pots. The pots and the oven can be dated to the 14th century.



Fig. 4. 1. Wood remains and the oven; 2. The three layers of the oven.

The closest analogy for these finds are known from an oven documented in Cristuru Secuiesc–Szabadság tér no. 48 (BENKŐ ET AL. 1997, 50–52, 66–70, fig. 5–7).⁶ The mug shaped stoves have good analogies in this period (MARCUS-ISTRATE 2004, 58; KÉMENES 2005, 36–38). The materials from Cotorman and Cristuru Secuiesc have more similarities, not just their circumstances of discovery (both from ovens), but also their character. Based on the repeating dimensions of rim widths and bottoms as well as the fabrication technology, they are very probably products of

⁶ Similar finds were collected from Turia–Bálványosvár, but their archaeological context is uncertain (RÁCZ 2006).

a specialised potter working for markets. This comment is highly valid for the jugs. These were defined earlier as '*hospes* pottery' connected with the Saxon communities from Southern Transylvania (BENKŐ *ET AL.* 1997, 51–52). This is a clear evidence of living trade contacts between Csík Seat and the Saxon regions, and of local pretensions for such products. It is surely not a coincidence that the analogies for these findings are known from medieval market towns, *oppidum* (Cristuru Secuiesc), noble mansion (Lăzarea) and noble castle (Turia–Bálványosvár). This fact has to be taken in consideration when one tries to analyse the results. It is highly probable that the plot (and its neighbourhood?) belonged to a family from the local elite.

Recent researches attest the importance of a social class in Székely Land, which originates in the late Árpáadian period, and through castles (BOTÁR 2009b, 45–46; BENKŐ 2010, 235), chapels (BOTÁR 2011), mansions (BENKŐ–SZÉKELY 2008, 30–64) and material culture has a similar representation as the nobles from the counties. They probably had an important impact in the political and social life from the beginnings, even if the records confirm this only from the 15–16th century (BENKŐ–SZÉKELY 2008, 13–30; BENKŐ 2009).

Among the fragments in the upper and lower level of the oven (Pl. 1/8; 3/8) parts of two 'archaic' pots were found. Their pebbly material, fabrication technology (both made on slow-turning pottery wheel), incised decoration (wave lines), grey colour and shape are more alike as the pots from the Árpáadian period. One of them is a small pot with round shoulder and high rim, the other is a larger one with cone-shaped rim. Although these two pots strongly differ from the majority of the material, due to the archaeological context they should be contemporary with the ones dated in the 14th century. Therefore, we have to count with archaic pottery within the 14th century sites, which is not a local, isolated phenomenon. The lower – earlier – layer of the oven from Cristuru Secuiesc also contained 'archaic' pots dated to the 13–14th century. On the territory of Cristuru Secuiesc such pottery was also found in other 14th century sites (BENKŐ *ET AL.* 1997, 50–52, 63–66).

Even so, at Cotorman there is a doubt that the presence of this archaic pottery could have other explanations. On one hand, it is sure that the maker of the oven used previously collected and stored material, indicated by the fragments matching from different layers, and at the same time there are earlier, 13th century pits just meters away from the oven. We cannot exclude the possibility that some materials could get from these pits into the ceramic deposit from the 14th century. In conclusion, based on the stratigraphic context and the analogies it is quite possible that archaic, Árpáadian age shaped pottery was used in the 14th century, but considering the close locations of the 13th century pits these fragments could originate also from here.

This single oven brought a lot of information and raised many questions that revealed the limits of our knowledge about the medieval Csík Seat. It was the first time, that archaeology could document 14th century materials, which beside the typology of medieval pottery it is an important evidence of trade relations between Csík Seat and the Saxon region or other towns and *oppidums* from the counties. On the other hand, the presence of such pottery in a small, hidden village with clear connexion with urban, noble material culture needs an explication. The mug shaped stoves also indicate a rare and early heating installation. We presume that near the excavation area there are the remains of the residence, the manor of an important family, which does not appear in the written records. A spur (l. 14 cm) found on the excavation without

archaeological context could be an argument for this hypothesis (Pl. 4/1). This type belongs to the equipment of heavy cavalry and has several analogies in the 14th century (see: GYÖRFI 2006).

The origins of this supposed elite family are to be found in the previous century. Beside the reliquary cross there is another find which could confirm the theory. Just meters away from the presented oven, in 2008 a large pit (Fig. 3, pit 3–4) was excavated. The pit has 2.5–3 m in diameter, and it was 1.5 m deep. The ceramic fragments had grey, brown and red colours; they were made on slow wheel and ornamented mostly with incised wave lines, although on some pieces other, archaic decorations, such as line bundles appear. Among the rims short, cut or rounded and high, in some cases developed articulated ones can be found. The ceramic material can be dated to the 13th century; the final loading of the pit could have reached the end of the Árpáadian period (Pl. 4/2–16).

From the same pit a pommel of a sword (weight 346 g) was collected (Pl. 4/9). The pommel is classified in the XIIIth type in the typology of A. RUTTKAY (1976, 249, 1/13, 257–258) and in the 6th group in the Transylvanian typology (PINTER 2007, 198, 32/6), generally dated to the 13th century. The closest analogies for the pommel were found at Săsăuși–Târgu Secuiesc and a similar example is known from Micloșoara (BORDI 2008, 241–242), connected by Zs. L. BORDI (2008, 242) to the Transylvanian Saxons, but the finds from Micloșoara and Bâta Doamnei – both 13th century castles – show that these pommels belong to swords used by the frontier guards of the 13th century, called by the records *miles* (PINTER 2007, 88–89), consideration which naturally leads us to the conclusion that this social and military class can be attested in the Csík Basin from the 13th century. Other finds belonging to the armament of organisation of *miles* are known from Jigodin and Sâncrăieni (spur and cross-guard discovered in uncertain circumstances), so one has to count with more such communities. It is quite probable – even if not proven – that the reliquary cross belonged to a member of this organisation.

The historical interpretation of the 13th century finds from Cotorman is a complicated problem which could have an important impact for whole Székely Land. According to the traditional interpretation the Székelys settled in the Csík Basin in the second half of the 13th century, so our finds cannot be associated with them, affirmation supported by the opinion that the Székelys had light armed warfare which does not include heavy swords. At the same time, we have more archaeological, ecclesiastical and place name data attesting that Csík Seat was inhabited already from the 11–12th century, and even the ecclesiastical organisation was formed in the 12–13th century (BOTÁR 1999; 2008), therefore the existence of a frontier guard settlements before the Székelys' arrival is not just a presumption. Lately, a new theory was published that does not follow the previous conception, which says that the Székelys had a strongly articulated society even in the 13th century in which one has to count with comparable elite, such as the nobles from the counties. Furthermore the early phases of the recently excavated churches from Székely Land are already associated with the first Székely inhabitants (BENKŐ 2010, 225–226). In this case the finds from Cotorman could belong to such an early Székely leader.

There is a quite sharp difference if such finds are interpreted as remains of a disappeared border guard organisation not mentioned in the written records, or elements of the early Székely history. The complexity of the problem is well illustrated by the fact that this new interpretation of the early history of the Székelys itself enumerates several elements (royal or noble castles, royal or ducal *curtis*) that presumes the existence of widespread 'pre-Székely' villages, settlement systems and churches (BENKŐ 2010). At the present, based on the archaeological materials one

cannot separate the 'Székely material culture' from the 'general' material. Even so, it is more probable that the finds from Cotorman dated to the 13th century belonged to a horizon before the Székely colonisation; however, we are aware that none of these opinions can be taken as certain (BOTÁR 2009b, 35–42).

Whatever will be the final and right solution, the 14th century elements of a prominent household and wears suggest that the presence of the 13th century local elite characterised by reliquary cross, and heavy sword, was continuous and extended into the next century. At the same time, the absence of 15–16th century finds can be the signs of the interruption of this process. It remains an open question if the change is due to the migration or extension of this family. While solving this problem, the offensive attitude of the Székely against the noble elite and its mansions has to be taken also in consideration (BENKŐ 2009, 29, 64–65).⁷

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7 Romanian–Hungarian place name index: Ciomortan–Csomortán; Ciucsângeorgiu–Csíkszentgyörgy; Cotorman–Kotormány; Cristuru Secuiesc–Székelykeresztúr; Gheorgheni–Gyergyószárhegy; Jigodin–Csíkszögöd; Lăzarea–Gyergyószárhegy; Miercurea Ciuc–Csíkszereda; Mihăileni–Csíkszentmihály; Sâncrăieni–Csíkszentkirály; Săsași–Kézdiszászfalu; Turia–Torja; Târgu Secuiesc–Kézdivásárhely.

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Plate 1. Ceramic finds from the upper layer of the oven.

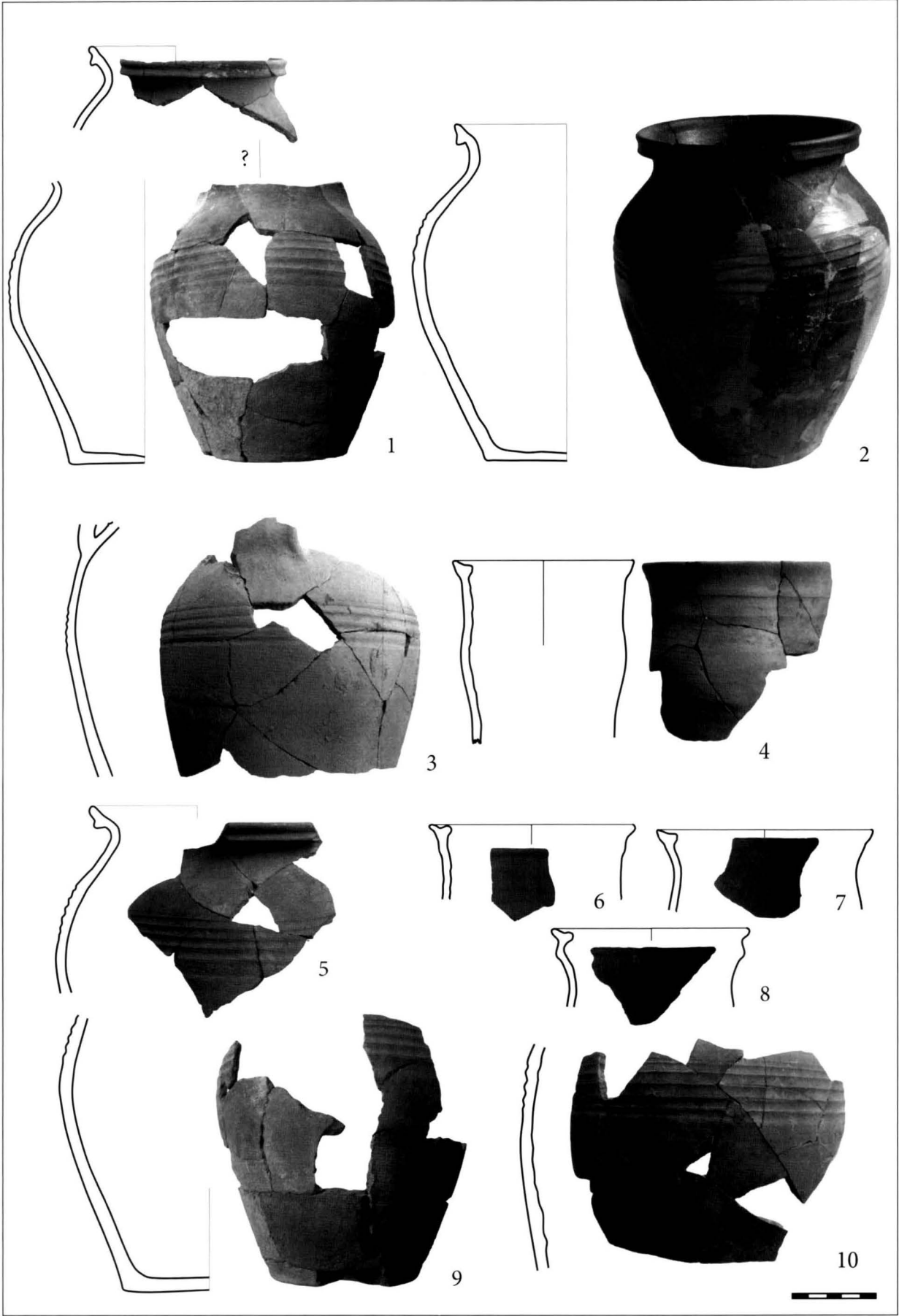


Plate 2. Ceramic finds from the middle layer of the oven.



Plate 3. Ceramic finds from the lower layer of the oven.

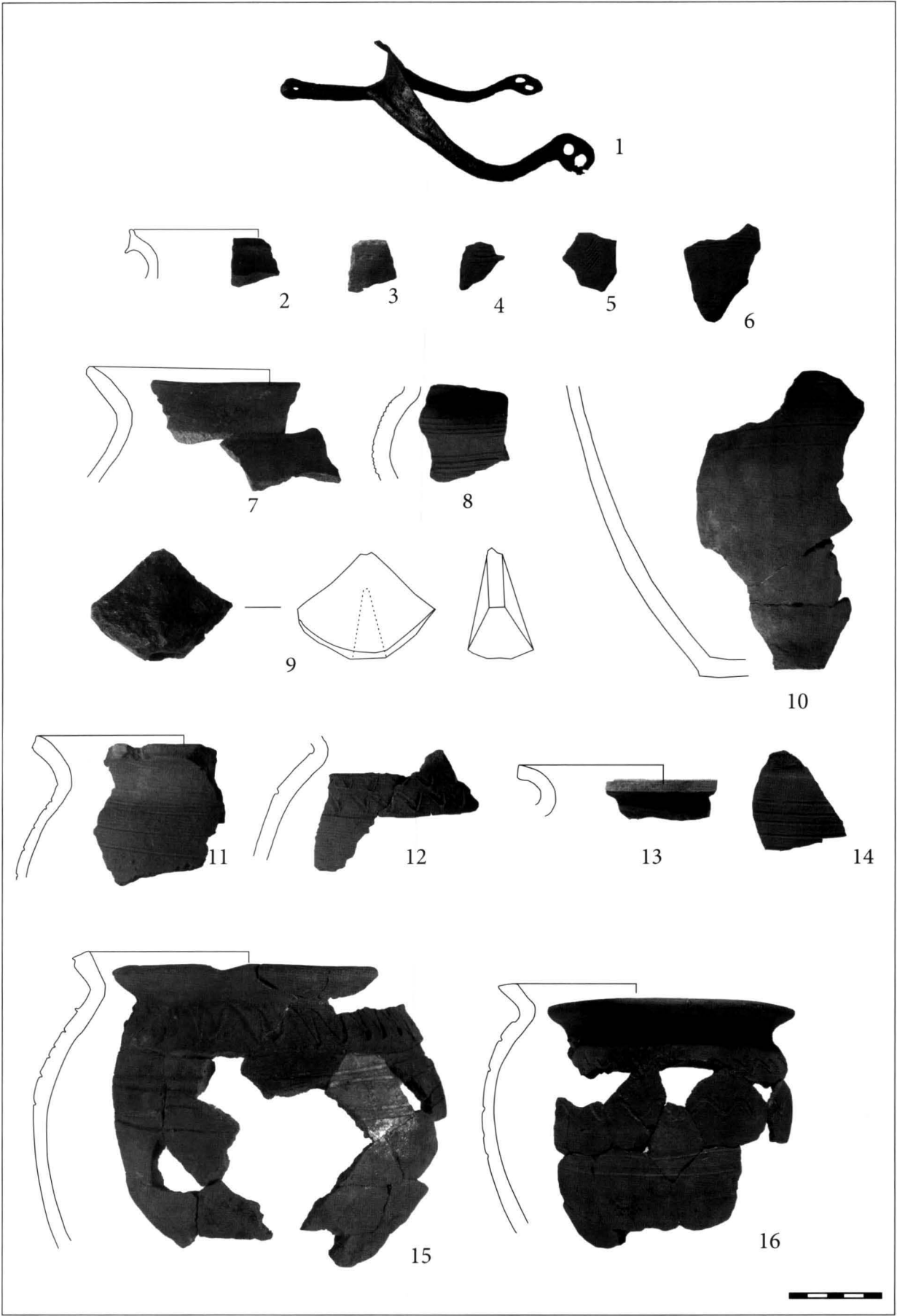


Plate 4. 1. Spur found without archaeological context; 2–16. Pottery from the pit.

BRONZE OBJECTS FROM THE EXCAVATION OF THE TÂRGU MUREŞ FRANCISCAN FRIARY

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The Franciscan friary from Târgu Mureş is intensively researched for more than one decade. The present paper proposes to present the bronze objects from these excavations. Based on their utility they were grouped in several types: friary objects, household tools and clothing accessories. A few outstanding artefacts indicate the importance of the Franciscan friary from Târgu Mureş.

Keywords: bronze objects, Franciscan friary, Middle Ages, household objects, clothing accessories

The excavation of the Franciscan friary from Târgu Mureş, one of the largest friaries in the eastern part of the Hungarian kingdom started in 1999.¹ The site of the friary was mainly destroyed in the 17th century; the cloister and most of the friary's buildings were demolished and reused as construction material for the new town wall. The systematic research of the former friary's buildings revealed a number of well preserved archaeological complexes that contained rich archaeological material. These provided solid chronological evidence for the identified artefacts since most of them contained coins or in some cases the stratigraphy offered the necessary information for the dating of an object.

The Târgu Mureş Franciscan friary had four major construction phases (Soós 2002; 2003). The first construction phase can be dated to the 1320's when the first still unidentified church and two wooden buildings, a warehouse and a friary building were built (Fig. 2). The second phase can be dated to the end of the 14th century. In this period the second church (today Calvinist church), the sacristy and the northern wing was built. The third phase is connected to the observant Franciscan activity in the 1440's, when the 55 m high tower was built. The last important construction period was in the 1480's when Transylvanian Voivode Stephen Báthory fortified the friary because of the approaching Turkish danger. In the mid 16th century the whole town was converted to Calvinism and the friary's buildings lost their function. A smaller part of the buildings were used by the protestant school but the other buildings, except the church and the tower, were demolished in order to obtain construction material for the town walls.

The site of the former Franciscan friary was almost completely destroyed by later demolition and within the buildings we found only a few undisturbed areas. The excavations provided

1 The systematic archaeological excavation at the site of the former Franciscan friary (in present a Calvinist church) started in 1999 under the supervision of Prof. Adrian A. Rusu, from the Institute of Archaeology and History of Art from Cluj Napoca.

a rich and varied bronze material from the 14th and 16th centuries. First we would like to present the different archaeological complexes in a chronological order.

To define the foundation period of the friary it was very important the identification of the 14th century friary buildings. Until now, we have identified two 14th century buildings, which were outside the area of the 15th century stone made friary. The 14th century buildings were made of wood and there were no later constructions above them, therefore we could identify their structure and so the excavated archaeological material is from a well determined chronological period. This is important not only for the history of the friary but it reveals the process of the foundation of a friary in the late middle ages. The foundation and evolution of a friary had several stages and the final result depended a lot on the financial support of the place, on the activity and importance of a friary, on the leaders of a friary, on the strategically important site selection and on the political support. In the case of the Târgu Mureş friary one can follow the whole evolution process from the early wooden phase of a smaller foundation until the construction and fortification of a large religious and pilgrimage centre of regional importance.

The first identified wooden building was the L1. In 2005 the north-western corner of the 15th century friary was researched and instead of the later friary structures the foundation of the northern wall and a small plaza paved with stone was identified. The northern wall was longer than the friaries' courtyard (Fig. 1), probably the Franciscans planned the construction of a western wing as well but for unknown reasons this never happened. Nevertheless, below the plaza marked with the gray colour the traces of an earlier wooden building were identified that was destroyed in a fire. The site of L1 was excavated in 2005–2007 (Fig. 2). The wooden building's floor was dug in the yellow clay, the eastern side was 1 m deepened in the soil while its western side was on the edge of the hill. The pit of the former building was filled up with the garbage resulted after the fire and it was never rebuilt; therefore all the material kept in the house remained below the ruins. This helped to establish an exact chronology and to recover precious archaeological material. Inside the building we identified a large quantity of different types of seeds, pottery (GYÖRFI 2008), leather fragments and even carbonized fragments of wooden tableware such as bowls and cups. Based on the large amount of seeds – mainly grain (CIUTĂ 2009; 2010) – and pottery material indicate that the burned wooden building served as a warehouse.

Some of the architectural elements of the building were also identified, while from one of the partly carbonized roof beams we could get a sample for dendro-chronological analysis. The results were more than satisfactory; we could establish that the oak tree was cut around the year 1315. This means, that the latest by 1317 the building was standing. During the research of the



Fig. 1. The reconstruction of the Franciscan friary based on the results of the archaeological excavations and on the existing analogies (by Gergely Buzás).

eastern side of the building we identified a Charles Robert coin in the destruction layer. With the help of the coin we could establish the functioning interval of the warehouse between the years 1317 and latest around 1350. The precise chronology of the building provided solid evidence in the dating of the bronze material as well. From the L1 warehouse we have two important bronze finds: the remains of a *stilus* and a bronze bowl (cat. no. 3 and 37; Pl. 1/3; 4/37a–d).

The second complex named L3 was identified northeast to the Franciscan friary. It was excavated in 2009–2010 and it turned out to be the remnant of a cellar of the larger 14th century friary building. This building was demolished during the mid 15th century and its construction can be dated to the mid 14th century. The size of L3 was around 96 square meters; its southern wall was 8 meter long and its western wall was 12 meter long. L3 had a specific construction technique. On the bottom of the 2.5 meter deep cellar a 0.6 meter wide and 0.5 meter high stone wall was built using plaster composed of clay mixed with sand. On the stone foundation the wooden wall was placed. Inside the foundation four large wood columns were placed at every three meter. These columns supported probably the upper structure. Based on the archaeological material, the L3 building was demolished, its material was reused at another construction and its cellar was filled up with the garbage of the friary. Based on the coin finds the last period when the L3 functioned could have been the end of the 14th century we have found Louis the Great coins on the cellar's floor. The place of the former cellar was filled up in approximately fifty years; the latest coins were from the mid 15th century. The filling of the cellar contained an enormous quantity of pottery since the place served as a garbage pit after it was abandoned. We have found a large quantity of stove tiles and animal bones along with the garbage of a bone tool workshop that produced mainly rosaries, glass fragments, but iron fragments and bronze material were also revealed.

The bronze material found in L3 contains a number of special objects and tools such as a second 14th century *stilus*, snuffers, book cover ornament, thimble, needle, knife handle, clothing accessories, etc. The large variety of the bronze objects reveals a lot of information about the rich material culture of an important medieval friary. In case of other archaeological sites such a large variety is not characteristic. The most important bronze find from L3 is a so-called pointed oval (*vezica*) shaped 14th century seal. This unique find belonged to the guardian of the Győr (western Hungary) Franciscan friary. We can connect some of the finds to the activity of the friary or to another group of objects found here. For instance the large number of thimbles (eight) might be connected to the presence of a bone workshop. The thimbles were probably used during the drilling process of the bones. The presence of another *stilus* is also connected to the friary where the friars copied codices and documents. The *stilus* was used for writing on wax boards. The book cover ornaments are again connected to the friary's life. Usually larger friaries had a library a compactor and a *scriptorium*, meaning a place where the friars copied the manuscripts. The newly copied books received a cover and necessary bronze ornaments to protect them. The other objects were connected to everyday life and probably one can find them in the case of other medieval sites as well. The knife handles are very widespread but the candle extinguisher fragment from the early 15th century is again a rare piece.

The third important archaeological complex with a considerable number of finds was the cellar of the 15th century friary building. The late gothic construction was demolished in the early 17th century but the filling contained several late medieval objects. The late gothic cellar had around 105 square meters, a little larger than the 14th century cellar. The filling of the cellar consisted mainly of demolition material from the friary buildings; therefore the archaeological



Fig. 2. The ground plan of the 14th century friary with the wooden buildings.



Fig. 3. The fortified Franciscan friary at the late 15th century.

material was not so numerous. Nevertheless, it contained a number of unique and high quality finds, mainly renaissance stove tiles, but in the area of the former heating system we found a larger concentration of book covers. The bronze ornaments were found in ash and burned soil bellow the filling of the cellar composed of demolition material. Based on the powerful burnt traces on the floor of the cellar we could establish that the northern wing of the friary once burned down and it was reconstructed later. This circumstance let us believe that the scriptorium of the friary was among the heated parts of the buildings and it was destroyed in a fire together with the books.

In the demolition layers of the cellar there were only a few bronze objects, we found one more book cover ornament and a few bronze fragments. The other bronze objects were identified accidentally or they were single finds thus they could not be connected to a specific activity or friary building. Altogether, a very important quantity of bronze artefacts was found, among them several rare objects and some of them, such as the seal, are unique until now in medieval Hungary.²

The bronze material

Generally we call bronze objects all the materials made of copper, plumb or tin alloy. The bronze also contains different materials so we have tin or plumb bronze depending on the quantities. It is important regarding the origin of an object if it is yellow copper, because these are all imported. The bronze material identified during the excavations may be grouped in three major categories.

The first category is composed of objects that belonged to the specific activity of a friary such as items belonging to book binding, seals, etc. The second group is formed of clothing accessories, the third group contains different tools, while in the fourth group we have unidentified objects. Within the three categories one can separate items that were probably produced in specialized town workshops and the rest of the objects were probably imported. In this matter it is of great help the research of E. BENKŐ (2002) on Transylvanian bronze workshops, which produced church bells and baptismal fonts. On the medieval bells of different chronological periods one can see different small decorative medallions. Among these medallions there are two major groups; the first one represents the symbol of different pilgrimage places reused for a longer period within a bell founder workshop, while the second group is composed of book cover ornaments and of cloth or belt accessories. The medallions representing clothing accessories and book cover ornaments have a very wide variety both chronologically and typologically. In the medieval workshops they reused a number of bronze ornaments and in case of each bell or baptistery we have a different set of decoration motifs. Several ornaments were used throughout generations and a certain set of symbols became the trademark of a workshop, therefore the production year of a bell can be misleading in the chronological determination of the decoration elements. Moreover the set of symbols used on the bells can be misleading as well because they do not necessarily reflect the material produced in Transylvanian workshops. We have few written evidences regarding the mobility of the Transylvanian guild members in Sibiu (Hu. Nagyszeben, Germ. Hermannstadt) the son of two different masters studied in Vienna and it is described, that when they returned they brought a number of special bronze items, belt and cloth ornaments, to use as bell or baptismal font ornament in their own workshop (BENKŐ 2002, 180).

2 Two more seals were found in excavations in the Hungarian kingdom, one 14th century seal in Visegrád and one 13th century seal in the Pilis Cistercian monastery.

The chronological horizon of the bronze objects identified at the excavation of the Franciscan friary was established based on the stratigraphy of the layers, on the analogies and based on the database of Transylvanian bells and baptistery fountains. Certain elegant ornaments such as book covers or belt buckles were reused for bell decoration even after half a century (BENKŐ 2002, 174–176). A large part of the decorations were probably borrowed from the local goldsmith's workshops of the town and these decoration elements are usually chronologically closer to the production date of the bells. Nevertheless, these types of objects are only produced in larger centres and in specialized workshops. The more simple bronze items could have been produced in the workshops of smaller towns as well such as most of the clothing accessories or household tools.

Special objects

The first group of bronze finds is connected to the presence and the specific activity of the friary. In case of larger medieval friaries it is very likely to find objects that can be linked to the profile and activity of the institution. During the excavation of similar sites depending of the importance of the place there were found objects that referred to different types of activity. It is very likely to find book cover ornaments as friaries and monasteries are the most important places of literacy for centuries. These institutions usually had smaller libraries; larger centres such as Târgu Mureş had *scriptoriums* and the necessary tools for book binding.

During the excavation 9 objects belonging to book binding were found. Among these, the most significant are a perforated ornament representing a chalice surrounded with acanthus leaves (Pl. 1/8), a book corner ornament (Pl. 1/7) and the rest was composed of buttons bronze made stripes and clamps. There are two cover ornaments, one corner ornament and one casted ornament having a chalice in the middle. The ornaments we found are rather fragmentary so it would be very difficult to reconstruct a possible late medieval book cover. Excellent analogies are offered by the material discovered at the Pilis Cistercian monastery (HOLL 2000) and at the excavations of the Alba Iulia/Gyulafehérvár bishopric palace (MARCUS-ISTRATE 2008; MARCUS-ISTRATE 2009, cat. no. 123–129).

The other special objects are rather rare, very specific and one of them is directly connected to the Franciscan order. During the excavations we have found two *stili* from the 14th century. Used for writing on wax-boards, the medieval *stilus* has a very wide typology. Both pieces (Pl. 1/3–4) came from a closed context, one is dated to the first half of the 14th century, while the second is very likely from the 14th century but it was identified in a garbage pit from the first half of the 15th century. The first *stilus* is elaborate, elegant, it has an octagonal shape and it narrows towards the pin part. It has a rounded end, small but thick spatula shape with two half moon carvings at the base. A small carved line is the mark between the spatula ending and the octagonal body of the *stilus*. Its head is again separated by two small ring decorations from the body followed by a 0.5 cm pin. The *stilus* is approximately 6 cm long. It was found in an early 14th layer dated – as already mentioned – with the help of dendro-chronological analysis of a beam (1317) and a Charles Robert coin (1342). The layer was identified in an approximately 100 square meter storage building (L1, see Fig. 2), which burned down sometimes in the mid 14th century. Based on the style and rarity of the *stilus* it is a unique find in the 14th century Hungarian kingdom. The second *stilus* was identified in building L3 in the filling of the former cellar. It is 15 cm long, its spatula is 3.5 cm long and 1.5 cm wide, the other side ends in a pin. Compared to the other *stilus*

this is a simple piece without any decoration. Based on the filling of the cellar the *stilus* was lost or thrown out sometimes in the early 15th century. The layer contained coins from King Louis the Great (1342–1382) and from King Sigismund of Luxemburg (1395–1437). Therefore, the second *stilus* is again a 14th century item and against the very small number of the preserved medieval *stili* we have to say that in a larger friary with scriptorium it is very likely that there were a larger number of *stili* made of bronze or bone in use but until the present day very few medieval friaries were thoroughly excavated in central Europe. We believe that the *stilus* was used in everyday life in teaching activities or even in daily recordings of the friary. Important friaries worked like charter houses, they copied documents, they wrote letters and they were involved in trials.

We have identified two rings from the late medieval and early modern period. The first one is probably a private seal ring from the late 15th century having a small oval shaped top decorated with a symbol in the middle surrounded by small semicircles. The body of the ring has a simple decoration composed of lines carved on the surface. The ring was made from a single bronze piece (Pl. 1/5). The second ring is from the mid 16th century it is composed from two parts, the top of the ring and the body. The body is a simple bronze ring without any decoration, the top is larger and its centre part has a solar symbol decoration surrounded by semicircles placed along the edges (Pl. 1/6).

The Medieval Seals

The most important bronze finds from the excavation are two seals from the 14th and early 16th centuries. A first seal was identified in the filling of the L3 building's cellar in cassette C30, □3/a at 1.40 m depth. It has a pointed oval (almond-like) shape representing Saint Elisabeth holding a fish in her right hand (Pl. 1/1).³ The figure of the saint has a large crown on her head that fills the upper part of the seal. The figure of the saint stands in contra post and she holds her mantle in the left hand. Usually the main accessories of Saint Elisabeth on medieval representation are the loaf of bread in one hand and a plate or jar in the other hand, also holding a fish in her hand, offering her gown or clothes to the poor referring to the miracle of the mantle, representation with roses in her lap referring to the miracle of the roses (GECSEK 2007). Among these the representation with the loaf of bread and the miracle of the mantle are probably the most often used accessories while the representation with a fish it is used in a smaller number in medieval iconography.⁴ The central field is surrounded by two pearl like stripes that contain the inscription around the figure of the saint. The inscription made possible the exact identification of the origin of the seal. The first letter is an S followed by a dot and it is the abbreviation of Sigillum. After S(igillum) one can read the word GARDIANI that directly connects the seal to the mendicant orders because only they had guardians as leaders of a friary. On the other half of the seal the first letter is an abbreviated E that is the first letter of the guardians name followed by the inscription IAURINUM which offers the exact place of the friary in the town of Győr in western Hungary.

The detailed analysis of the seal revealed a number of elements. Among these the most important are the letter types used on the seal that based on analogies are characteristic for the mid 14th century. They show similarities with the letters used on the seal of the chapter of Csázma

3 Saint Elisabeth belonged to the Franciscan tertiary order. They lived in convent-type houses under a rule – usually *Supra montem* with some added constitutions. The Franciscan tertiaries did not have a common distinctive habit before the formation of the unified Third Order Regular.

4 See the catalogue composed by O. GECSEK (2007).

and on the seal of the Zagreb chapter (TAKÁCS 1992, 42, 99). Another important detail in the chronological identification is related to the background ornament formed by rhomb shaped net with a dot in the middle. Exactly the same motif one can see on the Zagreb seal but it is the late Anjou period in the Hungarian kingdom, when this type of decoration is widely used. On more elaborate seals instead of the dot like decoration one can see different ornaments such as the lily (TAKÁCS 1992, 42). Based on the existing medieval Hungarian ecclesiastic church seal collection presented in the book of I. Takács it is clear that most of the preserved seals were made earlier in the 13th, first half of the 14th centuries and that the material from the second half of the 14th century does not offer very good analogies. It is very likely, that for further and more exact results one should research the Austrian or German ecclesiastic seals from the same period. Taking into account the vicinity of Győr to the Austrian border and its large German population it seems logical that most probably the seal was made by a foreign goldsmith workshop like Vienna.

A last and important element that helps the chronological identification of the Győr seal is the representation of the figure of Saint Elisabeth. The mantle of the saint is arranged in wimples, it covers her left shoulder, where she seems to have a larger cloth buckle. The wimples are more accentuated on her shoulder, her hip seems to be a little wider and her mantle is elegantly stretched at her knees. The way of arranging the mantle and the almost S like contra post of the saint's figure, based on the analogies⁵ indicates that the seal was probably made in the second half of the 14th century.

Gathering the three essential chronological elements the possible production date of the seal is very likely the second half of the 14th century. The filling of the cellar can be dated to the mid 15th century based on the large number of coins. This means that the seal after a few decades of use was lost or intentionally thrown in the garbage after the death of the guardian of the Győr Franciscan friary. We know from documents that guardians of friaries were sent to analyze the activity of the friaries in different districts and with the occasion of the local assemblies. The seal of the Győr guardian shows that he was here in an official mission and it also means that important delegations were sent from remote friaries in order to obtain an objective description of an important friary or of a region. This is one of the possible explanations on how the seal of the guardian of the Győr friary was brought to Târgu Mureș.

The smaller seal (Pl. 1/2) was dated to the late 16th–early 17th century, found in the filling of the stone made cellar built in the early 15th century. It was found in C23 at the depth of 1.5 m in square □1/d. The seal has an octagonal shape with four longer and four shorter sides. Its handle is narrowed until its end, formed by a larger buckle and it was probably hanged in its owner's neck. On the seal one can see a moving lion raising its front right leg placed in a heraldic shield. The lion shows its tongue and it has a raised tail. Above the shield there is a small separated field with two initials G D. These two letters probably are referring to the first letters of the owner. The whole representation and the letters are surrounded by a decoration composed of a pearl row. Based on the shape, size and characteristics of the seal, it belonged very likely to a nobleman. On the basis of its shape and the letter types, the seal can be dated to the mid 16th century and it was lost or thrown during the late 16th–early 17th century. Unfortunately the coat of arms and the initials are still unknown; therefore, the identity of the seal's owner could not be identified.

5 Regarding the iconographical representation, for the clothing the most relevant analogies are from the late 14th early 15th century, see the statues of the Buda castle or the Madonna statues from Toporec/Toporc (Slovakia) and Cislădioara/Kisdísznód (Romania) in the collection of Hungarian National Museum (MAROSI 1987, 362, 388, 390).

Clothing accessories

The second group of objects presented here are the clothing accessories. There are several local or regional products such as belt ornaments, buttons, pendants and buckles. Among these a square shaped ornament representing a snake surrounding a staff (Pl. 6/65) was found along with a few belt ornaments produced probably in a specialized workshop and one trefoil shaped ring brooch. The belt ornament is pin pointed at one of its edges and it was positioned at the end of the belt. It is lavishly decorated with leaves. The belt buttons have an octagonal shape with a convex middle part and with four claws on the back side. The ring brooch is rather a rare object, there are only around five similar pieces found in Transylvanian excavations. The buckle had a decoration made with incision and it follows the pattern of the late gothic buckles produced in north of Europe. The incision tries to follow the shape of letters and leaves.

An interesting decoration element is a bronze pendant, its upper part is triangle shaped it ends in a hook, its lower part is square shaped and it has a small plate attached with three nails. It seems that the pendant, together with other pendants was attached to a leather belt and then hanged on someone's cloth as decoration. The rest of the bronze pieces are simple buttons and belt buckles.

Household accessories and tools

The third group is composed of bronze objects used in households or in everyday life. Most of the objects from this category were identified in the building L3, that is the cellar of the early 14th century friary building, used as garbage pit after the demolition from the early 15th century. Among the most interesting identified objects was the lower part of a candle extinguisher composed of two spatula shaped sides⁶ and the large number of thimbles was noticeable. Eight thimbles were found and five out of eight were identified in L3. The thimbles could be connected to the large number of carved animal bone material. The carved animal bones were mainly of antler (deer) and from these beads were produced for rosaries. The thimbles could be used in the process of carving or during the string process. We have identified in the same context about six bronze needles.

A separate group of the household tools are the fragments from cutlery and tableware. There were identified knives, forks and bronze made knife or spoon handles. In this article we are only going to discuss the bronze made items so we are only going to deal with the handle of knives and probably spoons. Different types of handles with close analogies at Alba Iulia/Gyulafehérvár (MARCUS-ISTRATE 2009, cat. no. 152, 155, 156, etc.), and a few accessories were found, such as a bronze petal from the end of a handle. The more complex pieces were produced in specialized workshops just as the casted bronze handle or we have a number of knife handles from Steyr or Nürnberg workshops imported in large number. These handles have a special cover from bronze plates combined with animal bone. The bronze plate was often decorated with vegetal ornaments. The elegant handles have a widened crown like ending (Pl. 2/24). Another interesting bronze piece identified during the excavation is a bronze made fishing hook. The hook is 5.7 cm long and it has no beard at its end (Pl. 5/42).

The bronze finds from the Târgu Mureș Franciscan friary are very important and relevant to understand the regional connections of a friary and of a middle sized market town. A number of bronze items found at the friary excavation are rather connected to the wealth and possibilities

6 The artefact has close analogies at Oradea/Nagyvárad (Rusu 2002, 158, pl. LVI/i).

offered by a mid size market town in central Europe but there are also objects directly connected to different activities of a large Franciscan friary. With the comparison of the objects found at the friary and the material identified through the research of the medieval bells and baptismal fonts produced in the workshops of the larger Transylvanian Saxon town's one will see the differences in its content and decoration. The work of E. BENKŐ (2002) revealed that most of the ornamental material used at the bell foundries was a specific collection partly brought from abroad and partly gathered from the local goldsmith workshops that cooperated with the foundries. While the ornamental material of the bell foundries was mainly composed of elegant clothing accessories (belt buckles, discs, pressed plates or clothing ornaments) and book cover ornaments, the bronze material of the friary contains a large number of objects connected to everyday life activities such as bone carving workshop, horse accessories, fishing, tableware (knife and spoon handles), local commerce (weight balance) and only a smaller part of the friary's material is composed of ornamental clothing and book binding accessories. We found similarities between the ornamental discs used in the foundries and between the diadem discs found in the grave M52 (Soós-Gál 2010), but these similarities are again very general, the Anjou lily and the running deer are very widely used in the 14th and 15th centuries. The symbols on the discs are not closely related to the symbols used in the Transylvanian foundries and they were very probably produced in the central part of the Hungarian kingdom. Their close analogies are to be found in the Cuman cemeteries of the great Hungarian plane (HATHÁZY 2002) and in today's Slovakia in the medieval cemetery of Nyitražobor (RUTKAY 2005). Moreover, the ornamental elements from the friary are rather produced in the region; while the bell foundries gathered specific material from abroad as well; therefore we have only few similar items in the two materials. In the foundries some ornaments were used for generations and each generation added new ornaments and medallions to the collection; therefore it is possible to identify the origin of the bells based on the ornaments and letter types used in a workshop. It became clear that the foundries were closely connected to the goldsmiths, carpenters, engravers and sculptors from where they obtained a part of the ornaments or they remade the used ornaments (BENKŐ 2002, 183–184).

Regarding the workshops we have found important data about the activity of the Transylvanian bronze foundries. Besides producing bells in case of need they produced a number of special objects such as weight balance and very probably bronze bowls and three legged pots (grappe). We have at the friary a number of specific objects such as candle extinguisher, bronze pot leg, fragments of bronze bowls, two *stili*, several thimbles and we believe that all these products except maybe the elegant *stilus* were produced in the Saxon towns of Transylvania in Hermannstadt, Kronstadt or possibly in the nearby Schässburg.

The difference between the ornamental objects found in the friary and used in the bronze foundries can be explained by the nature of the friaries material that came from many different sources through the wide range of donations and pilgrimage, so it is almost impossible to establish the direct source. The only exception is the seal of the Győr Franciscan friary's guardian, which was probably produced in one of the workshops of the western side of the Hungarian kingdom (maybe Pozsony or Buda) or in the nearby Vienna.

The bronze material of the friary identified during the archaeological excavations offers important data regarding the richness of medieval Transylvanian material culture and about the intensity of the commercial relations. A number of objects such as the knife handles (Styria, Nürnberg), diadem discs (central Hungary), seal (western Hungary) arrived here either

through commerce or through the specific Franciscan activity. In this matter the material is unique because it is composed of objects with laic as well as religious background and it reflects how the presence of an important ecclesiastic establishment influenced the material culture and also the connections of the town dwellers with the outside world.

A last important aspect of the bronze material recovered from the excavations is the large variety of fragments and raw material such as bronze wires and plates. Besides the debris material we have a number of spoiled objects and more important we have found several dross fragments and raw bronze. All this finds indicates that a workshop functioned at the Târgu Mureș friary, at least for a certain period, where they produced different type of bronze objects such as needles, book cover accessories and possibly simple cloth accessories. We have one direct source regarding the *scriptorium* of the friary from 1522 but based on the archaeological evidence the book copy workshop was functioning at least from the second half of the 14th century. Based on the finds except the high quality book cover ornaments a number of binding elements such as bronze stripes, hooks, buckles were produced in a workshop that functioned connected to the friary or within the friary. The vicinity of the workshop is proved by the large number of debris and spoiled objects found in the garbage of the friary. Most of the fragments were found in the demolished L3 buildings cellar in burned warehouse L1 and in the filling of the fifteen century cellar. Moreover, the presence of bronze dross proves that the workshop was producing bronze castings as well. Besides the bone carving workshop, the bronze workshop is the second type of manufacture that we could prove with the help of archaeology. Accessories for bronze manufacturing were found in other friaries too, such as a moulding form at Vințul de Jos/Alvinc Dominican friary (Rusu 1998, cat. no. 38) and a crucible at Teiuș/Tövis Franciscan friary⁷, but in the present day there are not enough proofs for the presence of workshops there.

The Târgu Mureș Franciscan friary is the first from Transylvania where we could prove the existence of workshops that functioned besides and connected to the friary but they very probably fulfilled the needs of the population of the market town and they possibly sold a part of the products for the pilgrims. Therefore the workshops offered an important extra income for the friary and we might expect further discoveries to prove the existence of similar workshops in case of other large friaries as well. This kind of economic activity was very profitable if we think about the large and stabile number of customers represented by the needs of the friary, the inhabitants of the region, the donors and the pilgrims.

CATALOGUE

Special Objects

1. **Seal**, (Inv. no. 8680), C31/2009, C 30, □3/a, -1.4 m, late 14th century. The seal represents Saint Elisabeth holding a fish in her right hand, she has a crown and she wears a mantle. Around the figure of the saint there is an inscription bordered by two rows of pearl S(igillum) GARDIANI – E (name of the gardian) IAURINUM. The inscription reveals that the seal belonged to the guardian of the Győr Franciscan friary. The seal is 4.7 cm long, 2.7 cm wide and 0.4 cm thick. It has a hook behind from where it was hanged in the gardians neck.
2. **Seal**, (Inv. no. 8556) C23/2008, 1.50m, □4–5/a, late 15th–early 16th century. The seal has an octagonal shape with four longer and four shorter sides. Its handle is narrowed until its end formed by a larger buckle and it was probably hanged in its owner's neck. On the seal one can see a moving lion raising

7 Unpublished information kindly offered by A. A. Rusu.

its front right leg placed in a heraldic shield. The lion shows its tongue and it has a raised tail. Above the shield there is a small separated field with two initials G D. The seal is 2.7 cm high, the lower seal part is 144 × 1.1 cm, at the hook it is 0.9 cm wide and 0.5 cm thick.

3. **Stilus**, (Inv. no. 7908) 14th century, first half, C13/2006, □4/D, -1.50 m, casting. One side is ended in a pin, the other side is widened, the middle has an octagonal shape and it narrows towards the pin. Before the pin it has three little rings. The *stilus* has a special shape it could be used in the codex transcription for the design of the initials, its length is 7.4 cm.
4. **Stilus**, (Inv. no. 8669), C34a/2010, □4/B, -2.2 m, casting, second half of the 14th century. On one side there is 3.5 cm long and 1.5 cm wide spatula, the haft is 11.5 cm it is narrowed from the spatula and it is ending in a pinpoint. The length of the *stilus* is 15 cm it was probably used for writing on wax board.
5. **Seal ring**, (Inv. no. 8550), C23, □e-f/3-4, -2.75 m, it was found in the filling of the 15th century cellar near the western column. Probably a private seal ring from the late 15th century having a small oval shaped top decorated with a symbol in the middle, surrounded by small semicircles. The body of the ring has a simple decoration composed of lines carved on the surface. The ring was made from a single bronze piece. Diameter: 2.7 cm.
6. **Ring**, (Inv. no. 8681) C6/2004. Ring from the mid 16th century, it is composed from two parts, the top of the ring and the body. The body is a simple bronze ring without any decoration, the top is larger and its central part has a solar symbol decoration surrounded by semicircles placed along the edge. Its diameter is 2 cm its height is 2.4 cm, thickness of the ring 0.18 mm.
7. **Embossed book corner ornament**, (Inv. no. 8683), S1/1999, □11, - 2.3 m, 15th century, pressed. It has a rhomboidal shape, it was a corner ornament and also protected the book cover. In the middle of the ornament there is a flower symbol in relief with six petals, at the edge it has a decoration motif formed from lines, and on the inner end one can see an oak leaf having two holes at its beginning. The wholes created by the nails are visible. Its length is
8. **Book cover ornament**, (Inv. no. 7911), C 21/2007, □4/e, -2.9 m, 15th century, casted. The fragment was part of a larger ornament, one of its narrow edges was preserved and it is decorated with a repeating lily motif, between the lilies the ornament was perforated. On the longer side it has two simple edges and between them a decoration of perforated acanthus leaves surrounding a chalice. The rest of the stripe was broken, we do not know local analogies but there is one similar ornament preserved in the collection of the Hungarian National Museum (LOVAG 1999, 87, 228, item no. 220). The ornament is 4.6 cm long, 2.75 cm wide and 0.16 cm thick.
9. **Book clamp**, (Inv. no. 8686), C34/2010, □b/1, -2 m, early 15th century pressed. It has a trapezoidal shape (2.5 × 1.5 cm) with two nails at its wider side and a simple striated decoration at the edge. On the narrower side there is a buckle for the clamp. Length 4.2 cm, width (middle part) 0.6 cm, width (end part) 1.55 cm.
10. **Book cover ornament**, (Inv. no. 8698), C29/2008, 15th century, pressed. The pressed ornament was preserved in a very bad shape its decoration is hardly visible. The ornament has a stripe decoration with vertical lines inside surrounding a vegetal ornament consisting of leaves and a spiral line. At the fourth edge it has a dent like decoration. On the object it is visible the trace of a nail. The fragment is 3cm long and 2.4–2.6 cm wide, it has a trapezoidal shape.
11. **Book buckle**, (Inv. no. 8701), C34/2010, □b/3, -2.30 m, mid 15th century. The buckle is a thicker object, it is widening from one side to the other. It starts with a hook and eye, followed by a round shaped part with a hole in the middle, between a single closing groove and a double closing groove. After the double groove follows the widening body of the buckle, ended in three V shaped dents. Just near the dents there are two holes with the bronze nails inside. On the other side there is a small fragment of a bronze plate and between them it is visible a fragment of leather from the book cover. It has a similar analogy in the collection of the Hungarian National Museum (LOVAG 1999, 90, 230, item no. 230). Its length is 4.4 cm, thickness 0.4 cm, width (wide side) 1.3 cm, width (middle hole) 0.85 cm.
12. **Book buckle**, (Inv. no. 8705), C 34/2010, -2.6 m, mid 15th century. The buckle is made of a simple tucked plate, it has a hook on its upper part, its lower side has a trapezoidal shape and on the front side it has a V shape dent decoration. On the lower wider side there are two bronze nails preserved in the

- buckle used probably at smaller books. Its length is 2.5 cm its width at the lower wide side is 1.5 cm, its width at the upper part is 1.2 cm.
13. **Book buckle**, (Inv. no. 8749), C34, 15th century, pressed bronze plate. The buckle is composed of a square shaped body having three holes on its surface. One corner was broken just as the hook of the buckle and it has the trace of a cut as it was separated from the book cover. Its length is 3.1 cm its width is 2.1 cm.
 14. **Book cover stripe**, (Inv. no. 8709), C30/2009, 15th century, cut from a larger bronze plate. The book cover stripe has two simple striated decorations at the two edges in the middle it has no ornament. Its length is 5.2 cm, its width is 1.2 cm and its thickness is 0.09 cm.
 15. **Book or box cover stripe**, (Inv. no. 8732), C34/2010, -2.55 m, early 15th century. The stripe was cut from a larger plate its edges are faceted and uneven; it has five holes in the middle part. One side is round; on the other side the ending part was broken. Its length is 11 cm its width is generally 0.65 cm its thickness is 0.1 cm.
 16. **Book cover stripe**, (Inv. no. 8754), C30/2009, -0.8 m, 15th century, bronze stripe. The stripe has no decoration it has six holes in a row two of them still has nails inserted. Its length is 7.5 cm its width is 1.44 cm its thickness is 0.09 cm.
 17. **Book cover ornament**, (Inv. no. 8700), C23/a/2008, □6, -1.4 m, late 15th early 16th century. The square shaped fragment is divided by a square shaped incision that divides in eight equal parts its inside. Every second field is striated. One of its edges has three V shaped decoration besides the decoration there are two holes for the nails, at the opposite side it was continued there is the breaking line. It is 2 cm wide, 2.2 cm long and 0.8 mm long.
 18. **Book cover ornament**, (Inv. no. 8719), C 34/a/2010, □4/c, -2.3 m, 15th century, pressed. The inner end of the ornament has a serrated decoration and two nail holes, on the body of the plate there is a stylized fish ornament formed by two rhomboidal line decoration surrounded by a simple line frame. The outside part of the ornament with the clamp is missing. Its length is 4.7 cm, its width is 1.65 cm, and its thickness is 0.08 cm.
 19. **Book cover button**, (Inv. no. 8720), C25, -1.71 m, 15th century, casted. The button has a 0.7 cm wide rim having a high sphere in the middle. Its height is 0.9 cm, its diameter has 2 cm.
 20. **Book cover clamp**, (Inv. no. 8731), C23, □f/5, -2.3 m, 15th century. Fragment of a smaller book's lock system. The clamp is 1.6 cm long, 0.9 cm wide and 0.12 cm thickness, it ends in a little hook.
 21. **Bronze plate fragment and bronze nail**, (Inv. no. 8728), C23/2008, □1-3/g-h, -2 m, 16th century. The fragment of a bronze plate and nail could be used as book binding accessory. The nail is 1 cm long, the plate is 2.1 cm long and 1.6 cm wide.
 22. **Candle extinguisher**, (Inv. no. 8684), C34/2010, -1 m, late 14th early 15th century, casting. Only the lower part was preserved, the upper part with the handles is missing. On the lower part we have two wider spatula-type ends; one side has a deepened ending so it could extinguish the candle. The deeper side has a wider side where one can see tree circle ornaments having a point in the middle. At every circle the backside of the spatula has a wave like higher point. The extinguisher fragment is 7 cm long.

Household accessories and tools

23. **Knife handle**, (Inv. no. 8687), C34/2010, □4/D, -0.8 m, 15th century, casting. It has a flattened octagonal shape, in the middle it has a simple line drawing decoration formed of five lines. In the two sides it has triangle shaped line decoration, the handle is widened and it has three knobs at its end. From the three knobs two end in a point, the middle one is round shaped. The handle is 7.3 cm long at its end is 1.4 cm wide, at the middle has 0.8 cm.
24. **Knife handle fragment**, (Inv. no. 8708), C34/2010, -3.1 m, 15th century, composed of bronze plate and iron middle. The fragment is from the back side of a handle, it still has its iron core, which is surrounded by the decorated bronze plate. Its decoration is made through incision imitating the form of leafs and it is ending in two circular lines. The end of the handle has three knobs the lower one is ending in a point and it is little longer. The knife probably originated from Styria, it is a German import. Its length is 4.8 cm its width is 2.7 cm at the wider par and 1.74 cm at the lower narrow part.

25. **Knife handle fragment**, (Inv. no. 8718), C34/2010, pressed, 15th century. The fragment is the copper cover plate of a Styrian type knife handle. Its decoration is made through incision imitating the form of leafs and it is ending in two circular lines. The end of the handle has three knobs the lower one is ending in a point and it is little longer. Its length is 4.87 cm its width is 2.25 cm at the wider side, the thickness of the bronze plate is 0.037 cm.
26. **Spoon handle fragment**, (Inv. no. 8729), C34/2010, 15th century, casted. Only the bronze outside cover was preserved of the spoon handle, it has a hexagonal shape narrowing from its backside towards the spoon where the hexagonal handle ends in a rounded part margined by two circular lines. It ends in a small bulb. It is 6.2 cm long its widest upper part is 1.2 cm near the spoon part it is 0.68 cm wide.
27. **Weight**, (Inv. no. 7909), C15, (2006), □2, -1.85 m, casting, 15th century. The weight was used at scale measuring. Its weight (after restoration) is 50 g, its height is 1.64 cm and its diameter is 3.6 cm. It has a round conic shape, inside and outside it has a simple decoration composed of three parallel lines on its rim it has again a decoration formed by three parallel lines. The weight was part of a set composed of twelve or more pieces.
28. **Weight**, (Inv. no. 8688), C8, □3/b, -2.0 m, casting, 15th century. The weight was used at scale measuring. Its weight (after restoration) is 70 g, its height is 2.35 cm and its diameter is 4 cm. It has a round conic shape with narrower bottom and a wider top. There are traces of simple line decoration on the outside. The surface of the weight is deteriorated as it was found just below the walking surface of the cellar entrance and it was in permanent contact with moisture. The two weights were part of different sets.
29. **Thimble**, (Inv. no. 8689), C34a/2010, □C/4, -2.3 m, first half of the 15th century, casting. Onion shaped thimble decorated with holes placed in a spiral shape. The holes have a practical reason to support the needle and it protected the finger. At the bottom it has a small trench bellow the holes. The thimble is 1.8 cm wide and 1.4 cm high.
30. **Thimble**, (Inv. no. 8690), C34/2010, □1-6/a-e, -1.6 m, first half of the 15th century, casting. Conic shaped thimble decorated with holes placed in a spiral shape. The holes have a practical reason to support the needle and it protected the finger. At the bottom it has a small trench bellow the holes. The thimble is 1.8 cm wide and 1.4 cm high. The thimble was found near a coin of Sigismund of Luxemburg from the first half of the 15th century.
31. **Thimble**, (Inv. no. 8691), C31/2009, □C/1, -0.4 m, 14th century, casting. Conic shaped thimble, with a pointed decoration. The thimble was made without a top; at the bottom it has a wider rim. The object is 1.35 cm high and 1.8 cm wide at the bottom.
32. **Thimble**, (Inv. no. 8694), B/C2 (2005), □1/a-b, 17th century, pressed. Conic shaped thimble, with pointed decoration, it is 1.32 cm wide, and it is 1.41 cm high. At the bottom there is a single circular line closing the decoration.
33. **Thimble**, (Inv. no. 8692), C34/2010, 1.7-1.9 m depth from the early 15th century filling of the L3 friary building. The thimble has thinner walls it was partially damaged in the soil, it was restored. It has numerous dot like wholes on its surface arranged in a spiral form. At the base of thimble there is an empty space left without any decoration. It is 1.6 cm high and 1.8 cm diameter.
34. **Thimble**, (Inv. no. 8693), C 25/2008, 1.2 m depth, from the filling of the L2 15th century wooden building. The thimble is slightly distorted, it has 1.8 cm width at the base and it has 1.53 cm height. On the surface there is a pointed decoration arranged in a spiral line.
35. **Thimble**, (Inv. no. 8695), C30/2009, -3.3-3.7 m, found on the cellars floor level. The thimble has a conic shape with numerous small dot-like points on its surface. At the bottom it has a simple circular line decoration. It is 1.8 cm wide and 1.6 cm high.
36. **Thimble**, (Inv. no. 8696), C38/2011, 0.2 m depth, □ 3/c, besides the filling of the L3 friary building, 15th century. This is the largest thimble found within the friary material, its width is 2.1 cm at the base and 2.2 cm at the top it is 1.82 cm high. The thimble has a conic like shape with slightly rounded top, a soft rim and a narrowing body. At the bottom it has two circular lines closing the pointed spiral line decoration on the outside. Near the circular line at the bottom of the thimble there is a gothic majuscule A letter, probably meaning the name of the manufacturer or eventually the owner.

37. **Bowl**, (Inv. no. 8746), C13/2005. The bowl is among the rare pieces from this period we do not have analogies for the early 14th century but we have representations about similar objects. The bronze bowl had a thin wall its height is 14 cm and its diameter was approximately 40 cm.
38. **Pot leg**, (Inv. no. 8753), C34A/2010, □3/a, -1.7 m. H= 6.4 cm, diameter at the bottom 2.7 cm, diameter at the middle 2 cm. The bronze made leg imitates the shape of a lion leg and it belonged probably to a smaller pot or eventually to an *aquamanile*.
39. **Bronze vessel leg**, (Inv. no. 8747), C23/b, □5/I, 15th–16th century, casted. The vessel leg has a square shaped section it has a widened bottom and it is narrow at the top. Its height is 3.15 cm its width at the bottom is 1.1 cm, at the top is 0.7 cm.
40. **Bronze vessel rim**, (Inv. no. 8697), S2/2003, □5, -1.35 m, 15th century. Rim fragment of a bronze vessel. The fragment was found in a 14th century garbage pit together with numerous pottery fragments and three late 14th century coins (Louis the Great of Hungary). The rim is a fragment of a 14th century bronze vessel it is 7.77 cm wide and 4.2 cm height the thickness of its wall is 0.25 cm.
41. **Chisel**, (Inv. no. 8711), C38, -0.4 m, 15th–16th century. Lower fragment of a bronze gouge, possibly used in the friary workshop. Length 4.5 cm, 2.2 cm, thickness at the top 0.7 cm – at the edge 0.2 cm.
42. **Fishing hook**, (Inv. no. 8710), C20/2007, □1/a, -1.55 m. 16th century. The fishing hook is 5.7 cm long and there is 1.3 cm distance between the pin and the body. In the upper side there is a small ring for the thread.
43. **Needle**, (Inv. no. 8736), C23/2008, □3–4/e–f, -2.8 m, 15th–16th centuries. The needle has a small bulb at its end and it is pin pointed at the other end. It is 5.5 cm long and 0.11 cm thick.
44. **Needle**, (Inv. no. 8737), C23/2008, □3–4/e–f, -2.8 m, 15th–16th centuries. The needle has a small bulb at its end and it is pin pointed at the other end. It is 5.7 cm long and 0.11 cm thick.
45. **Needle**, (Inv. no. 8738), C23/b/2008, □3/i, -1.2 m, 15th–16th centuries. The needle has a small bulb at its end and it is pin pointed at the other end. It is 2.9 cm long and 0.095 cm thick.
46. **Needle**, (Inv. no. 8739), C23/2008, □d/5, -2.3 m, 15th–16th centuries. The needle has a small bulb at its end and it is pin pointed at the other end. It is 3.3 cm long and 0.085 cm thick.
47. **Needle**, (Inv. no. 8740), C23/a/2008, □h/5, -2.3 m, 15th–16th centuries. The needle has a small bulb at its end and it is pin pointed at the other end. It is 2.5 cm long and 0.091 cm thick.
48. **Auger**, (Inv. no. 8748), C13/2005, 14th century. The auger has a square shaped body from its middle part that is narrowing and it ends in a point. The other side is round shaped it is slightly narrowing, from this side it was attached to a wooden handle. It is 8.1 cm long and 0.33 cm thick.
49. **Filter**, (Inv. no. 8730), C34/2010, -3.1 m, 15th century, pressed. The filter fragment has a wider 1 cm margin the rest of the fragment has wholes on the surface. It is 6.4 cm long and 3.8 cm wide, its thickness is 0.05 cm.
50. **Bronze ring**, (Inv. no. 8723), C7/2004, □2/c, -1.35 m. 16th century, bronze wire. It was the accessory of a tool, its section is square shaped, its diameter is 2.3 cm its thickness is 0.08 cm.

Clothing accessories

51. **Button**, S IV/1999, -0.34 m, 15th–16th century, pressed. Round shaped bronze button, its decoration is hardly visible because of its deterioration, could have been a flower in the middle. It has 2.3 cm diameter and 0.7 cm height.
52. **Button**, (Inv. no. 8734), C31/2010, -2.5 m, 15th century, pressed. It was made from a thin 0.1 cm thick bronze plate to which they soldered a hook. It has a 0.2 cm rim and its diameter is 1.5 cm.
53. **Button**, (Inv. no. 8735), C34/2010, -2.7 m, 15th century. The button was cut from a simple bronze plate it has two narrow holes cut into the surface. Through the holes they entered a strong bronze stripe and they folded in two sides. The button could be on a leather cloth. It has 1.2 cm diameter, its legs are 2 cm and 1.8 cm long.
54. **Triangle belt ornament**, (Inv. no. 8704), C31/2009, -2.7 m, 15th century. Triangle shaped pressed ending of a narrow belt with two nails, it is 3.1 cm long and 1.7 cm wide.

55. **Belt ornament**, (Inv. no. 8706), C6/2004, -1.2 m, 15th century, casted. The belt ornament was found above the medieval floor level of the cloister. It was placed at the end of a belt. The belt ornament has a pointed end its surface is covered by a rich floral palmetto ornament. Its beginning follows the shape of the leaf and close to this there is a nail that was pierced through the ornament to attach this to the leather. Its backside has no ornaments. Its length is 3 cm, width is 1.8 cm, its thickness is 0.4 mm. The ornament has close analogies within the small and mid size market towns (BENKŐ 1992).
56. **Belt button**, (Inv. no. 7915) S I/1999, □ C 1, 15th century, casted. It has an octagonal shape at its edge there is a thin 2.6 mm rim in the middle it has a spherical shape with a small point at its top. The diameter of the button is 2.6 cm its height is 1 cm. On the back side it has four claws that made possible its attachment to a leather cloth.
57. **Belt button**, (Inv. no. 7914), C8/2004, □5, -0.45 m, 15th century, casted. It has an octagonal shape at its edge there is a thin 2.6 mm rim in the middle it has a spherical shape with a small point at its top. The diameter of the button is 2.6 cm its height is 0.9 cm. On the back side it has four claws that made possible its attachment to a leather cloth.
58. **Belt button**, (Inv. no. 8682), C23/2008, -0.45 m, from the filling of the 15th century cellar, 15th century, casted. It has an octagonal shape at its edge there is a thin 2.3 mm rim, in the middle it has a convex shape with a small point at its top. The diameter of the button is 2.9 cm its height is 1cm. On the back side it has four claws that made possible its attachment to a leather cloth.
59. **Ring brooch**, (Inv. no. 8702), C36/2011, -1.6 m. The brooch fragment was found in the 15th century graveyard of the friary inside the chapter house. The fragment is from a four leaf clover shaped ring brooch; its decoration is made through incision. At the two edges it has two lines, within them rhomboidal simple ornaments. It has one hole preserved that served for the attachment of the brooch to the cloth. On the surface there are traces of gilt. It is 0.88 cm wide and length of the fragment is 4 cm. The diameter of the buckle could be around 5.4–5.6 cm.
60. **Belt buckle, spoiled**, (Inv. no. 8745), C34/2010, -2.8 m, late 14th–early 15th century. The piece looks like a spoiled buckle; this is the first evidence of the existence of a bronze workshop. One side of the buckle is straight here it could have been connected to the belt. The buckles diameter is 2.8 cm and its thickness is 0.17 cm.
61. **Belt ornament**, (Inv. no. 8699), C23/2008, from the filling of the 15th century cellar. It is a fragment from a belt ornament, having a flower with five petals in the middle marked by two stripes at the two edges. It is 2.1 cm wide and 1.55 cm long.
62. **Cloth buckle**, (Inv. no. 8703), C34/a/2010, C/2 □, -1.6 m, (pressed) a square shaped 2 × 2.1 cm large buckle having a whole at each corner and a claw on one side. Besides the buckle we found a 4 cm long bronze band that was probably connected to the buckle.
63. **Bracelet**, (Inv. no. 8707), C13/2006, first half of the 14th century. The bracelet is composed of spun bronze wire. It is an important and rare find for the early 14th century Transylvania together with the preserved bronze wire fragments. Two fragments were preserved from the bracelet. It is probably imported from Germany. Its thickness is around 0.36 cm, the lengths of the fragments are 7.4 cm and 5 cm.
64. **Bronze wire**, (Inv. no. 8711), SIII/2003, □5, -1.4 m, 14th century. The roll of bronze wire was found bellow the 15th century walking layer near the wall, close to a grave. It was probably imported for a local manufacture as a raw material and used for cloth decoration. We found two types of metal threads, one has a simple thread form and the second has spiral a shape with a simple bronze thread in the middle.
65. **Embossed ornament**, (Inv. no. 8683), C34a/2010, -2.3 m, late 14th–early 15th century, pressed. Cloth ornament, made from embossed copper plate. The ornament is square shaped, its size is 4.6 × 4.6 cm and has a central image surrounded by a blank frame and the very edge has a pearl decoration. In the middle square there is a symbolic representation of a snake surrounding a column, the snake has on both sides a head. In the background one can see an ornament imitating trees. A possible explanation for the representation is the example of the fire snake from the book of Moses.

66. **Pendant**, (Inv. no. 8717), sporadic find in the Târgu Mureș castle. The pendant was probably a cloth accessories and it seems to be from the 15th–16th centuries. It has a hook on the top followed by a triangle shaped top and a trapezoidal body. On the edges it has a simple line decoration at the top triangle part it has a striated decoration. On the back side another smaller trapezoidal plate is nailed with three nails. Its length is 3.1 cm; its width is 1.8 cm at the bottom.
67. **Cloth ring**, (Inv. no. 8712), C34/2010, 15th century, bronze casting. The wide ring has two edges at both sides and on one side there is a simple line decoration. The ring was very probably a cloth accessory. Its diameter is 3,7cm, the width of the ring is 0.7 cm and its thickness is 0.36 cm.
68. **Cloth ring**, (Inv. no. 8713), C35/a/2011, -1.05 m, besides the grave M110. 15th century, bronze casting. The wide ring has two edges on both sides. The ring was very probably a cloth accessory. Its diameter is 3.9 cm, the width of the ring is 0.67 cm and its thickness is 0.33 cm.
69. **Cloth ring**, (Inv. no. 8714), C35/a/2011, -1.1 m, 15th century, bronze casting. It was also found in the vicinity of the graves. The body of the ring is circular without any specific decoration. The ring was very probably cloth accessory. Its diameter is 2.8 cm and the width of the ring is 0.4 cm.
70. **Cloth ring**, (Inv. no. 8715), C36/2011, -1.4 m, 15th century, bronze casting. It was bellow the 16th century clay bed of the brick floor. The body of the ring has a flattened part it has no decoration. The ring was very probably a cloth accessory. Its diameter is 3.37 cm, the width of the ring is 0.4 cm.
71. **Cloth ring**, (Inv. no. 8716), C34/2010, □a/2, -2.55 m, 15th century, bronze casting. It was found in a 15th century filling layer. The body of the ring is circular without any specific decoration. The ring was very probably cloth accessory. Its diameter is 2 cm and the thickness of the ring is 0.3 cm.
72. **Cloth ring**, (Inv. no. 8726), C36/2011, -m, 15th century, casting. The bronze cloth ring we identified in a fifteen century grave and it also had an unidentified coin besides. The simple rings section has an ellipsoid form its diameter is 4 cm, its thickness is 0.5 cm in the front and 0.35 cm on the side.
73. **Cloth clamp**, (Inv. no. 8721), C35/a/2011, -1.6 m, found in the grave M129 on the right femur. It is from the 15th century, made of bronze wire. The cloth clamp has two parts a hook and an eye. On several medieval representations one can see similar clothing accessory, this is the first grave where we have found a medieval cloth clamp in good condition.
74. **Cloth clamp**, (Inv. no. 8722), C35/a/2011, -1.2 m, found in a grave, on the right femur. It is from the 15th century it was made of bronze wire. It was a cloth accessory, only the hook side of the clamp was preserved.

Others

75. **Twisted bronze wire**, (Inv. no. 8733), C34/2010, -2.6 m, 15th century. The bronze wire is bended in a semicircle and it is twisted therefore it has a spiral decoration on the surface; it ends in an eye for a hook. We do not know its usage. It is 0.17 cm thick and 3.6 cm is the diameter of the semicircle.
76. **Bronze lily ornament**, (Inv. no. 8742), C23/2008, □e-f/3-4, -2.8 m, 15th century. Lily shaped bronze ornament fragment, only the upper part of the lily was preserved with three petals. It has a simple incised decoration on its surface and it was punched in the middle. It is 2.48 cm high 2.13 cm wide, its thickness is 0.2 cm.
77. **Bronze wire**, (Inv. no. 8743), C34/2010, □a/4, -1.9 m, 15th century. Bronze wire probably used as raw material for bronze processing, decoration etc. It thickness is 0.2 cm its length is 13 cm.
78. **Bronze wire**, (Inv. no. 8744), C34/2010, -1.6 m, 15th century. Bronze wire probably used as raw material for bronze processing, decoration etc. It thickness is 0.34 cm its length is 5.4 cm.
79. **Stripe with whole**, (Inv. no. 8725), C23/2008, □c-d/4-5, 15th–16th centuries, bronze plate from the walking layer of the 15th century cellar. The stripe has a widened part with a square shaped hole in it and the trace of a line incision near the hole. The piece was very probably part of the lock of a little box. Its length is 8.7 cm its width at the whole is 0.75 cm, its average width is 0.5 cm and its thickness is 0.15 cm.
80. **Bronze plate with furrow**, (Inv. no. 8727), C31/2009, -1.9 m, 15th century, pressed. The bronze plate has a 0,4cm furrow in the middle and on one side it is slightly bended at the edge. It is 3.8 cm long and 2.1 cm wide.

81. **Bronze stripe**, (Inv. no. 8750), C34/2010, 15th century. The bronze stripe is twisted in its third part; it seems to be a spoiled piece. Its length is 10.8 cm its width is 0.8 cm its thickness 0.14 cm.
82. **Spacer**, (Inv. no. 8751), C34/2010, b–d/2–4, -2.3 m, 15th century. The oval shaped spacer was probably produced for a handle; it has a square shaped hole in the middle and a number of scratches on its surface. It is 2 cm wide and 0.09 cm thick.
83. **Bronze plate**, (Inv. no. 8752), C34/2010, c/2, -2.2 m, 15th century. The bronze plate has three evenly placed holes in a row. It is 2.9 cm long 1.95 cm wide and 0.05 cm thick.
84. **Bronze stripe with hook**, (Inv. no. 8724), C30/2010, -0.8 m, 15th century, bronze plate. The stripe has no decoration on one of its end it has two nails, in the vicinity of the other end has three small holes, while at the end there is a tube to attach to the body of the book or box. Its length is 7.5 cm its width is 1.44 cm its thickness is 0.09 cm.
85. **Bronze plate**, (Inv. no. 8755) C30/2009, -0.8 m, 15th century, bronze plate. The plate has a hole in the middle; it seems to be a removed bronze piece from a book cover or other item. Its height is 2.6 cm its width is 2.7 cm.

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Fig. 1. The reconstruction of the Franciscan friary based on the results of the archaeological excavations and on the existing analogies (by Gergely Buzás).

Fig. 2. The ground plan of the 14th century friary with the first church (later chapter house) and the wooden buildings.

Fig. 3. The fortified Franciscan friary at the late 15th century.

LIST OF PLATES

Pl. 1–6. Bronze objects from Târgu Mureș–*Franciscan Friary*.



Plate 1. Bronze objects from Târgu Mureș–*Franciscan Friary*.



Plate 2. Bronze objects from Târgu Mureș–Franciscan Friary.

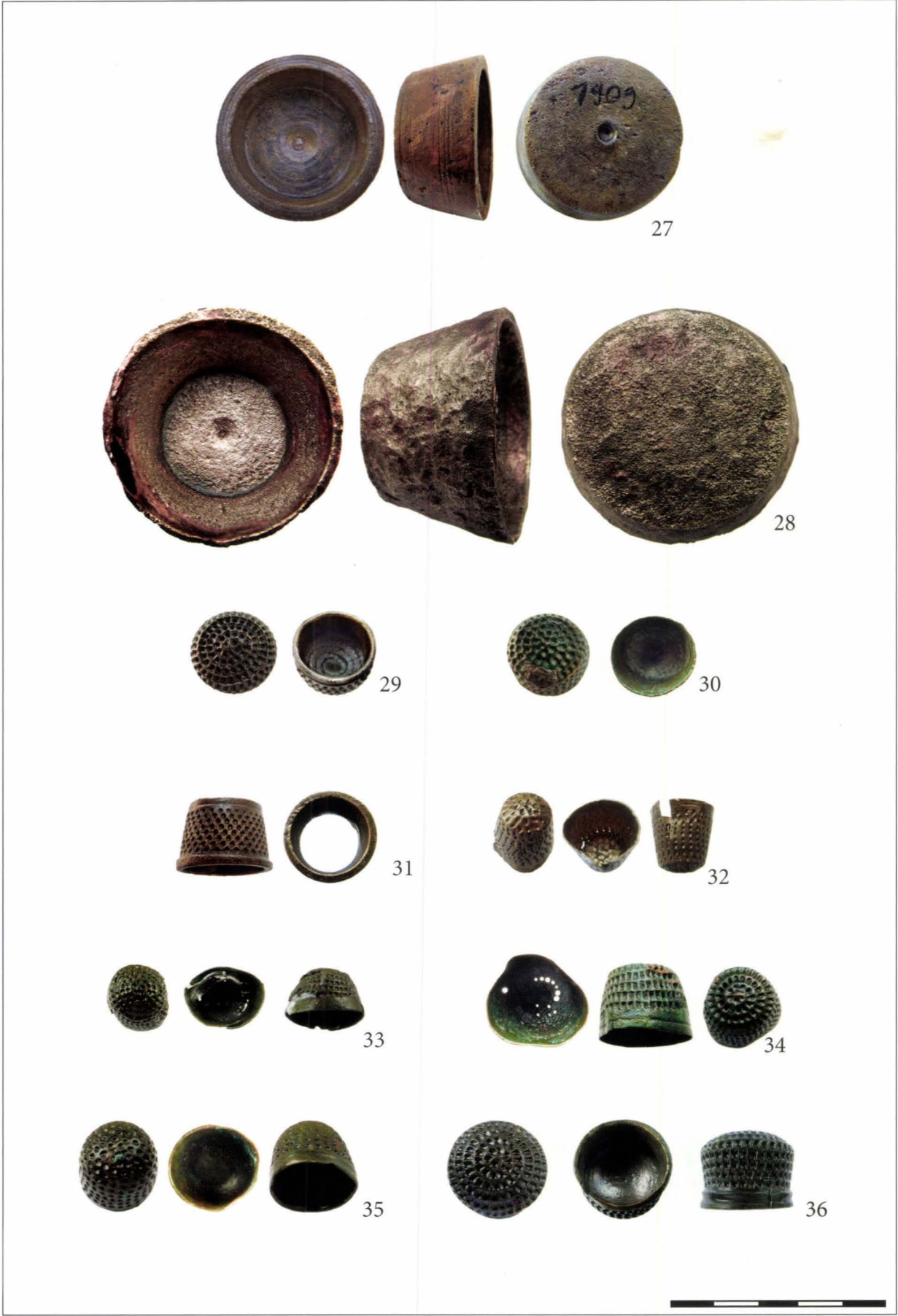


Plate 3. Bronze objects from Târgu Mureș–Franciscan Friary.

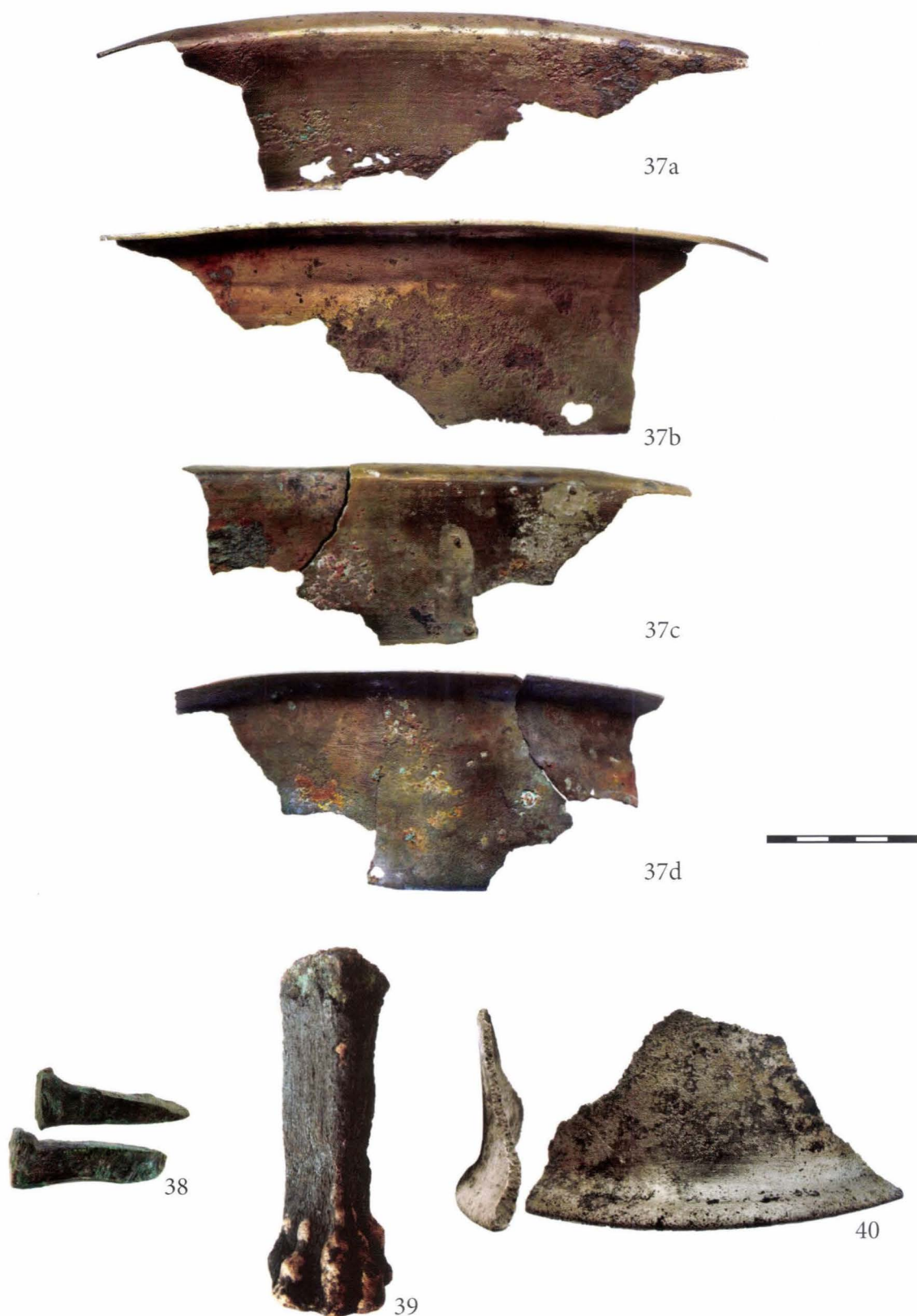


Plate 4. Bronze objects from Târgu Mureș–Franciscan Friary.



Plate 5. Bronze objects from Târgu Mureș–Franciscan Friary.



Plate 6. Bronze objects from Târgu Mureș–Franciscan Friary.

DIE FRÜHE SÄCHSISCHE PRÄSENZ IN BAIJA MARE UND IN DER MARAMURESCH

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Im Jahre 2009 kam ein archäologischer Fund zu Tage, der die frühe sächsische Präsenz an den Ufern des Flusses Săsar zu bestätigen scheint. Es ist die Rede von einem kugelförmigen Bronzegefäß, versehen mit drei Beinen und zwei Griffen, gefunden, wahrscheinlich in sekundärer Lage, während der Rettungsgrabungen im Gebäude Piața Libertății 13, dem sogenannten Haracsek-Haus, in der alten Stadtmitte von Baia Mare. Dieses Gefäß gehört der Grapen-Form an, ein charakteristisches Produkt in von deutscher Bevölkerung besiedelten Gebieten zwischen dem 12. und dem 18. Jahrhundert. Das Fundstück von Baia Mare dürfte ins 14.–15. Jahrhundert datiert werden. Es wird kurz auch die frühe Präsenz der Saxonen in der Maramuresch-Senke (Țara Maramureșului) erörtert.

Schlüsselwörter: Baia Mare, Maramuresch, Sachsen, Bronzegefäß

Bereits im 17. Jahrhundert behauptete der Chronist Gheorghe Brancovici, dass die Stadt Baia Mare durch Sachsen gegründet wurde (siehe ARMBRUSTER 1980, 93). Manche Autoren schreiben von einer Ansiedelung von sächsischen Kolonisten 1141 oder 1142 durch den ungarischen König Geisa II. (1141–1162) (SZIRMAI SZIRMAY 1809, 215; SCHEMATISMUS 1864, 109; RUPP 1872, 355; SZELLEMY 1894a, 7; SZELLEMY 1894b, 266; SZOKOL 1895, 5; BRADOFKA 1896, 36; TÉGLÁS 1897, 344; SCHEMATISMUS CENTENARIUS 1904, 199; SZMIK 1906, 207; URBÁN 1912, 37; POP o.J., 14; CRIȘAN 1940, 9; MANILICI ET AL. 1965, 5; RÉTHY 2001, 31; MOLNÁR 2002, 24; RÉTHY-TÓTH 2010, 14; KARCZAG-SZABÓ 2010, 250). Diese Autoren meinen, dass die Anwesenheit der Sachsen auch mit den Anfängen des Bergbaus in der Gegend in Verbindung steht.

Es ist aber kein sicheres Datum bekannt, das vor dem 14. Jahrhundert die Ausübung des Bergbaus in Baia Mare bestätigen könnte. Ferner fehlen auch konkrete Informationen über eine sächsische Ansiedlung in der Gegend um Baia Mare, welche den ersten sächsischen Ansiedlungen im Süden Siebenbürgens im 12. Jahrhundert zeitlich entsprechen könnte. Es gibt lediglich eine von König Andreas II. (1205–1235) 1230 ausgestellte Privilegiums-Urkunde für in Sathmar angesiedelte *hospitibus Teutonicis*. In diesem Dokument wird berichtet, die *hospites* meinen, dass ihre Vorfahren unter dem Schutz der bairischen Königin Gisela (*Keysla*) ins Land gekommen sind, also wären sie schon zur Zeit der Herrschaft von Stefan dem Heiligen, Anfang des 11. Jahrhunderts nach Ungarn ausgewandert (MITTELSTRAß 1961, 37; WAGNER 1982, 114; NÄGLER 1992, 129; siehe auch KACHELMANN 1853, 11; SCHEMATISMUS 1864, 108).

Das älteste bekannte Schriftstück, in dem Baia Mare urkundlich erwähnt wird, stammt aus dem Jahre 1329.¹ In dieser Urkunde schenkt König Karl Robert (1301–1342) dem *Corrardus Judex Civitatum Rivuli Dominarum et de Medio Monte* den Wald zwischen den beiden genannten Ortschaften, mit dem Zweck, dass hier eine Siedlung gegründet wird. Baia Mare erscheint hier unter der Bezeichnung *civitas Rivuli Dominarum*, wobei diese Siedlung und das benachbarte *Mons Medius* (Baia Sprie) einen gemeinsamen *judex* haben. In einer Urkunde von 1327 wird *Zazarbanya* (Grube Săsar)² erwähnt, welches später mit Baia Mare vereint wurde. Unter der Bezeichnung *Zazurbanya* erscheint die Siedlung, neben *Rivulus Dominarum*, auch in der am 20. September 1347 ausgestellten Urkunde von König Ludwig I. (1342–1382).³

Es werden einige Angaben verzeichnet, welche die berichtigte Vermutung anstellen lassen, dass die heutige Form der Stadtmitte, wie auch der größte Teil des Straßennetzes in dem befestigten Stadtteil in der zweiten Hälfte des 13. Jahrhunderts (NIEDERMAIER 2008, 157, Abb. 55) oder im 14. Jahrhundert entstanden, obwohl die ältesten identifizierten Architekturelemente Ende des 14. bzw. Anfang des 15. Jahrhunderts datiert werden können. E. Greceanu meint sogar, dass „die Ansiedlung der deutschen Gäste und die Erteilung der Stadtprivilegien an diese, eine Systematisierung der ebenda gelegenen älteren Siedlung mitgebracht habe, auf Grund der günstigen Überquerungsmöglichkeit des Flusses Săsar“. Nach derselben Autorin spricht für den sächsischen Ursprung der Stadt auch „...die Lage der wichtigsten Pfarrkirche der Stadt (Skt. Stefan) im Rückzug gegenüber dem Hauptplatz, mit dem sie aber in direkter Verbindung steht“, was „der Lage der Kronstädter Schwarzen Kirche entspricht, im Verhältnis zum hiesigen mittelalterlichen Rathausplatz“ (GRECEANU o.J.). Eine ähnliche Meinung führt auch E. HAULER (1998, 15) aus. Es gibt aber auch Ansichten, laut derer der zentrale Marktplatz erst in den 15–16. Jahrhundert angelegt wurde (WEISZ 2007, 11).

Sichere dokumentarische Beweise der sächsischen Präsenz an den Ufern des Flusses Săsar gibt es in geringer Anzahl. Sie gehören meist zur Domäne der Onomastik (SCHÖNHERR 1910b, 328; MAKSAI 1940, 101; siehe auch aus der neu erschienen Literatur HOCHSTRASSER 2006, 66).

Im Jahre 2009 kam ein archäologischer Fund zu Tage, der diese Präsenz zu bestätigen scheint. Es ist die Rede von einem kugelförmigen Bronzegefäß, versehen mit drei Beinen und zwei Griffen, gefunden, wahrscheinlich in sekundärer Lage, während der Rettungsgrabungen im Gebäude *Piața Libertății* 13, dem sogenannten *Haracsek-Haus* (Abb. 1) in der alten Stadtmitte von Baia Mare (Abb. 2).⁴ Ein ähnliches Gefäß wurde in Siebenbürgen auf dem Territorium der Ortschaft Baraolt (Kreis Covasna), wahrscheinlich im Flussbett des Baches Vârghis, gefunden.

1 Das Original der Urkunde aus dem Jahre 1329 ist nicht erhalten geblieben. Es gibt nur eine lateinische Zusammenfassung in einer Urkunde aus dem Jahre 1479 betreffs eines Prozesses zwischen der Stadt Baia Mare und Nikolaus und Bartolomeus Drágffy, siehe WENZEL 1880, 110, Anm. I; SCHÖNHERR 1910a, 397; *DIR*, C, Veacul XIV, II. Band (1321–1330), 1953, 290; FEȘTILĂ ET AL. 1972, 130; CĂPÎLNEAN ET AL. 1974, 49, Anm. I.

2 Laut SCHÖNHERR 1910a, 379, war schon damals diese Ortschaft eine Stadt; nur so kann die besondere Interesse des Königs an die hiesigen Einwohner erklärt werden. Wichtige Rechte der Besitzer der benachbarten Grundstücke waren von der Genehmigung dieser Einwohner abhängig. Der Historiker behauptet ebenfalls, dass die Urkunde einen Beleg des starken Verkehrs am Anfang des 14. Jahrhunderts darstellt.

3 Die Urkunde ist schon von VON BORN 1774, 147 und SZIRMAI SZIRMAY 1809, 217 (hier auch die Übersetzung der Urkunde ins Ungarische) besprochen. Siehe auch SCHÖNHERR 1910a, 390; MAKSAI 1940, 99; OSZÓCZKI-SABĂU 1967, 179; MAGHIAR-OLTEANU 1970, 113; FEȘTILĂ ET AL. 1972, 131; CĂPÎLNEAN ET AL. 1974, 49. Die Übersetzung der Urkunde ins Rumänische in *DIR*, C, Veacul XIV, IV. Band (1341–1350), 400–404.

4 Freundliche Mitteilungen M. Ardeleanu. Siehe auch http://www.epochtimes-romania.com/article.php?article_id=47870 (es wird hier das Bronzegefäß in das 19. Jahrhundert datiert [?!]).

Z. Székely schreibt das erwähnte Gefäß den Petschenegen zu (SZÉKELY 1975, Anm. 25, Abb. 8; SZÉKELY 1992, 134), aber E. Benkő macht in mehreren seiner Arbeiten darauf aufmerksam, dass es der *Grapen*-Form angehört. Dieses Gefäß ist ein charakteristisches Produkt in von deutscher Bevölkerung besiedelten Gebieten zwischen dem 12. und dem 18. Jahrhundert (BENKŐ 2003a, 111, Abb. 1; BENKŐ 2003b, 47, Abb. 1; BENKŐ 2005, 1, Abb. 1). Der Autor datiert das siebenbürgische Exemplar, nach typologischen Kriterien, in das 12–13. Jahrhundert, wobei seine Anwesenheit in Baraolt, hypothetischerweise in Verbindung mit einer sächsischen Präsenz oder einem sächsischen Einfluss vor dem Jahre 1241 stünde.⁵



Abb. 1. Baia Mare. Die Fassade und die Außenseite des Haracsek-Hauses.

Das Fundstück von Baia Mare unterscheidet sich leicht von dem von Baraolt durch den schräg orientierten Rand, den betont umrissenen Übergang vom Gefäßmund zum -körper und die dreieckigen Griffe. Gemäß den typologischen Kriterien und den chronologischen Betrachtungen von H. DRESCHER (1968, 23),⁶ dürfte das Exemplar von Baia Mare ins 14–15. Jh. datiert werden. Zweifellos handelt es sich um ein metalenes Haushaltsgefäß (RÜTZ 2005, 295),⁷ das in vielen großen deutschen Städte serienweise gegossen wurde (STEUER 1993, 88). Eine gute Analogie zu dem Gefäß von Baia Mare ist ein im Museum in Köln aufbewahrtes Stück, das aus Rheinland stammt (POETTGEN 2005, 207, Abb. 215–216).

Nach E. Benkő, sind ethnisch gerichtete Einschätzungen auf Grund eines einzigen Fundes unsicher, trotzdem kann das Bronzegefäß von Baia Mare als ein erstes archäologisches Indiz für die frühe sächsische Präsenz in Baia Mare angesehen werden.



Abb. 2. Baia Mare. Plan der Stadtmitte.

⁵ Das Gefäß wird identisch in CAVRUC 1998, 158, Taf. 23/5, sowie auch von SZTÁNCSEJ 2005, Abb. auf S. 32 und von BORDI 2009, 67, Nr. 55 datiert. Belege für diese Datierung liefern auch die Grabungen von Cristuru Secuiesc, wo ein Siedlungsteil aus dem 13. Jh. freigelegt wurde. Unter den Funden kam auch das abgebroche Bein eines ähnlichen Bronzegefäßes zu Tage (BENKŐ 1992, 168, Taf. 40/9). Ein jüngeres siebenbürgisches Exemplar, ebenfalls ein Flußfund, stammt aus Stăulești (ANDRIȚOIU 1979, 27, Nr. 34, Taf. 6/9).

⁶ Für die bibliographischen Hinweise danke ich Herrn Dr. E. Benkő.

⁷ Es gibt auch besondere Stücke, wie jenes aus Csongrad, das mit zwei Röhren versehen ist und sehr wahrscheinlich eine andere Verwendung hatte, siehe LOVAG 1999, 108, nr. 300.

Über eine vermutliche, frühe deutsche Kolonisierung wird auch in Zusammenhang mit der Maramuresch gesprochen. Ich zitiere hier aus der älteren Literatur die Werke von G. Wenzel, J. Szilágyi und I. Mihályi, in welchen eine Urkunde aus dem Jahre 1213 erwähnt wird, die die Anwesenheit der Ritter des Deutschen Ordens (der Teutoner) in der Maramuresch beweisen würde (WENZEL 1857, 322; SZILÁGYI 1889, 18; MIHÁLYI 1889, 58). In einer anderen Arbeit setzt I. Mihályi voraus, dass Anfang des 13. Jahrhunderts „die Gründer der oppida Teceu (Teutschnau), Huszt und des Castrum Hust, Teutoner waren“ (MIHÁLYI 1900, 5, Anm. 3). Ich erwähne noch aus der älteren Literatur die Meinung von I. SCHIOPUL (1932, 118), laut derer die von Andreas II. an die Teutoner verschenkte *terra Borza* mit der Region Maramuresch identifiziert wird.

In der neueren Literatur gibt es ebenfalls relativ zahlreichen Bezugnahmen auf die frühe Präsenz der Saxonen in der Maramuresch. So behauptet G. Hochstrasser, dass die frühe Besiedlung der historischen Maramuresch mit Saxonen zwar nicht urkundlich erwähnt ist, aber die Information, dass 1143 deutsche Bergleute nach Oberwischau (Vișeu de Sus) und Baia Borșa gekommen seien, ist akzeptabel (HOCHSTRASSER 2002, III). In dem Buch *Noile modele. Maramureș între ficțiune și realitate* schreibt L. Ghinea: „Im Jahre 1143 siedeln sich in Oberwischau und Baia Borșa Bergleute aus Sachsen an und schließen Bergwerke auf“ (GHINEA 2007, 43). R.-C. ȚURCANU (2008, 75) spricht ebenfalls über die Anwesenheit sächsischer Bergleute in Oberwischau und Baia Borșa im Jahre 1143. F. Wanek et al. sind auch der Meinung, dass die ersten Saxonen im Laufe des 12. Jahrhunderts nach Oberwischau und Pfefferfeld (Borșa) gekommen sind (WANEK 2009, 18). A. SZÖKE (1962, 20) schreibt ferner über einen im Jahre 1143 ausgestellten Erlass, der die Wiederinbetriebnahme der „alten römischen Gruben“ bestätigen soll und als erster konkreter Beweis für die Erzförderung in der Maramuresch gelten soll. Die erwähnten Autoren nehmen die noch in den achtziger Jahren des 19. Jahrhunderts geschriebene Behauptung von E. Preisig wieder auf, gemäß der im Jahre 1143 manche Siedler von Visc (Visk), Petrova (Petermannsdorf) und Vișeu de Sus (Wisch-Au), vor allem Saxonen, den Grundstein der Erzförderung in Visc und Băile Borșa (Pfefferfeld) gelegt hätten (PREISIG 1877, 322). Diese Behauptung wurde Anfang des 20. Jahrhunderts auch von L. Schmidt übernommen (SCHMIDT 1901, 333). Für seine Feststellung führt aber E. Preisig keine dokumentarischen Beweise an.⁸

Die Präsenz der Saxonen in der Maramuresch im 12. oder Anfang des 13. Jahrhunderts erwähnende Urkunden fehlen. Die ersten sicheren urkundlichen Erwähnungen der königlichen Gäste – *hospites* – erscheinen erst in einer Urkunde aus dem Jahre 1300 (siehe MIHÁLYI 1900, 3; DIR, C, veacul XIII, II. Band, 1952, 476 – Regest nach dem lateinischen Text; POPA 1970, 49; DIACONESCU 1999, 278), wie auch in dem von Karl Robert am 26. April 1329 erteilten Privilegium an „*hospitum nostrorum, fidelium de Maramorusio, Saxonum et Hungarorum*“ (WENZEL 1857, 332, 381; MIHÁLYI 1900, 8; DIR, C, veacul XIV, II. Band, 1953, 283; GYÖRFFY 1998, 120, 125).

R. POPA (1970, 48, Anm. 36), T. NÄGLER (1992, 170), M. DIACONESCU (1999, 278) und P. NIEDERMAIER (2008, 327) sind der Meinung, dass die erste Ansiedlungswelle, bestehend aus vorwiegend deutschen Elementen, in den letzten Jahrzehnten des 13. Jahrhunderts zu verzeichnen sei. R. Popa bespricht ebenfalls die Frage der Präsenz des Deutschen Ritterordens bzw. der Teutoner in der Maramuresch in den Jahren 1211–1225, indem er darauf aufmerksam macht, dass

8 Siehe auch STEPHANI 1970, 212, Anm. 18 mit weiterer Literatur.

die diesbezügliche Argumentation auf einem von J. Kemény aufgestellten und 1855 veröffentlichten fingierten Dokument basiere (POPA 1970, 49 f., Anm. 43 und 44). Ähnliche Betrachtungen bezüglich der fingierten Urkunde wurden schon Anfang des 20. Jahrhunderts von J. PAP (o.J., 18) veröffentlicht, welcher trotzdem eine sehr frühe sächsische Präsenz in der Maramuresch zulässt.⁹

In einer am 9. Februar 1319 in Medieșu Aurit von „*Nicolaus wayvode filius magistri Mauricii, comes de Malamorisio*“ ausgestellten Urkunde werden ebenfalls die Gäste (*Hospites*) aus der Maramuresch erwähnt: „...*in pugna hospitum, de Malamorisio circa nos transmigravit...*“ (DIR, C, veacul XIV, I. Band [1301–1320], 308, 416; siehe auch NÉMETH 2008, 181).

G. HOCHSTRASSER (2002, III; ders. 2006, 66) hält diese Urkunde für einen Beweis der Anwesenheit von deutschen *Hospites* in der Maramuresch. Auch andere Autoren zitieren, mit leichten Änderungen (*Maramorusio* anstatt *Malamorisio*), das Dokument von Medieșu Aurit (RIEDER 2006, Kapitel 2.14.4.1, Anm. 44; ILK 2009, 30, Anm. 111). Es ist noch zu überprüfen, ob es sich tatsächlich auf die Saxonen bezieht.

Daher bleibt, trotz eine Fülle von hypothetischen historischen Beweise und Spekulationen die auf wenige Urkunden basieren, unserer in Baia-Mare gefundener Grapen einer der wenigen sicheren Hinweise für eine frühe Präsenz einer Deutschen Bevölkerung in der heutigen Maramuresch.

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⁹ Siehe auch DIACONESCU 1997, 123.

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ABBILDUNGEN

Abb. 1. Baia Mare. Die Fassade und die Außenseite des *Haracsek-Hauses*.

Abb. 2. Baia Mare. Plan der Stadtmitte.

Gáll Erwin, *Doboka-IV. vártérség templom körüli temetője: régészeti adatok egy észak-erdélyi ispáni központ 11–13. századi fejlődéséhez (The churchyard cemetery in Dăbâca/Doboka, castle area IV: archeological data on the development of a north Transylvanian county centre in the 11.–13th centuries)*, Kolozsvár, Erdélyi Múzeum Egyesület, 2011, 232 pages, 70 plates, 35 figures, one large general plan.

Book review by ZALÁN GYÖRFI

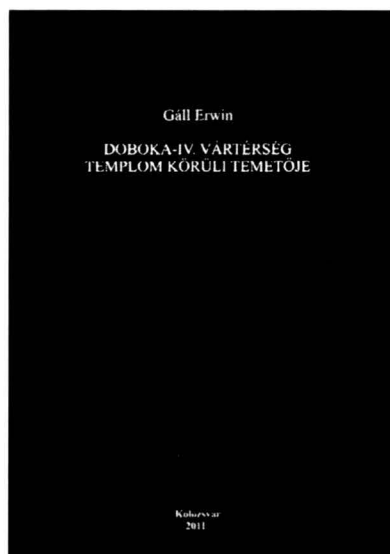
Gáll Erwin's work published by the Transylvanian Museum Society redeems and old debt of Transylvanian archaeology of the early Middle Ages. As the author's preface and the research's historical overview states it, several studies concerning Doboka have been published and many have used and abused them for scientific or pseudo-scientific historical reconstructions or arguments.

The first chapter reveals that this is not only a scientific research, as Doboka has always been the object of academic policy and prestige, a question of major importance for the Romanian 'national archaeology'. Theories and interpretations based mostly on historical and linguistic data have only used archaeological information as auxiliary. Besides the scanty information of documents, difficulties in interpreting the archaeological legacy of the cemetery around the church in the IV castle area also arise from the complete lack of bones.

The second chapter deals with the burial customs. After clarifying some methodological and theoretical percept as well as the rite, the author gives a detailed and extensive analysis of the cemetery and its structural elements, taking several aspects into consideration (shape, size, depth and orientation of the graves; position of the skeleton; position of the arms; unusual positions; *oboluses* in the graves). These make the cemetery in Doboka one of the many already revealed cemeteries of the early Hungarian kingdom, created around a church. Its population was a colourful community with diverse customs and identities.

The third chapter, dedicated to the analysis of the finds, also discusses a few methodological problems and considerations that reoccur when discussing the different object types. The findings include some fashion items, also found in other contemporary cemeteries of the Carpathian basin, in the same proportions: different types of simple or S shaped hair rings, hairpins, pearls, rings and bracelets. The author makes a useful point when suggesting that some objects may have had different functions, according to the context (e.g. hair rings, hairpins). The finds confirm the existence of the dividing line that separates the cemetery into the north-eastern and the north-western part, observed in the chapter dedicated to the cemetery's structure.

The last chapter is an assessment of the research. If one only takes the cemetery's partial excavation into consideration, the author's caution when drawing conclusions is justified. With



the joint use of the vertical and horizontal method, several groups of graves have been discovered in the central part of the cemetery and around its margins. At the present stage of the research, these represent three chronological burial horizons. The first one includes the end of the 11th century–first third of the 12th century, the second one includes the second third of the 12th century, and the last one covers the period between the end of the 12th century and the first third of the 13th century. Regarding the social status of the population, it can be stated that wealthier people were buried around the church, at least which is what the larger number of silver objects suggest.

It is impossible to define the population's ethnicity and identity, based on archaeological findings, therefore the only certain conclusion is that the cemetery carries the military and political elite, the colourful community of the *ispáns'* castle of Doboka, also known from the written sources. Although we mainly agree with the author's argumentation, we would be more cautious regarding the definition of ethnicity, interpreting it mainly, but not exclusively as a sociological construction.

The last, comprehensive conclusions regard the cemetery's relationship with the castle complex. These conclusions are by their nature anticipatory, since only a small part of the complex has been revealed so far. The church and cemetery of the IV castle area functioned during the time of the timber-and-earth castle built in the second half of the 11th century. In parallel there also existed at least two churches and cemeteries in the first half of the 12th century. The question regarding the relationship between the populations of the above-mentioned cemeteries is still pending and so is the issue of their settlements' location and structure. Although this was not the author's aim, he might have considered comparing his results obtained in Doboka to other county centres of the Arpadian Hungarian Kingdom, already revealed or still under excavation.

There are plenty of photos and the numerous statistical analyses are made more intelligible with the help of well structured tables. Maps that illustrate the graves' characteristics or the dispersal of different object types have the same aim. There are, however, several technical and editing inaccuracies: e.g. in case of tables 49 (scanty legend), 54 (faulty legend), 61 (the last object type is missing from the map) and 63 (missing legend). Table 64 is the first cumulative map of Transylvanian churchyards and it is therefore regrettable that several mistakes have occurred in the numbering and placement of the settlements that appear on the map. Respecting the order of the settlement register, we indicate the erroneous numbering (the number is followed by the information as shown in the book in italics, the name we considered correct follows the colon in normal character; in case of numbers appearing doubly we used curly brackets, numbers that do not appear on the map are followed by an exclamation mark): [6.] *Nemeszszuk*: Magyarvalkó; [17.] *Segesvár*: Székelyudvarhely; !19.(Kányád); !27.(Bögöz); 28. *Székelyudvarhely*: Bögöz; [29.] *Sajósárvár*: Kányád; [31.] *Szászorbó*: Berekeresztúr; 37. *Berekeresztúr*: Várfalva; 38. *Várfalva*: Szentábrahám; !39.(Szentábrahám); !41. (Gyalu); !42.(Magyarvalkó); !46.(Csapószentgyörgy). Some settlement names also require correction: 26. *Szászszeben*: Nagyszeben; 34. *Szentlászló*: Nyárádszentlászló; *Homoróddarócfalva*: Homoróddaróc. The almost 20 pages long English abstract follows the Hungarian text's structure; the most important chapter that contains the conclusions has almost entirely been translated.

All in all, the early medieval Transylvanian archaeological bibliography has been enriched with a very important monograph. After the much discussed excavations in Doboka, the articles – looking more like excavation reports – signed by many authors, this is the first exigent archaeological processing. After excavating for the second time (from the museum's storage, chests and dressers) the cemetery of the IV castle area, we hope that the author's further work will contribute to the carrying-on of the 'Doboka-plan'.

ABBREVIATIONS

<i>ABSz</i>	Acta Biologica Szegediensis
<i>Acta</i>	Acta (Siculica), Muzeul Național Secuiesc, Sfântu Gheorghe
<i>ActaArch</i>	Acta Archaeologica Academiae Scientiarum Hungaricae, Budapest
<i>ActaArch Carpatica</i>	Acta Archaeologica Carpathica, Academia Scientiarum Polona Collegium Cracoviense, Kraków
<i>ActaArch København</i>	Acta Archeologica, København
<i>ActaMN</i>	Acta Musei Napocensis, Cluj-Napoca
<i>ActaMP</i>	Acta Musei Porolissensis, Zalău
<i>Aetas</i>	Aetas, Történettudományi folyóirat
<i>AJA</i>	American Journal of Archaeology
<i>AJPhA</i>	American Journal of Physical Anthropology
<i>Alba Regia</i>	Alba Regia, Annales Musei Stephani Regis, Székesfehérvár
<i>Aluta</i>	Aluta, Revista Muzeului Național Secuiesc, Sfântu Gheorghe
<i>AMIT</i>	Archäologische Mitteilungen aus Iran und Turan, Berlin
<i>Analele Banatului</i>	Analele Banatului, Muzeul Banatului, Timișoara
<i>Anatolian Studies</i>	Anatolian Studies, Journal of the British Institute of Archaeology at Ankara
<i>Annales MNH</i>	Annales Musei Historiae Naturalis Hungariae, Budapest
<i>AnnalesUA, SH</i>	Annales Universitatis Apulensis, Series Historica, Alba Iulia
<i>Angustia</i>	Angustia, Muzeul Carpaților Răsăriteni, Sfântu Gheorghe
<i>AnthrAnz</i>	Anthropologischer Anzeiger, Journal of Biological and Clinical Anthropology
<i>AnthrKözl</i>	Anthropológiai Közlemények, A Magyar Biológiai Társaság Embertani Szakosztályának folyóirata, Budapest
<i>Antiquity</i>	Antiquity, London
<i>AO</i>	Arhivele Olteniei, Craiova
<i>Apulum</i>	Apulum, Acta Musei Apulensis, Alba Iulia
<i>ArchAustr</i>	Archaeologia Austriaca, Wien
<i>ArchBulg</i>	Archaeologia Bulgarica, Sofia
<i>ArchÉrt</i>	Archaeologiai Értesítő, Budapest
<i>ArchHung</i>	Archaeologia Hungarica, Budapest
<i>ArchKorr</i>	Archäologisches Korrespondenzblatt, Römisch-Germanischen Zentralmuseum in Mainz
<i>Argesis</i>	Argesis, Studii și Comunicări, Pitești
<i>ArhMold</i>	Arheologia Moldovei, Iași
<i>Asmosia</i>	Association for the Study of Marble and Other Stones In Antiquity
<i>ATN</i>	Archaeological Textile Newsletter
<i>AVSL</i>	Archiv des Vereins für siebenbürgische Landeskunde
<i>BA</i>	Biblioteca de Arheologie, București
<i>BAI</i>	Bibliotheca Archaeologica Iassiensis, Iași
<i>BAM</i>	Bibliotheca Archaeologica Moldaviae, Iași
<i>Banatica</i>	Banatica, Muzeul de istorie al județului Caraș-Severin, Reșița
<i>BAR</i>	British Archaeological Reports, International Series, Oxford

<i>BAU</i>	Beihefte Atlas der Urgeschichte
<i>BCMI</i>	Buletinul Comisiunii Monumentelor Istorice
<i>BCRC</i>	Buletinul Centrului de Restaurare-Conservare a Patrimoniului Cultural Național, Iași
<i>BCȘS</i>	Buletinul Cercurilor Științifice Studentești, Alba Iulia
<i>BdA</i>	Bolletino di Archeologia
<i>Beiträge MK</i>	Beiträge zu ur- und frühgeschichtlichen Archäologie des Mittelmeer-Kultarraumes, Bonn
<i>Beiträge UFMV</i>	Beiträge zur Ur- und Frühgeschichte Mecklenburg-Vorpommerns
<i>BerRGK</i>	Bericht der Römisch-Germanischen Kommission
<i>BHAB</i>	Bibliotheca Historica et Archaeologica Banatica
<i>BHAUT</i>	Bibliotheca Historica et Archaeologica Universitatis Timisiensis
<i>BM</i>	Bibliotheca Marmatia, Baia Mare
<i>BMA</i>	Biblioteca Muzei Apulensis, Alba Iulia
<i>BMant</i>	Bibliotheca Memoriae Antiquitatis, Muzeul de istorie Piatra Neamț
<i>BMBistrița</i>	Biblioteca Muzeului Bistrița
<i>BMM</i>	Bibliotheca Muzei Marisiensis, Seria Archaeologica, Târgu Mureș, Cluj Napoca
<i>BMN</i>	Bibliotheca Muzei Napocensis, Cluj-Napoca
<i>BMP</i>	Bibliotheca Muzei Porolissensis, Zalău
<i>BMTA</i>	Buletinul Muzeului Teohari Antonescu, Giurgiu
<i>BPH</i>	Bibliotheca Praehistorica Hispana, Madrid
<i>BpRég</i>	Budapest Régiségei, Budapest
<i>B-PS</i>	Baltic-Pontic Studies
<i>Bremer ArchBl</i>	Bremer Archäologische Blätter, Focke-Museum, Bremer Landesmuseum
<i>Britannia</i>	Britannia, A journal of Romano-British and Kindred Studies
<i>BT</i>	Bibliotheca Thracologica, București
<i>CA</i>	Cercetări Arheologice
<i>Carpica</i>	Carpica, Muzeul Județean de Istorie și Artă „Iulian Antonescu”, Bacău
<i>CCA</i>	Cronica Cercetărilor Arheologice din România
<i>CI</i>	Cercetări Istorice
<i>ComArchHung</i>	Communicationes Archaeologicae Hungariae, Budapest
<i>Corviniana</i>	Corviniana, Acta Musei Corviniensis, Hunedoara
<i>Crisia</i>	Crisia, Muzeul Țării Crișurilor, Oradea
<i>CRPC</i>	Conservarea și Restaurarea Patrimoniului Cultural, Iași
<i>CurrA</i>	Current Anthropology
<i>CsSzME</i>	Csiki Székely Múzeum Évkönyve, Csíkszereda
<i>Dacia</i>	Dacia, Recherches et découvertes archéologiques en Roumanie, I–XII (1924–1948), București; Nouvelle série (N. S.), Dacia. Revue d'archéologie et d'histoire ancienne, București
<i>DDME</i>	A Debreceni Déri Múzeum Évkönyve
<i>DolgKolozsvar (Ú. S.)</i>	Dolgozatok az Erdélyi Nemzeti Múzeum Érem- és Régiségtárából, (új sorozat, 2006–), Kolozsvár
<i>Eirene</i>	Eirene, Studia Graeca et Latina, Prague
<i>EM</i>	Erdélyi Múzeum, Kolozsvár
<i>EphemDacoromana</i>	Ephemeris Dacoromana
<i>EphemNap</i>	Ephemeris Napocensis, Cluj-Napoca
<i>EpigAnat</i>	Epigraphica Anatolica, Köln
<i>EPRO</i>	Etudes préliminaires aux religions orientales dans l'Empire romain
<i>ETF</i>	Erdélyi Tudományos Füzetek, Kolozsvár
<i>FBSMB</i>	Forschungen und Berichte der Staatlichen Museen zu Berlin

<i>FMSt</i>	Frühmittelalterliche Studien, Münster
<i>FolAnthr</i>	Folia Anthropologica, Szombathely
<i>FolArch</i>	Folia Archeologica, a Magyar Nemzeti Múzeum Évkönyve, Budapest
<i>FÖ</i>	Fundberichte aus Österreich, Wien
<i>Godišnjak Sarajevo</i>	Godišnjak Centra za Balkanološka Ispitivanja Akademije Nauka i Umjetnosti, Bosne i Hercegovine, Sarajevo
<i>Germania</i>	Germania, Frankfurt am Main
<i>Hesperia</i>	Hesperia, the American School of Classical Studies at Athens
<i>IPH</i>	Inventaria Praehistorica Hungariae, Budapest
<i>Jahrbuch RGZM</i>	Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz
<i>JahrDAI</i>	Jahrbuch des Deutschen Archäologischen Instituts, Berlin
<i>JahrMV</i>	Jahresschrift für Mitteldeutsche Vorgeschichte, Deutscher Verlag der Wissenschaften for the Landesmuseum für Vorgeschichte (Halle), Berlin
<i>JahrOM</i>	Jahrbuch des Oberösterreichischen Musealvereines
<i>JAMÉ</i>	A Nyíregyházi Jónás András Múzeum Évkönyve, Nyíregyháza
<i>JAMT</i>	Journal of Archaeological Method and Theory
<i>JBAA</i>	Journal of the British Archaeological Association
<i>JfA</i>	Jahrbuch für Altertumskunde
<i>JFS</i>	Journal of Forensic Sciences
<i>JHE</i>	Journal of Human Evolution
<i>JRS</i>	Journal of Roman Studies
<i>MAkadÉrt</i>	Magyar Akadémiai Értesítő
<i>Marisia</i>	Marisia (V–), Studii și Materiale, Târgu Mureș
<i>MCA</i>	Materiale și Cercetări Arheologice, București
<i>MCIV</i>	Materiale și Cercetări de Istorie Veche a României, București
<i>MIMK</i>	Molnár István Múzeum Kiadványai, Cristuru Secuiesc
<i>MittAGW</i>	Mitteilungen der Anthropologischen Gesellschaft Wien
<i>MittBGAEU</i>	Mitteilungen der Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte
<i>MittCCEB</i>	Mittheilungen der Central-Commission zur Erhaltung der Baudenkmale
<i>ΜΩΜΟΣ</i>	ΜΩΜΟΣ, Őskoros Kutatók Összejövetelének konferenciakötete
<i>Monographien RGZM</i>	Monographien Römisch-Germanisches Zentralmuseum Mainz
<i>MTAÉ</i>	Magyar Tudományos Akadémia Évkönyve
<i>Offa</i>	Offa, Berichte und Mitteilungen zur Urgeschichte, Frühgeschichte und Mittelalterarchäologie
<i>OpArch</i>	Opuscula Archaeologica, Arheološki zavod, Filozofski fakultet u Zagrebu
<i>Ősrégészeti levelek</i>	Ősrégészeti levelek / Prehistoric newsletter, Budapest
<i>PA</i>	Patrimonium Apulense, Alba Iulia
<i>PamArch</i>	Památky Archeologické, Praha
<i>PAS</i>	Prähistorische Archäologie in Südosteuropa, Berlin, Kiel, München
<i>PB</i>	Patrimonium Banaticum, Timișoara
<i>PBF</i>	Prähistorische Bronzefunde, München, Stuttgart
<i>Peuce</i>	Peuce, Studii și cercetări de istorie și arheologie, Institutul de Cercetări Eco-Muzeale Tulcea, Institutul de Istorie și Arheologie, Tulcea
<i>Pontica</i>	Pontica, Anuarul Muzeului de Istorie Națională și Arheologie Constanța
<i>PPS</i>	Proceedings of the Prehistoric Society, London
<i>PZ</i>	Praehistorische Zeitschrift, Berlin
<i>Pulpudeva</i>	Pulpudeva, Semaines philippopolitaines de l'histoire et de la culture traces
<i>RdA</i>	Rivista di Archeologia
<i>RégFüz</i>	Régészeti Füzetek, Budapest
<i>RevArh</i>	Revista Arhivelor, București

<i>RevBis</i>	Revista Bistriței, Complexul Județean Muzeal Bistrița-Năsăud
<i>RGF</i>	Römisch-Germanische Forschungen, Mainz, Berlin
<i>RHistRel</i>	Revue de l'histoire des religions
<i>RRTP</i>	Revista română de textile-pielărie, Iași
<i>RSP</i>	Rivista di scienze preistoriche, Istituto Italiano di Preistoria e Protostoria
<i>Sargetia</i>	Sargeția, Buletinul Muzeului județului Hunedoara, Acta Musei Devensis, Deva
<i>SCICP</i>	Studii și comunicări de istorie a civilizației populare din România, Muzeul Brukenthal, Sibiu
<i>SCIV(A)</i>	Studii și Cercetări de Istorie Veche (și Arheologie 1974–), București
<i>SIMA</i>	Studies in Mediterranean Archaeology
<i>SlovArch</i>	Slovenská Archeológia, Bratislava
<i>SpecNova</i>	Specimina Nova Dissertationum ex Institutom Historico Universitatis Quinqueecclesiensis de Jano Pannonio nominatae, Pécs
<i>StComCaransebeș</i>	Studii și Comunicări de Istorie Veche Caransebeș
<i>StCom Satu Mare</i>	Studii și Comunicări Satu Mare
<i>StCom Sf. Gheorghe</i>	Studii și Comunicări Sfântu Gheorghe
<i>StCom Sibiu</i>	Studii și Comunicări, Muzeul Brukenthal, Sibiu
<i>StudiaD</i>	Studia Danubiana, Series Symposia
<i>Studia Troica</i>	Studia Troica, Universität Tübingen
<i>StudiaUBB</i>	Studia Universitatis Babeș-Bolyai, series Historia, Cluj-Napoca
<i>Studie AUCAB</i>	Studie Archeologického Ústavu Československé Akademie věd v Brně, Praha
<i>Študijné zvesti</i>	Študijné zvesti, Archeologického Ústavu Slovenskej Akadémie Vied, Nitra
<i>Suceava</i>	Suceava, Anuarul Complexului Muzeal Bucovina
<i>Swiatowit</i>	Swiatowit, Rocznik katedry archeologii pierwotnej i wczesnosredniowiecznej Uniwersytetu Warszawskiego
<i>Századok</i>	Századok, A Magyar Történelmi Társulat folyóirata
<i>Terra Sebus</i>	Terra Sebus, Acta Mvsei Sabesiensis, Sebeș
<i>Thraco-Dacica</i>	Thraco-Dacica, Institutul de Tracologie, București
<i>Tisicum</i>	Tisicum, A Jász-Nagykun-Szolnok Megyei Múzeumok Évkönyve, Szolnok
<i>TrudyErmit</i>	Trudy Gosudarstvennogo Ėrmitaža
<i>UPA</i>	Universitätsforschungen zur prähistorischen Archäologie, Bonn
<i>VAH</i>	Varia Archaeologica Hungarica, Budapest
<i>VIA KÖK</i>	VIA, Kulturális és Örökségvédelmi Kismonográfiák – Monographia Minor in Cultural Heritage, Budapest
<i>VF</i>	Vorgeschichtliche Forschungen, Berlin
<i>Zargidava</i>	Zargidava, Revistă de istorie, Bacău
<i>ZE</i>	Zeitschrift für Ethnologie
<i>ZSL</i>	Zeitschrift für Siebenbürgische Landeskunde



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