

LIVIU MARTA – DANIEL V. SANA – IOAN BEJINARIU
L. NAGY MÁRTA – ELISABETA BERENDI

The Late Bronze Age Settlement of Nyíregyháza-Oros „Úr Csere”

Acest material este publicat în cadrul proiectului *Patrimonium. Valorificarea moștenirii culturale comune în regiunea de graniță* derulat de către Muzeul Județean Satu Mare și Direcția Muzeelor din județul Szabolcs-Szatmár-Bereg, finanțat prin Programul de Cooperare Transfrontalieră Ungaria-România 2007-2013

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Publicat la Satu Mare, 2010

Editor: Muzeul Județean Satu Mare

Adresa: Satu Mare, B-dul Vasile Lucaciu 21, Telefon: 00-40-261-737-526, Fax: 00-40-261-768-761,

E-mail: muzeusm@gmail.com, Web: www.muzeusm.ro

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Satu Mare
2010

Titlu: The Late Bronze Age Settlement of Nyíregyháza-Oros „Úr Csere”
Autori: Liviu Marta, Daniel V. Sana, Ioan Bejinariu, L. Nagy Márta, Elisabeta Berendi

Editura Muzeului Sătmărean

Descrierea CIP a Bibliotecii Naționale a României
 The late Bronze Age Settlement of Nyíregyháza Oros “Úr Csere” /
 Liviu Marta, Daniel V. Sana, Ioan Bejinariu, – Satu Mare : Editura
 Muzeului Sătmărean, 2010
 Bibliogr.
 Index
 ISBN 978-973-1843-42-1
 I. Marta, Liviu
 II. Sana, V. Daniel
 III. Bejinariu, Ioan
 902
 903

Copertă: Szilágyi Levente
Tipar:

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NOTE OF THE AUTHORS

The herein study analyzes the results of the archaeological research carried out in 2004 at Nyíregyháza-Oros, on the site of „Úr-Csere”, when building the eastern ring road of Nyíregyháza Town. The Late Bronze Age settlement was excavated over an area of 14,620m², inside of two archaeological sites conventionally delimited by a country road. When identifying the area through surface researches, the area located north of this road was assigned the index “Site 26”, and the area south of it was assigned the index “Site 33”.

The archaeological researches carried out between June 9 and October 8, 2004 led to the uncovering of 186 archaeological complexes dated to the Late Bronze Age. Archaeological complexes dated to the Eneolithic Age, the early Bronze Age, the Roman Age and the migrations period were also discovered on the same occasion.

The archeological excavations performed on the eastern route of Nyíregyháza Town ring road were made by the Museums Directorate of Szabolcs-Szatmár-Bereg County, being coordinated by the archaeologists Katalin Kurucz, Eszter Istvánovits and Katalin Almássy. Given the large number of archaeological sites on the section studied, the archaeological excavations were also attended by archaeologists from Hungary and Romania. The sites 26 and 33, presented herein, were attended by the following archeologists: Péter Levente Szőcs, Astaloş Ciprian, Virag Cristian, Kádas Zoltán, Liviu Marta (the County Museum of Satu Mare), Daniel V. Sana (The Directorate for Culture of Sălaj County), Ioan Bejinariu (the Museum of Zalău), Katalin Tóth (the Museum of Hódmezővásárhely) and Székély Zsolt (“Babeş–Bolyai” University, Sfântu Gheorghe Branch). The restoration and conservation of the materials were carried out by Szinyéri Péterné, Takácsné Varga Agnes, Németh Erika and Mester Andrea from the “Josa Andras” Museum of Nyíregyháza, the drawings of the archaeological complex were made by Gabriela Beleznai and the archaeological materials were achieved by Svéda Csaba. The topographic measurements and the digital processing were carried out by Veszpremi László.

The monographic publication of the Late Bronze Age settlement „Úr-Csere” of Nyíregyháza-Oros was carried out within the “Hungary-Romania Cross-Border Cooperation Programme 2007-2013”, jointly implemented by the “Josa András” Museum of Nyíregyháza and the County Museum of Satu Mare, with János Bene and Péter Levente Szőcs as project coordinators. As the archaeological investigation was jointly con-

ducted by the Hungarian and Romanian archaeologists and the “Hajdúbagos-Cehăluț” cultural group is spread over areas of both Hungary and Romania, the solution of publishing the study by means of the European Project for Cross-Border Cooperation has been regarded as optimal.

I. NATURAL ENVIRONMENT

The late Bronze Age settlement „Úr-Csere” of Oros is located in the Nir Plain, west of Nyíregyháza and south-east of Oros locality. The Nir Plain is a high one (the second largest in Hungary), taking the shape of an island surrounded by low, floodable plains. The most characteristic geological formation on the surface of Nir Plain is the flying sand, gathered by the wind in the form of dunes. The low areas between the dunes are damp, they are sometimes retaining the water throughout the year¹.

The settlement of Oros is located on such a dune of sandy loess, being part of a wave saddle placed on the line Nyíregyháza–Ujhértó². The original line, oriented strictly north-south, was slightly modified by the wind³.

The dunes ridge is bordered on both sides by the drained valleys of some former channels which used to serve at running out the rain waters or the waters resulted from the snow melting⁴. The settlement is bordered to the west by the large valley of Kállai Rivulet. There is evidence saying that its flowing rate during the medieval period was higher than the current one. The ridge of hills on which the settlement is located is bordered to the east by the valley of Balkányi Rivulet. The two rivulets bordering the dunes ridge get together at the northern edge of the settlement, the wetlands surrounding the settlements on three sides. Consequently, the position of the sand dune on which the late Bronze Age settlement was set up, could be regarded as a privileged one.

As it can be seen, the Nyíregyháza-Oros area had all the necessary conditions for living and thus people sat on its territory since the Neolithic⁵. The above presented geological formations have the best agricultural land in the Nir Plain⁶. The swampy areas that surround the site at north, south and east are rich in hydrophilic plants that could be grazed during the dry periods of the year or even during the winter.

Given the river proximity, fishing as a source of food could be considered as well, while the hunting could also constitute an important occupation, because of the

¹ Frisnyák 1933, p. 17; Frisnyák 2004, p. 23.

² Borsy 1961, p. 37.

³ Miskolczy 2003, p. 22-23.

⁴ Frisnyák 1993, p. 36.

⁵ Bóna 1986.

⁶ Borsy 1961, p. 50.

many swamp forests in the area. Together with the food sources, the meadow areas near the site provided a more stable microclimate during the very hot or very cold periods of the year⁷.

There is no doubt that over time the settlements in the area have begun to shape the surrounding environment, process that started in the phase of the sub-boreal beech and has gradually increased in intensity, due to the practicing of agriculture on the loess lands⁸. The anthropic effect on the environment was primarily evidenced in the deforestation, the wood being used in processing the metals and firing the ceramics⁹.

II. THE FORTIFICATION SYSTEM OF THE SETTLEMENT

The fortified settlement of „Űr-Csere” is located southeast Oros (Fig. 1), in an area with many sand dunes that slightly exceed 100 m in altitude. It has a swampy area at west and southwest, drained today by several sewers (Fig. 2).

The dune on which the settlement is located has an elongated shape, oriented approximately to north-south and it covers more than a kilometer, being crossed by several field roads. We believe that the fortification, located at the northern boundary of the dune, used to surround an oval surface of approximately 9 ha, with the sizes of 400 x 230 m (Fig. 2).

The data on the fortification elements were described in summary in other studies too¹⁰. Detected on the west side of the settlement, they consist of a trench with the researched length of about 120-125 meters, which crosses obliquely the southern half of the area investigated, following the level curve of the higher eastern area (Fig. 3). Both its width and its depth are variable, the first with a mouth opening measuring between 250 and 550 cm¹¹. The profile is generally “V” shaped but the bottom is rounded (Fig. 13-14). The complex had a depth of approximately 120-150 cm from the tailings layer. Due to the inclination of the land, in some cases it was found that the depth as to the outside of the mouth was smaller than that from the inside. The filling soil is also variable, encountering, from place to place, layers of gray or brown earth, or mixtures thereof. As a constant, a compact lenticular deposit of charcoal and burning residues appears almost everywhere in the area studied, at the bottom of this complex. This layer probably originates from the wood structure of the palisade, located behind the ditch, in its immediate vicinity. The palisade appears to have had a violent end, being fired and its burnt remains flowing into the ditch. However, as the amount of such remains are quite poor, we are not dealing with a complex type of palisade, but rather with a light structure, probably made from a nettle of poles and twigs, otherwise we cannot explain the absence of beams traces and the so reduced amount of charcoal. At the same time, a large quantity of shells appeared permanently in the filling of the bottom of the

⁷ Sümegi-Kertész 2001, p. 133-134.

⁸ Somogyi 2000, p. 13.

⁹ Frisnyák 2001, p. 119.

¹⁰ Bejinariu-Székely-Sana 2008, p. 193; Bejinariu-Székely-Sana 2009, p. 60.

¹¹ We believe that the 550 m opening is due to the failure, from here to there, of the sandy soil in which the trench was dug; the size of the opening in the areas where the “V” shape, its initial shape, as per our guess, is preserved, does not exceed 250 cm.

complex, of which the archaeozoologist on site said to belong to a species that lives in flowing water. Therefore, it can be assumed that the ditch was filled with flowing water, either from Nagykálló Brook or from the tributary stream that flew into it, in the southern side of the site¹².

Animal bones, large stone rocks or even replenishable ceramic were also discovered spread on the bottom of the ditch. Two large pots were also deposited in the ditch, an amphora and a supply pot (Pl. 27/4, 28/2). The existence of some deposits of vessels in the defense ditch was found in the defense ditch of Sântana fortification, too¹³.

To the east limit of the area studied, approximately in its middle, very close to the profile, the ditch is interrupted, a pit with no archaeological material, so with uncertain dating, appearing at its end (Complex no. 274). We are tempted to consider the pit as one used for the gate posts, although its shape is not at all relevant for this type of arrangement. If we accept the existence of a gate on this side, this could only be a simple one, without any evidence indicating the existence of a bastion. It is interesting that right in this area, on an area of several meters, the pits, numerous in other squares from outside and inside the perimeter, are missing. This fact is a further argument for our claim that this area was intended to serve a traffic route.

As concerns the other component of a fortification, the earth wall, this could not be documented by the excavations carried out on the route of the ring road. We suppose that the presence of the ditch implies the existence of a wall and of a palisade. It must have existed since the earth removed from the ditch during its digging has not been identified outside the enclosure. Probably the intensive agricultural work and the sandy soil, from which it derives, made it undetectable today. Since many archaeological complexes are located near the ditch, we admit the possibility that the wall was never built. This is valid in case all the mentioned complexes are contemporary with the fortification. In addition, a wall near the ditch would have raised a major issue related to its maintenance. Given the sandy soil, the stability of palisade would have been jeopardized, as a matter of fact impossible to implant it on the wall crest, but it would have especially led to the clogging of the ditch within a relatively short period of time. Thus, we believe that the soil excavated from the trench was most likely spread within the enclosure, the lifting of an earth wall being abandoned, due to the reasons stated above.

¹² For this information we acknowledge Mr. Matyas Vremir, of the Faculty of Geology, „Babeş-Bolyai” University.

¹³ Hügel et alii 2010, www.cimec.ro/Arheologie/cronicaCA2010/cd/index.htm.

It must also be said that a complex on the site 26 (complex 28), located just a few meters away, to the north of the ditch, seems to belong to Gáva culture. Other several such discoveries occur only 200-300 meters away, in the site 27¹⁴. Therefore, although all the materials recovered from the ditch, both bronze and pottery, plead for its assignment to the Hajdúbagos–Cehăluţ Group, we still have reservations in this respect until the entire settlement is excavated.

Because of the few data on the existence of such archeological complexes within the area of the cultural group Hajdúbagos–Cehăluţ, the functionality of the ditch that borders the northwest side of the Oros settlement is uncertain. The existence of a fortification within this group was considered only for the height settlement of Şimleu Silvaniei “Observator” (Romania), but the things are still not fully clear¹⁵. Approximately 7 km away from Oros settlement (such distance considered measured in a straight line), on a north-west direction, in a settlement dated to the same chronological period, two sectors of trenches were found, with a relatively small depth and an opening which does not exceed 220 cm. They, in addition to a potential defensive role, are assigned possible day-to-day functions: water drainage from the settlement area or the enclosing of some cultivated areas¹⁶. The last interpretations were previously considered for the settlement of Polgár-site 29¹⁷, which, from the perspective of the ditches, it is also a rare case for the period HaA1 on the Tisa Plain. The existence of some fortifications, situated in swampy areas, is documented in northern and eastern Hungary and northwestern Romania, but their construction is dated, based on the few excavations, during Ha B-C period¹⁸. But impressive fortifications, in size and system design, are already known for this period, as belonging to Gáva and Kyjatice cultures of the north of Hungary¹⁹, Slovakia²⁰, Transylvania²¹ and Trans-Carpathian Ukraine²². Even if most of them are located in higher areas, controlling the access routes, data on fortifications located in lower, plain areas, have increased lately²³.

¹⁴ Gindele et alii 2004, p. 257.

¹⁵ Pop et alii 2007, p. 359-360; Pop et alii 2010, p. 179.

¹⁶ Nagy 2007, p. 130.

¹⁷ V. Szabó 2002, p. 83; V. Szabó 2004, p. 144.

¹⁸ Hellebrandt 2003, p. 220; Hellebrandt 2004, p. 172, 186.

¹⁹ Matuz–Noväki 2002, p. 7-25.

²⁰ Furmánek–Veliačik–Vladár 1999 p. 120-121, Pl. 58.

²¹ Teleac (Vasiliev et alii 1991, p. 23-31); Dej, Subcetate, Bozna, Ciceu-Corabia, Şona (Vasiliev 1995); Şimleu Silvaniei (Sana 2006, p. 51-52); Călineşti-Oaş (Marta 2010, p. 175-182).

²² Balahuri 1972, p. 12-13.

²³ Sântana (Hügel et alii 2010, www.cimec.ro/Arheologie/cronicaCA2010/cd/index.htm), Corneşti (Heeb–Szentmiklósi–

Therefore, the settlement of Oros, which dating elements are tightly connected to the Reinecke BzD stage, precedes the large number of fortifications of the Gáva culture. At the same time, it was operational in a period dated long after the previous period rich in fortifications (early and middle Bronze Age)²⁴. The exceptional presence of the ditch of Oros within the area of the cultural group Hajdúbajos–Cehăluț and within the settlements of the Late Bronze Age I and II in general, maintains the question marks with regard to the perpetuation of some elements of fortification era from the early and middle Bronze Age until Reinecke BzD phase (Late Bronze II). The only one fortified settlement known so far in the Tisa basin to exceed the end of the tells period, is that of Boinești (northwest of Romania), its existence continuing at least until an early stage of the Late Bronze I period²⁵. An earlier dating of the fortified settlements of Cornești (Timiș County) and Sântana (Arad County)²⁶ has been recently put forward. Even if the connection of the Bz D fortification to those in the Middle Bronze Age is too weak, there are a number of common elements between the Oros settlement and the tells²⁷, namely: the positioning close to a marshy valley, the great length and width of the ditch, the possible evacuation in the ditch of a flowing water or the lack of evidence proving the existence of an earth wall.

Wiecken 2008, p. 179-188, Andrid and Căuș (Marta et alii 2010).

²⁴ Gogăltan 2008, p. 81-100.

²⁵ Bader 1978, p. 75; Kacsó 1995, p. 96; Marta 2009, p. 96-98.

²⁶ Cornești (Heeb–Szentmiklósi–Wiecken 2008, p. 179-188), Sântana (Hügel et alii 2010, www.cimec.ro/Arheologie/cronicaCA2010/cd/index.htm).

²⁷ For the fortifications of the early and middle Bronze Age, see Gogăltan 2008, p. 84-85. A magnetogram of a complete fortification has been realized recently at Andrid (north-west of Romania) (Marta et alii 2010).

III. ARCHAEOLOGICAL COMPLEXES AND THE SURFACE MANAGEMENT IN THE SETTLEMENT

Archaeological Complexes

Despite the investigation of about 186 archaeological complexes assigned to the late Bronze Age, the results do not provide a complete picture of the inhabitation process in the „Ūr-Csere” location. The type of excavation, limited to the researching of the eastern side of the settlement, deprives us of an overview picture. Even so, the contribution of the research to the knowledge of this period is, undoubtedly, an important one.

The types of archeological complexes are as follows: fortification elements, already discussed herein above, dwellings and pits.

Dwellings

Traces of such constructions, consisting of pieces of burnt clay-and-straw mortar, were found in the inventory of many pits. However, the diggings performed revealed very few such structures. This is understandable considering the fact that the archaeological research reached the peripheral area of the settlement from its western and northern-western area, excavating less than one quarter of its total surface.

Typologically, the dwellings researched are subterranean / cottage or semi-subterranean. The complex marked with the index 281, approximately rectangular, slightly deformed, sized 430 x 300 cm (Fig. 18-19), can be assigned to this category. The roof of the dwelling was most probably two-sided, supported by pillars placed at the middle of the short sides and in the middle of the long side, fact confirmed by the pit discovered on the north-west side and by a deepening encountered in the central area. The filling consisted of gray colored soil, with dark brown lenticular deposits. The lack of the burnt clay-and-straw mortar or of the charcoal indicates that the dwelling did not disappear violently, its degradation occurring in time, once it got abandoned. The long sides are arranged on the NW-SE direction.

Two other discoveries originate from site 33, considered initially to be pits. However, given their large size, we consider that their function should be re-analyzed. We are referring here to complex number 7 and the one marked with the index 14. The first

one used to have an approximately circular ground-plan and irregular profile, lowering down in two steps, getting narrower at the base. Its maximum diameter, measured in the upper part, is of approximately 200 cm. Its bottom is flat and the depth is of approximately 70 cm from the outlining level. It probably had a post pit, located approximately in the central area, which goes 100 cm deep from the outlining level. The second one is an oval complex, with the sizes of 200 x 230 cm, with oblique walls and flat bottom, narrower at the base and wider at the mouth. Its depth is of 45 cm from the outlining level.

As anyone can see, the system design respects the canons of the time. The houses were made of a superstructure of wood (poles and wattle) with a layer of clay applied above. The pole pits discovered and the fragments of clay-and-straw mortar found in many other complexes support these claims. The useful area was relatively reduced. None of the dwellings researched by us had combustion structures of the fireplace or stove type.

The closest similarities originate from the settlement of Nyíregzháza, located in the area of the Supermarket Tesco²⁸, these being actually the only ones known in Hungary until today as belonging to Hajdúbagos–Cehăluț group. Instead, on the territory of Romania, the discoveries are less numerous, these being in general surface dwellings²⁹. The most important similarities are found, however, in the recent discoveries of Recea–Valea Sulduba, where most of the constructions researched resemble in shape and size with our complex number 281, the difference being given by the fact that almost all of them used to have a fireplace inside³⁰.

Pits

This category is by far the most numerous one among our discoveries, being documented through approximately 183 complexes. Depending on their destination, they can be divided into two categories: a) Food store pits/domestic refuse pits and b) Offerings Pits. These categories can be further differentiated, shape wise, in other three categories (1. Cone-shaped; 2. Bag shaped or irregular profile; 3. Cylindrical).

1. The cone-shaped pits represent the dominant type, having, in general, circular or oval ground-plan and relatively flat or slightly concave bottom. Their maximum di-

ameter, located in most of the cases in the upper part, varies from 60 cm (complex no. 265) up to 210 cm (pit 194). One can remark that almost all the pits of this type have large sizes, exceeding 120 cm in diameter. The depth of the complexes is between 30 and 120 cm from the outlining level. Their inventory is varied, consisting in general of domestic refuse (ceramic fragments, animal bones, burnt clay-and-straw mortar, etc.). Very few of them have no materials in the filling (see, for instance, complexes 244 and 265), while only one complex (268) had a deposit of horns on its bottom.

2. The pits with bag-shaped or irregular/distorted profile represent a large category, too. They generally have a narrower mouth, with a diameter between 70 and 160 cm and a wider base, with a diameter between 100 and 200 cm. The depth varies between 30 and 135 cm from the outline level. The inventory is similar to the one of the pits in the first category. As in the case of the previously mentioned category, a small part of the pits of this kind have no materials in the filling (complexes 260, 264, 266). The fact that the vast majority of complexes with deposits of offerings (13, 19, 32, 33, 34, 245, 263) have irregular profile should be noted.

3. Pits with cylindrical profile. 24 such complexes, with flat walls and circular ground-plan were discovered, their diameter ranging between 100 and 180 cm and their depth between 15 and 140 cm from the outline level. In terms of inventory, we must say that this category includes complexes lacking archeological materials, too, being located in the area of the deposits (see complexes 17, 227, 259, 267) while a complex (286), given its content, seems to have had a special role.

If in the case of some contemporary settlements, some of the pits have been interpreted as a result of the clay extracting³¹, the sandy soil of our site simplifies the interpretation possibilities. Therefore, as mentioned before, regardless of their shape, a careful analysis of the archaeological complexes allows, in terms of destination, their dividing into two categories.

a) Food-store pits/domestic refuse pits. The vast majority of the pits explored in the settlement, at „Ūr-Csere” location, belong to this category. None of them had burnt walls or traces of clay plaster which means that their exploitation period must have been extremely reduced. Hence, the large number of them. The presence, however, of some dense lenticular deposits of ash or burn makes us admit the possibility that a number of

²⁸ Nagy 2007, p. 130.

²⁹ Suplacu de Barcău (Ignat 1984, p. 9); Crasna and Cehei (Bejinariu, Lakó 2000, p. 158-159; Bejinariu 2003, p. 97-98);

Pericei (Matei et alii 2005, p. 261).

³⁰ Bejinariu 2009, p. 185-188.

³¹ Bejinariu 2003, p. 101.

such complexes were subject of a treatment meant to remove moisture and strengthen the walls. However, the absence of a burning crust shows that there was no burning inside them. In a first phase, the utility of the pits must have been that of storing the food. Once they got degraded, they were filled with household waste (pottery, animal bones, burnt clay-and-straw mortar, mud plaster, ash, pieces of metal, stone, etc.).

Such pits are present in a large number in all the researched settlements of the Hajdúbagoss–Cehăluț³² Group. As presented above, their shape and sizes vary and their archeological inventory is an extremely poor one.

b) Offerings pits. Given the nature of the materials in the filling and the arranging of the inventory, more such complexes seem to belong to this category:

- Complex no. 13 – pit of large size, with irregular profile and an inventory consisting of animal bones, pottery, mud fireplace plaster and a complete pot, with an unusual shape and reduced volume, of the size of a mug, deposited in the lower part of the pit, in the north-west part, with the mouth upwards (Figure 7, photograph).

- Complex no. 19 – pit with an approximately circular ground-plan and irregular profile. Its main inventory consists of two overlapped grinders, placed in the southern half of the complex, on its bottom (Figure 7, drawing and photograph).

- Complex no. 32 – large pit, with irregular profile and an inventory including, among others, a complete cup, discovered in the lower part of the western half, deposited with the mouth upwards (Figure 7, drawing and photograph)

- Complex no. 33 – large size pit, with irregular profile, its inventory, arranged in the lower part, consisting mainly of a bi-cone-shaped pot and of a cup, both complete, arranged on one side, right near the upper part of another bi-conic pot, arranged with the mouth downwards. All these pieces were arranged towards the edges of the complex, in opposite directions: the complete pot and the cup in the southern half and the mouth of the other bi-cone shaped pot was located in the north part (Figure 8, drawing and photograph).

- Complex no. 34 – large pit, with irregular profile which had as main inventory a bi-cone shaped, replenishable pot, broken on spot, arranged in the upper part of the complex, in its southern half (Figure 8, drawing and photograph).

- Complex no. 245 – Large size pit, with circular ground-plan and irregular profile. An almost complete cup was discovered on the western side, in the lower part of the pit, placed in a natural position, with the mouth upwards³³ (Figure 16, drawing and photograph).

- Complex no. 263 – Large size pit, with an approximately circular ground-plan and irregular profile. Its main inventory consists of a cup almost complete, lacking only the handle.

- Complex no. 268 – Large size pit, with circular ground-plan and approximately cone-shaped profile. Its unique inventory consisted of a pair of cervidae horns, deposited on the bottom of the pit, in its north-western side (Figure 17, drawing and photograph).

- Complex no. 286 – Pit with a large diameter and reduced depth, its main inventory consisting of a cup almost complete, with the handle partially broken, deposited on the bottom of the pit, in the southern half, in a dense layer of charcoal and ash.

Complex 277 could add to these, with more osteological remains of animal origin, deposited on the bottom of the pit, in its southern half (Figure 17, photograph).

As can be easily noticed, in five of ten cases the inventory is deposited in the southern half of the complexes, in other four cases being deposited to their west or northwest side. With one exception (Complex 34), the layout on the bottom clearly dominates. Another constant is the large size and the irregular/bag-shaped profile of most of the pits, as well as the predilection for the depositing of pottery, cups being the dominant type. We could also underline that all the pits have a single layer of filling, which suggests that they were made in one single stage. We believe that the three categories of offerings (pottery, animal bones and the two grinders) served different purposes, impossible to say today with certainty which such purpose was. They could serve to get something, to fulfill a magical function, rather than a religious one, as Eliade states when speaking about the lithic kratophanies³⁴. The presence of the vessels used for storing or consuming liquids (cups, mugs, amphorae) is remarked, which makes us think about practicing libations. These, together with the offerings of meat, were probably meant to draw the benevolence of certain agricultural deities that would have influenced positively the fertility of the plants and animals that provided food for the community.

32 Pișcolt (Németi 1978, p. 106-114), Suplacu de Barcău (Ignat 1984, p. 11-12), Cehei, Crasna, Șimleu Silvaniei, Pericei (Bejinariu 2003, p. 99-00), Nyíregzháza – Tesco (Márta 2007, p. 130), Recea (Bejinariu 2009, p. 189), to quote just the ones with the most numerous discoveries.

33 Unfortunately, as it was left there for making a detailed drawing and some photographs after opening the northern half, the cup was stolen from the site after the working hours and it was no longer recovered.

34 Eliade 2008, p. 229-230.

We believe that the pits with no inventory, found in the vicinity of the complexes with offerings deposits, are part of this same category, forming together a number of groups apparently arranged chaotically, without forming a visible structure. Their association cannot be a random one. Through an exclusively archeological approach, the symbolism of the inventory-free pits appears to be inapproachable. Related, however, to a series of ancient texts that mention a number of practices to dig pits and use them for libations with liquids (wine, water, honey, milk, animal blood, etc.)³⁵, such symbolism could provide a different picture on the bareness of the archaeological documents.

The complexes with a specific character are well known in the area of the Hajdúbagos–Cehăluț group. Another settlement with a large number of pits is that of Biharea³⁶. Complexes similar to those of Oros, containing cups placed with the mouth upwards, or lying on one side, were discovered in pit 4/1974 of Pișcolt „Nisipărie” (Sand Pit)³⁷. Two pits were researched at Suplacu de Barcău „Lapiș” (no. 1 and 3), the first one with a mug and other poor archaeological material and the second one with a cup. Three pits burnt in the inside and with no archaeological inventory were also discovered on this settlement³⁸. A complete cup, deposited in a pit, along with other pottery, originates from Cehei „Mesig”³⁹. A pit which used to have in its inventory a Hajdúbagos type mug and a ladle was discovered in the settlement of the Suciul de Sus Culture of Petea–Csen-gersima⁴⁰.

Surface Management in the Settlement

The north area of the site, outside the enclosure delimited by the ditch, seems to have had a special character. Most of the complexes with deposits of complete vessels or of other materials can be found here. That is the case of the complexes 9, 13, 32, 33, 34, the last of them really closely grouped near the entry to the fortified enclosure. Complex 245 was in a similar situation, its single piece of inventory being a complete cup, placed at the bottom of the pit, in normal position, with the mouth upwards. Another

complex was discovered only a few meters away, to the west, with a special functionality, judging by the lack of any ceramic material and the presence of some stag antlers on the bottom of the pit, near its north wall. Complex 277, with more animal bone remains deposited on the bottom of the pit, seems to be one with a particular character, too. Pit 19 is also in this area, with a deposit of two large fragments of a grinder, partially overlapping each other.

We believe that these, together with the ditches with no inventory, 17, 226.2, 227, 244, located only a few centimeters away of 245 or the pits 258, 259, 260, 264, 266, 267 and 268, are part of an area aimed for depositing offerings, not for carrying out profane activities.

We also find a sporadic habitation outside the fortification, to the west, marked by the dwelling 281 and by other several pits located to the north, near the ditch.

As far as the interior of the premises is concerned, the lack of the dwelling complexes makes us believe that the area was intended exclusively for the preservation of the supplies, the houses being probably located in the upper side of the dunes, at a larger distance from the swamp, being thus protected from flooding and moisture.

³⁵ Bejinariu 2003, p. 155-156 with the bibliography.

³⁶ Dumitrașcu 1994, p. 106-107.

³⁷ Némethi 1978, p. 109.

³⁸ Ignat 1984, p. 11.

³⁹ Bejinariu 2003, p. 156.

⁴⁰ Marta 2009, p. 154, Pl. 19, 49/6,9.

IV. CERAMICS

The pottery from the settlement of Oros is becoming now the largest published ceramic assemblage from an archaeological site assigned to the Hajdúbajos–Cehăluț cultural group. Brief remarks about the pottery from this archaeological site have been made within the archeological report which presents the results of the excavations performed in the settlement⁴¹. Only a small number of other sites of the cultural group mentioned above contain more extensive pottery lots⁴², most of its pottery being presented within some lots originating mainly from rescue excavations or small archaeological surveys⁴³.

The late Bronze Age pottery from „Űr-Csere” was included into a database that helped us to process 640 ceramic items, containing the pottery with a clear shape, respectively ceramic fragments that have distinct decorative elements. The shape of the original vessel could be identified for a total number of 494 ceramic elements included in the database. The directory of the vessel forms from the settlement was set based on complete forms, appealing to the typology of the vessel shapes set for Hajdúbajos–Cehăluț cultural group, or for some of the sites within it⁴⁴.

Identi- fied Vessel Forms	Amphorae	Pots	Storage Vessels	Portable cooking Vessels	Dishes / Terrines	Cups	Lids	Ember Protectors	Miniature vessels
494	65	90	2	112	117	105	2	1	1

Technological Considerations

The Late Bronze Age pottery of Oros was made of three types of paste: coarse, semi-fine and fine. The proportion of each category was determined in the data-

41 Bejinariu–Székely–Sana 2008, p. 61-64.
42 Kovács 1966 (Hajdúbajos); Bejinariu–Lakó 2000 (Crasna).
43 Némethi 1978, p. 99-122; Bader 1978, p. 56-57; Ignat 1984, p. 9-26; Bejinariu 2001, p. 157-174; Nagy 2005, p. 63-105; Nagy 2007, p. 121-154.
44 Bader 1978, p. 56-57; Bejinariu–Lakó 2000, p. 160-167; Némethi 2009, Pl. I-IV.

base of the ceramic items from the settlement⁴⁵. The vessels made of fine paste have in composition very small-grained tempering material. The fine paste was used for making cups, bowls and terrines, in general vessels with very thin walls. The percentage of this category among the ceramic elements present in the database is of 13.93%. As compared to the previous category, the semi-fine paste contains a larger grained tempering material (sand, grit, finely crushed shards). The semi-fine paste was used to manufacture all types of ceramic pottery, except for the storage vessels. This is the best represented category within the pottery included in the database, with a percentage of 57.43%. The category of the coarse pottery contains large-grained tempering materials, such as crushed shards and gravel. Given the presence of the large grained tempering material, the outer walls of the vessels are often uneven. The vessels made of coarse paste form the category of the thick-walled pottery: storage vessels, pots, portable cooking vessels. The coarse paste has a smaller percentage for such forms as amphorae and terrines. The percentage of the coarse pottery within the ceramic set introduced into the database is 28.64%.

As for the methods used for firing the pottery from the settlement of Oros, a greater presence of the pottery fired in an oxidizing atmosphere has been noticed. This type of firing is present especially in the case of the kitchen ware and the storage vessels: pots, portable cooking vessels and storage vessels. The firing in reducing atmosphere is more frequently used for vessels for serving meals: cups, terrines, amphorae. Among the fragments of vessels included in the database, only nine vessels were fired to become shiny black on the outside and brown, brick-red or gray on the inside. The percentage of the dichromic firing is still small, showing that this process was at its beginnings.

Amphorae

This is a pottery type assigned to the table ware which, although usually made of a coarser paste, it presents carefully finished and often richly decorated walls. For the cultures of the Late Bronze Age, amphorae are considered as the “guiding fossil” within the

⁴⁵ With regard to the ratio of each category, a bias towards the fine and semi-fine categories is to be considered, due to a more numerous presence of the decoration, element that forms the base for including them into the database.

pottery. There were intensively studied mainly those types characteristic to the Gáva⁴⁶ culture. However, elements inherited from the amphorae of the Hajdúbágos–Cehăluț cultural group and from other neighbouring cultures are considered when debating the origin of the shape.

Fragments originating from 65 amphorae were identified in the settlement of Nyíregyháza–Oros, representing 13.15% of all forms of vessels identified in the settlement. Of those, only 4.62% were made of fine paste, 76.92% (the most) of semi-fine paste and 18.46% of coarse paste. In general, the amphorae are well fired, although sometimes, given their great height, their surface present stains of different colors. Only one vessel was bi-colored, black in the exterior and red in the interior (Pl. 2/1).

The vessels have been classified in 6 types, starting from their general architecture and considering the shape of their main parts (first of all the form of the neck, the shoulder and the body and secondarily the shape of the mouth).

Type 1 has cone-shaped prolonged body, pronounced shoulder, arched neck and, in most of the cases, out-curved rim (Pl. 6/6, 8/1, 31/3, 36/5). It holds the majority in the settlement, being represented by 18 of the 31 items typologically framed. Even if some of the pieces are decorated only with some small knobs, the most of the type 1 amphorae are richly decorated. Different variants of channels and ribs are the most frequent decoration types. Type 1 has numerous analogies in the settlements and necropolises of the Hajdúbágos–Cehăluț⁴⁷ cultural group, in which the predominant position of this category of amphorae is confirmed too. Vessels with similar shape are present in several neighbour cultures/cultural groups⁴⁸. At the end of the Hajdúbágos–Cehăluț cultural group, this type will survive within the succeeding cultural horizon Lăpuș II–Gáva I⁴⁹.

Type 2 is a short pottery shape, with short and strongly arched body, curved shoulder, strongly arched neck and out-curved rim (Pl. 14/1). Two pieces of this type have been identified in the Oros settlement. It has a weak representation within the

⁴⁶ László 1973; Rusu 1973, p. 108-112; Kemenczei 1984, p. 64-66; Kacsó 1981, p. 26-34; Vasiliev–Aldea–Ciugudean 1991, p. 80-83; László 1994, p. 75-79; Pankau 2004, p. 49-53; Vasiliev 2007, p. 7-16; Marta 2009, p. 61-65.

⁴⁷ Kovács 1970, Pl. 1/18-20, 2/1,6,9,19, 3/7-8, 10, 4/2-3,10,14,18; Némethi 1978, Pl. 10/6; Bejinariu–Lakó 2000, p. 161-162, Pl. 4/1, 23/6-7, 22/4, 25B/2-3, 33/1; Nagy 2007a, Pl. 1; Némethi 2009, Pl. 1/5 (pots).

⁴⁸ Piliny (Kemenczei 1984, Pl. XVI/4, XXXIV/21), Igrița (Chidioșan–Emödi 1982, Pl. 1; Chidioșan–Emödi 1983, Pl. 4/1), Suci de Sus (a recent presentation in Marta 2009, p. 22-23 – type 1).

⁴⁹ Kacsó 1975, p. 12/1 (Lăpuș); Kacsó 1981, p. 33 (shape II A); Némethi 1990, Pl. 2/2 (Berven), 12/7 (Carei); Marta 2009, p. 64–type 2 (Petee–Csengersima).

pottery assigned to the Hajdúbajos–Cehăluț cultural group, too⁵⁰. This type of shape continued to be used during the Gáva culture period as well⁵¹.

Type 3 has a cone-shaped, slightly inclined (almost vertical) body, poorly pronounced shoulder, almost cylindrical neck and out-curved rim (Pl. 8/6). Only one item of the third category was discovered in the settlement of Oros and its analogies seem to be very rare within the Hajdúbajos–Cehăluț (Berkesz) type of pottery⁵². These vessels with high neck, slightly pronounced shoulder and narrow body continue to survive in the discoveries of the Tisa Plain (The Great Hungarian Plain) dated to the HaA (pre-Gáva) ⁵³.

Type 4 is represented by the bi-conical amphorae, with an out-curved rim (Pl. 2/1, 6/3). This type is represented in Oros settlement by four vessels. The type 4 decoration is poor as compared with that of other types of amphorae, consisting only in some knobs. Analogies of type 4 are found in the settlements of the Hajdúbajos–Cehăluț cultural group Suplacu de Barcău⁵⁴ and Crasna⁵⁵ but also in the ceramics from other cultures and cultural aspects of the Tisa Basin and northern Transylvania⁵⁶. The presence, in the settlement of Oros, of a vessel glossy-black in the exterior and brick-red in the interior (Pl. 2/1), its similitude in terms of form and decoration with the vessels of the Lăpuș II–Gáva I habitation horizon ⁵⁷, makes us consider a possible transfer of shape between the two cultural horizons.

Type 5 is similar in shape to type 1, but with a more pronounced shoulder, a more arched neck, two over-raised handles that start from the rim and get to the shoulder (Pl. 27/3). Although only one item of this type was discovered in the settlement of Oros, analogies of type 5 are relatively numerous in the Hajdúbajos–Cehăluț cultural group ⁵⁸, this shape being one of its features. Similar types of

handles are rare in the neighbouring cultural environments, being reported in the Piliny⁵⁹ and the Berkesz⁶⁰ cultures. Fragments of an amphora with over-raised handles were discovered within the Lăpuș II–Gáva I pottery of Petea–Csengersima which, together with other elements, suggest the transmission of some influences and / or traditions coming from the southwest⁶¹.

Type 6 includes the amphorae with cylindrical neck and wide rim, strongly turned down to the outside (Pl. 7/5, 37/2). Type 6 is relatively rare within the discoveries assigned to the Hajdúbajos–Cehăluț⁶² cultural group, being present, however, in several neighbouring cultures⁶³. On the territory of the Hajdúbajos–Cehăluț cultural group, the amphorae with tall, cylindrical neck continued to survive within the Lăpuș II–Gáva I cultural horizon ⁶⁴ and the pre-Gáva⁶⁵ habitation, being taken over during the Gáva⁶⁶ culture as well.

Pots

From the point of view of shape, they include the so-called *bag-shaped pots*, representing an important category of the ceramics in the „Űr-Csere” location, the third in number, representing 18% of all the identified forms. Most of the pots are made of a coarse paste, shallowly polished or just smoothed (64%). There is, however, a significant quantity of vessels made with more care, of a smooth paste, semi-fine (35%) or even fine in the case of one item. Crushed shards and sand, sometimes a large-grained one, were used as tempering material. The firing was an oxidant one, incomplete in some cases. The predominant colours are brown or brick-red. The decoration is simple, consisting, in most cases, of embossed ornaments. In terms of size and morphological aspect, we can distinguish five main types of pots.

50 Némethi 1978, Pl.1/2; Ignat 1984, Pl. 1/1; Némethi 2009, Pl. 1/2 (pots); Nagy 2005, Pl. 6/1.

51 V. Szabó 1996, Pl. 10/10, 25/8, 45/4.

52 Kemenczei 1984, Pl. LVI/7.

53 V. Szabó 1996, Pl. 8/3.

54 Ignat 1984, Pl. 1/2.

55 Bejinariu–Lakó 2000, Pl. 20/1-3.

56 In the Piliny culture (Kemenczei 1984, Pl. XVIII/1, XXXVIII/1,2,7), the Berkesz group (Kovács 1967, Pl. 14/12; Kemenczei 1984, Pl. LVI/11), the Igrița cultural group (Emödi 1980, Pl. 11/68, 78; 1983, Pl. 3/2; Chidioșan–Emödi 1982, Pl. 1/5; 3/2; Andrișoiu 1992, Pl. 60/5,8.), the Suciu de Sus culture (Pop 2003, Pl. 4; Kacsó 2005, Pl. 4; Marta 2009, p. 24, Pl. 25/14, 29/2, 33/1), the group of discoveries from the Košice basin (Demeterová 1984, Pl. VII/19, VII/3, XX/10), within the Lăpuș II–Gáva I cultural horizon (Kacsó 1981, p. 34; Némethi 1990, Pl. 7/2, Marta 2009, p. 64-65, Pl. 12/1, 16/3, 26/10).

57 Marta 2009, p. 64-65.

58 Kovács 1970, Pl. 1/16-17,22, 4/9; Bader 1978, Pl. XXVI/8; Kacsó 1997, Pl. XII/2; Nagy 2005, Pl. 1/1.

59 Kemenczei 1984, Pl. II/12.

60 Kovács 1967, Pl. 14/12.

61 Marta 2009, p. 65, Pl. 14/5.

62 Kovács 1970, Pl. 2/11, 4/5; Bader 1978, Pl. XXII/9.

63 Piliny (Kemenczei 1984, Pl. II/1-2, III/3/2,5; IX/13), Suciu de Sus (Bader–Lazin 1980, Pl. 17), Oarța de Sus (Kacsó 2003, Pl. XXIII/22), Oarța de Jos (Kacsó 2004, Pl. 4/4), Bicaz (Kacsó 2005, Pl. 2/1, 11/1), Petea–Csengersima (Marta 2009, p.23, Pl. 54/15, 64/1), Lăpuș (Kacsó 2001, Pl. 4-10).

64 Némethi 1990, Pl. 5/1, 6/7 (Bervenii), 13/2 (Carei); Kacsó 2001, Pl. 17,18 (Lăpuș); Marta 2009, Pl. 17/1, 18/7 (Petia–Csengersima).

65 V. Szabó 1996, Pl. 49/3, 50/10.

66 László 1973, p. 599-601.

Type 1 brings together the pots with vertical or slightly oblique walls, with a flat or slightly rounded rim, present in two distinct variants, differentiated through their shape. Variant 1A includes the tall items, with slightly oblique walls, almost cone-shaped and with flat mouth (Pl. 2/2, 18/4, 21/2, 25/4, 31/1, 38/5). The decoration consists of applied protuberances, arranged right below the rim, the most frequent ones being slightly flattened, fitted with two punches (motif AE). The conical knobs (motif AA) or the flattened, simple ones (motif AB), associated, in one single case, with a finger impressed appliqué belt (Pl. 31/1), are more rare. The simplicity of its shape and decoration made it widely spread beyond the Hajdúbajos–Cehăluț environment. Analogies for our items come from the necropolis of Hajdúbajos⁶⁷, or from Valea lui Mihai⁶⁸, Pișcolt – Nisipărie, Acăț⁶⁹, Cehei⁷⁰, Crasna⁷¹, Nyírlugos⁷². This shape continued its existence in the subsequent stages⁷³.

Variant 1B is represented by a single pot, lacking any decoration, discovered in the pit number 13 (Pl. 4/5). The vessel, one of the very few complete items discovered in this settlement, has a short body, vertical walls and slightly rounded rim. Its uniqueness in the entire area of the Hajdúbajos–Cehăluț cultural group and the context in which it was discovered suggest a special destination of this vessel.

Type 2 includes pots with curved body and out curved-rim, clearly separated from the rest of the vessel through an accentuated shoulder. It also has two distinct variants. Variant 2A includes pots with strongly arched body and slightly out-curved rim, clearly separated from the rest of the vessel through an accentuated shoulder, adorned with either conical (AA) or flattened and almost vertically oriented (motif AF) knobs, located in its upper part (Pl. 29/6, 34/1 37/7) or with horseshoe-shaped knobs (Pl. 39/9). Variant 2B does not include very many discoveries. It groups however, the pots with slightly arched body, tall neck and out curving mouth (Pl. 9/3, 11/6, 39/8). The decoration consists of applied knobs, arranged on the shoulder of the vessel, either simple, conical (motif AA) or flattened and thumb impressed (motif AE).

67 Kovács 1970, Pl. 2/12, 18.

68 Némethi 1978, Pl. 4/3; Kacsó 1997, Pl. IX/3.

69 Kacsó 1997, Pl. I/2, V/1-3.

70 Bejinariu–Lakó 1996, Pl. IV/1; Bejinariu 2003, Pl. CX/4; CXVI/5.

71 Bejinariu–Lakó 2000, Pl. 14/1, 27/3; Bejinariu 2003, Pl. LXXXVI/4.

72 Nagy 2005, Pl. XII/7.

73 Marta 2009, Pl. 61/1,5.

Similar shapes to type 2 of pots were discovered at Berkesz – Csonkás-dűlő⁷⁴, Sanislău⁷⁵, Suplacu de Barcău⁷⁶, Nyírlugos⁷⁷, Nyíregyháza – Pazonyi út, Tesco⁷⁸ and in other neighbouring environments⁷⁹, surviving unmodified in the following period as well⁸⁰.

Type 3 is represented by vessels with slightly arched body, slightly turned down rim, well delimited, provided with four horizontal or bird's beak shaped knobs, arranged at equal intervals (Pl. 1/1, 10/1 12/6, 19/8, 25/1, 35/4). In one single case these protuberances have a more functional role rather than a decorative one and they are associated with a row of punches located in the upper part of the pot (Pl. 10/3). It is interesting that vessels with such protuberances appear only among the discoveries assigned to the Hajdúbajos–Cehăluț group of the northeastern Hungary⁸¹ and to the west, in the Hügelgräberkultur⁸² and the Piliny⁸³ area, but not in Transylvania⁸⁴. This type of pot continued to exist in the following stages, being documented among the pre-Gáva discoveries of Polgár⁸⁵ and Tiszacsenge⁸⁶, the protuberances appearing, in both these cases as well as in the early Gáva ones of Nagykálló, associated with thumb impressed appliqué belts⁸⁷.

Type 4 includes the pots with bi-conical, strongly curved body and turned down rim, provided, in some of the cases, with handles fitted in the upper part (Pl. 1/6; 16/4). They are made of semi-fine clay and they lack decorations. Similar pots were identified among the discoveries assigned to the Hajdúbajos–Cehăluț cultural group of Berkesz – Csonkás-dűlő⁸⁸, Alsóberecki⁸⁹, Pișcolt – Nisipărie⁹⁰, Crasna⁹¹, Nyíregyháza – Pazonyi

74 Kovács 1966-1967, Pl. 11/21.

75 Némethi 1978, Pl. 5/3.

76 Ignat 1984, Pl. X/3.

77 Nagy 2005, Pl. XII/3,9,10.

78 Nagy 2007, Pl. V/1-5.

79 Chidioșan–Emödi 1982, Pl. 6/7; Marta 2009, Pl. 49/1, 52/11, 56/1, 59/5, 60/16; Nagy–Scholtz 2009, Pl. X/5.

80 Kemenczei 1982, Pl. 8/4.

81 Kovács 1966-1967, Pl. 11/19-20, 13/10; Nagy 2005, Pl. IV/6-7; Nagy 2007, Pl. VI/6.

82 Kovács 1981, Pl. 1/7,12.

83 Kemenczei 1984, Pl. XIII/18; Hellebrandt 1991, Pl. 7, 8.

84 In the settlement of Petea–Csengersima, assigned to the Suciu de Sus culture, there is only one pot, reason why it was considered to be an import (Marta 2009, p. 36, Pl. 52/1).

85 V. Szabó 2002, Pl. 66/6, 8, 67/1-3, 74/1, 75/1-2.

86 V. Szabó 2002, Pl. 118/2.

87 Kemenczei 1982, Pl. 10/11; Kemenczei 1982a, Pl. 6/5.

88 Kovács 1966-1967, Pl. 12/11, 15.

89 Kemenczei 1982a, Pl. 3/9, 15.

90 Kacsó 1997, Pl. I/4.

91 Bejinariu–Lakó 2000, Pl. 4/1, 12/4, 21/2; Bejinariu 2003, Pl. LXXII/2, LXXIV/5, LXXX/6.

út, –Tesco⁹². More numerous are, however, the discoveries made in the area of the Suci de Sus⁹³ culture, occurring sometimes in settlements where a mixture of materials belonging to the two types of cultural manifestation can be noticed⁹⁴. The bi-conical pots continued to be used during the HaA period, within the pre-Gáva⁹⁵ type of discoveries.

Type 5, represented by very few pots, includes vessels with curved body, cone-shaped neck and flat rim (Pl. 16/6, 31/2). Some of the items have the handles placed at the top, just below the rim. The fragmentary state of our findings prevents us from doing a more detailed morphological analysis of this type of vessel. The few analogies for this type of vessel originate, for the Hajdúbajos–Cehăluț milieu, from Crasna⁹⁶. Vessels similar in shape, but decorated or provided with protuberances, were discovered at Demecer – Borzsova-puszta⁹⁷, Csallány⁹⁸ and Kék⁹⁹. The most numerous analogies are offered by the Piliny¹⁰⁰ culture, the pots assigned to this culture having, however, in most cases, ornaments and protuberances and handles located below the area with the maximum diameter. The pots with curved body and cone-shaped neck continue to be used in the subsequent stages, appearing among the finds made in the area of the Kyjatice culture¹⁰¹.

Portable Cooking Vessels

The so-called portable cooking vessels are containers that include in their morphology a pot and two legs joined by an arch-shaped band of clay.

This type of vessels was identified in large number in the settlement of Oros, representing a percentage of 21.71% of all forms of vessels identified¹⁰². Only a small number

of pottery fragments (5 pieces) preserve simple or double perforations in the upper part of the feet or on the band that joins them. Most of the portable cooking vessels were made of coarser paste (80.73%), the rest being made of semi-fine paste.

The vast majority of the portable cooking vessels were in a very fragmentary state and this is the reason why, from seven restored items, only three types could be identified. Type 1 includes deep, curve shaped pots, with out-curved rim, with the feet away from the body and narrow arched band (Pl. 34/2). Type 2 includes the bi-conical pots, with flat rim (Pl. 5/1). Vessels like this - with the mouth curled inwards and lacking the rims - were discovered within the Hajdúbajos–Cehăluț cultural group at Valea lui Mihai¹⁰³ and Pișcolt¹⁰⁴. Type 3 is represented by vessels with oblique body and out-curved rim (Fig. 4/1). The presence of this type has not been found within the Hajdúbajos–Cehăluț cultural group being instead documented within the Suci de Sus culture¹⁰⁵. The only decorative elements present on the portable cooking vessels from the settlement of Oros are represented by embossed ornaments that, in the pot morphology, could have a functional role, providing a better holding of the pot. The most frequent ornament (present on 5 items) is represented by the conical knobs (motif AA) (Pl. 14/4). One item has a wide, simple protuberance (motif AB) and another item has wide knobs with two punches (motif AE).

As regards the origin of the portable cooking vessels, the earliest items of the Carpathians are considered those discovered within the area of the Hatvan culture, dated to the III-rd stage of the Early Bronze Age¹⁰⁶. During the Middle Bronze Age, the portable cooking vessel spread over under various variants of shape, throughout a wide area of the Carpathian space. At that time, the portable cooking vessels (with embodied container) appeared in the III-rd stage of the Otomani¹⁰⁷ culture and in the III-rd stage of the Wietenberg¹⁰⁸ culture, in an area occupied later on by the Hajdúbajos–Cehăluț cultural group.

During the Late Bronze Age, the portable cooking vessels were well represented within the Hajdúbajos–Cehăluț¹⁰⁹ cultural group, being found, however, in the neighbouring cultural environments as well, often with similar shapes and ornaments.

92 Nagy 2007, Pl. III/6.

93 Marta 2009, Pl. 3/1, 14/2, 42/5, 45/3, 46/8, 48/1, 50/4, 8, 52/6, 55/1, 7, 58/4, 59/4, 60/13.

94 Nagy–Scholtz 2009, Pl. II/3, IV/3-6, V/3, 6, VII/1, VIII/3, IX/8, XI/10.

95 V. Szabó 1996, Pl. 51/1, 54/1.

96 Bejinariu–Lakó 2000, Pl. 7/2; Bejinariu 2003, Pl. LXXXII/5.

97 Kovács 1966-1967, Pl. 13/1.

98 Kovács 1966-1967, Pl. 13/12.

99 Kovács 1966-1967, Pl. 16/15.

100 Kemenczei 1982a, Pl. 2/1,7,12; Kemenczei 1984, Pl. I/25, II/4,6,8,9,11, III/9, XXX/5, XXXI/11,14,16, XXXII/1,9,10,13,14,17,18, XXXIII/5,8, XXXIV/22, XXXVI/15,18.

101 Kemenczei 1982a, Pl. 4/10, 5/16; Kemenczei 1984, Pl. LXXVII/24, LXXIX/11, 20, LXXXII/6, XC/1.

102 It can be assumed that this percentage is higher compared with that of the degree of shape use, because the shape is more easily identified among the ceramic fragments, given the presence of certain specific morphological features (feet, arches and the areas where they join with the recipient).

103 Bader 1978, p. 57, Pl. XXXII/1.

104 Bader 1978, p. 57, Pl. XXXI/11; Kacsó 1997, p. 87, Pl. IV/1.

105 Bader 1978, Pl. LIII/1 (Culciu Mare); Marta 2009, Pl. 51/6 (Petea–Csengersima).

106 Fischl–Kiss–Kulcsár 2001a, p. 169.

107 Bader 1978, p. 55.

108 Boroffka 1994, p. 168.

109 Némethi 1978, Pl. 5/1 (Foieni), 9/9 (Pișcolt); Bader 1978, p. 57, Pl. XXXIV/45 (Cehăluț); Kacsó 1997, p. 87, Pl. IV/4 (Ciumești), VIII/7-9 (Acâș); Bejinariu–Lakó 2000, p. 162, pl 14/4, 19/3 (Crasna); Bejinariu 2001, p.161, Pl. 171/6 (Zăuan); Nagy 2005, p. 82 Pl. IX/1-6, X/1-6 (Nyírlugos); Nagy 2007, p. 134, Pl. II/7, VII/5 (Nyíregyháza).

The shape of the portable cooking vessel is considered to be efficient for boiling. The experimental archeology proved a significantly reduced cooking time and amount of fuel used, compared with the boiling made in simple pots¹¹⁰. The analysis of the context in which the discoveries were made, and of the relationship between the frequency of such vessels and the quantity of bones present in the layers of the settlement of Kastanas revealed the functionality of this type as vessel used for cooking/boiling¹¹¹. The discovery of some portable cooking vessels in funerary context, the existence of some miniature forms, respectively the presence of a large number of vessels lacking traces of secondary firing, suggest other functionalities for the portable cooking vessels, too¹¹².

Towards the end of the existence of these types of vessels in the Upper Tisa region, a gradual loss of their functionality can be considered before the complete disappearance of these shapes. The decrease of their efficiency is suggested by the rarer-and-rarer presence of the ventilation holes and by the narrowing of the legs and of the arch-shaped band joining them¹¹³. The above mentioned aspects can be taken into account within the Hajdúbajos–Cehăluț cultural group as well, the small number of perforations present on the vessels from Oros, respectively the narrowness of the arch connecting the feet as compared to arches of the vessels assigned to an earlier stage of this cultural group, can be brought into discussion from this point of view¹¹⁴.

Storage Vessels

These are recipients of large capacity, wide-mouthed, with curved body and narrow bottom, used to store supplies. Two such vessels were identified. The shape could be identified only in the case of one complete vessel, discovered in the ditch on the outskirts of the settlement (cx. 200). It has flat mouth, high, cone-shaped neck, rounded body and narrow bottom (Pl. 28/2). It is a type well-represented within the Tumuli culture as well as within cultural groups absorbing its elements¹¹⁵. The storage

vessel from Oros, found on the bottom of the ditch, in a complete state, very probably represents a deposition made intentionally. Depositions, in a ritual context, of storage vessels, on the outskirts of some settlements, was found at Petea–Csengerisma and Lazuri, this time together with other vessels¹¹⁶.

Ember Protectors

Only one such fragment was discovered in the settlement of Oros. Its shape cannot be identified: it can be assumed that it has cone-shaped body, provided with small and frequent holes. In the the Hajdúbajos–Cehăluț cultural environment such shapes are known from the settlement of Crasna¹¹⁷. In the north-west of Romania, such ember protectors started to be used in the Otomani II stage¹¹⁸. During the Late Bronze Age the shape was poorly used, both within the Suci de Sus culture, as well as in its (and Hajdúbajos–Cehăluț cultural group's) immediate subsequent stage¹¹⁹.

Cups

A large number of cups or mugs were discovered on the site, either in a complete or a fragmentary form (105 items being included in the database). Most of them are made of fine paste, a large part of them are decorated and the colour of the vessels is variable.

Type 1: Globular flattened cups. Variant 1Aa: Cup with an out-curved rim, tall, arched neck, flattened globular body and a ring-shaped foot; the handle starts just from above the rim and goes down up to the shoulder. In some cases, in the middle area, the cups have vertical channels and knobs (Pl. 7/1, 39/7). Such table ware is common in the archaeological material of the Tumuli culture¹²⁰. On the other hand, given their early

110 Gucsi 2001.

111 Hochstetter 1984, p.155, 208; Becker 1995; Becker 1998.

112 Marta 2009, p. 29.

113 Marta 2009, p. 68-69.

114 See the wide vault of the vessel from the Valea lui Mihai deposit (Bader 1978, Pl. XXXIII).

115 Bejinariu–Székely–Sana 2009, p.62; Bartík 1996, Pl.5/7, 6/5 etc.; Kemenczei 1984, Pl. XXXI/11-14.

116 Marta 2009, p. 86-87.

117 Bejinariu–Lakó 2000, Pl. 5/6, 23/3.

118 Bader 1978 Pl. XIX/3,4; Bader–Dumitrașcu 1970, Pl. 7/4.

119 As an example, in the settlement of Petea–Csengerisma only two shards were discovered from complexes of the Suci de Sus culture (and some from the cultural layer) and only one item belonging tot the Lăpuș II–Gáva I cultural horizon (Marta 2009, p. 34, 76).

120 Kovács 1966, Pl. 6/16; Kovács 1975, Pl. 13/3; Trogmayer 1975, Pl. 38/426/3; Hänsel–Kalicz 1987, Pl. 8/47.

occurrence, we can consider that this type represents almost everywhere an element of the local tradition during Middle Bronze Age¹²¹. This type is present in the pottery assigned to the Otomani culture¹²², being also discovered in the sites of Nyíregyháza–Bujtos and Morgó¹²³. It occurs also in the pottery assigned to the Piliny¹²⁴ and the Kyatice¹²⁵ cultures, as well as among the materials of the Igrița group¹²⁶. It can be considered also as the main variant of the Hajdúbagós–Cehăluț group¹²⁷. One of these items has a decoration made by impressions (Pl. 39/1). This cup has not only a different ornamentation but also a different character among the other vessels found in the settlement, which make us believe that it is not local. This type of decoration along with the shape is found in the area of the Piliny culture¹²⁸, although the very dense impressions are not specific for it either. The decoration of the neck, made through registers of impressions, has analogies in the vessels of a tumulus in the necropolis of Tápé¹²⁹. *Variant 1Ab*: Cup with an out-curved rim, high arched neck, globular-flattened body and ornamental incisions in the middle (Pl. 11/3, 35/1). The shape is very much like the previous type but lacking the leg. Analogies are found in the Otomani culture¹³⁰ and later on, this variant appears also in the Tumuli culture¹³¹, being then adopted by the Hajdúbagós–Cehăluț cultural group. *Variant 1Ac*: Cup with an out-curved rim, high arched neck, globular-flattened body, and strongly accentuated shoulder line. In the middle area it has protuberances (Pl. 9/6) or vertical channels (Pl. 38/2). The earliest identification of such shapes in the Carpathian Basin is made in the archeological material of the Magyarád culture, while in Hungary the variant 1Ac appears in sites of the Tumuli culture¹³². *Variant 1B*: Cup with an out-curved rim, high arched neck, globular-flattened body (Pl. 24/3). Some of the items lack the handle (Pl. 17/4, 37/3) or are provided with a knob in the middle (Pl. 29/8). Others, however, have an over-raised handle that starts from the rim and goes down up to the shoulder level (Pl. 1/2, 13/3, 19/3, 20/3, 24/5, 29/5, 32/6, 34/4, 36/3,

121 Kemenczei 1968, p. 181.

122 Bader 1978, Pl. XXII/1-2; Furmánek–Veliačik–Vladár 1991, Pl. 6/5.

123 Kovács 1967, Pl. 15/12.

124 Kemenczei 1984, Pl. XI/13.

125 Kemenczei 1984, Pl. LXXIII/7.

126 Emődi 1980, Pl. 15/105. The ceramic type is dated here to the Reinecke Bz C period.

127 Kovács 1970, Pl. 1/16-17, 4/9; Nagy 2007, Pl. VI/9; Némethi 2009, Pl. II/9.

128 Kemenczei 1984, Pl. XI/13, XIII/3.

129 Trogmayer 1975, Pl. 46/1-2.

130 Bader 1978, Pl. XIV/2.

131 Točík 1964, Pl. XXI/6.

132 Trogmayer 1969, p. 91-92; Nagy 2005a, Pl. 4/5.

39/6). This shape is well represented in the pottery of the Hajdúbagós–Cehăluț cultural group¹³³, being found in the Suci de Sus culture, too¹³⁴. This shape is frequent within the Otomani culture¹³⁵, continuing in the Tumuli culture¹³⁶. An unusual fragment of this variant, resembling only in shape with the other cups, is one with rich incised-excised meanders decoration (Pl. 21/4). Judging from the decoration style, it is obvious that it belongs to the Suci de Sus culture. Analogies are present in the deposit of vessels of Nyírmada, dated to the RBD period, where a vessel similar in shape and decoration with the one of Oros was discovered¹³⁷.

Type 1C: Wide-mouthed cup with an out-curved rim, high arched neck and globular-flattened body (Pl. 17/7-8, 19/2, 24/6-7, 25/2). Some have small handles attached on the shoulder, the middle line being decorated with vertical (Pl. 11/2, 12/4, 20/5, 22/4-5, 24/7, 32/2,5) and oblique (Pl. 24/2, 32/3) channels. In one case the body of the cup is decorated with almost horizontal channels (Pl. 37/1). Variant 1C is present in the case of the Hajdúbagós–Cehăluț group¹³⁸ but it can also be encountered in the pottery repertory of the Otomani¹³⁹, Wietenberg¹⁴⁰ and Suci de Sus¹⁴¹ cultures.

Type 2: Bi-conical cups. They have out-curved rim, short arched neck and bi-conical body (Pl. 6/4, 24/1,4,8, 33/7, 35/5). It is a shape often encountered in the archeological material of the Hajdúbagós–Cehăluț group¹⁴² and in the the Berkesz-type discoveries¹⁴³. One item with a rich incised-excised decoration was discovered in the complex number 10 (Pl. 3/2). This is evidently related to the Suci de Sus culture¹⁴⁴ which contains undecorated items, too¹⁴⁵. The cups assigned to the Suci de Sus culture generally have a more rounded shoulder, while the items with a more accentuated shoulder within the

133 Kacsó 1997, Pl. VII/11; Bejinariu–Lakó–Sana 2004, Pl. I/6; Nagy 2005, Pl. V/1,4.

134 Marta 2009, Pl. 25/2,12; L. Nagy–Scholtz 2009, Pl. I/5, III/1-2.

135 Bader, 1978, Pl. XVIII/2, Pl. XVIII/4.

136 Točík 1964, Pl. XII/13; Kovács 1966, Pl. 6/9; Trogmayer 1975, Pl. 41/1,5.

137 Tóth–Marta 2005, Pl. 5/1; Marta 2009, Pl. 27/4, 30/4.

138 Bejinariu–Lakó 2000, Pl. 10/5, 17B/2-3; Bejinariu–Lakó–Sana 2004, Pl. VI/4.

139 Bader 1978, Pl. XVIII/15, 18.

140 Chidioșan 1980, Pl. 18/4, 7.

141 Marta 2005, Pl. 2/1, 4/12, 14; Marta 2009, Pl. 48/9; L. Nagy–Scholtz 2009, IX. t./7.

142 Kovács 1967, Pl. 11/2; Nagy 2005, Pl. V/6; Nagy 2007, Pl. I/13; Némethi 2009, Pl. II/5 (with reference to the Berkesz culture, see Nagy 2007, p. 138).

143 With reference to the Berkesz culture, see Nagy 2007, p. 138.

144 Demeterová 1984, Pl. IV/7; Tóth–Marta 2005, Pl. 8/1; Marta 2005, Pl. 3/4; Marta 2009, Pl. 23/10, 24/6, 51/2, 53/2.; L. Nagy–Scholtz 2009, Pl. IV/1.

145 Demeterová 1984, Pl. IV/7; Tóth–Marta 2005, Pl. 8/1; Marta 2005, Pl. 3/4; Marta 2009, Pl. 23/10, 24/6, 51/2, 53/2; L. Nagy–Scholtz 2009, Pl. IV/1.

Hajdúbagos–Cehăluț cultural group occur frequently in the Tumuli culture dated to the RBC-BD period¹⁴⁶. This shape continues to be used in the HA period, continuing even to the classical period of the Gáva culture¹⁴⁷.

Type 3. Globular cups. Cup with globular body and vertical, short neck (Pl. 3/1, 9/5, 24/9, 29/2, 39/10). One of the items has an out-curved rim (Pl. 32/8). This shape occurs in the pottery assigned to the Hajdúbagos–Cehăluț cultural group¹⁴⁸ and in the Berkesz-type discoveries¹⁴⁹. Analogies for type 3 are met in the Otomani, Tumuli and Suci de Sus cultures¹⁵⁰.

Bowls/Dishes

Type 1. Bowls with oblique walls. Variant 1Aa. This variant includes the bowls with oblique body, rounded mouth, and without accentuated rim (Pl. 13/6, 15/5, 17/10, 25/8, 38/4). Some of the items have handles below the rim (Pl. 6/5, 33/5). The channeled decoration occurs rarely (Pl. 20/6, 39/4). It is well represented in the discoveries of the Hajdúbagos–Cehăluț cultural group¹⁵¹. It can be considered as a general shape for the Late Bronze Age, as analogies of this variant are present in the archeological materials of the Tumuli¹⁵², Otomani¹⁵³, Piliny¹⁵⁴ and Suci de Sus¹⁵⁵ cultures. *Variant 1Ac:* Bowl with oblique body and the inside part of the rim thickened from the inside (Pl. 1/4). This variant occurs among the discoveries assigned to the Hajdúbagos–Cehăluț¹⁵⁶ cultural group, having, however, frequent analogies during the early and classic period of the Suci de Sus culture¹⁵⁷.

Type 2: Bowls with arched body and out-curved rim. Variant 2A: Semi-globular bowl with an out-curved rim and short, arched neck (Pl. 3/5, 8/2, 15/6, 22/1, 26/5, 33/4). In

many of the cases it has handle (Pl. 21/3) or knob (Pl. 3/3) under the rim. The ornamentation consists of channels (Pl. 1/3, 4/2, 9/7, 21/2, 26/4, 32/7, 33/1), incised lines (Pl. 26/2) or impressions (Pl. 38/3). This shape is found in the settlements of the Hajdúbagos–Cehăluț¹⁵⁸ and the Suci de Sus¹⁵⁹ cultural groups. Variant 2B: Semi-globular bowl with an out-curved rim, deeper than type 2A (Pl. 4/4, 8, 9, 25/9-10) sometimes with knobs below the rim (Pl. 14/4), with knobs surrounded by channels (Pl. 17/6, 26/3) or with impressions (Pl. 37/4). Variant 2B analogies are found in the archeological material of the Hajdúbagos–Cehăluț¹⁶⁰, Wietenberg¹⁶¹ and Suci de Sus¹⁶² cultures.

Type 3: Bowls with in-curved rim. Variant 3A. Semi-globular bowl, with an almost flat rim (Pl. 17/9, 18/1, 4, 20/1, 27/3, 20/1, 26/1). The items with handle on or below the rim (Pl. 12/1, 13/4) or with decorative knobs (Pl. 11/4, 13/8, 18/1,4) are the most frequent. A miniature copy of this model (Pl. 23/14) or one with the lower part surrounded by channels (Pl. 17/9) were also discovered. We can find this variant among the materials assigned to the Otomani¹⁶³, Wietenberg¹⁶⁴, Hajdúbagos–Cehăluț¹⁶⁵, Suci de Sus¹⁶⁶ or Gáva¹⁶⁷ cultures/cultural groups. Variant 3A used to be largely used during the Middle and Late Bronze Age, reason why it cannot be considered as a chronological indicator.

Type 3B: Bowl with in-curved rim (Pl. 4/10, 27/2), very often ornamented with simple (Pl. 4/1) or double protuberances (Pl. 37/6) on or below the rim. In some of the cases they are fitted with handle (Pl. 27/1, 3, 34/3) and one of the items has lobed rim (Pl. 13/5). It has analogies in the pottery assigned to the Hajdúbagos–Cehăluț¹⁶⁸ and Igrîța¹⁶⁹ cultural groups, respectively in the the Wietenberg¹⁷⁰, Gáva¹⁷¹, Piliny¹⁷² cultures and among the Berkesz-type materials¹⁷³. Among the bowls of Oros, there are some

146 Kovács 1967, Pl. 11/4; Horváth 1994, Pl. 11/6.

147 Gumă 1995, Pl. II/4,7; Horváth 1994, Pl. 13/5; V. Szabó 2002, Pl. 35/31.

148 Nagy 2005, Pl. V/1; Némethi 2009, Pl. II/10.

149 Kovács 1967, Pl. 11/13, 14/1.

150 Némethi–Molnár 2002, Pl. 53/8; Ilon 1996, Pl. XIII/4; Kacsó 2006, Pl. 13/18; Marta 2009, Pl. 22/5, 8; L. Nagy–Scholtz 2009, Pl. XI/5.

151 Kacsó 1997, Pl. V/2; Nagy 2005, Pl. VI/2.

152 Jankovits 1992, Pl. 31/2.

153 Bader 1978, Pl. XVI/16, Némethi–Molnár 2002, Pl. 15/2.

154 Kemenczei 1984, Pl. VIII/25.

155 Kacsó 2006, Pl. 6/7; Pop 2009, Pl. 60/5; Marta 2009, Pl. 43/10.

156 Bejinariu–Lakó 2000, Pl. 6/3, 19/1.

157 Pop 2009, Pl. 31/5-6; Marta 2009, Pl. 14/7, 26/1, 33/8.

158 Kovács 1970, Pl. 1/14, 4/17.

159 Kacsó 1996, Pl. 6/8, 13/15; Marta 2009, Pl. 3/2,

160 Kacsó 1997, Pl. V/ 6-7.

161 Boroffka 1994, Pl. 55/10.

162 Bader 1978, Pl. XLVII/25, LII/1; Kacsó 1987, Pl. 1/5-6; 1990, Pl. 9/5-7; Marta 2005, Pl. 3/3, 4/3.

163 V. Szabó 2002, Pl. 1/5.

164 Boroffka 1994, typological Pl.3/2; Ciugudean 1997, Pl. 7/3, 8/7.

165 Kacsó 1997, Pl. II/1-2, V/1, X/6; Bejinariu–Lakó 2000, Pl. 9/1, 13B/3; Nagy 2007, Pl. V/7-8.

166 Pop 2009, Pl. 23/4; L. Nagy–Scholtz 2009, Pl. VIII/4.

167 V. Szabó 2002, Pl. 14/5.

168 Kacsó 1997, Pl. II/1-4.

169 Chidioșan–Emődi 1982, Pl. 4/1-4; Emődi 1997, Pl. 44.

170 Boroffka 1994, tip. Pl. 3/3; Gogăltan–Florea 1994, Pl. 16/8.

171 V. Szabó 2002, p. 15/5-6.

172 Kemenczei 1984, Pl. XIII/19,23,26.

173 Kovács 1967, Pl. 11/15, 17-18.

items with the rim obliquely curved towards the inside, model that would become intensively used in the period of the pre-Gáva and Gáva¹⁷⁴ cultural manifestations. One bowl was discovered with a turban-shaped rim (Pl. 5/5), a rarely encountered element within the pottery assigned to the Hajdúbagos–Cehăluț¹⁷⁵ cultural group but which came to be intensively used in the Gáva culture¹⁷⁶. Variant 3C: Conical bowl with in-curved rim (Pl. 33/3). An analogy for the bowl of Oros was found in the settlement of Petea–Csengersima, the latter having, however, an out-curved rim¹⁷⁷. Bowls of this variant were discovered at Battonya, in a settlement of the Gáva culture¹⁷⁸.

Type 4: Conical bowl with accentuated shoulder and out-curved rim. Variant 4Aa: Conical bowls with an out-curved rim (Pl. 6/1, 26/6, 29/9, 37/5), the shoulder decorated with protuberances surrounded by channels (Pl. 12/ 3, 39/3) or with straight, incised lines (Pl. 12/2). This shape is frequent during the Late Bronze Age, the models discovered in the settlement being used until the Reinecke BzD period. They are encountered in the pottery assigned to the Wietenberg¹⁷⁹ culture, the Tumuli period¹⁸⁰, the Hajdúbagos–Cehăluț cultural group¹⁸¹ and the Balta Sărată group¹⁸². Bowls with intensely bent shoulder were identified in the graves of Gelej necropolis, dated during the transition period of Reinecke BzD–HA1 phase¹⁸³ and they continued to be used during the Gáva culture¹⁸⁴. *Variant 4Ab:* Conical bowl, with accentuated shoulder and lobed rim. One item is decorated with short, curved lines (Pl. 18/6) and another one is ornamented with protuberances on the shoulder line (Pl. 36/1). It is a shape considered characteristic for the Tumuli culture¹⁸⁵ but which is very often encountered within the Hajdúbagos–Cehăluț group, too¹⁸⁶. Its presence within the deposit of vessels from Debrecen¹⁸⁷ is to be noticed.

174 Kemenczei 1984, Pl. CXXXI/26; V. Szabó 2002, Pl. 11/3, 15/7; V. Szabó 1996, Pl. 41/7.

175 Nagy 2007, Pl. V/9.

176 Kemenczei 1984, Pl. CXXX/19; V. Szabó 1996, Pl. 41/9; V. Szabó 2002, Pl. 17/2.

177 Marta 2009, Pl. 56/6.

178 V. Szabó 2002, Pl. 2/5.

179 Ciugudean 1997, Pl. 2/6, 16/1.

180 Kovács 1975, Pl. 54/2; Trogmayer 1975, Pl. II/4; Ilon 1996, Pl. 6/8.

181 Kovács 1970, Pl. 1/14; Némethi 1978, Pl. 4/1; Kacsó 1997, Pl. II/5, 8; Bejinariu–Lakó 1996, Pl. VII/8; Bejinariu–Lakó 2000, Pl. 29/6; Nagy 2007, Pl. XI/6.

182 Gumă 1997, Pl. LXVIII/13, LXIX/1.

183 Kemenczei 1989, Pl. 10/4.

184 V. Szabó 1996, Pl. 13/10-12.

185 Kemenczei 1968, Pl. 4/16; Trogmayer 1975, Pl. 9:102/2, 32:356/4.

186 Kovács 1970, Pl. 8/2; Némethi 1978, Pl. 1/1; Kacsó 1997, Pl. VII/9; Bejinariu–Lakó 2000, Pl. 6/5; Bejinariu–Lakó–Sana 2004, Pl. III/3; Nagy 2007, Pl. II/4.

187 Poroszlai 1984, p. 92, Pl. II/3, X/1-3.

In the north area of the Alföld and in the northern Transylvania, the shape begins to be known during the late Wietenberg¹⁸⁸ and the Otomani¹⁸⁹ cultures. Variants of bowls with lobed rims were intensively used during the Bronze Age, within the Piliny¹⁹⁰ and the Suciul de Sus¹⁹¹ cultures.

Decorative motifs

The decorative motifs present on the vessels of the Oros–Űr Csere settlement were classified according to the decoration technique used: knobs (group A of ornaments), raised/applied cordons (group B of ornaments), fingertip impressions (group C of ornaments), striations (group D of ornaments), dotted impressions (group E of ornaments), channels (group F of ornaments) and incisions (group G of ornaments).

Group A of Ornaments (knobs). The knobs or the applied protuberances, as also named, are ornaments present on almost all the types of vessels of Nyíregyháza–Oros, in a wide variety of forms, as follows: conical knobs (AA), flattened protuberances arranged horizontally (AB), protuberances pointed upwards (AC), oval protuberances pointed downwards (AD), horizontal elongated knobs, fitted with two fingertip impressions (AE), vertical, flattened protuberances (AF), groups of conical, pointed downwards protuberances (AG), horizontal, elongated knobs, fitted with three fingertip impressions (AH), horseshoe shaped protuberances (AI).

This type of ornament, made by an addition of clay to the surface of the vessel, is widely used especially in coarse pottery, not lacking, however, from any of the other categories. The first group (AA) appears frequently on most types of vessels. On pots, portable cooking vessels and, more rarely, on amphorae, these protuberances are arranged independently, while on the rest of pottery forms the conical knobs appear in association with other ornamenting motives (channels, impressions). The upwards pointed protuberances (AC) (specific mainly for the bowls) and the horizontal elongated knobs, fitted with two fingertip impressions (AE) (oc-

188 Chidioșan 1980, p. 42; Boroffka 1994, p. 157-158, tip. Pl. 4 TE2a, TE2b, TE3a); Rotea 1994, Pl. II/7,9; Ciugudean 1997, Pl. 4/6, 5/1-2.

189 Máthé 1988, Pl. 25/6

190 Kemenczei 1984, Pl. XIII/2; Furmanek–Marková 2001, Pl. 4/13.

191 Bader 1978, Pl. XLVII/11, XLVIII/7; Marta 2009, Pl. 27/3.

curing only on the common household pots) are frequently encountered. The flattened, horizontal protuberances (AB) discovered in our settlement are quite few, occurring independently, in the upper part of an amphorae or embodied in a fingertip-impressed applied cordon. The horseshoe shaped protuberances (AI) have an isolated presence, occurring here on only one vessel (Pl. 39/9). Close analogies, not just as ornament type but also in terms of distance, originate from Nyíregyháza–Pazonyi út, –Tesco¹⁹², this decoration element being, however, well documented in some settlements of the Suciú de Sus environment¹⁹³.

Group B of Ornaments (Cordons). The vertical parallel raised cordons, the most numerous ones (BA) are present only on the body of the amphorae (Pl. 8/1, 14/1). The ornament is documented in the sites of the Hajdúbajos–Cehăluț cultural group and it continues to be used during the Ha A period within the Lăpuș II–Gáva I¹⁹⁴ and the pre-Gáva cultural horizons¹⁹⁵. The finger-impressed applied cordon (BB) is present on pots and on some of the bowls of Oros settlement (Pl. 31/1). The ornament is well represented in the discoveries of the Hajdúbajos-Cehăluț type¹⁹⁶, this ornament being considered to originate from the Otomani culture¹⁹⁷. What is interesting is that the finger-impressed applied cordon is transmitted within the Lăpuș II–Gáva I habitation horizon, only in the former area of the Hajdúbajos–Cehăluț cultural group¹⁹⁸, lacking from the former area of the Suciú de Sus culture¹⁹⁹. At the same time, this ornament will continue to be used in the north of the Tisa Plain (The Great Hungarian Plain) in the discoveries dating to the Reinecke HaA (pre-Gáva) period²⁰⁰. The vertical cordon, ended with an angular one (BC) is present in the settlement of Oros in only one case, on the handle of a vessel (Pl. 29/4). The ornament BD has a singular occurrence, too (Pl. 32/5). Although the two ornaments do not occur in other settlements of the Hajdúbajos–Cehăluț cultural group, they should not be considered as foreign, as they are complex types of ornaments, consisting of elements specific for the Hajdúbajos–Cehăluț discoveries.

192 Nagy 2007, Pl. I/3, VI/5.

193 Marta 2009, Pl. 56/1, 59/5, 60/16.

194 Mozsolics–Hegedűs 1963, Pl. 2; Némethi 1990, Pl. 4/4, 7/3,4, 15/5,11; Marta 2009, p. 77; Kacsó 1981, p. 64-65.

195 V. Szabó 1996, Pl. 10/10, 28/10, 32/4, 37/4 etc.

196 Némethi 1978, Pl. 5/3; Ignat 1984, Pl. II/2, IV/1; Bejinariu–Lakó 2000, Pl. 2/3, 8/5, 14/3, 18/1-3, 30/2.

197 Némethi 1990, p. 42, 46.

198 Némethi 1990, p. 40, Pl. 1/15, 11/3, 13/5.

199 See the case of the Petea–Csengersima settlement (Marta 2009, p. 36-37, 90-91)

200 V. Szabó 1996, p. 33.

Type C of Ornaments (Fingertip impressions). The CA ornament consists of three fingertip impressions arranged in a triangular shape (Pl. 21/2). This ornament is well represented in the discoveries associated to the Hajdúbajos–Cehăluț and the Berkesz cultures²⁰¹. As regards the neighbouring cultures dated to the Reinecke BzC–D stage, the ornament is well represented in the Piliny culture²⁰². Instead, in the area of the Suciú de Sus culture, it is known only in the settlement of Petea–Csengersima, located in the neighbourhood of the Hajdúbajos–Cehăluț culture²⁰³. This ornament starts to be used in the north of the Tisa Plain during the Otomani III/ Suciú de Sus I cultural stages²⁰⁴. The fingertip impressions arranged in a curved shape (CB Pl. 39/4,7) frame the knobs on the bowls, cups and amphorae, similar to the dotted ornament EB. The small fingertip impressions arranged circularly (CD) appears on a single vessel. Both CB and CD ornaments can be considered to be variants of the dotted ornaments EB și EC, as the fingertip impressions can be regarded as dots of a larger size. The fingertip-impressed rims (CC) are noticed mainly on pots (Pl. 21/4) and only in isolated cases on bowls. The decoration with rows of fingertip impressions (CE) is present on cups and pots (Pl. 9/2, 10/3).

Type D of Ornaments (Striations). These ornaments are superficial, made through a gentle impression in the clay. Striations were used to decorate a reduced number of ceramic fragments, unlike the settlement of Crasna where the striated decoration, achieved in a similar manner, occur rather extensively²⁰⁵.

Type E of Ornaments (Dotted impressions). This decoration occurs frequently on cups, bowls and amphorae. It rarely occurs as individual impressions, usually forming horizontal or vertical rows of dots (EA, Pl. 39/1,2). The motifs in the shape of a semicircular arcade located at the knobs and surrounded by channels (EB, Pl. 9/4, 7, 27/6, 38/3, 39/2) or located around the lentil motif (EC, Pl. 4/10, 32/9, 37/4, 38/3) are dominant. The origin of the ornamentation made by dotted impression can be traced during the Middle Bronze Age, being used during the Tumuli culture, too²⁰⁶. It has a good representation in the pottery assigned to the Hajdúbajos–Cehăluț cultural

201 Kovács 1967, Pl. 14/11, 15/1.

202 Kemenczei 1984, Pl. XIII/17, XXXVIII/2.

203 Marta 2009, p. 37.

204 Némethi–Molnár 2007, Pl. 98/2, 102/1, 107/1-4, 108/1,3-6.

205 Bejinariu–Lakó 2000, p. 170, Pl. 8/6, 10/3, 26A/2, 26B/1, 29/5. A striated vessel is recorded in the settlement of Curtuișeni–Dâmbul Ars too (Némethi 1978, Pl. 2/10), but this settlement is probably dated to Ha A.

206 Točík 1964, Pl. XXVI/2-3, XXVII/19; Trogmayer 1969, Pl. 3; Kemenczei 1968, Pl. 7/2,8,13, 8/7.

group²⁰⁷ and a weaker one in the archeological material of the Berkesz type²⁰⁸. The dotted decoration is intensively used in the pottery of the northern cultures, i.e., the Piliny²⁰⁹ and the Kyatice cultures²¹⁰.

Type F of Ornaments (Channels). In the pottery of Oros, we encounter horizontal channels (FA) on the neck of one pot (Pl. 23/2, 30/3), without completely covering it as in the period of the Gáva culture²¹¹. This type of channeled ornamentation can be noticed in the sites of the Kyatice²¹² and the Gáva cultures²¹³ too, although the latter one is characterized by the channeled model that cover the entire surface of the neck²¹⁴. Moreover, the lower part of the vessels is decorated with channels, too, a channeling (Pl. 17/9) that occurs very frequently in the archeological material of the Hajdúbagos–Cehăluț group. Oblique channels (FB, FC – Pl. 24/2, 5, 32/3) are already recurrent in the RBD–HA1 period, occurring frequently on cups, bowls/dishes and urns. It can be found in the material assigned to the Tumuli culture, quite rarely, however²¹⁵. A dish with frequent, oblique channels²¹⁶ occurred in Sălaj County, in a site of the Hajdúbagos–Cehăluț group, dated to the end of the group's period. The same type of decoration can also be noticed among the Berkesz type materials²¹⁷. It is encountered in the sites of the Piliny and the Kyatice²¹⁸ cultures, as well as in the archeological material of the Gáva culture²¹⁹. As in the case of the oblique channeling, the vertical one (FD – Pl. 3/1, 7/1, 8/5, 11/2, 16/5, 20/3, 5, 22/3, 6, 24/7, 27/6, 29/1, 30/2, 38/2, 39/2), respectively groups of three-four vertical channels (FE – Pl. 6/6, 8/1, 22/2, 5, 7, 24/1, 26/4, 29/2) are already encountered in the archeological material of the Tumuli period, without being characteristic for them²²⁰. They appear much more frequently in the late archeological material of the Hajdúbagos–Cehăluț²²¹ group, of the Berkesz-type²²², becoming charac-

teristically from the transition period BD-HA1²²³. This is an ornamentation frequently encountered within the Piliny, Kyiatice and Igrița cultures²²⁴. As far as the archaeological material from Oros is concerned, frequent channels can only be seen on some of the pottery, this not yet becoming a truly characteristic ornament. The channels around the protuberances and the handles are much more frequent (FF, FG – Pl. 1/3, 4/2, 6/6, 7/1, 8/1, 9/4, 7, 11/5, 12/3, 13/5, 10, 17/6, 20/6, 21/3, 22/2, 23/1, 26/3, 27/6, 32/7, 33/1, 38/3, 39/4.), helping at highlighting the decoration (knob, handle) on the vessel body. They often appear together with the motifs of EB type, i.e. in the shape of semi-circular impressions. This type of ornament clearly proves the continuation of the Middle Bronze Age traditions²²⁵. We can notice its continuation through the Tumuli culture period²²⁶, it is the determinant motif of the Hajdúbagos–Cehăluț²²⁷ group and it is much more modest, but observable, in the Berkesz type materials²²⁸.

Type G of Ornaments (Incisions). The ornamental motifs achieved through the incision technique are as follows: parallel horizontal lines (GA), long vertical lines incised superficially (GC), two parallel lines with a row of dots between them (GD), spirals (GE), horizontal arched lines (GF), lines forming a festoon (GG), group of short lines (GH), wave-like lines (GI), lines arranged in angle (GJ), group of long, vertical lines (GK), group of arched lines (GL).

The incised horizontal lines (GA) are present on nine ceramic fragments, among which two fragments of amphorae were found (Pl. 3/6, 27/4). The ornament is well represented on the vessels of the Hajdúbagos–Cehăluț cultural group, often decorating the neck of the vessels²²⁹. The vertical lines (GB), decorate seven vessels from Oros, among which two are amphorae (Pl. 27/4). Vertical incisions with pricks at the upper end (GC) appear on four ceramic fragments from two cups (Pl. 12/4), an amphora and a dish. The ornament can be considered as specific for the Hajdúbagos–Cehăluț cultural group, being present on vessels from other sites, too²³⁰. The ornament consisting of two lines that interpolate a row of dots (GD) is present on a single cup of Oros (Pl. 24/3). Even if

207 Kovács 1970, 1/20, 2/6,16, 3/11; Kacsó 1997, Pl. VI/10.

208 Kemenczei 1984, Pl. LXXII/11,16, LXXIII/13, LXXVI/7,12,14.

209 Kemenczei 1984, Pl. II/2, VII/12, 16, 26, VIII/26, XIII/3.

210 Kemenczei 1984, Pl. LXXII/11,16, LXXIII/13, LXXVI/7,12,14.

211 V. Szabó 1996, Pl. 11/3,13, 17/5-8,11-12.

212 Kemenczei 1984, Pl. LXXVI/12, LXXXIII/8, LXXXIV/6,19.

213 V. Szabó 2002, Pl. 18/1-2.

214 Kemenczei 1984, Pl. CXXX/1-3,5.

215 Kovács 1966, Pl. 14/10, 19/13.

216 Bejinariu 2001, Pl. VI/1.

217 Kovács 1967, Pl. 11/4, 13/2, 15/21, 17/13.

218 Kemenczei 1984, Pl. VII/11, 25, LXIX/3, LXXVI/21.

219 Kemenczei 1984, Pl. CXXV/20-21, CXXXIV/5, 19; Szabó 2002, Pl. 17/6.

220 Kovács 1975, Pl. 326/1, 242/2

221 Nagy 2005, Pl. XI/4,10, XII/1,7; Nagy 2007, Pl. III/4.

222 Kovács 1967, Pl. 13/9,13, 14/4,10,14, 15/15,18,19, 16/5-7,12.

223 Kőszegi 1988, p. 37.

224 Kemenczei 1984, Pl. IX/1, LXX/10, LXXIII/10; Chidioșan–Emődi 1982, Pl. 1/4,6.

225 Bóna 1975, Pl. 73/2; Kovács 1988, Pl. 1/4,12-13; Tárnoki–Csányi 1992, Pl. 165, 120; Poroszlai 1992, Pl. 108.

226 Kalicz 1958, Pl. IV/10; Točík 1964, Pl. XIV/6; Kovács 1966, Pl. 2/23; Kemenczei 1968, Pl. 7/7.

227 Kovács 1970, Pl. 1/16, Pl. 8/1; Kacsó 1997, Pl. I/8,9; Nagy 2005, Pl. XI/4,6-7.

228 Kovács 1967, Pl. 16/15.

229 Kovács 1970, Pl. I/1,16-20, II/1,16 etc.; Némethi 1978, Pl. 8/1, 10/8; Kacsó 1997, Pl. II/9, XII/1-2; Bejinariu–Lakó

2000, Pl. 8/1, 9/2, 33/1; Nagy 2005, Pl. VI/1.

230 Nagy 2005, Pl. VI/1.

it is an isolated presence, the ornament can be considered as specific for the culture²³¹ as it combines two of the most common ornamentation techniques in the Hajdúbagos–Cehăluț cultural group: incised lines, respectively, rows of dots. The spirals (GE) could be identified with certainty on only two of the cups from Oros (Pl. 3/2, 21/3). In the first case it appears on a cup specific for the Suci de Sus culture. The motif itself and the manner of achieving it - wide and deep incision - are also specific to this culture. In the second case, the fine incision decoration but also the spiral motif itself - simple spirals, consisting of shallow and narrow incisions, which descends from the shoulder and stop in the middle of the spiral – have very close analogies in eastern Slovakia²³². Even if it is considered to belong to the Suci de Sus culture, the pottery of this area has shapes and decorative motifs different from those encountered in the Suci de Sus culture of the Someș River Basin and of the Ukraine at west of the Carpathians. Given these cultural similarities with the neighbouring areas, the presence of the spiral motif at Oros can be considered as a result of the import, even if in some settlements of the cultural group the spiral motif plays an important role. It is the case of the Crasna settlement, where the good representation of this ornament²³³ could be related to the earlier dating of the site as compared to the settlement of Oros. The ornamental motif consisting of two horizontal faced vaults (GF), can be considered as an isolated presence, as it appears on only one dish (Pl. 23/15). The festoon lines (GG) appear on pottery fragments originating from three vessels, two of which were identified as being dishes (Pl. 18/5)²³⁴. Short vertical lines, arranged in the shape of a ribbon or in groups (GH), are present on two cups and a pot discovered in the settlement of Oros (Pl. 17/2, 21/3). Even if one of the cups is considered to be imported, given its massive presence in the Hajdúbagos–Cehăluț cultural group, the GH motif can be considered an ornament specific for its pottery²³⁵. The wave shaped lines (GI) are present on three ceramic fragments from the settlement of Oros, and the angular lines (GJ) appear on a single cup. Both ornaments are known in relation to the pottery assigned to the Hajdúbagos–Cehăluț²³⁶ cultural group and,

without the certainty of a genetic connection, they shall be used for the Gáva²³⁷ culture pottery, on its area of occurrence. The long vertical lines (GK) are present on five vessels from the settlement of Oros, among which the only identified shape is that of a cup (Pl. 39/7). The GK decorative motif is often encountered on the pottery assigned to the Hajdúbagos–Cehăluț²³⁸ cultural group. The beams of curved lines (GL) are present on a single ceramic piece from Oros. Based on analogies from other settlements of the Hajdúbagos–Cehăluț cultural group, its role was to frame knobs or handles²³⁹.

231 The CD ornament is present at Hajdúbagos (Kovács 1970, Pl. 2/9), Acâș (Kacsó 1997, Pl. VI/3) and Crasna (Bejinariu–Lakó 2000, Pl. 33/1).

232 Demeterová 1984, Pl. XXVI/2.

233 Bejinariu–Lakó 2000, p. 169.

234 The incisions in form of a festoon are quite rare in the Hajdúbagos–Cehăluț milieu (Kovács 1970, Pl. 2/9, 3/11, 8/8; Bejinariu–Lakó 2000, Pl. 32A/2).

235 Kovács 1970, Pl. 1/3, 8/6 etc.; Némethi 1978, Pl. 8/1, 10 Kacsó 1997, Pl. VIII/2; XI/4,6; Bejinariu–Lakó 2000, Pl. 32/2.

236 Kovács 1970, Pl. 1/1, 2/6; Bader 1978, Pl. XXVI/8; Némethi 1978, Pl. 9/4; Kacsó 1997, Pl. V/4, XII/2.

237 Kemenczei 1984, p.71.

238 Kovács 1970, Pl. 1/8-10,18, 3/8,10, 4/9,10,14,19, 7/3; Némethi 1978, Pl. 9/5-6; Bader 1978, Pl. XXX/7; Ignat 1984, Pl. 5/4; Kacsó 1997, Pl. II/10, XII/1; Nagy 2005, Pl. XI/5.

239 Kacsó 1997, Pl. II/6; Nagy 2005, Pl. XI/6.

V. METAL OBJECTS

The late Bronze Age period represents the stage of maximum development of the metal processing in the eastern half of the Carpathian Basin. This is confirmed by the big quantity of bronze pieces found in deposits alongside with the numerous artefacts (moulds, nozzles, crucibles, casting scraps etc.) directly connected to the activity of the artisans who made metal pieces on the territory of certain settlements.²⁴⁰

Various bronze items, casting scraps and residues, such as bronze slag (?),²⁴¹ were discovered in some complexes identified as belonging to the Late Bronze inhabitation from the Nyíregyháza–Oros settlement, „Űr-Cseré” location. A series of pieces discovered in the ditch on the western side of the settlement, as well as metal objects recovered from the mechanically uncovered level of the settlement add to these. The metal pieces and the artefacts that prove the carrying out of the metallurgical processing activities were found in the respective complexes together with pottery under various degrees of fragmentation, and sometimes with bones, stone and daub.

Fragments of a ceramic vessel made of coarse-grained paste, with visible remains of melted bronze on its bottom, were discovered in the pit 34, namely a crucible, a recipient frequently used for processing the metal. However, crucibles are not very often found among the discoveries associated to the Late Bronze era of the eastern part of the Carpathian Basin, although proves of metal processing were reported here. A stone crucible is recorded as originating from the Oszlár–„Nyárfaszög” (Hungary) settlement.²⁴² A similar piece was found at Oradea, in an uncertain context, however²⁴³, and another one in a Late Bronze settlement, recently researched at Recea, Sălaj County (Romania).²⁴⁴

A fragment originating probably from a mould, made of friable, soapy sandstone with burning traces was discovered in the pit 31. The precarious conservation status of the piece does not allow us to mention what type of pieces was casted in the respective mould.

240 Ilon 2006, p. 273-301; Bejinariu 2005, p. 47-74; Dumitraşcu 1989, p. 119-168.

241 We use the term of „bronze slag” with the deserved reserve as these residues, found in several pits, were not analysed. Therefore, it is not sure whether we are dealing with actual metallic residues, resulted after the melting-casting process or that it is about burnt and vitrified soil which, sometimes, because of the chemical compositions, can get the aspect of a metallic slag. See also: Vasiliev 2005, p. 14, note 29.

242 Kalicz–Koós 1997, p. 66-71, p. 180, no. 29.

243 Dumitraşcu 1989, p. 127, Pl. XIX.

244 Bejinariu 2009, p. 188.

A fragment of a mould valve originates from complex 120, a pit in which the mould fragment was associated with ceramic material dating to the Late Bronze age, two vessels, deposited, apparently, in whole, being also discovered there. The mould is made of soft, silicified sandstone, and it has traces indicating that it was used. The fragment discovered in the pit has the following sizes: length- 8.9 cm, width – 7.4 cm, thickness – 4.7 cm (Pl. 15/1). Although the valve is incomplete, the shape of a fight-axe with disk and thorn (Nackenscheibenaxte) can be observed in the negative. On the frontal side of the valve, the only one integrally preserved, located in the joint area with the valve of the axe disk, a wide incision, on the width of the valve, can be observed. On the short lateral, in the area where it joins with the other valve, a longitudinal bevelling can be observed²⁴⁵. The side that renders the piece negative is deteriorated here and there. We have available several observations that enable us to determine the type of butted axe and even the variant that was cast in the respective mould. The piece rendered in the negative had both the blade and the bar towards the disc of a hexagonal shape, thus, the rims of the axe resulted after casting were well shaped. It can be noticed that the blade is slightly curved, right after the fastening tube and a “step” appears on the tube. The tube for fastening the handle is round and neat. These characteristics make us believe that the respective mould was used for casting B3 type butted axes, probably the Târgușor variant.²⁴⁶ We find, however, the discovery itself to be more important than the mentioning of the exact type and variant of the butted axes that could be casted in the Oros mould.

The fight-axe with disk and thorn developed based on the older prototype of the – fight-axe with disk on neck is frequently encountered in the period of Late Bronze Age, especially in the deposits of the Uriu-Ópályi type (especially full pieces, while in the deposits of the Suseni and Uioara type, the butted axes are more rarely encountered, fragmentary pieces being more often discovered)²⁴⁷ and extremely rare in graves and settlement contemporary to the deposits of this type. Presently, the total number of this type of axes discovered in the Carpathian Basin exceeds one thousand of copies²⁴⁸. This

245 The bevelling of the surface of some moulds is encountered on a mould discovered at Cernat, respectively on one originating from „the surrounding areas of Mediaș Town” (both located in Transylvania, RO) – Wanzek 1989, Pl. 47/3c, 49/4b. Another piece with bevelling traces was discovered at Plenița (Oltenia, RO) /– Boroffka – Ridiche 2005, p. 139, Pl. 3/2. In all these moulds, the bevelling occurs only on the wide side of the piece.

246 Vulpe 1970, p. 86-88.

247 Bejinariu 2007, p. 48.

248 Kroeger-Michel 1983, p. 9 – the respective figure was postulated almost three decades ago.

quantity is in contrast with the evidence available on the producing of the respective pieces, namely the reduced number of moulds used for obtaining such axes. Most of the casting moulds known were used for producing some older types of axes, namely the B1 types of fight-axe with disk on neck. We are referring to the casting moulds discovered at Ritopek/Vinča (Serbia)²⁴⁹, Dunaujváros (Hungary)²⁵⁰, Barča (Slovakia)²⁵¹, Otomani (Romania)²⁵², Șimleu Silvaniei (Romania)²⁵³, Satchinez (Romania)²⁵⁴. As regards the pieces cast in the moulds discovered at Sântion²⁵⁵ and Lăpuș²⁵⁶ (both located in Romania), it is difficult to specify whether they were used for butted axes or for other bronze items. The fragment of valve discovered in the Oros pit is among the few that attest the producing of the later types of butted axes through the method of the mould casting. The small number of such moulds raises the question whether the majority of butted axes found in the eastern part of the Carpathian Basin were not made by casting, through the process of the lost wax (*cire perdue*) or in clay made valves.

Another fragmentary mould was discovered following the research of the ditch (C 200), detected on the west side of the sit. As in the case of the previously described mould, it is also made of soft, silicified sandstone, with traces indicating that it was used (Pl. 23/7). Sizes: length – 6.3 cm, width – 5.5 cm, thickness – 3.5 cm. The negative renders the outline of a piece with a slightly curved blade. A horizontal line appears in the lower part of the negative, parallel to the blade, with a circular curve above it. A short, slightly oblique incision appears between the circular curve and the horizontal incision. As in the case of the butted axes mould, a wide incision appears in the lower part of the frontal side. The opportunity of this incision can differ for each of the items. In case of the butted axes mould, we consider that this incision could have been important for joining the valve no. 3 (the one for the disc) to the axes valves. In the case of the second valve, the occurrence of this detail makes us think of a different explanation,

249 Werner 1950, p. 305. B. Wanzek, based on the data received from the National Museum of Beograd, believes that the mould originates from Vinča – Wanzek 1989, p. 147, Pl. 50/2a-c.

250 Mozsolics 1967, p. 42.

251 Furmánek 1980, Pl. 6, no. 116; Novotná 1980, p. 184, pl. 53, no.- p. 1506-1508; Bóna 1992, p. 62.

252 Ordentlich 1963, p. 136, Pl. 16/12; Vulpe 1970, p. 75.

253 Bejinariu 2010.

254 Vulpe 1970, p.75; Miclea-Florescu 1980, p. 362; Gogâltan 1999, p. 103, 147-148, Pl. 19/3, 47/3; Szentmiklósi-Drașoveanu 2004, p. 53.

255 Dumitrașcu 1989, p. 129-130, Pl. XXV-XXVIII.

256 Kacsó 1981, p. 75, Pl. 48 /T 11, 3 (Kacsó hesitates between a massive socketed axe and a butted one when trying to name the type of object that used to be cast in the valve fragment recovered from tumulus 11,); Kacsó 2001, p. 239, Pl. 27/H 11, 3. Wanzek appreciates that the mould renders a part of a socketed axe blade – Wanzek 1989, p. 201, no. 47d.

one outside the technological area, namely that it represented a marking. The aspect of the piece rendered into the negative indicates that it was used for casting socketed axes. As already mentioned, both the described moulds are fragmentary and their deterioration could have occurred naturally, as they were used at high temperatures that could affect the already soft rock that they were made of. Still, others believe that some of the moulds were deliberately destroyed and sometimes deposited within certain contexts with an assumed ritual character²⁵⁷. The pit in which the mould for the butted axe was deposited, together with two vessels deposited in whole, might have had this type of character.

A single mould was discovered in the complexes associated to the Late Bronze researched on the site no. 33. It was discovered in the pit marked with the index C 58, in association with a quasi-whole tall cup, respectively fragments from other several pots (Pl. 39/5). It is about approximately a quarter of the valve of a mould made of silicified, dark brown sandstone. The negative of the valve fragment renders a slim piece, most probably a chisel with the edge brim thickened and slightly flanged to the outside. The casting channel is located in the upper area of the valve. A synthetic analysis on the production, the typology and the spatial and temporal distribution of this kind of items in Romania, with consistent referring to the discoveries made in the neighbourhood areas²⁵⁸. At least 10 of the 12 moulds for such pieces discovered in Romania are originating from the western part of the country²⁵⁹.

Besides such pieces (crucibles mould) used for melting the raw material or for casting the bronze pieces, several tools used during the confectioning, respectively the finishing and decorating the finite items were also discovered in the researched area. We mention here the bronze item discovered in the complex 33, namely a punching device (Pl. 7/4). The drift was made of round bronze bar, with a pointed end and slightly flattened one. Such parts were used for decorating the bronze sheet items or for making the punches for fastening with rivets two pieces of sheet.²⁶⁰

A chisel made of hexagonal bronze bar originates from complex 226 (Pl. 29/7). The upper part of the tool, where it used to be hit, is deteriorated. The chisel was made of a

bracelet which profile was modified through hammering. Later on, it was sharpened at one of the extremities in order to obtain a sharp head. The chisels were absolutely necessary to somebody making bronze pieces. It was used for cutting the material, removing the seam and stubs left after casting or even for making certain types of decorations.²⁶¹ This is the reason why the chisels, either made of bronze bar or provided with holding case have been often discovered in settlements and interpreted as a mark for the presence of artisans in the respective settlements.²⁶² The piece has a dark-silver, dull appearance, characteristic to the bronze with a high content of tin. The high percentage of tin increased the alloy resistance and, implicitly, that of the objects made of it. This was probably the reason behind the transformation of an accessory device (a bracelet) into a tool used for cutting or punching.

Needles represent the richest category of metal items discovered in the Oros settlement. We are talking about at least 5-6 pieces. The same is the situation in other Late Bronze settlements, most of them belonging to the Cehăluț–Hajdúbajos Group, of the Upper Tisa area where such pieces, with either an utilitarian role or used as ornaments, are well represented numerically.²⁶³ Three of the needles discovered at Oros have their rod punched at one of the heads (Pl. 4/6, 23/8-9). They are all made of wire or of thin, round, bronze bar and the punching was accomplished either by casting²⁶⁴ or it was made subsequently, after flattening, by drifting a portion of the bar. Such needles, generically called “sewing needles” (Nähnadeln) must have served a practical purpose, respectively that of making or repairing garments or various other items made of textile or leather. Their frequent occurrence in graves of female persons is an argument in this respect.²⁶⁵ This very utilitarian role made this type of needles to appear, in a practically unmodified shape, throughout the entire Bronze era. As per the typology set by M. Novotná for the needles of this type discovered on the territory of Slovakia, the items found at Oros settlement can be framed within the second main group, characterized through the round or angular perforation located at a certain distance from the needle head.²⁶⁶ Given their common character, their dating can be made only through associa-

257 Wanzek 1989, p. 65-66; Boroffka–Ridiche 2005, p. 160-161.

258 Bălan 2009, p. 1-40.

259 Bălan 2009, p. 11. Gogăltan 1999, p. 156-157. Their number could be higher as in the case of the fragmentary mould valves it is difficult to state, unequivocally, whether we are dealing with the rendering of some chisels or of some socketed axes. Further data on the moulds used for producing chisels are available in: Dietrich 2010 (under publishing).

260 Medeleț 1987, p. 6.

261 Szentmiklósi–Drașovean 2004, p. 41-44.

262 Medeleț 1995, p. 235-236; Gogăltan 2009, p. 127; Bejinariu 2005, p. 57; Bălan 2009, p. 31.

263 Examples: Oszlár (HU)– Koós 2001, p. 218-219, Pl. 1/1-10; Suplacu de Barcău (RO) – Ignat 1984, p. 10, Pl. XII/3-11; Crasna (RO) – Lakó 1987, p. 77-81; Pericei (RO) – new materials in the MJIA Zalău collection.

264 A mould used for producing this type of needles was discovered at Ciumești (Satu Mare County) – Bader 1978, Pl. LXIII/9.

265 Vasic 2003, p. 130.

266 Novotná 1980, p. 166-168.

tion with other representative archaeological materials.

The mushroom-shaped head that probably comes from a needle was discovered in the pit no. 44 (Pl. 8/4). This type of needles, unfortunately most of them with the rod broken, occurs in small numbers in discoveries from Slovakia, in funerary contexts or in deposits²⁶⁷.

A cup-headed needle was recovered from the uncovered cultural stratum. The needle rod, round in section, is decorated towards the head with horizontal and zig-zag lines. The needle length: 15.5 cm, the head diameter: 0.9 cm (Pl. 36/5). The needles of this type from the area of Slovakia were included by M. Novotná in the Diviaky type. They were discovered in the western half of Slovakia, especially in funerary contexts (Chotín, Diviaky and other cremation cemeteries) and they garnished mainly tombs of the male persons, together with other objects considered as masculine. The discoveries here are located during the old times of the urn fields.²⁶⁸ In the western part of the Carpathian Basin (west of the Danube) this type of needles appear in a much larger number in the archaeological contexts assigned to the Late, respectively Recent Bronze Age and they are encountered even in discoveries assigned to the Hallstatt period.²⁶⁹ A bronze needle resembling to the one discovered in Oros settlement originates from the Village of Ciumești²⁷⁰ (Satu Mare County). Unfortunately, it is a discovery made by accident, probably in the “Moara” (Mill) location and therefore no other references about the possible association of this item with ceramic material are available.

A horseshoe-shaped or crescent pendant was discovered alongside other bronze pieces incurred in the filling of the ditch researched on the west side of the site. The pendant is slightly damaged on the outside curve and it has two small protuberances on the inside (Pl. 23/10). The prototype of these pendants appears in the Koszider type deposits of the Upper Tisa region, dated to the end of Middle Bronze Age. Their evolution, with only negligible changes of shape, continues until the old times of Urnfield Culture, the numerous discoveries made in the deposits, in settlements and in graves standing as evidence in this respect.²⁷¹ The biggest number of this type of pendants was

discovered, however, in archaeological complexes assigned to the medium and recent tumular period²⁷².

In addition to the above-mentioned bronze pieces, other small objects, often preserved only fragmented, were discovered in other different complexes. We are referring to fragments originating, probably, from two rings with single or double spiral termination, out of which one was found in complex 200 (Pl. 23/11) and another one in complex 123 (Pl. 17/1). A bronze wire ring with spiral endings was found near the fingers of a deceased, in a tomb assigned to the latest funerals taking place in the necropolis of Nižné Myšľa (Slovakia) assigned to the Otomani Culture.²⁷³ The discovery represents one of the earliest confirmations of the use of such an object with multiple connotations (magic, representation of social position, respectively of the membership group)²⁷⁴. Pieces of this type appear, however, more frequently in settlements, graves and deposits of the Carpathian Basin, during the late Bronze Age.²⁷⁵ Among the metal pieces recovered from the ditch (cx. 200) filling, we mention a spiral made of bronze wire (Pl. 23/14) with an outside diameter of approximately 2 cm, as well as small fragments of raw bronze, fragments of bronze sheet or wire (Pl. 23/15). From complex 130 we mention a tubular piece made by rolling a piece of bronze sheet (Pl. 21/1). While researching complex 14, the rod of a bronze needle was recovered (Pl. 4/7).

267 Novotná 1980, p. 125.

268 Novotná 1980, p. 125-127, Pl. 66.

269 Říhový 1983, p. 26-27.

270 Bader 1978, p. 100, Pl. XC/10.

271 Bóna 1959, Pl. 5; Kemenczei 1965, p. 114; Kemenczei 1967, p. 292; Dušek 1969, p. 72, Pl. 14/14; Kovács 1984, Pl. XC-VIII/2; Kovács 1986, p. 28, 39-40, Pl. 2/6-8; Furmánek 1980, p. 39; Furmánek–Illášová–Marková 1999, p. 7-15, Pl. 3/1-4; Veliačik 1991, p. 202-203, Pl. 32/10; Kacsó 1999, p. 93, Pl. I/1.

272 Kacsó 1999, p. 101.

273 Olexa 1992, p. 197, Pl. VI/2. Both types were discovered in the necropolis of Tápe (in the south-east of Hungary), dated to Reinecke B2- D (early) – Blischke 1997, p. 325-326.

274 Blischke 1997, p. 334.

275 Kovács, 1970, p. 28, Pl. 3/6; Kemenczei 1984, Pl. VI/24, XXXV/19, 21; Petrescu-Dâmbovița 1977, p. 99, Pl. 165/25; Ignat 1984, Pl. XII/8; Bejinariu 2005, p. 58, Pl. VII/5.

VI. STONE AND CLAY OBJECTS

The stone and clay objects are either part of the archeological complexes' inventory or they were discovered in the vegetal layer on the surface of the Nyíregyháza-Oros settlement. Objects made of stone and clay existed in the ditch on the outskirts of the settlement (complex 200), too.

The grinders and crushers are the most numerous among the stone objects, fragments of which being discovered in a great number of pits. Two complete pieces were found in pit 19 (Pl. 5/3,4). They have a flat, rectangular surface, slightly concave, probably due to their long use. The pieces discovered in the complex 19 distinguish themselves among the other grinders from the settlement, being stacked on the bottom of the pit, one above the other. The existence of some ritual deposits made in connection with the grains grinding and cultivating was long ago debated²⁷⁶, the deposits containing grinders continuing to be present during Bronze Age on a large territory of Europe²⁷⁷. Grinders discovered within a ritual context have been identified in several Late Bronze Age finds from the upper Tisa Basin and from Transylvania²⁷⁸, at Biharea being present in two deposits of Hadjdúbagos–Cehăluț (Biharea)²⁷⁹ type. The ritual valences of the pit number 19 of Oros are suggested not only by the manner in which the pieces were arranged in the pit, but also by the location of the pit in an area with other pits of a possible ritual nature.

A second category of stone objects are the moulds used to cast metal parts, which are presented together with the bronze pieces, together reflecting the metallurgical activity in the settlement. A blade fragment, made from obsidian, originates from a different type of stone tool (Pl. 33/2). The blade was carved in such a manner to have both its edges sharp. Even if they are present in a relatively small number, the carved or polished stone objects continued to be used in the Upper Tisa region during the Late Bronze Age²⁸⁰.

Weights are the most numerous objects made of clay, discovered in the settlement of Oros. Fragments of clay weights were discovered in many archaeological complexes.

²⁷⁶ Makkay 1978.

²⁷⁷ Stapel 1999, p. 108, note 496.

²⁷⁸ Nestor–Zaharia 1961, p. 174-176; Vasiliev et alii 1990, p. 41, 151, Pl. 13b; Marta 2008, p. 118.

²⁷⁹ Dumitrașcu 1994, p. 106.

²⁸⁰ Némethi 1997, Pl. 2/3; Kacsó 2003, Pl. XXXVI/7,8; Marta 2009, p. 46, Pl. 59/1.

Among these, there is a better preserved piece which confirms the existence of some pyramid like shapes, with well pronounced edges (Pl. 24/10). Although they do not appear among the materials assigned to Hajdúbajos–Cehăluț cultural group, such pieces are very common in the settlements and necropolises of the Late Bronze Age in the Upper Tisa area. The explanations related to their functionality still remain uncertain²⁸¹. The clay plate discovered in complex number 33 from the settlement of Oros has a rectangular shape, with folded edges (Pl. 7/3). We cannot state its functionality. Without necessarily serving similar purposes, we note that clay plates, this time decorated, were found in the settlement of Crasna²⁸². Two clay counters found in settlements were made by rounding the edges of some ceramic fragments (Pl. 36/2). The functionality of these pieces is uncertain as they could have been used for practical activities or, why not, as playing items.

281 Marta 2009, p. 45, 84 (with bibliography).

282 Bejinariu–Lakó 2000, pl. 33/1, 34/4.

VII. ACTIVITIES IN THE SETTLEMENT

Considering the fertile area where the settlement of Oros is situated, in the high Nir Plain, agriculture is well-understood. The presence of chaffs in the fragments of burned walls and some fragments of walls that preserve the traces of some cereal chaff sustains this assertion. The large number of supplies pits and grinder fragments present in the inventory of most of the complexes in the settlement can be connected to the existence of grains in the settlement. The discovery of a pit containing two grinding stones in an area with ritual deposits (complex 19, Fig. 7), suggests the practicing of some rituals related to the cultivation or consumption of cereals²⁸³. The fact that the two grinders were discovered on the bottom of the pit, arranged (superposed), comes to support the idea that the pit was dug especially for this purpose.

The bones preserved in the settlement offer clues about activities such as husbandry, respectively hunting. The large number of cattle bones (47% of all the bones identified), implies that the breeding of this species had an important role. The preponderance of the adult female bones can be correlated with the breeding of cows for dairy products. It seems that the inhabitants of the Late Bronze Age settlement of Oros gave a smaller importance to the breeding of pigs, sheep, goats and horses as their number was rather small. The few bones of wild animals discovered, originating from cervidae, rabbits or bison are unlikely to prove intense hunting activities²⁸⁴.

Many artifacts found in the settlement of the late age of Oros clearly prove the carrying out of activities of bronze pieces casting. This includes: a crucible, moulds, casting debris, perhaps even the river stones occurred in some complexes that could serve to finish the bronzes through polishing²⁸⁵. One such activity was primarily designed to meet the community needs, but we cannot exclude the idea that part of the bronze pieces were meant for trading. Those objects were not found in a complex, in a building which could be considered to be a metallurgical workshop²⁸⁶, but they occurred most often in a fragmentary state, in various complexes

283 A discussion on grinders within a ritual context, at Makkay 1978, p. 13-36.

284 The species share in the Nyíregyháza – Oros settlement is similar to the one from Suciu de Sus of Petea–Csengersima (analysis made by Elisabeta Berendi – in Marta 2009, p.181-186).

285 Mozsolics 1984, p. 19-72; Gogáltan 1999, p. 127-128; Péterdi 2004, p. 487.

286 As a matter of fact, only one of the numerous complexes assigned to the inhabitation of this time, with rectangular ground-plan (complex 281, sized 5 x 2,5 m), slightly deepened in the ground, can be considered to be a construction.

or in the filling of the ditch researched on the west side of the settlement. The distribution of these clues of metallurgical activity in the researched area of the settlement shows a significant grouping in the complexes 31-34, from which fragments of a mould and the remains of a crucible, respectively pieces of bronze slag and the mandrel mentioned above origin.

The Late Bronze Age settlement of Oros–„Űr-Cseré” is located in an area without the necessary resources to obtain the prehistoric bronze. The sandstone itself, used to manufacture the moulds in which the metal parts were cast, is missing. Their absence could be replaced by the geographic location of this settlement, within the Upper Tisa region. The location near the sources of copper of Maramureş and Slovakia or the settlement location in the center of a communication network were other possible advantages²⁸⁷. So far, in the absence of further data, such as the analysis of the composition of the bronze pieces in the settlement, such assertions remain in a hypothetical stage. We cannot know where the metal came from and how it got in this settlement. The number of the moulds and of the items related to metal processing discovered suggest that we are dealing with a stable workshop. The findings from the settlement of Oros–„Űr-Cseré” seem to confirm the earlier observations of G. Ilon who appreciated that the metal processing and the manufacturing of the finished products were not performed in the areas of ore extraction²⁸⁸, but in the area of the settlements, mainly in the ones more favorable for human inhabitation, located in lower areas, as there was a greater need for such metal items.

As already mentioned, the bronze pieces discovered in the settlement of Oros–„Űr-Cseré” are similar to those from other settlements of Hajdúbajos–Cehăluţ Group. They can be equally found in discoveries of the neighboring cultural areas, being both items with a certain functionality (needles, for example) as well as objects considered as ornaments, but which in reality may have had versatile functions related to the joint ideology and mentality of some populations undergoing the same stage of development.

As demonstrated in the case of other settlements of the Bronze Age (as Százhalom-

²⁸⁷ The maps indicating the discovery of bronze and gold pieces (arms and ornaments) can be brought into discussion here, as the discovery points form a route which, crossing the northern of the Tisa Plain (The Great Hungarian Plain), connects the south of Transylvania to the north-western shore of the Baltic Sea (Marta 2009, p. 85-86, and the bibliography).

²⁸⁸ Ilon 2006, p. 276.

batta - Földvár), the presence in a settlement of craftsmen processing the metal involved their interaction with other categories of artisans (builders, potters, etc.) and, therefore, the mutual transfer of knowledge and technology.²⁸⁹ Such a process favored the development dynamics in these settlements.

Just as an area of the settlement gathers several artifacts related to metallurgy, another one, even better represented, located at the settlement boundary, contains elements of the cult and religious activities carried out here. Most of the pits contain one cup (complexes 32, 245, 263 and 286). In one of the cases this ceramic form is associated to amphorae (complex 33), while complex 34 contains only one amphora. Cups and amphorae are types of vessels used for storage and handling liquids, operations that can be considered connected to the rituals that led to the burial of such pottery²⁹⁰. As mentioned when describing the offerings pits, the cultural group Hajdúbajos-Cehăluţ has numerous pits with a single cup. Alongside these, as in the case of pit no. 33 of Oros, there are several deposits in which the cups occur in association with other types of pottery (often amphorae). This situation occurs in the settlement of Biharea²⁹¹.

Pit 19 (Figure 7) is one of the ritual pits of the settlement which had two overlapped grinders on the bottom. We have no data on the existence of pits containing only grinders in the Hajdúbajos cultural environment, but this kind of items is contained in some ritual pits in the north of the Tisa Plain²⁹².

An important element about the religious ritual activity in the settlement of Oros is that it concentrates in one particular area within the site, respectively in the area located in the northwest of the settlement boundary. This area also includes, among the pits with deposits, a large number of pits with no archaeological inventory, which, given their position, may be thought to be linked to certain ritual practices. The concentration of some pits with ritual deposits at the edge of a settlement could be found in the case of Suciul de Sus culture of Petea–Csengersima and it

²⁸⁹ Sofaer 2006, p. 134-141.

²⁹⁰ Lindinger 1999, p. 83-85.

²⁹¹ Dumitraşcu 1995, p. 104-107 (M1, M3, M4, M5?, M6, M10). Amphorae associated with one/a small number of cups are encountered in several cultural environments of the late Bronze Age (Kemenczei-Genito 1990, p. 113-125, Pl. 4/7; Dumitraşcu–Sfrengeu–Sărac 1997, p.7-10; Marta 2008, p. 118; Marta 2009, p. 86-87.

²⁹² Dumitraşcu 1995, p. 106-107 (Biharea – M 3, M 6); Marta 2008, p. 113 (Lazuri); Marta 2009, p. 86-89 (Petia–Csengersima). Deposits of pottery associated with grinders are present in other areas of Europe, too (Stapel 1999, p. 108, note 496).

can be suspected in the case of the Nagykálló settlement²⁹³. The deposits of bronze items or of pottery discovered in several settlements of the Upper Tisa region, discovered either accidentally or during archaeological excavations, were on the edge of the sites, too²⁹⁴.

293 Marta 2009, p. 20, note 66, 46-48.

294 Császló – a bronze deposit discovered in year 2008, (informations Gábor Pintye), Carei– Spitz Farm –bronze deposit at the boundary of a settlement, (Németi 1990, p. 32, pl 10), Oarța de Sus/ Bicz –two bronze deposits discovered at a small distance from a settlement and in the proximity of a necropolis (Kacsó 1990, p. 48), Kvasovo – two bronze deposits discovered at the boundary of a settlement (Kobal 2007, p. 592-599, Pl. 1), Petea–Csengersima – two deposits of pottery, one discovered near the boundary of a settlement, the other one outside it (Marta 2009, p. 59).

VIII. CONCLUSIONS. NYÍREGYHÁZA-OROS SITE AND ITS SIGNIFICANCE FOR THE RESEARCH OF THE LATE BRONZE AGE

Thanks to the research performed, the „Úr-Csere” settlement of Nyíregyháza–Oros is becoming now a reference site for the Late Bronze Age archaeology of the Upper Tisa Basin. The site is located in an area of confluence between several late Bronze Age cultures and, probably, populations, having a geographic distribution that cannot be precisely stated in all cases. The earlier researches used to establish the extent of the area occupied by the communities assigned to the Hajdúbágos–Cehăluț cultural group up to the environs of the Nyírlugos – „Szennyespusztá” settlement²⁹⁵. However, more recently it has been shown that the cultural manifestations of the Hajdúbágos–Cehăluț type extend farther towards north-east.

This statement was grounded on several discoveries made in the area of the town of Nyíregyháza²⁹⁶ – an area previously assigned to the Suci de Sus culture²⁹⁷. The confusion was generated by the fact that pottery of the Suci de Sus type was discovered in several archeological sites located nearby the town of Nyíregyháza (Nyíregyháza–„Bujtos” and Nyíregyháza–„Morgó”). Now it is becoming much clearer that the pottery of Suci de Sus type discovered in this region can be considered as an „imported product” and the archaeological researches performed at Oros emphasize this fact once again. A third cultural phenomenon in question for the late Bronze Age period in the Nyír area is the Berkesz culture²⁹⁸. Recent research tends to prove that the definition of this cultural phenomenon, as given decades ago, was based on erroneous premises.²⁹⁹

The cultural framing

When assigning the cultural materials from Oros, it is necessary to discuss the ratio between the archaeological materials assigned to Hajdúbágos–Cehăluț group and the ones from the discoveries previously considered as being of Berkesz type. It is con-

295 Kovács 1970, p. 26-47; Zoltay 1909, p. 34-40.

296 Tóth–Marta 2005, p. 127-128; Nagy 2007.

297 Kalicz 1960, p. 1-15.

298 Kemenczei 1963, p. 182-183; Kovács 1967.

299 Tóth–Marta 2005; Nagy 2007.

sidered that the genesis of the Berkesz culture, dated to the second half of the RBC stage and the RBD one, occurred on a background of mixture between the Suciú de Sus and the Tumuli (Egyek) cultures, a cultural mixture over which were attached eastern elements, of the Noua–Komarovo type³⁰⁰. The territory from the north-eastern Hungary which included the Hajdú–Bihar and Nyírseg areas, was assigned to the Berkesz culture. The ceramic materials discovered in the northern part of the Berkesz culture's territory (e.g., Alsóberecki, Vajdácška) differ partially from those materials discovered in sites from the eastern and southern Nyír. Some of the pottery from the Alsóberecki necropolis already presents ornaments specific for the Suciú de Sus culture³⁰¹. In the case of the sites of Berkesz–„Csonkás-dűlő”, Demecser–„Borzsovapuszta” or Nyíregyháza–„Bujtos” and Nyíregyháza–„Morgó”, those fragments of cups or dishes of the Suciú de Sus type must be considered as imports. Instead, as regards the eastern and southern sites, it was considered that those materials gathered under the denomination of Berkesz culture, actually belonged to the Suciú de Sus culture³⁰². At the same time, the sites from the western area – Nyíregyháza–„Bujtos” and Nyíregyháza–„Morgó” and many other sites assigned to the Berkesz culture³⁰³ – can be actually assigned to the late period of the Hajdúbagos–Cehăluț group³⁰⁴.

Given this context, one could debate the manner in which those artefacts of eastern provenience can be interpreted within the discoveries assigned to the Berkesz culture. On the one hand it is about pottery and, on the other hand, we refer to the metal items³⁰⁵. As at the present time the pottery of the Noua–Sabatinovka culture is better known, it is more difficult to distinguish the presence of some of its ceramic elements in the Upper Tisa region and the possible route on which they could have penetrated into this region³⁰⁶.

300 Kemenczei 1963, p.182-183; Kovács 1967.

301 Kemenczei 1981. Pl. 3/8,4.

302 Tóth–Marta 2005, p. 127.

303 Tibor Kemenczei (1967) enumerates the discoveries assigned to Berkesz culture. Most of them are represented by sparse materials. More important ceramic lots originate only from the settlements of Nyíregyháza–„Bujtos”, Nyíregyháza–„Morgó” and from the necropoleis of Berkesz–„Csonkásdűlő” and Demecser–„Borzsovapuszta”.

304 Nagy 2007, Pl. 1. It is interesting that most of the sites assigned to Berkesz culture in 1967 are positioned east of Nyíregyháza and west of Crasna course. Therefore, they are located on a territory on which one can assume the existence of some settlements with mixed archaeological material that bears, in majority, the characteristics of the Hajdúbagos–Cehăluț group, elements of the Suciú de Sus culture appearing often alongside.

305 Several ceramic forms (the concave amphorae with wide rim, the two handles cups as well as the pots) and several metallic pieces (Kemenczei 1981, p. 89–91 Kalicz–Koós 1997, p. 68) are considered to be of eastern origin. The origins of these types were looked for in the cultures Noua and Komarovo.

306 There are no traces of the Noua culture in the Ukraine from west the Carpathians to justify an entry from the east. Regarding the situation in Transylvania, the most northern Noua-type ceramic elements appear as imports / influences

The few types of weapons (daggers, socketed axe of Transylvanian type, sickles with hook-shaped handle and needles of Noua type) can be considered rather as imported items or items made under the influence of the eastern or even the Transylvanian metallurgy. An argument in this respect is that the big needles with protuberances from the Upper Tisa basin belong to a variant that can be regarded as being specific to this region even if, originally, this type seems to have been influenced by an eastern model. Moreover, in all the four cases in which the needles with protuberances from the upper basin of the Tisa were discovered together with pottery, the latter is always of local nature³⁰⁷. The bronze deposits from the Upper Tisa region, in which items of eastern/Transylvanian type are present, are of Uriu–Ópályi type. Within these deposits, items of eastern origin are deposited together with many local items. As a result, those eastern pieces discovered on the Hajdúbagos–Cehăluț group's territory can be attributed to connections with the metallurgy of the Noua–Sabatinovka milieu and the same is the case for pieces discovered in the area of the Suciú de Sus culture³⁰⁸. The pottery discovered in the settlement of Nyíregyháza–Oros did not reveal the presence of eastern ceramic forms, leading to the idea that at least a part of the archaeological material previously assigned to the Berkesz culture should rather be framed into a late phase of the evolution of the Hajdúbagos–Cehăluț group.

J. Némethi has recently accomplished the history of research of the Hajdúbagos–Cehăluț cultural group and synthesized a series of its defining elements³⁰⁹. Thus, its distribution area includes: the Carei region and the Ecedea Swamp, the Crasna Valley, Șimleu Silvaniei Depression, the western part of Sălaj up to the Barcău, the area between Barcău and Crișul Repede River, the Nir area, the Ier Valley and the Tășnad Hills.

Although the researches on the Hajdúbagos–Cehăluț cultural group in northwestern Romania were somewhat more intense than in the Hungarian area of Nyírség, they were initially interpreted differently. T. Bader assigned them to the Otomani IV phase³¹⁰, starting from some ceramic elements that could be considered as inherited from the

in the necropolis of Lăpuș (Kacsó 1975, p. 60), missing from the Satu Mare area. The „eastern” elements are very rarely found among the pottery discoveries in Sălaj, west of Meseș, too (e.g. the settlement of Zalău–Valea Mișii) and the metallurgical products (eastern type sickles, socketed axes, spearhead of the Krasnomajak-type in deposits as the one from Crasna, respectively Marca – Bejinariu 2005, p.62).

307 Nyírkarász–Gyulaháza (Mozsolics 1960, p.113-123), Zemplinske–Kopčani (Demeterová 1984, Pl. VI/1), Petea–Csengersima (Marta 2005, p. 83-84) and Seini (recently discovered piece, information from Dan Pop).

308 Kacsó 1983, p. 48.

309 Némethi 2009a, p. 203-205; Némethi 2009, p. 31-33.

310 Bader 1978, p. 56-57.

Otomani III phase³¹¹. J. Némethi regarded them as belonging to a distinct cultural phenomenon (later called Pișcolt), placed chronologically after the Otomani culture and dated prior to the Gáva culture.³¹²

S. Dumitrașcu assigned the Late Bronze Age materials from northwestern Romania to a particular cultural phenomenon, called the Biharea culture³¹³. C. Kacsó proposed the name of Cehăluț group for the discoveries in northwestern Romania, although he identified for them similarities with the Hajdúbajos group. He started from the idea that discoveries of the Hajdúbajos type seem to evolve differently in their distribution area. While during the RBD phase in the northwest area they were followed by the Berkesz cultural group/culture, in the southeast they continued to survive during this chronological stage as well, reason why it was considered necessary to gather them under a different name³¹⁴. However, the study and the publication of some new lots of materials indicate that, on a large area of the northeastern Hungary³¹⁵ and northwestern Romania³¹⁶, we have the same types of materials which have a similar evolution in different geographical micro-regions from the north of the Tisa Plain (The Great Hungarian Plain) and from northwestern Transylvania. Based on these considerations, they can be attributed in fact to the same phenomenon, namely to the Hajdúbajos–Cehăluț cultural group.

In the Nyír, the Carei Plain and the Bihor, as well as in the Nyírség area, the Hajdúbajos–Cehăluț cultural group was preceded by the Otomani culture, whose traditions are evident through the perpetuation of some pottery shapes and decoration elements³¹⁷. However, for some sets of materials, it is difficult to say if they belong to a late phase of the Otomani culture or if they can already be assigned to the cultural group Hajdúbajos–Cehăluț³¹⁸. In addition to the Otomani traditions, the contribution of the Tumuli culture in setting up the group was also highlighted³¹⁹. Based on researches made in the previous years, it was found

311 Boroffka 1994a, p. 7-18; Boroffka 1999, p. 113-125.

312 Némethi 1978, p. 120-121.

313 Dumitrașcu–Emödi 1980, p. 53 (called materials of the Oradea–Cociuba Mare–Biharea type); Dumitrașcu 1983, p. 111; Dumitrașcu 1994, p. 101-111.

314 Kacsó 1981, p. 61, 72; Kacsó 1990, p. 4-41, 50; Kacsó 1997; Kacsó 1999, p. 85-112.

315 Nagy 2005, p. 63-105; Nagy 2007, p. 121-154.

316 Bejinariu–Lakó 1996, p. 11-33; Bejinariu–Lakó 2000, p. 163-219; Bejinariu 2009, p. 183-201.

317 Kemenczei 1963, p. 184-185.

318 Körösszegapáti–„Pál-lapály”, Pir/ Szilágypér–„Rozgáz”, Săraud/Tasnádszarvas–„Vatra satului no. 327”, Zăuan/ Szilágyszóvány–„Temetődomb”, Oradea/ Nagyvárad–„Salca”, Mónospetri–„Szeméttelep”, Budiusslău/ Bogyoszló–„Legelő völgy” (Némethi 2009a, p. 41).

319 The bearers of the tumuli culture appear in the northeastern part of the Hungarian Plain and in the west of the Nyír after the setting up of the Suci de Sus culture (Egyek culture) (Bóna 1993, p. 82, Tóth–Marta 2005, p. 127.).

that the Hajdúbajos–Cehăluț group continued to survive during the RBD period³²⁰, pre-Gáva type materials, dated to the second half of the RBD period and during the HA1 one, being present in some sites³²¹.

Chronology

The quite numerous discoveries of metal and moulds should represent an important support for specifying the precise chronological coordinates that frame the evolution of the Late Bronze Age settlement „Űr–Cseré” of Nyíregyháza–Oros. To these discoveries we can add dating elements obtained based on the analysis of the pottery and the chronological correlations that can be made based on imports from the neighbouring cultural environments.

Unfortunately, most of the metal pieces found during the research of the settlement of Oros, have a reduced chronological value, they being rather types whose evolution cannot be restricted to narrow chronological frames. Eventually, the fragmented mould for casting butted axes which is a testament to the production of such pieces in the settlement of Nyíregyháza–Oros is a possible issue of discussion. Most of the butted axes appear in the Upper Tisa area in deposits of the Uriu–Ópályi series, mostly as whole pieces, while in deposits of the Cincu–Suseni series they occur more rarely and are generally fragmented. This situation suggests that most pieces of this kind were produced in a period contemporary to the Uriu–Ópályi deposits, which were dated primarily during the RBD phase. However, we do not exclude the possibility that the deposition of deposits of this type continued during the beginning of the next period as well.³²²

The analysis of the ceramic material from Oros revealed that a large number of shapes and most of the decorations are encountered in almost all the sites of the Hajdúbajos–Cehăluț culture, but also between the Berkesz-type findings. Even though a two phase evolution for the Hajdúbajos–Cehăluț cultural group has been suggested, this discussion remained to date only in a theoretical stage, lacking any substantial elements to differentiate

320 Nagy 2005; Tóth–Marta 2005, p. 128; Nagy 2007; Bejinariu–Székely–Sana 2008.

321 Nagy 2005; Tóth–Marta 2005, p. 128; Nagy 2007; Bejinariu–Székely–Sana 2008.

322 Kacsó 2003, p. 277; Kacsó 2007, p. 37. Other opinions on the wider dating of the deposits of Uriu–Ópályi type – Gumă 1993, p. 262; Gogăltan 2001, p. 196.

between the two phases. Some elements of chronological segregation between the sites can be assumed, based on the principle that older materials preserve more pregnant the Otomani pottery traditions and the latest ones contain elements specific for the cultural manifestations subsequent to the cultural group Hajdúbagos–Cehăluț, respectively discoveries of pre-Gáva and Lăpuș II–Gáva I type.

In this regard, a comparative analysis of the vessels' shapes and decorations show the existence of some differences between the pottery found at Oros and some Hajdúbagos–Cehăluț sites containing earlier elements. Although Oros is the largest processed ceramic lot of the Hajdúbagos–Cehăluț group, there are no incised lines filling the triangular areas flanking the spaces between arches identified. The ornament is present in several sites on the upper flow of Crasna and Barcău³²³, in Sătmár³²⁴ and Hajdú–Bihar³²⁵.

One can notice that for those archaeological sites where this ornament appears, there are also additional dating arguments placing them during the early stage of the development of the Hajdúbagos–Cehăluț cultural group. It is the case of the settlements at Otomani–„Cetatea de pământ” and at Pișcolt–„Nisipărie”, where bronze pieces were discovered (needle with seal-shaped head, horseshoe-shaped pendant) which are dated mainly during the middle and evolved Tumuli period³²⁶. As regards the dating of the settlement of Pișcolt in an early phase of the Hajdúbagos–Cehăluț cultural group, a confirmation is provided by numerous ceramic imports with decorations typical for the Suci de Sus Ila phase³²⁷. The perpetuation of some Otomani traditions and relatively sporadic occurrences of elements specific for the Tumuli culture in the settlements of Körösszakál–„Gál tanya” and Körösszegapáti–„Pál-lapály” made them to be included in the early stages of the Hajdúbagos–Cehăluț group, being dated during the RBB2-BC period³²⁸. In the cemetery of Hajdúbagos–„Daraboshegy”, dated during the RBC³²⁹ phase, the Otomani tradition is less obvious while the Tumuli elements are already striking.

The ceramic material from the settlement of Nyíregyháza–Oros has much in common with some of the vessels from the cemeteries with cremation in urns from Berkesz–„Csonkásdűlő” and Demecser–„Borzovapuszta”. None of the mentioned ne-

cropolises include „later” forms and ornaments, characteristic to the RBD and early HA1 periods³³⁰. In both sites, the Suci de Sus³³¹ imports can be considered as belonging to the classic phase of the culture.

On the other hand, as seen in the chapter dedicated to the pottery analysis, as far as Oros settlement is concerned, the closeness with the chronological horizon following the Hajdúbagos–Cehăluț group cannot be eluded. This could be inferred for some types of vessels (bowls with pronouncedly shaped shoulder or amphorae), ornaments (thick vertical channelling, horizontal channels on the neck of the vessels) but also in the presence of some dichromic fired pots, black on the outside and brown-brick on the inside. Based on these elements, it can be invoked a certain chronological proximity with the site of Suplacul de Barcău–„Lapiș”, where are present a number of late elements, which appear also in the necropolis of Lăpuș³³². The pottery from Biharea presents also some secure elements for a recent dating, based on the presence of the import materials of Igrița, Cruceni-Belegis³³³ or Lăpuș³³⁴ type.

In the Nyír area, the pottery of Oros has analogies in the discoveries from Nyírlugos and Nyíregyháza–TESCO, and Shell Petrol Station respectively³³⁵. The material of the last two sites includes, however, a larger number of vessels specific for the late Reinecke BD stage and the early Müller-Karpe HA1 one. Therefore, in the case of the settlements researched in the area of the TESCO store and of the Shell Petrol Station of Nyíregyháza, there is evidence for a possible more recent dating than in the case of the Oros settlement. For the Hajdú–Bihar area, we could mention as an analogy the deposit of vessels from Debrecen, dated during the RBD period³³⁶.

The imports discovered in the settlement of Oros include materials of the Suci de Sus, Igrița, and Piliny type and elements specific for the Košice basin. They can be used for a better chronological correlation of the site by setting certain convergences with these neighbouring cultural environments.

The presence of a cup of Suci de Sus type in the settlement of Nyíregyháza–Oros

323 Bejinariu–Lakó 2000, p. 169 (Crasna); Bejinariu–Lakó 1996, Pl. III/1; IV/4 (Cehei).

324 Némethi 1978, Pl. 1/1, 7/8-9 (Andrid, Pișcolt); Kacsó 1997, Pl. VI/1,4, VII/9 (Acăș).

325 L. Nagy 2007, Pl. III/4-6, VI/2-5, X/4,7, XIII/5,8.

326 Kacsó 1997, p. 88.

327 Marta 2009, p. 96-98.

328 Nagy 2007a, p. 35.

329 Kovács 1970.

330 Kovács 1967, Pl. 11-13. The materials from the Nyíregyháza–Bujtos and Morgó sites are under processing, but the materials specific for the Hajdúbagos–Cehăluț group is very numerous, fact which does not raise question marks as to their cultural assigning.

331 Kovács 1968, Pl. 11/1.

332 Kacsó 1997, p. 88.

333 Dumitrașcu 1994, p. 109.

334 Dumitrașcu 1994, p. 106, Pl. XLIV/2; XLV/8.

335 Nagy 2005; Nagy 2007.

336 Poroszlai 1984.

(Pl. 3/2) is an evidence of the links with this archaeological culture located to the south and east. The reduced quantities of the Suciú materials make us conclude that they are only evidence of some neighbourhood imports, but not of such a strong presence of the Suciú de Sus culture to support a cultural mixture³³⁷. The imports from the classical phase of the Suciú de Sus culture in the Hajdúbágos–Cehăluţ milieu, and generally towards west, are well documented³³⁸. They are represented on a limited number of richly decorated vessels used for serving meals (cups, bowls) that the two cultures interchange³³⁹. The manner in which the decorated cups are represented in serving set of Nyírmada makes reference to interpretations suggesting that the presence of the vessels for serving meals in foreign cultural environments can be placed in the context of some identity expressions³⁴⁰. As regards the dating of the Suciú de Sus cup from Oros, its decoration, through wide incision and through excision, determines us to opt for a dating during the Suciú de Sus II phase, and Reinecke BC-BD phases respectively³⁴¹.

The presence of a cup with spiral decoration made through a superficial incision in a narrow channel (Pl. 29/4), raises the question of a possible affiliation to an earlier period of the Suciú de Sus II phase, respectively to the Suciú de Sus IIa sub-phase. But the fine incision through which the decoration is made, and the spiral motif itself – simple spirals, consisting of shallow and narrow incisions, which descend from the shoulder and stop into the centre of the spiral – have very close analogies in eastern Slovakia³⁴² on some materials dated during Reinecke BC2 and BD stages³⁴³. Vessels originating from eastern Slovakia spreaded towards south in the Upper Tisa region³⁴⁴ and even to the centre of Satu Mare region³⁴⁵.

One of the legged mugs (Pl. 39/1), although its shape is similar to that of many other vessels from the settlement, differs, however, not only through the ornament, but also through its nature. This makes us consider it of a non-local nature. Given its man-

ner of ornamentation, its origin should be sought to the north, where the decoration made by dotted impressions is found in the Piliny cultural area³⁴⁶. The ornamentation of the neck through registers of impressions finds similarities among the vessels from a tumulus from the necropolis of Tápe³⁴⁷.

The relationships between the settlement of Nyíregyháza–Oros and other contemporary sites, situated south of the Hajdúbágos–Cehăluţ cultural area, are also highlighted by some of the materials found here. As one could see in the chapter dedicated to the pottery, a series of ceramic forms are more numerous within the manifestations of the Igriţa group. Here it is mainly about biconic amphorae with out-curved rim belonging to the types 1, 4 and 6, all with good analogies within the environment of the above mentioned cultural group³⁴⁸. To these, we can add the cups with out-curved rim and flattened body (the 1B variant), well documented in the Igriţa area too³⁴⁹.

The Contribution of the Researches from Oros to the Knowledge of the Late Bronze Age in the Upper Tisa Area

The research carried out at Nyíregyháza–Oros has brought up new elements with reference to the structure of a Hajdúbágos–Cehăluţ type settlement and to the shape of the complexes within it. It is one of the few settlements of this culture where an area delimited by a ditch, probably with defensive role, was identified³⁵⁰. A new element recognized for this cultural group is the identification of an area of ritual depositions located at the edge of the settlement, an important aspect that was revealed among other neighbouring cultures as well. The carrying out of some human activities within the settlement was highlighted and the osteologic analysis provided clues to how the community used to interact with the natural environment. The presence of numerous pieces of metal, and the statistical processing of a relatively large ceramic lot, offer clues to the evolution of the Hajdúbágos–Cehăluţ cultural group. Thus, the settlement of Oros can be dated to a late period of the evolution of the Hajdúbágos–Cehăluţ group, during

337 The Suciú de Sus pottery was present in a similar quantity in the site nearby Nyíregyháza–Tesco, Shell Petrol Station (Nagy 2007).

338 Némethi 2009a, p. 41, and the bibliography.

339 Imports of Hajdúbágos cups and bowls in settlements of the Suciú de Sus culture can be documented as well, although they are less well accentuated (Kacsó 2005, p. 53; Marta 2009, Pl. 49/6).

340 Tóth–Marta 2007, p. 132–134.

341 A closer delimitation within Suciú de Sus II phase (IIa and IIb) can be achieved only for some richer ceramic lots (Marta 2009, p. 96–101).

342 Demeterová 1984, Pl. XXVI/2.

343 Demeterová 1984, p. 46.

344 Kovács 1967, Pl. 14/3.

345 Marta 2009, Pl. 24/2.

346 Kemenczei 1984, Pl. XI/13, XIII/3.

347 Trogmayer 1975, Pl. 46/1–2.

348 Chidioşan–Emődi 1982, Pl. 1; Chidioşan–Emődi 1983, Pl. 4/1; Emődi 1997, Pl. 1, 3.

349 Chidioşan–Emődi 1982, Pl. 6/1–3; Chidioşan–Emődi 1983, Pl. 6/6–9, 8/1; Emődi 1997, Pl. 7/14–15.

350 Some recent researches have managed to identify the existence of some defensive structures (palisade) on a side of the Hajdúbágos–Cehăluţ settlement of Şimleu Silvaniei, too: researches, I. Bejinariu.

the RBD phase. The relationships with the neighbouring cultural environments could be captured thanks to the import items present in the settlement, the establishment of a correlation between the evolution of the materials of Hajdúbagos–Cehăluț type and those of Suciú de Sus/Lăpuș type, being thus possible.

The placing of the Oros settlement's evolution during a late period of the Hajdúbagos–Cehăluț group's evolution requires a presentation of the links that the Hajdúbagos–Cehăluț group has with its subsequent cultural manifestations, respectively of the cultural heritage transmitted to the Lăpuș II–Gáva I and pre-Gáva cultural horizons. The presence of some black ware, polished on the outside or with a double colouring, black on the outside and brick-like coloured on the inside, although limited in quantity among our findings, predict the distinctive features of the future Gáva culture, at which birth, we believe the cultural group Hajdúbagos–Cehăluț brought its contribution. The small number of vessels with the above mentioned characteristics makes us believe that the inhabitation in the „Űr-Csere” point ended in a period when the transformation process that would lead to the widespread adoption of black, channelled pottery, barely begun.

As seen from the analysis of the types and variants of pottery from Oros, many elements of the ceramic ware of the Hajdúbagos–Cehăluț type continue to be present in the material culture of the pre-Gáva cultural horizon³⁵¹. It is the case of the types 1, 3, 4 and 6 of amphorae and of all the variants of the bowls of type 2 and 3. It is possible that the tradition of the legged vessels or of the lobed rim bowls present in the pre-Gáva type ceramics have their origin in the legged cups/mugs from the Hajdúbagos–Cehăluț cultural group. The pre-Gáva type pottery continues to have a large number of ornaments that used to define the Hajdúbagos–Cehăluț pottery (knobs, ribs, channels). The incised, dotted and thumb impressed motives are well represented, too. However, certain ceramic shapes, such as the portable cooking vessels or some variants of tall legged mugs, rather numerous in the ceramic repertory of the mentioned group, are no longer present in the subsequent period. This aspect is also meant to highlight the deep transformations taking place within the pottery of the central Hungarian Plain once with the end of the Hajdúbagos–Cehăluț cultural group. In this respect, it should be mentioned that for the final part of the RBD period – the beginning of the HaA one, the penetra-

tion towards north of certain cultural elements from the Banat and Voivodina areas was noticed³⁵². The Tumuli cultural grounds on which all these cultural manifestations in the above mentioned areas are based, clearly evident in the case of the local culture Hajdúbagos–Cehăluț too, makes it difficult to reveal the particular contribution of the manifestations from the two regions in the formation of the HaA pottery in the northern Hungarian Plain. This makes the precise indication of the contribution brought by the Hajdúbagos–Cehăluț group in setting up the cultural manifestation of the pre-Gáva type rather difficult.

Numerous vessel shapes present on the Bronze Age settlement at Oros have close analogies within the Lăpuș II–Gáva I cultural horizon: amphorae with long, arched and cylindrical neck (type 1 and 6), biconic amphorae, most of the pots types, portable cooking vessels, dishes/bowls of 1Aa and 1Ac variants and of all the variants of the types 2, 3 and 4, and finally cups of 1C, 2 and 3 types. Analogies for these vessels in the Lăpuș II–Gáva I pottery were mentioned when presenting each ceramic variant, they being well represented in the settlements of Berveni, Carei and Petea–Csengersima³⁵³. As for the decoration, almost every relief, thumb-impressed or channelled ornament finds analogies in one of the three settlements of the cultural horizon Lăpuș II–Gáva I. Instead, we find a poor transmission of the dotted ornaments. The small number of ceramic fragments with dichromic firing, black in the exterior and brown-brick like in the interior, highlights the issue of the origin of this technique of firing the vessels. In this regard, it is observed a similar situation with the settlement of the Late Suciú de Sus culture of Petea–Csengersima. If the two settlements are approximately at the same chronological level within the RBD phase – as suggested by the mutual imports – then we can find a somewhat synchronous adoption of the new method of firing the ceramics.

Although the new technology gains prominence in time, it seems that a quick transmission of the information on this process took place since the early use of the black-and-red dichromic firing. In this respect, there are no visible differences between a western cultural manifestation, with strong Tumuli influences (Hajdúbagos–Cehăluț culture) and a culture located to the east, anchored in the traditions of the Middle Bronze Age from the Carpathian area (the Suciú de Sus culture).

³⁵¹ For the comparison with the pre-Gáva type pottery, we used the works of V. Szabó (1996, 2004).

³⁵² Kemenczei 1984.

³⁵³ Némethi 1990; Marta 2009, p. 274–275, typological plate 5-6.

The comparative analysis of the pottery of the Lăpuș II–Gáva I horizon in the Carei area and the Satu Mare Plain revealed, beyond many common elements, the presence of some regional features³⁵⁴. The pottery from Carei area is primarily individualized by the presence of the thumb-impressed appliqué belts³⁵⁵ and by the large amount of bowls with inverted rim³⁵⁶. Their origin is attributed to inheritances from the Hajdúbagos–Cehăluț group, descending up to the Otomani culture³⁵⁷. They are elements that highlight the fingerprint of the Hajdúbagos–Cehăluț cultural group visible in the HaA inhabitation horizon from Carei area.

In the end, it can be concluded that the researches from Nyíregyháza–Oros are likely to provide new elements concerning the late development of the Hajdúbagos–Cehăluț cultural group and to specify more accurately its contribution to the processes of birth of the subsequent cultural manifestations in the north Hungarian Plain and north-west Transylvania.

354 Marta 2009, p. 88-91.
355 Némethi 1990, p. 40, Pl. 1/15, 11/3, 13/5.
356 Némethi 1990, p. 41.
357 Némethi 1990, p. 42, 46.

IX. DESCRIPTION OF THE ARCHAEOLOGICAL COMPLEXES

Site no. 26

Complex no. 3. Location: G01 square. Pit with circular ground plan, concave bottom and cylindrical profile. Its diameter has an opening that slightly exceeds 140 cm. The maximum depth is of about 115 cm from the outlining level. The filling of the complex consists of two layers of soil, with approximately equal thickness, separated by a white coloured lenticular deposit. The upper one is gray, and the lower one is dark brown, with yellow lenticular deposits. Inventory: two ceramic fragments (Pl. 1/ 1) (Inventory no. 2006.1.1.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	c	3		1/1

Complex no. 4. Location: G01 square. Oval pit, relatively straight bottom and bag shaped profile. The mouth, narrower, has an opening of about 130 cm, while the median, wider, area, measures approximately 160 cm. Its depth is of about 120 cm from the outline. In the upper part, the filling consists of a substantial layer of dark brown soil, with light brown and black lenticular deposits. At its base, there is a discontinuous layer of yellow clay, with a thickness of approximately 15 cm, which superimposes another layer, of light brown soil. The complex bottom is covered by gray-brown soil, yellow lenticular deposits, thicker towards the middle area of the pit. Inventory: 1 ceramic fragment, 2 stone fragments (Inventory no. 2006.2.1-3.)

Complex no. 5. Location: G00 square – pit with an approximately circular shape, with the bank diameter of 70 cm. It has a concave profile and a 30 cm depth from the outlining level. Its filling, consisting of a brown coloured soil, revealed pottery dating from the Bronze Age. Inventory: 47 ceramic fragments originating from 2 vessels (Inventory no. 2006.3.1-3)

Complex no. 8. Location: G03 square. Oval pit, with the long side measuring approximately 136 cm, crossed in the southern part by the complex no. 9. The bottom is concave, with a slope to the north, where the maximum depth reaches 40 cm from the outlining level. Its filling consists of yellow-brown soil and atypical ceramic fragments from the Bronze Age. Inventory: 20 ceramic fragments from approximately 8 vessels, 1 daub fragment, 1 hand mill fragment (Inventory no. 2006.4.1-19).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	f			
pot	c		CE	

Complex no. 9. Location: G03 square. Pit with an approximately circular shape, wider at the mouth (150 cm in diameter) and narrower at the base (110 cm in diameter). The profile is cone-shaped. Its depth is of 74 cm from the outlining level. Its filling consists of brown-gray coloured soil, with yellowish lenticular deposits and Bronze Age pottery fragments. Inventory: 148 pottery fragments from about 24 vessels, 1 stone fragment. (Pl. 1/2-7, 2/1,2) (Inventory no. 2006.5.1-93)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	f	4	AB	2/1
bowl/dish	f	1B		1/4
cup	s	1B		1/2
bowl/dish	s	4Aa	FG	1/3
pot	s	5		
pot	s	2		1/5
pot	c	1A	AE	2/2
bowl/dish	s	2	AC,FG	
amphora	s			
pot	c	4		
cup	f			
bowl/dish	f	1A		1/7

Complex no. 10. Location: G03 square. Circular ground-plan pit, with the mouth diameter of over 120 cm, wider at the bottom, where its diameter measures approx. 150 cm. The bottom is concave, located 112 cm away from the current walking surface. Its

filling consists of three successive layers of soil, their thicknesses ranging from 26 to 30 cm. The upper one is brown-gray, the one in the middle is a narrow, gray coloured layer, and, at the base, it is yellow with black lenticular deposits. The complex is partially superimposed by pit no. 11. Inventory: 70 pottery shards from about 13 vessels, three daub fragments, 5 stone fragments, out of which a grinding one and a sharpening one (Pl. 3/1-5) (Inventory no. 2006.6.1-72.).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s			
cup	s	1B	FD	3/1
bowl/dish	f	2A		3/5
bowl/dish	f	4Aa		3/3
cup	s	1Ab	FD	3/2
bowl/dish	f		AC,EB,FG	
	f		AA,EG	
pot	c		AE	
	f		GB,CE	
cup	f			
cup	f		FD	
bowl/dish	f	3B	AA	4/1
amphora	f		GA	3/6
pot	c		AB,GB	
p. cooking v.	c			
p. cooking v.	s			
amphora	s			
p. cooking v.	s	3		4/3
pot	c			
bowl/dish	s	4Aa	FG,AC	4/2
amphora	f			

Complex no. 11. Location: G03 square. Oval pit, with the long side of the upper part measuring 200 cm and the lower one 170 cm. It has a depth of 50 cm from the outlining level. Its filling consists of gray soil with yellow lenticular deposits. Its eastern side slightly crosses complex no. 10. Inventory: 59 ceramic fragments from approximately 20 vessels, 2 fragments of clay and straw mortar, 1 grinding mill fragment, 1 fragment of processed bone, 1 fragment of slag, animal bones (Pl. 3/6, 4/1,2) (Inventory no. 2006.7.1-58).

Complex no. 13. Location: G03 square. Pit with a circular ground plan and bag shaped profile, with the mouth diameter of 180 cm and the base one of approximately 160 cm. The complex deepens about 40 cm from the outlining level. The filling consists of gray coloured soil, with yellow and dark brown lenticular deposits. A whole pot, with an unusual form, is placed at the bottom of the pit Inventory: 48 de ceramic fragments from approximately 19 vessels, 1 fragment of clay and straw mortar, 1 fragment of clay weight, 1 stone fragment, 1 obsidian, animal bones (Pl. 4/3-6) (Inventory no. 2006.8.1-50).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	c	5		
p. cooking v.	c			
bowl/dish	s	2B		4/9
bowl/dish	s	2B		4/4
pot	s	1Ab		4/5
cup	s			
bowl/dish	f			
bowl/dish	s	2B		
amphora	c			
amphora	s			

Complex no. 14. Location: G02-03 square. Pit with an approximately circular ground plan and bag shaped profile, mouth diameter of 140 cm and base diameter of approximately 152 cm. The concave bottom is placed approximately 85 cm deep from the outlining level. The filling consists of brown-grey coloured soil and black lenticular deposits of ash. Inventory: 66 ceramic fragments originating from approximately 19 vessels, 1 fragment of clay weight, 1 fragment of hand mill, animal bones (Pl. 4/7-10, 5/1) (Inventory no. 2006.9.1-57).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	f	2B	AA	4/8
bowl/dish	s	3A	EC	4/10
bowl/dish	f	1A		4/9
p. cooking v.	c	2A		5/1
pot	c	1A	AE	
amphora	s			

p. cooking v.	c			
	s		AA	
cup	f			
bowl/dish	s			
	s		FH	

Complex no. 15. Location: G03 square. Uneven ground-plan pit, with an approximate oval shape, that partially overlaps complex 15/1. The mouth length is 150 cm and the bottom one is 130 cm. The depth as to the outlining level is of 22 cm. The filling consists of black coloured soil. Inventory: 11 ceramic fragments from 9 vessels, 1 fragment of fire place, 1 fragment of grinding stone (Inventory no. 2006.10.1-9).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		AA	
	c		GG	

Complex no. 15/1. Location: G03 square. Circular ground-plan pit, with the mouth diameter of approximately 90 cm. It has a depth of 50 cm from the outlining level. The filling consists of brown, light coloured soil, with yellow lenticular deposits. The complex is partially overlapped by pit 15. It has no archaeological inventory.

Complex no. 17. Location: H07 square. Circular ground-plan pit, with the mouth diameter of approximately 130 cm. The complex has flat walls and concave bottom, situated 60 cm deep from the outlining level. Its filling consists of brown – grey soil, with yellow lenticular deposits. It has no archaeological inventory.

Complex no. 18. Location: G07 square. Approximately rectangular ground-plan pit, with rounded corners, poorly shaped, sized 210 x 70 cm. The research proved it smaller than originally thought. In the section, the profile is concave, with 120 cm at the mouth and 100 cm at the bottom. The depth was not more than 20 cm from the outlining level. The filling consists of dark brown soil, with black lenticular deposits. The complex was accidentally dug at a larger size. Inventory: 10 ceramic fragments from approximately 5 vessels (Inventory no. 2006.12.1-19)

Complex no. 19. Location: G04 square. Poorly shaped pit, with an approximately circular ground-plan and irregular profile. The mouth diameter was 150 cm and the bottom part diameter, 110 cm. The depth as to the outlining level was approximately 40 cm. The filling consists of gray coloured soil. Two superimposed hand mills were found in the pit. Inventory: 10 ceramic fragments from approximately 5 vessels, animal bones (Inventory no. 2006.13.1-7).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	s			
p. cooking v.	c			
	s		GB	

Complex no. 28. Location: G09 square. Poorly shaped pit, with an upper side ground plan and an irregular profile. It is circular in its middle and bottom areas, the diameter of the first reaching to 180 cm and of the latter to 100 cm. The maximum depth is of about 74 cm from the outlining level. The upper filling consists of a sandy, dark-gray soil and the bottom part consists of a light brown soil, with gray lenticular deposits. Most of the archaeological inventory was found approximately 20 cm deep. Inventory: 54 ceramic fragments from approximately 10 vessels, 4 pieces of clay and straw mortar, 1 fragment of fire place, 4 grinding stones (Pl. 5/5) (Inventory no. 2006.20.1-31).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	s			
	s		FB	
bowl/dish	s	1B	HI	
bowl/dish		2A	FC	5/5
	s		AA	

Complex no. 29. Location: G09 square. Large sized pit, with circular ground plan and cone-shaped profile, the mouth diameter is 190 cm, the base one is 168 cm. The maximum depth is of approximately 50 cm as to the outlining level. The filling consisted of gray soil, with yellowish lenticular deposits. It has no archaeological inventory.

Complex no. 31. Location: H07-08 square. Oblong shaped pit, with bag shaped profile, the length of the upper part of approximately 140 cm and that of the lower part

exceeding 150 cm. The concave bottom is located 80 cm deep from the outlining level. The complex filling consists of two layers of soil, with different thicknesses. The upper one, light brown, has a maximum depth of 20 cm. The lower one, much denser, is dark brown with yellow and black lenticular deposits and burned clay-and-straw-mortar pigments. (Inventory no. 2006.21.1-21).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	4Aa	FG	6/1
amphora	s	2		6/2
amphora	s			
p. cooking v.	c			
	s		FB	
	s		FB	

Complex no. 32. Location: G10 square. Approximately circular shaped pit, with a bag-shaped profile. The mouth diameter is 164 cm and the maximum one, located towards the bottom, reaches about 180 cm. Its depth is of 120 cm from the outlining level. The soil filling is brown-gray, with yellow lenticular deposits. An integral cup, with its opening facing the bottom, was found in the bottom part of the western half. Inventory: 42 ceramic fragments from 11 vessels (including an integral cup), 1 fragment of slag (an integral cup) (Pl. 6/3-6) (Inventory no. 2006.22.1-17).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	s	4	AC	6/3
bowl/dish	s	1Aa		6/5
amphora	f	1	HJ,HK,HE,FA	6/6
amphora	s	1	AC	
cup	f	2A		6/4
p. cooking v.	s			
p. cooking v.	c			
amphora	s		FB	
	s			

Complex no. 33. Location: F-G10 square. Pit with a circular ground plan and bag shaped profile. The mouth diameter is approximately 160 cm and the base one reaches approximately 170 cm. The bottom is concave and it deepens 84 cm from the outlining

level. The filling consists of gray soil, with dark brown lenticular deposits. On the bottom of the pit there were an amphora and a cup laying on a side, both complete, along with the top of another amphora, positioned with the opening downwards. Inventory: 44 ceramic fragments from approximately 9 vessels, 1 fragment of fireplace, 1 fragment of burnt clay, 1 fragment of hand mill, a big piece of a rectangular fireplace, animal stones (Pl. 7/1-4, 8/1) (Inventory no. 2006.23.1-46.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	f	1Aa	FE,FF,FB	7/1
amphora	f	1	AA	7/2
cup	f		FB	
cup	f			
cup	s			
p. cooking v.	c			
p. cooking v.	c			
amphora	s	1	AC	7/5
amphora	f	1	FF,FA	8/1

Complex no. 34. Location: G10 square. Pit with a circular ground plan and bag shaped profile. The mouth diameter, much larger than the bottom, measures approximately 200 cm. The concave bottom is located at a depth of 106 cm from the outlining level. The filling consists of dark brown soil, with black lenticular deposits. The remains of a bi-cone shaped pot, broken on the spot, were found in the southern half of the complex, near the mouth (not illustrated because it was no longer found in the storeroom). Inventory: 66 ceramic fragments, originated from 16 vessels (Inventory no. 2006.24.1-22).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
p. cooking v.	c			
	s		EA	
	s		GB	
	s		D	
	s		FD	
	s		GC	

Complex no. 36. Location: H13 square. Oval shaped pit and bag-shaped profile. The complex, lightly deep, has the mouth diameter of 120 cm and the base one of 138 cm. The maximum depth of the pit is of 30 cm from the outlining level. It has no archaeological inventory.

Complex no. 38. Location: G13 square. Roughly circular ground-plan pit with a bag-shaped profile. The mouth, narrower, has a diameter of approximately 160 cm, while the lower part, wider, measures almost 200 cm. The bottom is irregular, slightly concave and it has a depth of approximately 90 cm from the outlining level. The filling consists of a substantial layer of gray soil with yellow lenticular deposits, which superimposes a thin layer of combustion residues (charcoal and ash). Inventory: 71 ceramic fragments from approximately 11 vessels, 3 stone fragments, out of which 2 grinding ones, a burnt pot (Inventory no. 2006.25.1-31.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	s	3		
amphora	s			
pot	s	3B		

Complex no. 40. Location: G14 square. Circular ground plan pit and bag shaped profile. The mouth diameter is 120 cm, and the bottom one is 154 cm. The maximum depth of the pit reaches 85 cm from the outlining level. The filling consists of dark brown soil, with grey lenticular deposits. Inventory: 4 fragments from 2 vessels (a burnt pot) (Pl. 8/2,3) (Inventory no. 2006.26.1-2.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	s	1B?		8/3
bowl/dish	s	2A		8/2

Complex no. 41. Location: pot H14. Circular ground plan pit and bag shaped profile. The mouth diameter is 80 cm, and the maximum one, located at the bottom, is 100 cm. The depth is reduced, the complex bottom reaching only 30 cm from the outlining level. The filling consists of light brown soil, with yellow lenticular deposits. Inventory: 3 ceramic fragments from 3 vessels (Inventory no. 2006.27.1-3).

Complex no. 42 Location: G14 square. Large pit, with a circular ground plan and bag shaped profile. The upper diameter is approximately 170 cm. The complex has a concave bottom and it deepens over 100 cm from the outlining level. The filling consists of two different layers, a denser one of brown soil with gray lenticular deposits and a second one, located at the bottom of the pit, consisting of ash. The latter used to have a thickness of approximately 8-10 cm. Inventory: 16 ceramic fragments from 4 vessels, 1 stone fragment (Inventory no. 2006.28.1-8.).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	s			

Complex no. 44 Location: G14 square. Large pit, with a circular ground plan and bag shaped profile. Its mouth is wider, with a diameter of about 190 cm and its base is narrower, measuring about 150 cm in diameter. The pit has a concave bottom and it deepens more than 120 cm from the outlining level. The filling consists of light brown soil, with yellow lenticular deposits. Inventory: 72 ceramic fragments, from 14 vessels, 3 fragments of clay-and-straw-mortar, 1 fragment of fireplace (Pl. 8/4-7) (Inventory no. 2006.29.1-41).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	s	2	FB	8/5
amphora	s			8/7
amphora	s	3		8/6
amphora	s	1		
amphora	s			

Complex no. 45 Location: F-G14 square. Pit with an approximately circular ground plan and concave bottom. It is wider at the mouth and narrower at the base. Its maximum diameter reaches almost 160 cm, and its depth is of 50 cm from the outlining level. The filling consists of a dense layer of grey soil, with dark brown lenticular deposits. In the central area of the upper part, there occurs a compact lenticular deposit of ash. Inventory: (Inventory no. 2006.30.1-18.)

Complex no. 46 Location: F14 square. Circular ground plan pit partially overlapped by complexes 45 and 204. It seems that the pit used to have a cone or bag shaped

profile. The base diameter reaches more than 180 cm, and the depth is 72 cm from the outlining level. The filling consists of dark brown soil, with yellow lenticular deposits and another compact lenticular deposit of ash. Inventory: 35 ceramic fragments from 8 vessels, 15 clay-and-straw-mortar fragments, 1 sharpening stone (Pl. 9/1,2) (Inventory no. 2006.31.1-37).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		CE	
cup	s			
	s		CE	9/2

Complex no. 47 Location: F-G14 square. Circular ground plan pit and slightly cone shaped profile. The upper diameter exceeds 120 cm, while the base one reaches 110 cm. The complex deepens approximately 60 cm from the outlining level. The filling consists of grey soil with yellow lenticular deposits. Inventory: 1 fragment of 1 vessel (Pl. 9/3) (inventory no. 2006.32.1.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	s			

Complex no. 48 Location: G14 square. Pit with an approximately oval plane and slightly cone shaped profile. The upper part has an approximately 160 cm opening in the sectioned area while the lower part measures approximately 150 cm. The depth from the outlining level is 120 cm. The complex has two different filling layers. The first one, located in the upper part, consists of grey coloured soil and it has an approximate thickness of 30 cm. The second one, significantly denser, consists of light brown soil, with yellow lenticular deposits. It has no archaeological inventory.

Complex no. 49 Location: G14 square. Pit with an approximately circular ground plan and an almost cylindrical profile. Its diameter is of approximately 130 cm both in its upper and in its lower part, the middle area being slightly convex. The maximum depth is at 70 cm from the outlining level. The filling consists of brown soil, with yellow lenticular deposits. It has no archaeological inventory.

Complex n. 50 Location: G14 square. Circular ground plan pit with cone shaped profile. The upper part is wider, with a diameter of over 120 cm. The base diameter is of approximately 100 cm. The complex has a relatively flat bottom and it deepens approximately 100 cm from the outlining level. The filling consists of dark brown soil, with black lenticular deposits. Inventory: 73 ceramic fragments from 13 vessels, 1 fragment of clay-and-straw-mortar (Pl. 9/4) (inventory no. 2006.33.1-28.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	s		CD,CA,CE	
	s		CD	
	s		FD	
cup	s			

Complex no. 51 Location: H14 square. Circular ground plan pit and tapered shape profile, with a narrower upper part, of approximately 170 cm in diameter and a wider lower part, of 180 cm in diameter. The complex has a relatively flat bottom and it deepens approximately 44 cm de la outlining level. The filling consists of grey soil with light brown lenticular deposits. Inventory: 2 ceramic fragments from 2 vessels (inventory no. 2006.34.1-2.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		GF	

Complex no. 53 Location: H14-15 square. Small pit, with circular ground plan and cone shaped profile, deepening approximately 32 cm from the outlining level. The upper part diameter is 94 cm, and the lower one is 84 cm. The filling of the complex consists of grey soil with light brown lenticular deposits. Inventory: 14 ceramic fragments from 10 vessels, 2 fragments of grinding stone (inventory no. 2006.35.1-10.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	2B	AC	
p. cooking v.	c			
p. cooking v.	c			

Complex no. 54 Location: H14-15 square. Small pit, with circular ground plan and cylindrical profile It deepens only 20 cm from the outlining level. Its maximum

diameter is of approximately 104 cm. The filling consists of dark brown soil. It has no archaeological inventory.

Complex no. 55 Location: H15 square. Circular ground plan pit and bag shaped profile. The mouth is narrower, with 100 cm in diameter. The pit widens to the lower part with approximately 10 cm over the mouth diameter. The complex depth is of 60 cm from the outlining level. The filling of the complex consists of three different layers of soil. The upper one is grey coloured and has light brown lenticular deposits. There follows a layer of clay-and-straw mortar and burnt materials mixed with archaeological materials of approximately 6-8 cm, and at the bottom there is a layer of dark brown soil. Inventory: 153 ceramic fragments that origin from approximately 24 vessels, 1 fragment of grinding stone (Pl. 9/5-8, 10/1-5) (inventory no. 2006.36.1-88.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	c	2A	FL,FG,EC,AC,EB,GG	9/7
bowl/dish	s	2A		
can	s	3		
pot	f			
	s		EE	
	s		AC	
pot	c		GH	
pot	s	3B	CE	10/3
pot	c	3B		
pot	c	1A		
pot	c	1A		
pot	s	4		10/4
amphora	c	1		10/2
p. cooking v.	c			
p. cooking v.	s			
cup		1Ab	A	9/6
cup		1B		9/5
can	f			
	s		FG,EB	9/4
pot	c	3B		10/1
amphora	c	3P		10/5

Complex no. 56 Location: G15 square. Small pit, with circular ground plan and

cylindrical profile, it deepens less than 15 cm from the outlining level. Its maximum diameter is of approximately 110 cm. The filling consists of grey soil with dark brown lenticular deposits. Inventory: 13 ceramic fragments that origin from 2 vessels (Pl. 38/4,5) (inventory no. 2006.37.1-2.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		FA	

Complex no. 57 Location: G15 square. Circular ground plan pit with cone shaped profile, wider at the mouth and narrower at the base. The complex is partially overlapped by a narrow and slightly deep ditch, noted with the index 52, which belongs to the Imperial Period. Its filling consists of dark brown soil with yellow lenticular deposits. The bottom of the complex is relatively flat and it deepens approximately 62 cm from the outlining level. Inventory: 19 ceramic fragments that origin from 7 vessels, 2 clay-and-straw mortar pieces (inventory no. 2006.38.1-15.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	1Aa	FA	
can	s		GI	
cup	s			

Complex no. 60

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup		1C	FD	11/2
cup		1Ac	GK	11/3
bowl/dish		3A	AG	11/4
	f		EC,GB	11/1

Complex no. 61 Location: G15 square. Circular ground plan pit, wider at the mouth and narrower at the base, deepening approximately 22 cm from the outlining level. The upper part has a diameter of 140 cm and the lower one of 110 cm. Its filling is unitary, consisting of grey soil, with light brown lenticular deposits. Inventory: 5 ceramic fragments from 3 vessels (inventory no. 2006.41.1-5.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
p. cooking v.	c			

Complex no. 62 Location: G15 square. Circular ground plan pit and relatively cone shaped profile, wider at the mouth and narrower at the base. The upper part diameter is of approximately 124 cm, and the maximum one, situated towards the lower part, is of 136 cm. The complex bottom is uneven, slightly concave. The pit deepens approximately 50 cm from the outlining level. Its filling consists of grey soil with light brown lenticular deposits. Inventory: 23 ceramic fragments from 10 vessels, 1 fragment of clay weight, 1 fragment of stone (Pl. 11/5-8, 12/1,2) (inventory no. 2006.42.1-20.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	3A		12/1
bowl/dish		4Aa	CE, GK	12/2
	s		FG,FK	
bowl/dish	s		GC,CF	
amphora	f	1		11/8
pot	s	4	AA	11/6
p. cooking v.	c			
pot	c		AE	
pot	c	5		
	f		FG	11/5

Complex no. 66 Location: G15 square. Circular ground plan pit with an almost cylindrical profile. The maximum diameter is 160 cm, and the depth is 30 cm as to the outlining level. Its filling consists of grey soil. Inventory: 8 ceramic fragments from 3 vessels, 8 clay-and-straw mortar fragments, 1 portable cooking vessel (inventory no. 2006.43.1-8.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	2B		

Complex no. 67 Location: G16 square. Circular ground plan pit and slightly cone shaped profile, with a wider upper part, of approximately 160 cm in diameter and a narrower lower part, with a diameter of approximately 140 cm. The depth is of approxi-

mately 62 cm as compared to the outlining level. Its filling consists of grey soil with yellow lenticular deposits. Inventory: 2 ceramic fragments from 2 vessels, 5 fragments of limestone (inventory no.2006.44.1-3.)

Complex no. 68 Location: G16 square. Circular ground plan pit and cylindrical profile, deepening only 22 cm from the outlining level. The maximum diameter is of approximately 150 cm. The filling is unitary, consisting of grey soil. It has no archaeological inventory.

Complex no. 69 Location: H16 square. Circular ground plan pit and cone shaped profile. The upper part diameter is 100 cm and the base one is 120 cm. The pit went approximately 64 cm deep as compared to the outlining level. The filling consists of dark brown soil with black lenticular deposits. It has no archaeological inventory.

Complex no. 71 Location: H16 square. Circular ground plan pit and cone shaped profile, with the upper part diameter of 100 cm, and the lower one of 110 cm. The depth is of approximately 60 cm as compared to the outlining level. The filling consists of dark brown soil, with black lenticular deposits and dispersed ceramic fragments. Inventory: 54 ceramic fragments from approximately 14 vessels, 1 stone fragment (Pl. 12/3-6) (inventory no. 2006.46.1-26.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	s	1Ac	GC	12/4
bowl/dish	s	4Aa	AC,FG	12/3
amphora	f	1		12/5
	s		FD	
pot	s	3B		12/6
pot	s	4	AA	
can	s			
	s		FB	
	s		GA	

Complex no. 72 Location: G-H17 square. Pit with an approximately circular ground plan and concave bottom, wider at the mouth and narrower at the base. It has a maximum diameter of about 110 cm and its depth measures only 30 cm from the

outlining level. The filling consists of a dense layer of dark brown soil, with yellow lenticular deposits. It has no archaeological inventory.

Complex no. 74 Location: H17 square. Pit with a circular ground plan and cone shaped profile, wider at the mouth and narrower downwards. The upper part diameter is of 120 cm and the bottom one is of 100 cm. The pit has a depth of approximately 72 cm as to the outlining level. The filling consists of dark brown soil, with yellow lenticular deposits. Inventory: 4 ceramic fragments from 2 vessels (inventory no. 2006.47.1-3.)

Complex n. 75 Location: H17 square. Pit with circular ground plan and irregular profile, wider at the mouth and narrower downwards. The upper part has a diameter of 160 cm, while the base diameter is of approximately 110 cm. The complex has a flat bottom and it deepens by more than 90 cm from the outlining level. The filling consists of light brown soil, with yellow lenticular deposits. Inventory: 20 ceramic fragments resulting from 2 vessels (Pl. 13/1) (inventory no. 2006.48.1-11.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	s		FG,EB	
bowl/dish	s			
p. cooking v.	s			
	f		CA, FA, FG, FI,	13/1

Complex no. 76 Location: H17 square. Large pit, with a roughly circular ground plan and irregular profile. The maximum diameter measures approximately 155 cm. The bottom of the complex is almost flat, its depth reaching approximately 120 cm from the outlining level. The main filling consists of a dense layer of gray soil with yellow lenticular deposits. In the mid-west, we have a dark brown layer of soil, thicker towards the edge of the pit. Underneath, there is a thin but continuous lenticular deposit of yellow clay, which overlaps a layer of black soil, located at the base. Inventory: 13 ceramic fragments resulting from 6 vessels, 2 stone fragments, 1 processed bone (inventory no. 2006.49.1-14.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	c	1A		

pot	c	1A		
	c		FJ	
	s		D	

Complex no. 77 Location: G-H17 square. Pit with an approximately circular ground plan, cylindrical profile and relatively straight bottom. Its maximum diameter is of almost 130 cm and it has a depth of approximately 45 cm as compared to the outlining level. The filling consists of a layer of dark brown soil. Inventory: 1 fragment of clay-and-straw mortar.

Complex no. 78 Location: H17 square. Pit with circular ground plan and bag shaped profile. The mouth diameter is of approximately 120 cm, while the lower part has a diameter of approximately 130 cm. The complex bottom is slightly inclined to the west. It has a maximum depth of about 80 cm from the outlining level. The filling of the pit consists of grey soil with yellow lenticular deposits. Inventory: 10 ceramic fragments resulting from 6 vessels, 2 stone fragments (inventory no. 2006.51.1-10.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	c		BB	
pot	c		BB	

Complex no. 81

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup		1Ac	A	13/2

Complex no. 83 Location: G17 square. Pit with circular ground plan and irregular profile. The upper part is wider, with a diameter of approximately 140 cm. At the bottom, the complex gets very narrow, its diameter hardly reaching 40 cm. The depth is reduced to approximately 54 cm from the outlining level. The filling consists of grey soil with yellow lenticular deposits. Inventory: a ceramic fragment (inventory no. 2006.54.1.)

Complex no. 86 Location: E-F19 square. Pit with circular ground plan and irregular profile, wider at the mouth and narrower at the base. The complex is superimposed

by the dwelling marked with the index 150, attributed to the Roman period. The maximum diameter measures approximately 140 cm. The detected depth of the pit is of only 25 cm from the outlining level. The filling consists of a layer of grey soil, pigmented with combustion remains (ash). Inventory: 6 ceramic fragments resulting from 5 vessels, 1 stone fragment (inventory no. 2006.57.1-6.)

Complex no. 87

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup		1C		13/3

Complex no. 88 Location: G18 square. Pit with circular ground plan and approximately cone shaped profile, narrower at the mouth and wider at the base. Its maximum diameter measures approximately 150 cm, being about 20 cm wider than the upper opening. The pit has a depth of approximately 50 cm from the outlining level. The filling consists of a layer of light brown soil, which superimposes on the Eastern side a thin lenticular deposit of coil. Inventory: 9 ceramic fragments from 6 vessels, 1 stone fragment (inventory no. 2006.58.1-7.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	f			
	s		FB,FG	

Complex no. 89 Location: G18 square. Pit with circular ground plan and bag shaped profile. The mouth has a diameter of approximately 98 cm, while the maximum one, located towards the base, is 110 cm. The pit has a maximum depth of approximately 40 cm from the outlining level. The filling consists of a layer of light brown soil, located in the upper part and a dense layer of ash, with a thickness of approximately 20 cm, located on the bottom of the complex. Inventory: 16 ceramic fragments from 5 vessels (inventory no. 2006.59.1-10.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
can	c	3		

	f		FB	
	f		FB	

Complex no. 97 Location: G19 square. Small pit, with a circular ground plan and a bag shaped profile. The mouth, narrower, has a diameter of approximately 70 cm. The complex bottom is slightly concave and has a diameter of 130 cm. Its depth is of approximately 90 cm from the outlining level. The filling consists of a layer of light brown soil, interpolated with a compact lenticular deposit of ash, with a maximum thickness of 10 cm, located approximately 50 cm from the pit mouth. On the bottom, there is a layer of dark brown soil with a thickness exceeding 20 cm. Inventory: 81 ceramic fragments from 24 vessels, 4 stone fragments (inventory no. 2006.66.1-16.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	3B		13/4
bowl/dish		3B	FG	13/5
	s		AA	
	s		FG,AC	
bowl/dish	s	4Ab	FG,CB	
	f		FG,AC	
cup	f			
p. cooking v.	c			
	s		FB	
pot	s	1A		

Complex no. 102

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	f	1A		13/6

Complex no. 105 Location: H21 square. Pit with circular ground plan and cone shaped profile. The mouth is wider, with a diameter of approximately 110 cm. The complex bottom is rather flat and the maximum depth is of approximately 75 cm from the outlining level. The filling consists of a layer of gray soil, 50 cm thick, located at the top. Below, there is a compact lenticular deposit of charcoal, with a maximum thickness of 5 cm, separating the upper layer from another one, light brown, with a thickness of ap-

proximately 20 cm. Another compact charcoal lenticular deposit covers the entire bottom of the complex. Inventory: 4 ceramic fragments from 3 pots. 2 vessels fragments (inventory no. 2006.72.1-5.)

Complex no. 106 Location: G20 square. Circular ground plan pit and concave bottom. Only its lower part was detected. The mouth has a diameter of approximately 100 cm. The complex has a maximum depth of only 15 cm from the outlining level. The filling consists of grey soil. Inventory: 1 ceramic fragment from 1 vessel (inventory no. 2006.73.1.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	s		BA	

Complex no. 109 Location: G20 square. Circular ground plan pit and cone shaped profile. The mouth diameter is of almost 150 cm and the one at the base of approximately 135 cm. It has a maximum depth of 55 cm from the outlining level. The filling consists of a layer of dark brown soil, approximately 12 cm thick, located in the upper part. In the lower part, there is a denser layer of grey soil, interpolated with a dark brown lenticular deposit, located on the west side of the pit. Inventory: 5 ceramic fragments from 4 vessels (Pl. 13/7, 14/1-4) (inventory no. 2006.76.1-4.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	s	5	AC	13/7

Complex no. 110 Location: G20 square. Circular ground plan pit and bag shaped profile. The pit has a maximum opening of almost 160 cm and a depth of approximately 135 cm from the outlining level. The filling consists of a layer of gray soil with yellow lenticular deposits, which thickness exceeds 100 cm at the top. At the bottom there use to be a compact charcoal lenticular deposit that was covering a layer of black earth, located in the eastern half of the pit and another one, dark brown, located on the west side of the pit. On the same side, but outside the complex, right near the upper part, several ceramic fragments were grouped. Inventory: 92 ceramic fragments originating from 25 pots. 1 clay grill, 7 fragments from 4 vessels are missing. 5 stone fragments, out of which 1 fragment of crusher, 2 processed bones (Pl. 13/8-10) (inventory no. 2006.77.1-74.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	3A	AE	13/8
pot	c	1A	AA	
bowl/dish	s	4Aa	AA,BA	14/4
amphora	s	1	BA	14/1
bowl/dish	s	2B		
pot	c	1A	AE	
bowl/dish	s	2A		
	s		AA,FG	
	f		FB	
bowl/dish	s	1Aa		
can	f			
cup	f			
cup	s		CC,GH	
	s		FB	
bowl/dish	s		FH	
pot	s	3A		13/9
	s		FG	13/10
p. cooking v.	c			14/2
p. cooking v.	s	2	AA	14/3

Complex no. 111 Location: G20 square. Pit with an approximately circular ground plan and cone shaped profile. The upper part has a diameter of approximately 160 cm. The complex goes almost 90 cm deep from the outlining level. The filling consists of brown-grey soil, with yellow lenticular deposits. Inventory: 10 ceramic fragments from 6 vessels, 2 fragments of clay-and-straw mortar, one of them still preserving the trace of a 3 cm wattle. (Inventory no. 2006.78.1-9).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
p. cooking v.	c			

Complex no. 112 Location: G21 square. Small pit, with circular ground plan and cone shaped profile. The maximum diameter measures approximately 90 cm. The pit, only partially detected, deepens 15 cm from the outlining level. The filling consists of grey soil, with a black lenticular deposit. It has no archaeological inventory.

Complex no. 117 Location: G21 square. Small pit, with circular ground plan and irregular bottom. The complex has a maximum opening of approximately 125 cm. Only

partially detected, it hardly deepens 15 cm from the outlining level. The filling consists of brown-grey soil, with yellow lenticular deposits. Inventory: 9 ceramic fragments originating from 9 vessels (inventory no. 2006.82.1-7.)

Complex no. 118 Location: G-F21 square. Circular ground plan pit and bag shaped profile. The pit has a maximum opening of approximately 130 cm and it deepens approximately 50 cm from the outlining level. The filling consists of brown-grey soil, with yellow lenticular deposits. A thin lenticular deposit appears on the bottom of the complex. Inventory: 22 ceramic fragments from 7 vessels, 1 grinding stone, 2 stones (inventory no. 2006.83.1-14.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
p. cooking v.	c			

Complex no. 119 Location: G21 square. Circular ground plan pit and bag shaped profile. The maximum diameter, located towards the pit bottom, is of approximately 130 cm. The complex has an opening of 105 cm at the mouth. The depth from the outlining level is of 70 cm. The filling consists of a layer of light brown soil with burnt clay-and-straw mortar, located in the upper part, approximately 30 cm thick. At base, there is a layer of approximately 40 cm of dark gray soil, with brown lenticular deposits, which partially overlaps a lenticular deposit of light brown soil, located in the western half of the pit. Inventory: 13 ceramic fragments from 6 pots, 4 fragments of fireplace clay-and-straw-mortar (inventory no. 2006.84.1-13.).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	f			

Complex no. 120 Location: G21 square. Circular ground plan pit irregular profile. The maximum diameter is at the upper side, measuring almost 140 cm and the depth is of 50 cm from the outlining level. The filling consists of a layer of grey soil with light brown lenticular deposits, partially overlapping a lenticular deposit with combustion remains (charcoal and ashes), located at the base, in the eastern side. Inventory: 26 ceramic fragments from 14 vessels (the pots on board 7 are missing) (Pl. 15/1-6, 16/1-3) (inventory no. 2006.85.1-31.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	2A		15/6
amphora	s			15/4
bowl/dish		1A		15/5
p. cooking v.	c			15/2
p. cooking v.	c			
	s		FG	
amphora	s	1		15/1

Complex no. 121 Location: G21 square. Circular ground plan pit and cone shaped profile. The pit has a mouth opening of 154 cm and almost 170 cm at the base. The maximum depth is of approximately 60 cm from the outlining level. The filling consists of grey-brown soil, with yellow lenticular deposits. Inventory: 16 ceramic fragments from 12 vessels, 1 clay weight, 3 grinding fragments (Pl. 16/4-6) (inventory no. 2006.86.1-20.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		FG,EB	
	s	5A	FB	
bowl/dish	f		AC,FG	
p. cooking v.	c		AB	
bowl/dish	s		AC,FG	
bowl/dish	s	3B	AG	
	s		FA,FD	
	f		FB	16/5

Complex no. 122/1 Location: G21 square. Circular ground plan pit and cone shaped profile, located on the west side of the settlement noted with the index 122, which belongs to the Imperial Period, being completely superimposed by it. The complex has a mouth diameter of approximately 90 cm and a preserved depth of almost 40 cm. The filling consists of dark brown soil, with light brown lenticular deposits. It has no archaeological inventory.

Complex no. 122/2 Location: G21 square. Circular ground plan pit, located in the Northeast corner of the settlement noted with the index 122, which belongs to the Imperial Period, being totally superimposed by it. The complex has a mouth diameter of approximately 120 cm and a preserved depth of only 15-20 cm. It has no archaeological inventory.

Complex no. 123 Location: F21 square. Circular ground plan pit and cone shaped profile, narrower at the mouth and wider at the base. The upper part diameter is 140 cm, and the bottom one is 180 cm. The complex has a maximum depth of 60 cm from the outlining level. The filling is unitary, consisting of a layer of brown-grey soil. Inventory: 44 ceramic fragments from 18 vessels, 3 clay-and-straw mortar fragments, 1 obsidian (Pl. 17/1-6) (inventory no. 2006.88.1-38.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s		FG	
cup	s	1B		17/4
cup		1B	GH	17/2
pot	c		FE	
amphora	f			
	s		FB,CE	

Complex no. 124 Location: G22 square. Large pit with circular ground plan and bag shaped profile. The complex has a mouth opening of 185 cm, this being also its maximum diameter. The depth from the outlining level is 85 cm. Scattered fragments of ceramic shards and burnt clay-and-straw mortar were found in the filling. The filling consists of a layer of dark brown soil, located at the top, approximately 50 cm thick. At its base, we have a thin but continuous charcoal lenticular deposit, which superimposes a layer of brown-gray soil with yellow lenticular deposits, approximately 20 cm thick. On the bottom of the pit, there is a dense layer of charcoal mixed with pieces of burnt-clay-and-straw mortar. Inventory: 74 ceramic fragments from 27 vessels, 2 stones, out of which 1 hand mill fragment, 7 clay-and-straw mortar fragments, out of which one from a fireplace, 5 pieces of stone (Pl. 17/7-10, 18/1-4) (inventory no. 2006.89.1-83.)

Complex no. 125 Location: G22 square. Pit with an approximately circular ground plan, cone shaped profile and irregular bottom. The pit has a diameter of approximately 160 cm. The maximum depth is of almost 50 cm from the outlining level. The filling consists of brown-grey soil. Inventory: 4 ceramic fragments from 4 vessels (inventory no. 2006.90.1-4.)

Complex no. 126 Location: G22 square. Pit with an approximately circular ground plan and cone shaped profile, wider at base and narrower at bottom. The maximum diameter slightly exceeds 100 cm. The depth is almost 40 cm from the outlining level. The filling consists of dark brown soil with yellow lenticular deposits. Inventory: 19 fragments from 9 vessels (inventory no. 2006.91.1-14.)

Complex no. 127 Location: G22 square. Pit with oval plane and cone shaped profile, wider at the mouth and narrower at the base. It has a maximum opening of approximately 130 cm and a depth of almost 80 cm from the outlining level. The filling consists of brown grey soil, with yellow lenticular deposits. Inventory: 73 fragments from approximately 33 vessels, 6 clay-and-straw mortar fragments, 1 complete grinding mill, 1 crusher fragment and other 2 stones (Pl. 18/5,6, 19/1-3) (inventory no. 2006.92.1-58.)

Complex no. 128 Location: G22 square. Circular ground plan pit and cone shaped profile, wider at the mouth and narrower at the base. Its maximum diameter is of approximately 150 cm. The complex has a depth of almost 100 cm from the outlining level. The filling consists of dark brown soil with black lenticular deposits, with a compact layer of charcoal on the bottom, denser in the central part of the pit, where it reaches a thickness of approximately 15 cm. Inventory: 63 ceramic fragments from 23 vessels, 2 fragments of fireplace, 4 fragments of clay-and-straw mortar (Pl. 19/4-8) (inventory no. 2006.93.1-58.).

Complex no. 129 Location: G22 square. Circular ground plan pit and bag shaped profile. Its maximum diameter is of approximately 138 cm. The pit goes approximately 70 cm deep in the sterile soil as compared to the outlining level. Its filling consists of a compact layer of dark brown soil, with yellow lenticular deposits, which superimposes a black, sand layer, with a thickness of approximately 10 cm. Inventory: 8 shards originating from 5 vessels (inventory no. 2006.94.1-5.)

Complex no. 130 Location: G-F22 square. Circular ground plan pit and bag shaped profile. Its maximum diameter is of approximately 160 cm. The complex has a depth of almost 150 cm from the outlining level. Its filling consists of a layer of dark brown soil, with yellow lenticular deposits. On one of the sides, there is a thin lenticular deposit

of charcoal, which falls transversally towards the lower part of the pit. Several animal bones were discovered on its bottom, some of them in anatomic connexion. Inventory: 110 ceramic fragments from 25 vessels (Pl. 20/1-6, 21/1) (inventory no. 2006.95.1-87.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	f		CB	
	f		GI	
cup	s			
	s		FB	
	s		FB	
bowl/dish	s	1Aa	FG	
	s		GJ	
	s		FB	
cup		1Ac	FD	20/5
bowl/dish		3A	FG	20/6
p. cooking v.	c		AA	20/4

Complex no. 131 Location: F22 square. Circular ground plan pit and bag shaped profile. Its maximum diameter, located towards the base, is of approximately 100 cm. The pit deepens in the sterile soil approximately 60 cm from the outlining level. The filling consists of brown – grey soil, with yellow lenticular deposits. Inventory: 8 ceramic fragments from 7 vessels (inventory no. 2006.96.1-8.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	c	1B		
	c		AE	

Complex no. 132 Location: F21 square. A not very deep pit, with circular ground plan and relatively cone shaped profile. The upper part has an opening of approximately 140 cm. The depth, as already mentioned, is small, reaching almost 40 cm from the outlining level. The filling consists of three successive layers, with almost equal thicknesses, of dark brown soil, at the mouth, with yellow in the central part and light brown at the base. Inventory: 1 ceramic fragment (inventory no. 2006.97.1.)

Complex no. 133 Location: F21 square. Circular ground plan pit and relatively cone shaped profile. It has a maximum diameter of approximately 125 cm. The complex deepens approximately 60 cm from the outlining level. Its filling consists of brown

– grey soil, with yellow lenticular deposits. Inventory: 22 shards from 17 vessels, 8 ceramic fragments (Pl. 21/2) (inventory no. 2006.98.1-18.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	2A	CA,FG,FK	21/2
bowl/dish	s	2A	AA,FG	
bowl/dish	s	2A	FG	
p. cooking v.	c			
	s		GA	

Complex no. 136 Location: F20 square. Pit with an approximately circular ground plan and cylindrical profile. The complex has a diameter of approximately 80 cm and a depth of only 20 cm from the outlining level. Its filling consists of grey soil with yellow lenticular deposits. Inventory: 2 shards from 1 vessel (inventory no. 2006.100.1.)

Complex no. 142 Location: F19 square – Circular ground plan pit and cylindrical profile. The pit has a maximum diameter of approximately 130 cm and a depth that slightly exceeds 50 cm from the outlining level. The filling consists of grey soil with yellow lenticular deposits. Inventory: 12 ceramic fragments from 9 vessels (Pl. 21/3-4) (inventory no. 2006.101.1-11.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	s	5	CC	21/4
cup	f	1B	GE,GH,EA	21/3
pot	c	5		
p. cooking v.	c	2		

Complex no. 145 Location: E19 square. Circular ground plan pit and cone shaped profile, wider at the mouth and narrower at the base. The pit has a maximum diameter of approximately 110 cm and a depth of approximately 45 cm from the outlining level. The filling consists of a dense layer of yellow soil with light brown lenticular deposits, which superimposes other thin charcoal lenticular deposits, arranged on the bottom of the pit. Inventory: 2 ceramic fragments from 1 vessel, 4 clay-and-straw mortar fragments (inventory no. 2006.102.1-3.)

Complex no. 149 Location: E19 square. Circular ground plan pit and cone shaped profile, wider at the mouth and narrower at the base. The upper part has an opening of approximately 85 cm and the base has a diameter of approximately 50 cm. The maximum depth is of approximately 40 cm from the outlining level. The filling consists of light brown soil. Inventory: 27 ceramic fragments from 9 vessels (Pl. 21/5) (inventory no. 2006.104.1-14.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	s			21/5
cup	f			
	s		EC	
	s		FD	

Complex no. 151 Location: E18 square. Circular ground plan pit and cone shaped profile, wider at the mouth and narrower at the base. The maximum diameter is of approximately 120 cm. It has a depth of approximately 25-30 cm from the outlining level. In the upper part, the filling consists of dark brown soil and at the base, it consists of grey coloured soil. It has no archaeological inventory.

Complex no. 153 Location: E18 square. Circular ground plan pit and cone shaped profile. The mouth diameter is of approximately 120 cm, and the maximum one, situated at the base, is of approximately 130 cm. The complex has a flat bottom, which deepens approximately 60 cm in the sterile soil as compared to the outlining level. Two layers of filling overlap each other partially in the upper part, out of which a grey one, found only in the eastern half of the pit and a dark brown one, with a thickness of approximately 20-25 cm. In the middle, it used to have a denser layer of grey soil, with light brown lenticular deposits. Beneath it, again on the Eastern side, there is another transversal lenticular deposit of dark brown soil. The pit bottom is covered by grey ooze. Inventory: 7 ceramic fragments from 6 vessels, 2 clay-and-straw mortar fragments, one of them preserving the trace of a 2 cm wattle.

Complex no. 155 Location: E18-19, F18-19 squares. Circular ground plan pit and cone shaped profile. The maximum diameter, located in the upper part, measures approximately 160 cm. The complex has a depth of approximately 30 cm from the outlin-

ing level. The filling consists of brown-grey soil, with yellow lenticular deposits. Inventory: 2 ceramic fragments from 2 vessels, 1 clay-and-straw mortar fragment (inventory no. 2006.109.1-3.)

Complex no. 163 Location: F17 square. Circular ground plan pit and irregular profile. The complex has a diameter of approximately 150 cm and a maximum depth of approximately 30 cm from the outlining level. The filling consists of grey soil with yellow lenticular deposits. Inventory: 2 ceramic fragments from 2 vessels (inventory no. 2006.111.1-2.)

Complex no. 164 Location: E17 square. Circular ground plan pit, with the maximum diameter of approximately 110 cm and bag shaped profile. The complex has a straight bottom and a depth of approximately 65 cm from the outlining level. The upper part of the filling consists of a dense layer of grey soil with burnt clay-and-straw mortar and yellow or dark brown soil lenticular deposits. At the base, it has a compact layer of charcoal, with a thickness of approximately 25-30 cm. It has no archaeological inventory.

Complex no. 165 Location: E17 square. Circular ground plan pit, with the maximum diameter of approximately 120 cm and cone shaped profile. The complex has concave bottom and a depth of approximately 40 cm from the outlining level. The filling consists of grey soil with yellow and black lenticular deposits. The pit is located right near the ditch noted with the index 200, having a slightly unclear stratigraphic relationship to it. It is possible that one of these two complexes superimposes the other one. Given, however, the archaeological research method approached, this can only be clarified based on the analysis of the archaeological materials. It has no archaeological inventory.

Complex no. 167 Location: E-F17 square. Small pit, partially detected, with circular ground plan and concave bottom. Its maximum diameter was of almost 60 cm and it went only 10 cm deep from the outlining level. The filling consists of a grey soil with ceramic fragment. It has no archaeological inventory.

Complex no. 168 Location: F17 square. Circular ground plan pit and bag shaped profile. The complex has a maximum diameter of approximately 130 cm and a depth of almost 90 cm from the outlining level. In the upper part, the filling consists of a dense layer of light brown soil and yellow and black soil lenticular deposits. In the median area, on the eastern side of the pit, there is a compact lenticular deposit of dark brown soil and white calcite concretions interposed. The bottom of the pit is covered by two layers of dark brown and light brown soil, white calcite concretions, arranged obliquely, thicker to the west. The inclination of the layers and of the lenticular deposit from the median area makes us believe that the pit was filled from the west side. Inventory: 12 ceramic fragments from 8 vessels, 1 clay-and-straw mortar fragment, 1 grinding fragment (inventory no. 2006.112.1-12.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
p. cooking v.	c			
bowl/dish	s	2A		
	c	2B		
	c		EC,FL	

Complex no. 175 Location: F16 square. Circular ground plan pit, relatively straight bottom and bag shaped profile. The maximum diameter, located in the lower part, measures approximately 140 cm, being only 10 cm smaller than the upper part opening. The pit deepens by 60 cm from the outlining level. The filling consists of dark brown soil with grey lenticular deposits. Inventory: 3 ceramic fragments from 2 vessels, 1 clay-and-straw mortar fragment (Pl. 22/2) (inventory no. 2006.116.1-3.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	c		AA,FG,FB	22/2

Complex no. 176 Location: F16 square. Large pit with circular ground plan, concave bottom and bag shaped profile. The mouth diameter is 140 cm and the maximum diameter, located at the bottom, measures approximately 170 cm. The complex has a depth of 115 cm from the outlining level. The main filling layer, almost 100 cm thick, is gray with yellow and light brown lenticular deposits. There follows a compact lenticular

deposit of combustion remains (charcoal and ash), which overlaps a narrow layer of dark brown soil with yellow lenticular deposits. The bottom of the pit is almost completely covered by another thin lenticular deposit of charcoal and ash. Inventory: 27 ceramic fragments from 13 vessels (Pl. 22/3-7, 23/1,2)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		FB	22/3
can	f	1	FB	22/6
cup	f		FA	
amphora	f		FB,AA	22/7
cup		1C	FE	22/4
cup		1B	FE	22/5
can	s		FE	
amphora	s		AA,FG	23/1
amphora	f	1	FA	23/2

Complex no. 178 Location: D-E19 square. Pit partially detected, with circular ground plan and relatively straight bottom, superimposed by the complex marked with the index 179. The pit used to have an opening of over 135 cm and a depth of only 15 cm from the outlining level. The filling consists of light brown soil. It has no archaeological inventory.

Complex no. 179 Location: D-E19 square. Partially researched pit, with slightly oval plane and relatively straight bottom, partially superimposing the complex marked with the index 178. The pit had an opening of over 100 cm and a detected depth of only 20 cm from the outlining level. Its filling consists of grey soil. Inventory: 2 ceramic fragments from 2 vessels, 23 fireplace fragments (inventory no. 2006.119.1-4.)

Complex no. 184 (Roman period)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora			BA	23/3
amphora	s	1		23/4

Complex no. 189 (Roman period)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		AA	23/5

Complex no. 190 Location: F14-F15 square? Oval plane pit with and relatively flat bottom. The complex, poorly shaped, used to have a cone shaped profile and its maximum diameter was of approximately 125 cm. Its depth was of only 25-30 cm from the outlining level. Its filling consists of grey soil. Inventory: 1 ceramic fragment (inventory no. 2006.123.1.)

Complex no. 191 Location: F15 square. Circular ground plan pit and bag shaped profile, partially overlapped by the complex marked with the index 192. The pit used to have an irregular bottom, slightly concave and a maximum depth of approximately 85-90 cm from the outlining level. Its diameter measures more than 120 cm. The filling consists of four successive layers of soil. In the upper part, there is a first layer, grey coloured, with an approximate thickness of 25 cm. A dark brown layer follows, narrower to the west, which superimposes a grey one, with light brown lenticular deposits. At the base, there is a last layer, a dark brown one, with burnt clay-and-straw-mortar and charcoal lenticular deposits. Inventory: 4 ceramic fragments from 2 vessels (inventory no. 2006.124.1-3.)

Complex no. 193 Location: F15 square. Circular ground plan pit of reduced size, with an almost cylindrical profile and a diameter of approximately 60 cm. Its depth used to be of only 25-30 cm from the outlining level. The filling consists of a grey-brown soil. Inventory: (inventory no. 2006.126.1.)

Complex no. 194 Location: F15 square. Pit with an approximately circular ground plan and cone shaped profile. Its maximum diameter measures 210 cm and its depth is of almost 90 cm from the outlining level. The complex partially inter-crosses pit 195. In the upper part, the filling consisted of a brown-grey soil, with yellow lenticular deposits. At the base, there was a layer of grey soil with burnt-clay-and-straw mortar, yellow lenticular deposits and some denser, dark brown ones. Inventory: 48 ceramic fragments (inventory no. 2006.127.1-44.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	s	1A		
pot	c			
	s		FA	
pot	c		AB	
	s		AA	
pot	c	3A		23/6

Complex no. 195 Location: F15 square. Circular ground plan pit and cylindrical profile, partially superimposed by complex 194. The pit has a diameter of approximately 160 cm and a depth of approximately 140 cm from the outlining level. The filling consisted of grey soil, with light brown lenticular deposits. Other more compact lenticular deposits of dark brown soil also appear in the filling, transversally. Inventory: (inventory no. 2006.128.1-6.)

Complex no. 200 Location: C20-23, D18-20, E16-18, F13-16, G12-13 squares. Trench with a length of approximately 120 m, which runs obliquely through almost the entire site, following the contour lines of the highest area on the east side. Both its width and depth are variable, the first with a maximum opening at the mouth of approximately 370 cm. The profile is “V” shaped, but the lower part is rounded. The complex used to deepen approximately 120-150 cm from the tailings layer. The soil that forms its filling is also variable, layers of gray or brown soil, or mixtures thereof being encountered from place to place. As a constant, almost everywhere in the area studied, at the basis of this complex, there appears a compact lenticular deposit of charcoal and combustion remains. This layer probably originates in the wood structure, of palisade type, located behind the ditch, in its immediate vicinity. It seems that the palisade had a violent end, being burnt in a fire, its burnt debris flowing into the ditch. Animal bones, large rocks or even replenishable ceramic stone were also found, here and there, spread on the bottom of the ditch. “Complexes” 180, 181, 183, 184, 185, 189, 196, 201, 205, 220 and 283 were originally designated as individual pits. However, after sectioning them, we found a slight difference in the filling colour of this large complex, marked with the index 200. Inventory: 1291 ceramic shards originating from at least 395 vessels, a fragment of clay weight, 58 pieces of a hand mill, 4 crushers, 58 pieces of clay-and- straw mortar. (Pl. 23/7-15, 24/1-9, 25/1-11, 26/1-6, 27/1-5, 28/1,2) (inventory no. 2006.132.1-1490.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	s	1Ab		
p. cooking v.	c		AA	
bowl/dish	s		AA,FG	
pot	c	1A		
pot	s			
cup	s	1Ab	FB	
p. cooking v.	c		AA	
	s		GD	
can	f			
pot	c			
pot	c		AE	
pot	c		AC	
p. cooking v.	c	1A		
cup	c			
cup	s	1A	FC	
amphora	f		FA	
p. cooking v.	c			
b	s		FB	
pot	c		AB	
p. cooking v.	s			
bowl/dish	s	3B	AG	
	c		BD	
can	s	1		
p. cooking v.	c			
cup	s	1Aa	FB	
can	s			
	s		GB	
p. cooking v.	c			
p. cooking v.	s			
cup	s			
	f		FB	
	s		CD	
	c		AC	
	c		FJ	
	s		FJ	
bowl/dish	s	2A	FJ	
p. cooking v.	c			
	c		FG,EB	
bowl/dish	s	3B		
bowl/dish	s	4Ab		

p. cooking v.	c		p	
pot	c	4		
bowl/dish	s	2A		
amphora	s			
bowl/dish	s	4Ab	AA	
cup	c	5		
pot	s			
bowl/dish	s	2A	AB	
amphora	c		FG	
bowl/dish	s	2B	FG	
bowl/dish	s	2A	FG	
bowl/dish	s	2B	FG	
bowl/dish	c		AA	
amphora	s	1		25/3
	f		FG	
p. cooking v.	c			
p. cooking v.	c			
p. cooking v.	s			
p. cooking v.	c			
cup	f		FE	
	s		FB	
bowl/dish	s		FG	
pot	c			
pot	s	4		
p. cooking v.	s			
can	s	2		
bowl/dish	f	2A	AA	
	c			
bowl/dish	s		FG	
bowl/dish	s		FG	
bowl/dish	s	2A		
p. cooking v.	c			
p. cooking v.	s			
amphora	s	5	AA	
p. cooking v.	s			
p. cooking v.	s			
p. cooking v.	s			
	c		AB	
	c		AE	
cup	s			
amphora	s		FB, EB	27/6
p. cooking v.	s		FH	
	s		CD	

	f		FB	
	f		GB	
bowl/dish	s		FG	
	f		FB	
bowl/dish	s		FG	
p. cooking v.	c			
can	s			
	s		FE	
bowl/dish	s	3B		
amphora	s		FH,FG	
bowl/dish		3A		
	s		FB	
cup	f	1B	GD	24/3
bowl/dish	s	3A	GF	
bowl/dish	s	1A		
amphora	s	1	AC,LA,GB	27/4
	c	1A	AI	25/8
p. cooking v.	c			
p. cooking v.	c			
lid	s			
bowl/dish	f	2A		
p. cooking v.	s			
p. cooking v.	s			
cup	s			
pot	s	6	AA	25/4
can	s			
pot	s		AE	
bowl/dish	s	3A		
cup	f			
pot	s	3B		
pot	s		AB	
	s		FC	
	s		AC	
p. cooking v.	c			
	f		BA,FG,CB	
p. cooking v.	c			
p. cooking v.	g		p	
bowl/dish	s	5B		
can	f		FB	
pot	c		AB	
	s		FG,EB	
	s		FG	
	s		FG	

cup	f			
	s		FG	
cup	f	1Ac	FB,GB,FF	
cup	f			
cup	f			
p. cooking v.	c			
	s		GK	
	s		GK	
p. cooking v.	s		FB	
	s			
bowl/dish	s	2A	FE	
p. cooking v.	c			
p. cooking v.	c			
p. cooking v.	c			
bowl/dish	f			
bowl/dish	s	3B		
	s	2B	FA	
bowl/dish	s		FG,CB	
can	s			
p. cooking v.	c			
p. cooking v.	c			
bowl/dish	s	4Ab		
bowl/dish	s			
bowl/dish	f	3B	AB	
cup	c	2B	FB	
	s		FG	
	s		FJ	
	s		GA	
	f		GA	
p. cooking v.	c			
	s		FE	
	s		FN	
	f		FG	
p. cooking v.	c			
	c		AE	
p. cooking v.	c			
	c		AE	
pot	c	1B		28/1
pot	c	1A	AB	
lid	s			
p. cooking v.	c	1	p	
cup		2A	FE	24/1
cup		1C	FC	24/2

cup		1B		24/3
cup		2A	GD	24/4
cup		1B	FC	24/5
cup		1C		24/6
cup		1Ac	FB	24/7
cup		1C		24/8
cup		3A		24/9
bowl/dishes		1A		25/8
bowl/dishes		2A		25/9
bowl/dishes		1A		26/1
bowl/dishes		2A	GF	26/2
bowl/dishes		2B	AC	26/3
bowl/dishes		2A	FE	26/4
bowl/dishes		2A		26/5
bowl/dishes		4Aa		26/6
bowl/dishes		3B		27/1
bowl/dishes		3B		27/2
bowl/dishes		3A		27/3
	s		ED,AC	
amphora	s		AA,FA,EB,FE	27/5
	s		FB	
p. cooking v.	c			
p. cooking v.	s			
	s		GA	
storage v.	c		AH	28/2

Complex no. 202 Location: F14 square. Circular ground plan pit and concave bottom, partially overlapping the complex marked with the index 203. The pit has a maximum diameter of approximately 110 cm and it used to deepen approximately 35 cm from the outlining level. The filling used to consist of a layer of grey soil. It has no archaeological inventory.

Complex no. 203 Location: F14 square. Circular ground plan pit and irregular bottom, partially crossed by complex 202. Its maximum diameter used to be of approximately 110 cm and it used to deepen approximately 40 cm down from the outlining level. The filling consisted of a layer of brown-grey soil, with yellow lenticular deposits. Inventory: 5 ceramic fragments resulting from 5 vessels and a stone used for sharpening. (Inventory no. 2006.134.1-6.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
p. cooking v.	c			
bowl/dish	s		FA	

Complex no. 206

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup		?		29/1
cup		1B	FE	29/2

Complex no. 211 Location: E14 square. Circular ground plan pit and cone shaped profile, with a mouth slightly wider than the base. The upper part has a diameter of approximately 130 cm and the lower part one has approximately 100 cm, this being its depth from the outlining level. The filling used to consist of a layer of dark brown soil, which superimposed a compact charcoal lenticular deposit, approximately 10 cm thick, located at the base. Inventory: 16 ceramic fragments from 14 vessels, 2 pieces of fire-place. (Inventory no. 2006.141.1-17.)

Complex no. 212 Location: E14 square. Circular ground plan pit and bag shaped profile. The mouth, wider than the base, has a diameter of approximately 130 cm. The complex used to deepen approximately 65 cm as compared to the outlining level. The filling in the upper area consists of a compact lenticular deposit of dark brown soil, which superimposes a layer of brown-grey soil. At base, there is grey layer, thicker in the western side, with a compact charcoal lenticular deposit. Inventory: 54 ceramic fragments originating from 25 vessels, 2 pieces of clay-and-straw mortar. (Pl. 29/3-8) (inventory no. 2006.142.1-58.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	f		BC	29/4
pot	c	1A	AE	
bowl/dish	s	3A		
p. cooking v.	c			
cup	s		FB	
cup	s		FB	
p. cooking v.	c			

Complex no. 213 Location: square E14. Circular ground plan pit and bag shaped profile. Its maximum diameter measures approximately 110 cm. The complex has a depth of approximately 70 cm from the outlining level. The filling consists of grey soil, with light brown lenticular deposits and burnt clay-and-straw mortar. At base, there is a grey layer, thicker to the west side, with a compact charcoal lenticular deposit. Inventory: 8 ceramic fragments from 8 vessels (inventory no. 2006.143.1-8.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	s			

Complex no. 216 Location: square E13. Circular ground plan pit, slightly cone shaped profile and concave bottom. The complex has a maximum diameter exceeding 110 cm and a preserved depth of approximately 40 cm from the outlining level. The filling consists of brown-grey soil, with yellow lenticular deposits. Inventory: 22 ceramic fragments from 20 vessels (inventory no. 2006.146.1-25.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	2B		
cup	s	3A	FE	
can	s		FE	
amphora	s	2A		
	s		GA	

Complex no. 217 Location: square F13-14. Circular ground plan pit and bag shaped profile. The maximum diameter, located in the lower part of the pit, measures approximately 170 cm. The depth is of approximately 105 cm as compared to the outlining level. The mouth filling consists of a layer of brown-grey soil, with yellow lenticular deposits. It superimposes another layer that starts transversally from the upper part of the pit, consisting of dark brown soil and black lenticular deposits, crosses by a denser, light brown lenticular deposit. On the pit bottom, especially in its western half, there is a grey layer with a thickness that does not exceed 20 cm. Inventory: 3 ceramic fragments originating from 3 vessels (inventory no. 2006.147.1-3.)

Complex no. 221

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup		3A	AA	29/5
pot	c	2	AA	29/6

Complex no. 223 Location: square F13. Circular ground plan pit, bag shaped profile and almost flat bottom. Its maximum diameter, located in the lower part of the pit, measures approximately 140 cm. The complex has a depth of almost 90 cm from the outlining level. The filling consists of grey soil and burnt clay-and-straw mortar. (inventory no. 2006.150.1-16.)

Complex no. 224 Location: square E14. Circular ground plan pit and bag shaped profile, wider at the base and narrower at the mouth. The complex is partially overlapped by the pit marked with the index 208, belonging to the Imperial Age. Its maximum diameter is of approximately 180 cm. The complex has a depth of almost 100 cm as compared to the outlining level. The filling consists of dark brown soil, with burnt clay-and-straw mortar. Two compact lenticular deposits of charcoal appear in the lower part. Inventory: 10 ceramic fragments from 9 vessels, one fragment of clay weight. (inventory no. 2006.151.1-11.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
p. cooking v.	c			
bowl/dish	s	2B		

Complex no. 226/3 Location: square F10. Circular ground plan pit and almost cone shaped profile. The maximum diameter, located at the bottom, measures almost 120 cm and its depth exceeds 90 cm from the outlining level. The main filling consists of a light brown soil, which superimposes, in the middle, a brown-grey layer with a compact charcoal lenticular deposit. Inventory: 11 ceramic fragments from 9 vessels (inventory no. 2006.154.1-11.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
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cup	f	4Aa	AA	29/7
bowl/dishes	s			29/8

Complex no. 227 Location: square F10. Pit with an approximately circular ground plan, cylindrical profile and oblique bottom. The maximum diameter measures approximately 130 cm and its depth is 50 cm from the outlining level. It used to have a grey soil filling with yellow lenticular deposits. It has no archaeological inventory.

Complex no. 229 Location: square F07. Pit with an approximately circular ground plan and cone shaped profile, wider at the mouth and narrower at the base. The maximum diameter has an opening of approximately 90 cm, being only 10 cm wider than the one in the lower part. The complex has a depth of approximately 45-50 cm as compared to the outlining level. Its filling is compact, consisting of brown-grey soil. Inventory: 4 ceramic fragments from 4 vessels (inventory no. 2006.157.1-4.)

Complex no. 230 Location: square F07) – Circular ground plan pit and concave bottom, wider at the mouth and narrower at the base. The complex has a maximum diameter of approximately 100 cm and a depth of approximately 30 cm as compared to the outlining level. The filling is compact, consisting of brown-grey soil and yellow lenticular deposits. Inventory: 5 ceramic fragments from 4 vessels (Pl. 30/1) (inventory no. 2006.158.1-5.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	s		AB, FA,FB	30/1
can	s		FB	
amphora	s	1	FA	30/3
bowl/dish	s	3A	FB	30/2

Complex no. 231 Location: square F06-07. Circular ground plan pit and almost cylindrical profile. Its diameter measures almost 140 cm and the depth is of approximately 40 cm from the outlining level. The filling consists of grey soil. Inventory: 63 ceramic fragments from 8 vessels, 3 fragments of fireplace. (Pl. 30/2,3) (inventory no. 2006.159.1-30.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	f	4	FA	
pot	c			
p. cooking v.	c			
pot	c		AC	

Complex no. 232 Location: square F06. Circular ground plan pit and concave bottom, with a mouth diameter of approximately 90 cm. Only the lower part of the complex was detected. It used to have a depth of only 10-12 cm from the outlining level. The filling consists of brown-grey soil. Inventory: 3 ceramic fragments from 2 vessels, 3 fireplace fragments. (inventory no. 2006.160.1-5.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	s			

Complex no. 233 Location: D05 square. Pit with an oval plane, wider at the mouth and narrower at the base. The pit has a maximum opening of almost 220 cm and a depth of approximately 60 cm from the outlining level. In the upper part, the filling consists of a grey soil, with yellow lenticular deposits. At base, we have a mixture layer of brown-grey and yellow. Towards the north wall of the complex, inserted between the two layers, there is a compact lenticular deposit of dark brown soil. Inventory: 35 ceramic fragments from 10 vessels, a stone and 2 pieces of clay-and-straw mortar. (Pl. 30/4,5, 31/1-3) (inventory no. 2006.161.1-31.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	c	6		31/2
amphora	s	1		30/5
amphora	s	1	AA	31/3
bowl/dish	f	3C		
cup	c			
pot	c		AB,BB	31/1

Complex no. 234 Location: F03 square. Circular ground plan pit, wider at the mouth and slightly narrower at the base. Its maximum diameter measures approximately 130 cm, and the depth is of almost 30 cm from the outlining level. In the upper

part, the filling consists of a grey soil, which superimposes a denser light brown layer, with black lenticular deposits. It has no archaeological inventory.

Complex no. 235 Location: F03 square. Circular ground plan pit and concave bottom, wider at the mouth and narrower at the base. Its maximum diameter measures approximately 130 cm, and the depth is of approximately 25 cm from the outlining level. The filling consists of a compact, brown-grey soil. Inventory: 2 ceramic fragments from 2 vessels. (inventory no. 2006.162.1-2.)

Complex no. 238 Location: E05 square. Circular ground plan pit and an approximately cone shaped profile. The mouth diameter is of approximately 80 cm, and the one at the base is of approximately 135-140 cm. The complex has a maximum depth of 115 cm from the outlining level. The filling consists of three successive layers of soil. The one in the upper part is grey coloured and it is mixed with burnt clay-and-straw-mortar and yellow lenticular deposits. At base, there is a dark brown layer. Between them, on almost the entire surface of the pit, there is an interpolated layer of charcoal pigments. Inventory: 47 ceramic fragments from 18 vessels, 3 fragments of grinding stone and one piece of clay-and-straw mortar. (Pl. 32/1-4) (inventory no. 2006.163.1-53.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup		2A	FE	32/1
cup		1C	GC	32/2
cup		1C	FC	32/3
can	s	1	FC	32/3
cup	s	6	GC	
amphora	s		AA,FL,CD,GA	
p. cooking v.	c		FA	
bowl/dish	s		FG,AA	
bowl/dish	s		FG	
pot	c	5		

Complex no. 239 Location: E05 square. Pit with an approximately circular ground plan and bag shaped profile. The maximum diameter, located at the base, measures almost 140 cm. The pit has a maximum depth of 75 cm from the outlining level. The filling consists of a layer of dark brown soil, which superimposes a lenticular deposit of

burnt clay-and-straw mortar. Inventory: 19 ceramic fragments from 9 vessels, 17 fire-place fragments. (inventory no. 2006.164.1-21.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	s	3A		

Complex no. 240 Location: square F03. A rather small pit, with circular ground plan and cone shaped profile, wider at the mouth and narrower at the base. Its maximum diameter is of approximately 130 cm and its depth is smaller than 30 cm from the outlining level. The filling consists of a layer of brown-grey soil. Inventory: 10 ceramic fragments from 3 vessels. (inventory no. 2006.165.1-10.)

Complex no. 242

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	f	1C	BD, GK	32/5

Complex no. 243 Location: square D06. Circular ground plan pit and bag shaped profile. The mouth diameter measures approximately 145 cm, being larger than the one at the base by only 5-10 cm. The complex has an oblique bottom and a maximum depth of 80 cm from the outlining level, size reached in its northern half. In the upper part, the filling consists of a layer of grey soil, with light brown lenticular deposits. At base, there is a layer of light brown soil, with lenticular deposits of burnt clay-and-straw-mortar and ashes. Inventory: 37 ceramic fragments from 10 vessels, a stone and 4 pieces of clay-and-straw mortar. (inventory no. 2006.166.1-28.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	f	1B	BD,GK	
pot	c	1A		
pot	c		AE	
	s		FK	
bowl/dish	s	1Ac		

Complex no. 244 Location: square D04. Oval pit, with the sizes of 110 x 135 cm and cone shaped profile. The bottom is irregular, located at a depth of 50 cm from the outlining level. The filling consists of a layer of grey soil, with yellow lenticular deposits. It also used to have a compact ashes lenticular deposit in its upper part. It has no archaeological inventory.

Complex no. 245 Location: square D06. Circular ground plan pit and bag shaped profile. The mouth diameter measures approximately 110 cm, and the lower one 145 cm. The pit bottom, almost flat, is placed at a depth of almost 90 cm from the outlining level. The filling consists of a dense layer of grey soil, with yellow lenticular deposits, which superimposes a thin lenticular deposit of charcoal pigments. At base, we have a layer of light brown soil, with lenticular deposits of burnt clay-and-straw-mortar and ashes. An almost complete cup, with the opening upwards, was found in the lower part of the pit, on its West side (it is not drawn because it was stolen from the archaeological site). Inventory: 32 ceramic fragments from 10 vessels, 2 pieces of clay- and-straw mortar, a fragment of grinding mill and a fragment of clay weight. (inventory no. 2006.167.1-35.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		FE	
amphora	s			
p. cooking v.	c			
bowl/dish	s	3A		

Complex no. 246 Location: square D04. Circular ground plan pit and bag shaped profile, narrower at the mouth and wider at the base. The mouth diameter is almost 125 cm, and the base one is 170 cm. The pit bottom is approximately flat. The complex has a depth of almost 80 cm from the outlining level. The filling is compact, consisting of grey soil, with yellow and black lenticular deposits. Inventory: 49 ceramic fragments from 15 vessels, 2 hand mill fragments and 1 fragment of clay-and-straw mortar. (Pl. 32/6,7) (inventory no. 2006.168.1-52.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup		1B		32/6
cup		3A		32/8

bowl/dish	f	4Aa	AA,FG	32/7
cup	s	1B		
p. cooking v.	c			
p. cooking v.	c			
p. cooking v.	c			
cup	f	1B		
pot	s	3B		

Complex no. 248 Location: square F13-14, G13-14???. Circular ground plan pit and cone shaped profile, wider at the mouth and narrower at the base. The mouth diameter measures approximately 125 cm, and the one at base, 105 cm. The bottom, relatively flat, has a depth of approximately 85 cm from the outlining level. The filling consists of a mixture of brown with grey and yellow soil. (inventory no. 2006.169.1-4.)

Complex no. 251 Location: square E-F15. Circular ground plan pit and an approximately cone shaped profile, narrower at the base and wider at the mouth. The maximum diameter measures approximately 130 cm and the depth is of approximately 65 cm from the outlining level. The filling consists of a brown-grey soil. Inventory: 2 ceramic fragments from 2 vessels and 4 pieces of clay-and-straw mortar, out of which one fragment preserves the trace of two parallel wattles. (inventory no. 2006.170.1-3.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		GA	

Complex no. 253 Location: square F15. Circular ground plan pit and almost cylindrical profile, with a diameter of 180 cm and a depth of approximately 45 cm from the outlining level. The filling consists of a layer of grey soil, with yellow lenticular deposits, which superimposes on the Western side of the pit two compact lenticular deposits of combustion residues, interpolated with dark brown soil. Their oblique arrangement suggests that the filling of the pit was made from this side. Inventory: 3 ceramic fragments from 3 vessels and 2 stones. (inventory no. 2006.171.1-5.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	c		AE	

Complex no. 254 Location: square D06. Circular ground plan pit and concave bottom, wider at the mouth and narrower at the base. Its maximum diameter measures approximately 165-170 cm. The preserved depth is rather reduced, being of only 30 cm from the outlining level. The filling consists of grey soil with dark brown lenticular deposits. On the bottom of the complex, from place to place, there appear thin lenticular deposits of charcoal. Inventory: 28 ceramic fragments from 12 vessels, a crusher, a piece from a fireplace and a piece of clay-and-straw mortar. (Pl. 32/8,9, 33/1) (inventory no. 2006.172.1-31).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dishes		2A	FG	33/1
p. cooking v.	c		p	
p. cooking v.	c			
bowl/dish	s		FG	
	s			
	s		GJ	
	s		GK	
	s		FG	
bowl/dish	s	2B	FG	

Complex no. 255 Location: square D04-05. Circular ground plan pit concave bottom, wider at the mouth and narrower at the base, with a maximum diameter of 110 cm and a depth of approximately 55 cm from the outlining level. The filling consists of grey soil with yellow lenticular deposits and burnt clay-and-straw mortar. Inventory: 7 ceramic fragments from 6 vessels and a firestone blade. (Pl. 33/2) (inventory no. 2006.173.1-8.)

Complex no. 256 Location: square B07. Circular ground plan pit and almost cylindrical profile. Its diameter measures approximately 140 cm and the depth is of 35 cm from the outlining level. The filling consists of light brown soil, with yellow lenticular deposits. Inventory: 30 ceramic fragments (28 re-burnt) from 8 vessels, 5 pieces of hand mill, a piece of clay-and-straw mortar. (Pl. 33/3-5) (inventory no. 2006.174.1-24.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dishes		2A		33/4

bowl/dish	s	1Aa		33/5
bowl/dish	s	3C		33/3
bowl/dish	f		FA,FG	
pot	c	1A	AE	
cup	s			

Complex no. 257 Location: square B07. Partially detected pit, with circular ground plan and concave bottom. The maximum diameter is of approximately 120 cm and the depth is of only 18-20 cm from the outlining level. The complex has a filling of brown-grey soil with yellow lenticular deposits. Inventory: 111 ceramic fragments from 21 vessels, most of them re-burnt. (Pl. 33/6,7, 34/1,2) (inventory no. 2006.175.1-40.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup		2A		33/7
p. cooking v.	s	1		34/2
pot	c	2		34/1
amphora	s		CB,FG	
amphora	s	1	AA	
amphora	s		FB	
	s		GA	
cup	s		EG	
cup	s		AA	

Complex no. 258¹ Location: square A07. Circular ground plan pit and cone shaped profile, with the mouth diameter of 120 cm and the base of 140 cm. The bottom is flat. The pit depth measures 60 cm from the outlining level. The complex used to have a filling of dark brown soil, with yellow and black lenticular deposits. Inventory: 4 ceramic fragments from 2 vessels and 2 hand mill fragments (inventory no. 2006.176.1-3.)

Complex no. 259 Location: square A07. Pit with an approximately circular ground plan and cylindrical profile, with a mouth diameter of approximately 200 cm. The bottom is slightly inclined and the pit depth measures 80 cm from the outlining level. The complex used to have a filling of dark brown soil, with a compact lenticular deposit of light brown soil and combustion residues, located in the lower part. It has no archaeological inventory.

Complex no. 260 Location: square A07. Oval pit (sizes: 70 x 100 cm) and deformed profile, the western wall being straight and the eastern one bellied out to the exterior. The bottom is relative and the pit depth measures 75 cm from the outlining level. The complex used to have a grey soil filling. It has no archaeological inventory.

Complex no. 261 Location: square A06. Pit with an approximately circular ground plan and irregularly shaped profile. The mouth diameter measures almost 160 cm, being approximately 10 cm higher than the base. The complex bottom is flat and the pit depth reaches 100 cm from the outlining level. The filling used to consist of grey soil, with yellow and black lenticular deposits. Inventory: 37 ceramic fragments from 14 vessels. (Pl. 34/3,4) (inventory no. 2006.177.1-31.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	3B		34/3
cup	s	1B		34/4
p. cooking v.	c			
p. cooking v.	c			

Complex no. 263 Location: square B06. Large pit, with an approximately circular ground plan and bag shaped profile. The mouth diameter measures almost 190 cm, the maximum one, located in the central part, reaching approximately 240 cm. The complex bottom is irregular, slightly deeper to the west, where it measures 110 cm from the outlining level. The filling used to consist of a grey soil, with yellow lenticular deposits. An almost integral cup, missing only the handle, was found in the pit. (inventory no. 2006.178.1-13.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	s	1Ac	AA,FE	35/1

Complex no. 264 Location: square C05. Large pit, with an approximately circular ground plan and bag shaped profile. The mouth diameter measures almost 170 cm. The complex bottom is irregular, deeper to the south, where it measures 65 cm from the outlining level. The filling used to consist of grey soil, with black lenticular deposits. In the lower part, in the southern half, it used to have a compact lenticular deposit of combustion residues. It has no archaeological inventory.

³⁵⁸ In the statistical reports, it appears with uncertain dating!

Complex no. 265 Location: square B03. Small pit, with an approximately circular ground plan and cone shaped profile. The mouth diameter measures approximately 60 cm and its depth is of 30 cm from the outlining level. The filling used to consist of grey soil with yellow lenticular deposits. The complex was partially superimposed by pit no. 265. Considering the reduced sizes, we are probably dealing with a pillar pit. It has no archaeological inventory.

Complex no. 266 Location: square B05. Oval pit (sizes: 130 x 160 cm) and irregular profile. Its depth is reduced, measuring only 40 cm from the outlining level. The filling used to consist of dark brown soil, with a compact lenticular deposit of grey soil, which covered almost the entire upper part of the complex. It has no archaeological inventory.

Complex no. 267 Location: square B05. An approximately oval pit (sizes: 130 x 80 cm), with cylindrical profile and concave bottom. Its depth measures 65 cm from the outlining level. The filling used to consist of a thick layer of approximately 20 cm of light brown soil, with dark brown lenticular deposits, located at the base. The remaining part of the pit was filled with dark brown and light brown lenticular deposits. It has no archaeological inventory.

Complex no. 268 Location: square C04-05. Circular ground plan pit and an approximately cone shaped profile. The mouth diameter measures approximately 120 cm and the depth is of 50 cm from the outlining level. The complex bottom is concave. The filling used to consist of a brown-grey soil. A pair of cervidae horns were deposited in the northwest part of the complex, on its bottom,. Inventory: 11 ceramic fragments from 6 vessels, 2 fireplace fragments. (Pl. 35/1)

Complex no. 269 Location: square H17. Large pit, with circular ground plan and irregular profile, partially superposed by the complex marked with the index 270. The diameters of the pit are 180 x 200 cm, the maximum one being located in its upper area. The depth is of approximately 60 cm from the outlining level. The filling used to consist of a grey soil, with yellow lenticular deposits. Inventory: 5 ceramic fragments from 3 vessels and a stone. (inventory no. 2006.179.1-5.)

Complex no. 270 Location: square H17. Large pit, with circular ground plan and cone shaped profile, wider at the mouth and narrower at the base. The complex partially superposes pit no. 269. The mouth diameter is of 155 cm and the one at base of 100 cm. The pit is approximately 60 cm deep as to the outlining level. The filling used to consist of grey soil, with yellow lenticular deposits and some denser, dark brown ones. Inventory: 11 ceramic fragments from 5 pots (inventory no. 2006.180.1-8.)

Complex no. 271 Location: square H17. Circular ground plan pit and straight bottom, wider at the mouth and narrower at the base, partially superposing complex no. 273. The pit has a maximum diameter of almost 170 cm and a depth of 100 cm. The filling used to consist of a grey soil, yellow lenticular deposits and two thin lenticular deposits of charcoal.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	s			
	s		CB	
pot	c		AA,CC	

Complex no. 273 Location: square H17. Large, circular ground plan pit, with 230 cm diameter and approximately 100 cm depth. The complex is partially superimposed by pit 271. The filling consists of dark brown soil. Inventory: 68 ceramic fragments originating from at least 16 vessels, 3 stones, out of which 2 are grinding mill fragments. (Pl. 35/24) (inventory no. 2006.181.1-72.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	s			35/4
amphora	s		FG	
pot	c		AC	35/3
bowl/dish	s		FG	
bowl/dish	s		FG	
pot	c	1A		
	s		AB	
p. cooking v.	c			
cup	s			
	s		FA	

Complex no. 275 Location: square F10. Pit with an approximately circular ground plan and cone shaped profile. Its maximum diameter, located in the upper side, measures approximately 130 cm, and the depth is of only 25 cm approximately. The filling consists of light brown soil. Inventory: 8 ceramic fragments from 6 vessels. (inventory no. 2006.182.1-9.)

Complex no. 276 Location: square F10. Circular ground plan pit and an approximately cylindrical profile. Its diameter is of 100 cm and the depth of only 25 cm. The upper section filling is grey and the lower one consists of light brown soil. Inventory: 5 ceramic fragments from 3 vessels. (inventory no. 2006.183.1-4.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	s			
b	s			
p. cooking v.	c			
	s			

Complex no. 277 Location: square F10. Circular ground plan pit and cone shaped profile, wider at the mouth and narrower at the base. Its maximum diameter is of approximately 95 cm, and the depth is of 60 cm from the outlining level. The filling consists of grey coloured soil. A skull and several animal bones were discovered on the pit bottom. Inventory: 8 ceramic fragments from 6 vessels, 2 hand mill fragments, a crusher piece, 2 fragments of clay-and-straw mortar. (inventory no. 2006.184.1-15.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
p. cooking v.	s			
p. cooking v.	s			
p. cooking v.	f		GL	

Complex no. 280 Location: square F14. Pit with an approximately circular ground plan and cone shaped profile, wider at the mouth and narrower at the base. Its maximum diameter is of almost 110 cm. The pit has a preserved depth of 40 cm from the outlining level. The upper part filling consists of grey coloured soil. In the lower part, there is a denser layer of dark brown soil. Inventory: 9 ceramic fragments from 4 vessels. (inventory no. 2006.185.1-4.)

Complex no. 281 Location: square C18. Rectangular dwelling, the big size 430 cm long and the small one of 300 cm. The complex, partially of the deepened into surface type, must probably had a two-sided roof, supported by columns arranged in the middle of the short sides, as evidenced by the pit discovered on the northwest side. It seems that in the middle of the long side, where the complex bottom deepens slightly, taking the shape of an alveolus, there used to be another pillar. The filling consists of gray coloured soil, with dark brown lenticular deposits. It has no archaeological inventory.

Complex no. 284 Location: square D21. Circular ground plan pit and concave bottom. Only a depth of approximately 10 cm from the outlining level was still detected. The complex used to have a diameter of 120 cm. The filling consists of dark brown soil. Inventory: 2 ceramic fragments from 2 vessels. (inventory no. 2006.187.1-2.)

Complex no. 285 Location: square D21. Circular ground plan pit and concave bottom, with a diameter of 140 cm and a preserved depth of 20 cm from the outlining level. Half of the filling consists of light brown soil, which partially superimposes a dark brown layer. Inventory: 1 ceramic fragment from 1 vessel. (inventory no. 2006.188.1.)

Complex no. 286 Location: square D22. Circular ground plan pit with the bottom slightly inclined towards west. Its diameter measures approximately 140 cm and its depth goes approximately 25 cm down from the outlining level. The upper part of the filling consists of a grey, sandy soil, which superimposes a compact layer of charcoal and ash. An almost integral cup, only with its handle broken partially, was deposited on the pit bottom, in its Southern side. Inventory: 19 ceramic fragments from 9 vessels, 1 fragment of a grinding stone. (Pl. 35/5) (inventory no. 2006.189.1-18.).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	s	2A		35/5
bowl/dish	s	3B	AA	
p. cooking v.	c			

Complex no. 287 Location: square E14. Circular ground plan pit and approximately cone shaped profile. Its maximum diameter is in the upper part and it measures

approximately 105 cm, while its depth is of approximately 40 cm from the outlining level. The filling is unitary, consisting of light brown soil. Inventory: 4 ceramic fragments from 2 vessels (Pl. 36/1) (inventory no. 2006.190.1-3.).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	4Aa		36/1

Complex no. 293 Location: square C13-14. Circular ground plan pit and approximately cone shaped profile, partially destroyed by a series of rodents' holes. It is superimposed by complex 292, which belongs to the Imperial period. The pit, wider at the mouth and narrower at the base, used to have a diameter of approximately 160 cm. The lower part used to measure approximately 90 cm in diameter. The complex bottom used to be straight and its depth was of 80 cm from the outlining level. The upper part filling, a denser one, consisted of grey soil. At its base, there was an almost 20 cm thick brown-grey layer, with clay-and-straw mortar and ceramic fragments. Inventory: 7 ceramic fragments from 5 vessels (inventory no. 2006.193.1-5., 2006.194.1-14.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
p. cooking v.	s			

Complex no. 308 Location: square D15. Circular ground plan pit and concave bottom. Its maximum diameter measures approximately 135 cm and its depth is of only 25 cm from the outlining level. The filling is unitary, consisting of grey soil. Inventory: 5 ceramic fragments from 3 vessels (inventory no. 2006.204.1-3.)

Complex no. 312 Location: square D21. Pit with an approximately circular ground plan and bag shaped profile, narrower at the mouth and wider at the base. The diameter of the upper part measures approximately 125 cm and the maximum one is of approximately 160 cm. The complex bottom is slightly inclined and deeper towards west, where it reaches a depth of approximately 70 cm from the outlining level. The filling is unitary, consisting of light brown soil. Inventory: 11 ceramic fragments from 6 vessels and 2 clay-and-straw mortar fragments (inventory no. 2006.208.1-14.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	s		FA,FB	
	s		FE	

Complex no. 323 Location: square D22. Pit with an approximately circular ground plan and irregular profile, wider at the mouth and narrower at the base. Its maximum diameter measures approximately 130 cm. The complex bottom is slightly inclined and deeper towards west. Its maximum depth is of approximately 45 cm from the outlining level. The filling is unitary, consisting of dark brown soil, with yellow and light brown lenticular deposits. Inventory: 7 ceramic fragments from 1 vessels, a piece of grinding stone. (inventory no. 2006.214.1-3.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	c	1A		

Complex no. 329 Location: square F14-15. Poorly outlined, large size pit with circular ground plan and irregular profile, wider at the mouth and narrower at the base. The maximum diameter has approximately 140 cm. The base has a diameter of 100 cm. The complex has a depth of 160 cm from the outlining level. The upper half of the pit has a filling of light brown soil with light brown lenticular deposits and others brown grey. At the base, we have a sandier, grey coloured layer, mixed with light brown lenticular deposits. Inventory: 46 ceramic fragments from 16 vessels; a ceramic fragment is rounded, having the shape of a counter (Pl. 36/2). (inventory no. 2006.215.1-44.)

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		CB	
pot	c		AB	
p. cooking v.	s			
bowl/dish	s			
p. cooking v.	c			

Site no. 33

Complex no. 3/33. (Roman period).

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	f	1B		37/1

Complex no. 7/33. Large size complex, with a relatively circular ground plan and irregular profile, lowering down in two steps, getting narrower at the base. The maximum diameter, measured in the upper side, is of approximately 200 cm. Its bottom is flat and the depth is of approximately 70 cm from the outlining level. It most probably had a pillar hole located approximately in its centre, which went 100 cm deep from the outlining level. The filling consists of a grey soil, separated at the level of the two steps by thin lenticular deposits of ashes. Judging from its shape and sizes, we are most probably dealing with a dwelling deepened in the surface. Inventory: 2 ceramic fragments from 2 vessels.

Complex no. 12/33. Oval pit (sizes: 130x170 cm), with concave bottom, located at 30 cm depth from the outlining level. The filling consists of grey soil. Inventory: 5 ceramic fragments from 5 vessels and a piece of stone.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
amphora	s	6		37/2

Complex no. 13/33. Oval pit (sizes: 135x170 cm), with cone shaped walls and flat bottom. The complex has a depth of 50 cm from the outlining level. Its filling used to consist of brown-grey soil. Inventory: 10 ceramic fragments from 8 vessels.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
bowl/dish	s	4Aa		37/5
bowl/dish	s	2B	EC	37/4

Complex no. 14/33. Oval, large size complex (200 x 230 cm), with oblique walls, flat bottom, narrower at the base and wider at the mouth. It has a depth of 45 cm from

the outlining level. The filling consisted of grey soil. Its sizes make us believe that we are dealing with a deepened type dwelling. Inventory: 9 ceramic fragments from 9 vessels.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	s			

Complex no. 15/33. Oval pit (sizes: 110x90 cm), with an irregular profile and relatively flat bottom. The complex has a depth of 30 cm from the outlining level. It used to have a grey soil filling and thin, yellow coloured lenticular deposits, from place to place, at its base. Inventory: 2 ceramic fragments from 2 vessels.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
storage v.	c		AI	

Complex no. 17/33. Oval pit (sizes: 100x90 cm), with an irregular shaped profile, out of which only the lower part was detected. The maximum depth of the pit is of 20 cm from the outlining level. The filling used to consist of dark brown soil, with pigments of charcoal and burning residues. Inventory: 48 ceramic shards that reconstitute $\frac{3}{4}$ of a vessel and 2 ceramic fragments from a bowl.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	c	2	AA	37/7
bowl/dish	f	3B	AG	37/6

Complex no. 18/33. Large, oval pit (sizes: 140x170 cm), with a bag shaped profile and concave bottom. The pit has a maximum depth of 95 cm from the outlining level. The filling used to consist of a grey soil. Inventory: 23 ceramic fragments from 16 vessels and a piece of fireplace mud plaster.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
cup	f	3B		
can	f			
bowl/dish	s		CC	
	s		FA	

Complex no. 23/33. Pit with an approximately circular ground plan and a bag shaped profile. Its diameter measures approximately 130 cm. The bottom is slightly inclined towards west. The pit has a maximum depth of 90 cm from the outlining level. The filling used to consist of grey soil with black lenticular deposits. Inventory: 33 ceramic fragments from 1 vessel.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		FG	
	s		BA	

Complex no. 25/33. Pit with an approximately circular ground plan and a cone shaped profile, narrower at the base and wider at the mouth. Its maximum diameter measures approximately 140 cm. The bottom is slightly inclined towards west, where it has a depth of 50 cm from the outlining level. The filling used to consist of a grey soil with black lenticular deposits. Inventory: 8 ceramic fragments from 6 vessels.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	c		AE	

Complex no. 26/33. Oval pit (sizes: 80x115 cm), with a cylindrical profile and relatively flat bottom. It has a depth of 60 cm from the outlining level. The filling used to consist of a grey soil with yellow clay lenticular deposits in the upper part. Inventory: 11 ceramic fragments from 8 vessels.

Complex no. 27/33. Approximately circular pit, concave bottom and bag shaped profile. Its maximum diameter measures approximately 110 cm. It has a depth of approximately 70 cm from the outlining level. In the lower part, the complex used to have a filling of brown-grey soil, 30 cm thick. In the upper area, the filling consisted of grey soil. Inventory: 12 ceramic fragments from at least 4 vessels and an obsidian blade.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
can	s	1Ab	BA,FB,AA	38/2
amphora	s	6		

Complex no. 33/33. Approximately circular pit, irregular bottom and bag shaped profile. Its maximum diameter measures approximately 120 cm and its depth is of 60 cm from the outlining level. The filling used to consist of grey soil with clay lenticular deposits. Inventory: 6 ceramic fragments from 6 vessels and a grinding mill fragment.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	s	2		

Complex no. 34/33. Circular pit, straight bottom and cylindrical profile, with a diameter of approximately 120 cm. The complex has a depth of 60 cm from the outlining level. In the lower half, the pit used to have a filling of brown-grey-yellowish soil, superimposed by a filling of brown-grey soil. Inventory: 5 ceramic fragments from 3 vessels.

Complex no. 46/33. Circular pit, with straight bottom and inclined walls, wider at the mouth and narrower at the base. Its diameter measures approximately 140 cm. The complex has a depth of 83 cm from the outlining level. The filling used to consist of grey soil. Inventory: 10 ceramic fragments from 8 vessels.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
p. cooking v.	c			
p. cooking v.	c	1		

Complex no. 56/33. Oval pit (sizes: 130 x 170 cm), straight bottom and walls arched to the inside. The complex had a depth of 80 cm from the outlining level. The filling used to consist of a dark brown soil, with yellow and black lenticular deposits. Inventory: 22 ceramic fragments from 11 vessels and 3 stones, out of which 2 are hand mill fragments.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	c	1A	AE	38/5
bowl/dish	s	1A		38/4
bowl/dish	s	2A	EB,EC,FG	38/3
lid	s			
	f		FD	

Complex no. 57/33. Oval pit (sizes: 150 x 170 cm), straight bottom and walls curved towards the inside. The complex used to have a 65 cm depth from the outlining level. The filling used to consist of dark brown soil, with yellow and black lenticular deposits. Inventory: 93 ceramic fragments from at least 68 vessels, 2 pieces of hand mill stone, 4 clay-and-straw mortar pieces, a print fragment with intense burning traces.

Complex no. 58. Circular pit, with flat bottom and oblique walls, wider at the mouth and narrower at the base. Its diameter measures approximately 140 cm and its depth is of 70 cm from the outlining level. The filling used to consist of dark brown soil, with black lenticular deposits and clay. It has no archaeological inventory.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	f		FB	
p. cooking v.	c			
amphora	s	4	AB	
	s		GK	
	s		FG	
p. cooking v.	c		FG	
can	c	1Aa		39/1
bowl/dish	f	4Aa	AA,EA,EB,EC,FG	39/3
amphora	s	5C	FA,EB,FB	39/2
bowl/dish	s	1A	CB,FG	39/4

Complex no. 60/33. Circular pit, with straight bottom and oblique walls, wider at the mouth and narrower at the base, out of which only the lower part was detected. It used to have a diameter of approximately 140 cm and a depth of 45 cm from the outlining level. The filling used to consist of grey soil. Several ceramic fragments were discovered on the bottom of the pit, in its northern half. Inventory: 30 ceramic fragments from 5 vessels (some of them re-burnt), 3 stones out of which 2 are fragments of a hand mill.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
pot	c	1A		39/8
can	s	1Aa	AA,CB,GK	39/7
can	s	1B		39/6
can	s	2B	FC	

Complex no. 98/33. Approximately circular pit, with the bottom inclined towards east and irregular walls, narrower at the base and wider at the base. Its diameter measures approximately 150 cm, and the maximum depth is of approximately 95 cm from the outlining level. The filling used to consist of a grey soil. Inventory: 19 ceramic fragments from at least 10 vessels, 2 ceramic jetton, one piece of clay weight, 2 hand mill fragments, one piece of clay-and-straw mortar.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
can	s	3A		39/10
pot	s	3A	AK	

Complex no. 100/33. Circular pit, with flat bottom and oblique walls, narrower at the base and wider at the mouth. Its diameter measures approximately 120 cm and the maximum depth is of approximately 30 cm from the outlining level. The filling used to consist of a dark brown soil and clay. It has no archaeological inventory.

Complex no. 101/33. Circular pit, with flat bottom and cylindrical profile, its diameter measuring approximately 130 cm. The complex used to deepen approximately 50 cm from the outlining level. The filling used to consist of brown-grey soil, mixed with black sand. Inventory: 68 ceramic fragments from at least 16 vessels, 3 stones, out of which 2 grinding fragments.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
p. cooking v.	c			
amphora	c	1		

Complex no. 103/33. Circular pit, with flat bottom and cone shaped profile, wider at the mouth and narrower at the base. Its diameter measures approximately 120 cm and the depth is of approximately 40 cm from the outlining level. The filling used to consist of a dark brown soil, with a grey, compact lenticular deposit, located in the lower part. Inventory: 22 ceramic fragments from 10 vessels.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		CB,FG	

Complex no. 104/33. Approximately circular pit, with the bottom slightly irregular and bag shaped profile. Its maximum diameter measures approximately 130 cm and the maximum depth is of 67 cm from the outlining level. The filling used to consist of brown-grey soil, with lenticular deposits of black soil in the central area. Inventory: 17 ceramic fragments from 11 vessels, a stone and a piece of clay-and-straw mortar.

Pottery shape	Paste	Pottery Type	Decoration Type	Plate
	s		ED	

**X. ARCHAEOZOOLOGICAL DESCRIPTION
OF THE FAUNAL REMNANTS**

The faunal remains collected from these sites were not so high in number, but high enough to reflect the structure and some habits of the analyzed period. The distribution in number and percentage of the species is as follows:

Species	No	%
Bos taurus	342	23.10
Sus scrofa	92	6.20
Ovicaprinae	68	4.58
Equus caballus	75	5.06
Canis familiaris	107	7.21
Lepus europaeus	29	1.95
Cervus elaphus	9	0.60
Felis silvestris	2	0.13
Aves	1	0.06
Esox lucius	1	0.06
Bos primigenius	1	0.06
Indet. (large mammals)	237	15.98
Indet. (medium size mammals)	118	7.96
Indet. (small mammals)	4	0.27
Indet.	397	26.77
Total	1483	100

Tab. 1: The distribution in number and percentage of the species

As obvious, the number of broken, undeterminable bone fragments is very high, still, they shouldn't be left out of the analysis, as they contain important data mostly about the anthropic traces. Their fragmentation is caused mostly by human action, and not entirely due to the soil or collection methods.

The first among domestic animals bred by this population were, as usual in this region, the *Bovidae* because they provided besides meat, also milk, leather etc. The other species that follow cattle in number are, also as usual, swine, sheep and goat, horses and dogs, and the site provided minimal, but important amount of wild animals, such as rabbit, red deer, fish, cat, and one indeterminable bird bone. Several bones were processed, they will be discussed later on.

I. Description of species

Bos taurus (cattle)

Cattle bones were highest in number among the determinable bones (47% of the defined material). Also, a considerable part of the undefined material is coming from large mammals, which can easily be attributed to cattle as well. 50 pieces could be defined as juvenile, 50 pieces as subadult, and 114 as adult, thus we can conclude the usual: cattle were raised for their primal (meat, leather, horns, bones for tools, etc.) and their secondary usage (milk, animal of burden). 98 fragments were gnawed, 91 fragments were cut, only 15 pieces were burnt, and 44 fragments showed boiled-like structure. This may lead to the conclusion that the bones were used also to retrieve some kind of adhesive, or that the meat could have been eaten boiled. As for the quality of the meat¹, the distribution in percentage is the following (teeth and horns are treated separately because horns don't wear meat, and teeth can fall out easily even without human action):

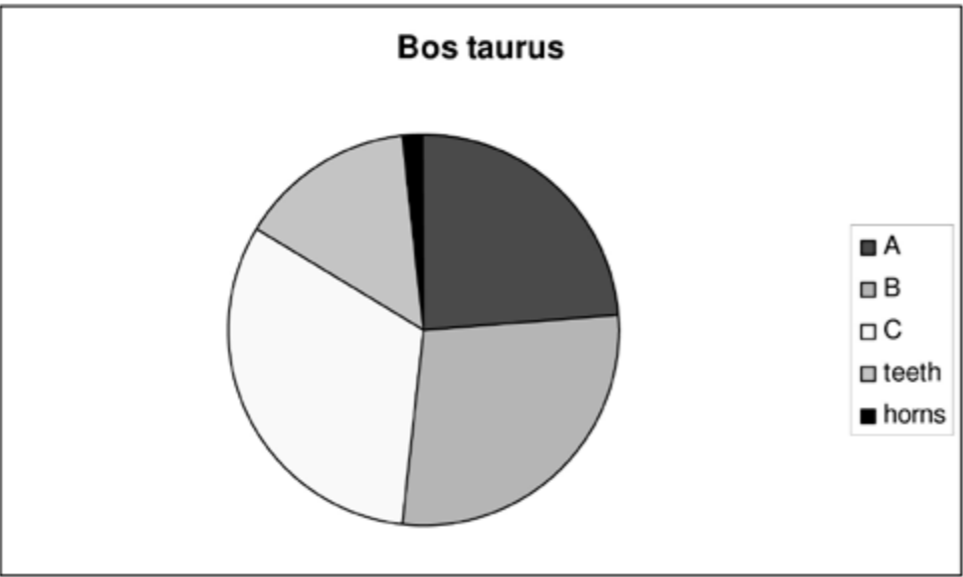


Fig. 1: Distribution in percentage of cattle bones according to meat quality

Some complete or almost complete bones provided metrical data:

Element	GL	Bp	Dp	sb	sd	Bd	Dd	wh
radius sin.	264	77.8	38.4	37.2	21.7			1135.2

radius sin.	244.8	68.8	37.7	33	17.4	63	39	1052.64
radius dext.	225.7	71	30.7	29.6	17.5	61.1	37.5	970.51
metacarpus sin.♀	183	52.5	31.3	28.5	20.6	56.4	28.7	1094.34
metacarpus dext.♂	175	55.6	34.1	29.3	22.8	59.2	28.7	1092.00
tibia dext.	196.3	59.7	36.3	19	14.6	41.6	27.8	677.24
tibia dext.	300	69	55	36.5	23	52.5	39	1035.00
astragalus dext.	58.5	38	32					
astragalus sin.	58	40 (Bd)	32.5 (Dm)					
astragalus dext.	52	35.5 (Bd)	28.3 (Dm)					
astragalus sin.	51.6	34 (Bd)	30 (Dm)					
astragalus sin.	55.7	40 (Bd)	33.9 (Dm)					
calcaneus sin.	71	31 (GB)	39.5 (GD)					
calcaneus dext.	84.7	26 (GB)	41 (GD)					
calcaneus dext.	134.7	37 (GB)	63 (GD)					
metatarsus dext.♀	208.6	47	45.5	28.7	28.3	55.4	29.6	1113.92
metatarsus dext.♀	220.7	46	43.1	24.5	26.1	54.7	29.7	1178.54
metatarsus dext.♀	204	42.7	40.8	21.7	22.2	49.5	27.7	1089.36
metatarsus sin.♀	203.7	41.1	40.2	21.8	22.8	49.7	27.6	1087.76
metatarsus sin.♀	193.4	42	37.5	22.2	23	46.3	27.1	1032.76
metatarsus sin.♀	152.4	34	30.5	16	14.3	35.7	20.4	813.82
phalanx I	55.2							
phalanx I	52.8							

¹ According to Uerpmann (1973)

phalanx I	53.7							
phalanx I	54.3							
phalanx I	51.2							
phalanx I	35.3	17	19.5					
phalanx I	36	16.3	19.2					
phalanx I	50.6	23	29.2	19.6	16.2	23	18.4	
phalanx I	58	26.2	31	20.3	19	23.5	20	
phalanx II	39	29.4	31	23.2	21	23	26.7	-
phalanx II	38.7							
phalanx II	36.6							
phalanx III	2.8	3 (Ld)						

Tab. 2: Some metrical data of *Bos taurus* bone elements² expressed in mm

As we can see, the withers height is changing in an interval from 67.7 cm – 117.8 cm, with the average of 102.87 cm. This is smaller than the usual at that time³ in Central Europe (117-145 cm), but in many cases this is natural and it is caused by malnutrition and inadequate keeping in the main growth period. Also, if these animals were used as draught animals earlier than their adult age, this stopped their growing (or their growth rhythm decreased). It must be taken into consideration that the bone elements that provided measurable data were mostly coming from female individuals, a fact that also pushes the average sizes towards smaller values.

There are some withers height measurements from this period from Eastern Europe, for comparison: average size was 116.79 cm (105-131 cm) at Otomani⁴, 115.4 cm (106-133,4) at Mîndrișca (Valea Seacă)⁵, 105.52-121.76 at Szombathely-Kámon⁶, 122.4 cm (115-128.5) at Soroksár⁷, 122 cm at Nagyedém-Középrépuszta⁸, 104.79 cm (96.41-114.33) at Tiszaalpár⁹. The nearest from a geographical point of view is the latter one, the size of which stands also closer to our measurements. The other data

2 Abbreviations after Angela von der Driesch (1976)

3 According to Teichert (1993)

4 According to Haimovici (1987)

5 According to Haimovici (1994)

6 According to Vörös (1999)

7 According to Bökönyi (1984)

8 According to Vörös (1995)

9 According to Bökönyi (1982)

proves that our bovids were smaller indeed, than the average, but considering the Tiszaalpár metrical data this might also be a result of some kind of local environmental effect.

Sus scrofa (swine)

Swine bones were poor in number, very fragmented and teeth constitute a big part of them. This fact can be explained either by the fact that the environmental conditions were not the best for keeping pigs, or that the bones were destroyed by serious consuming. 15 bones were coming from juveniles, 7 from subadults, 33 from adults, the rest could not be determined because of fragmentation (remember, that juvenile bones are always more fragile!). 21 fragments showed gnawing marks, only 10 were cut, 3 fragments were burnt and 7 fragments looked boiled. As for the quality of the meat¹⁰, the percentage is as follows:

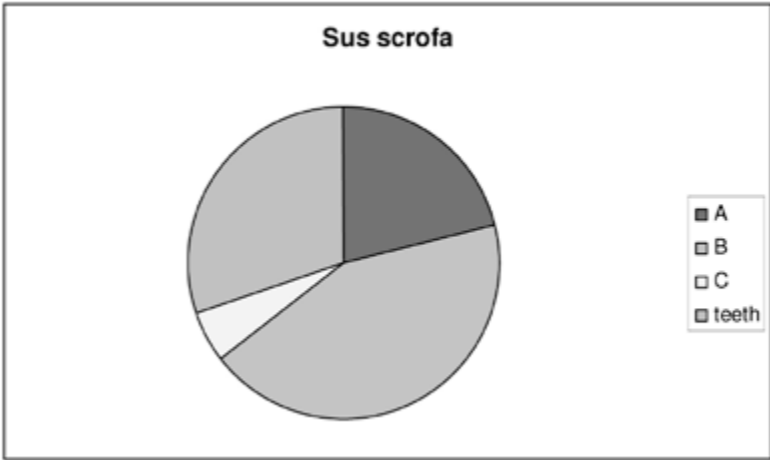


Fig. 2: Distribution in percentage of pig bones according to meat quality

As obvious, most of the bones belong to the best meat-quality, C category is poorly present, and teeth are also high in number, probably because of their resistance. So clearly, they kept swine for consuming their meat, but pigs did not play a very important role in the society's life from the animal husbandry's point of view.

Only one element was complete enough to provide metrical data for defining withers height, this was a left astragalus with the following sizes: GL=39.4, Bd=23.5,

10 According to Uerpmann (1973)

Dm=21.5, thus the wither height is 70.53 cm. This size fits exactly the withers height of adult pigs in Central Europe in the Bronze Age¹¹, which was not more than 60 to 85 cm. The length of the astragalus also fits the measurements taken at Otomani¹² (39-48 cm), it is smaller than the one measured at Monteoru¹³ (notice that there was also only one astragalus found), but it is smaller than the withers height average from Szombathely-Kámon¹⁴ (77-83 cm).

Ovicaprinae (sheep and/or goat)

Only 4.58% of the bones come from this group (this is a bit less then 10% of the defined elements), but we should mention that most of the undefined elements that originated from medium size mammals probably belonged to this category. 23 pieces could be determined as *Ovis aries*, and 17 pieces as *Capra hircus*, but they all will be referred to as *Ovicaprinae* in the following, due to the other, not specifically defined elements. The slaughter age could be determined at almost all fragments: 14 juveniles, 14 subadults, and 21 adults. Unfortunately, we must consider the fact that there was a high number of teeth (30 pieces), which means that almost half of the defined *Ovicaprinae* bones were teeth. This means that we should be careful with conclusions. High presence of teeth can explain also the relatively small amount of artificial bone alterations observed: 11 gnawed bones, 11 cut bones, 5 burnt bones, and 3 boiled ones, which means that almost all post-cranial bones were affected. As for the percentage according to meat quality¹⁵, it can be clearly noticed, that half of the findings are teeth and horns. So obviously, these animals were kept mostly because of their secondary usage, but in number, they were not primarily important in animal husbandry.

11 According to Teichert (1993)
 12 According to Haimovici (1987)
 13 According to Haimovici (1994)
 14 According to Vörös (1999)
 15 According to Uerpmann (1973)

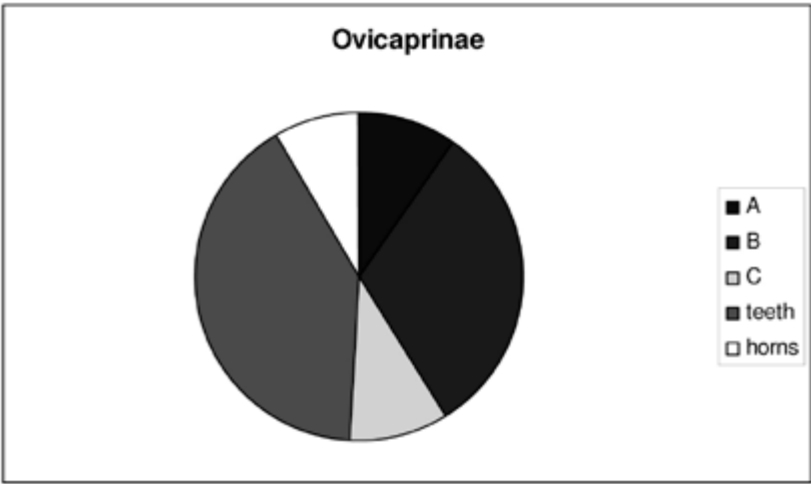
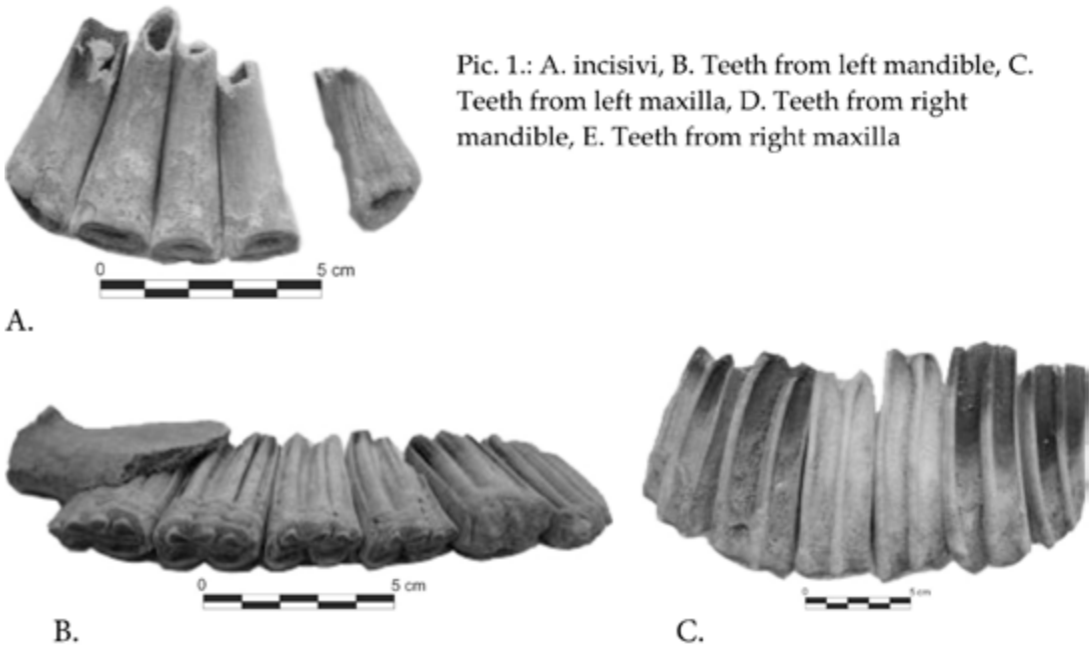


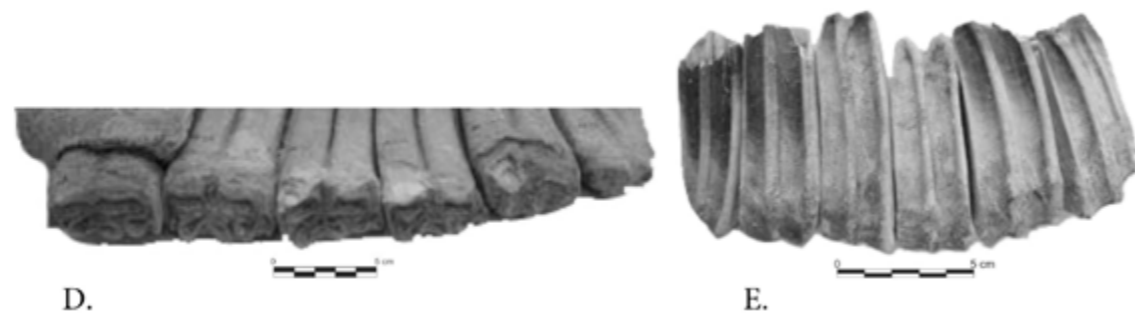
Fig. 3: Distribution in percentage of sheep and/or goat bones according to meat quality

The goat horn from pit 46 was almost complete, with a length of 130 mm, 34.2x25.7 mm basal diameter, and 28.7x18.2 mm diameter around the middle part.

Equus caballus (horse)

Although pretty high in number, horse bones were not very spread on the site. 32 of the 75 identified pieces were teeth. Other bones were nearly evenly spread on the site, not much anatomically related bones were present. Exception is one partial leg (right metatarsus to phalanges, Cx50), and one partial horse skull, broken into small pieces (Cx153). Only teeth remained intact (sizes found in table below):





Tooth (right side)	Length	Breadth	Tooth (left side)	Length	Breadth
I1	16.5	8.5	I1	17.3	8.4
I2			I2	20	9.1
I3	19.3	8.2	I3	20	9.2
P2	35.8	25	P2	36.3	25
P3	28.9	24.3	P3	28.3	26.1
P4	25	25	P4	25.1	26.7
M1	26.1	24.2	M1	25.3	24.5
M2	26.2	24.8	M2	26	28.6
M3	23.8	18.5	M3	23.7	19.6
p2	32.5	15.9	p2	31.3	15.3
p3	29.3	16.5	p3	28.9	16.7
p4	26.7	16	p4	26.2	17
m1	26.6	14.2	m1	26	14.6
m2	28.8	15.8	m2	28.5	17.2
m3	25.6	11.4	m3	25.3	11.4

Tab. 3: Sizes of horse teeth, measured at the biting surface

Only 3 bones were identified as juvenile, 31 fragments came from subadults, and 30 pieces from adults. The few left could not be identified from this point of view. As for artificial marks, 10 bones presented gnawing marks, 10 bones presented cutting marks, and 2 elements seemed boiled. Regarding the meat-quality, equal amount of bones (13.5%) belonged to A and B categories, 29.7% to category C, and 43.3% were teeth. This shows obviously, that horses were primarily kept for their carrying capacity, but not in such a great number, so it might have been the privilege of some social class, maybe depending on status, wealth or position in society.

Some elements provided useful metrical data¹⁶:

¹⁶ Abbreviations after Angela von der Driesch (1976)

Element	GL	Bp	Dp	sb	sd	Bd	Dd	wh
metatar-sus dext	261.5	47.7	45	29.7	28.4	45.8	32	1393.8
phalanx I ant	84	54.4	36.5	33.3	21.5	44.8	23.6	
phalanx I ant	82	53.2	34	32.3	22.2	42.4	22.1	
phalanx I post	77.7	52.4	35	33.7	24	40.7	23.3	
phalanx II ant	45	50.6	29.7	45	21.9	50.5	25.8	
phalanx II ant	42.5	51.1	28.5	43	21	48	20	
phalanx III post	61	62.7						
phalanx III post	53.7							

Tab. 4: Some metrical data of *Equus caballus* bone elements

That one bone that provides possibility to calculate withers height is not enough to draw conclusions. However, after taming of the horses (cca. 4500 B.C.) in the southern Ukraine they were only used as a source of meat. This changed when horses were introduced to Central Europe. Their utilization as draught and saddle-horses became popular only in the 3rd and 1st millennium, and in Central and Eastern Europe this was their primary function for a long time (until the Roman time). Eurasian wild horses displayed withers heights of 125 to 135 cm, and after domestication this could change into bigger or smaller. Very little is known about horses from the territory and period analyzed in the present study, however this individual seems to be a forceful, super-middle type (with withers height belonging to the middle class's second half¹⁷). This size also fits to the medium determined at Otomani¹⁸ (128-145 cm), same sizes of phalanx were measured at Sărata Monteoru¹⁹, bigger than the horse measured at Szombathely-Kámon²⁰ (134.53) and those at Tiszaalpár²¹ (132.37 cm, but emphasizing the fact that these were concluded

¹⁷ After Kiesewalter (1888)

¹⁸ According to Haimovici (1987)

¹⁹ According to Haimovici (1994)

²⁰ According to Vörös (1999)

²¹ According to Bökönyi (1982)

as being smaller than the average). Also, this size fits to the horses described by El Susi²² in a tumulus at Ripiceni, who mentions in her work that the average horse withers height calculated for Romanian Bronze Age by Haimovici is 138.4 cm. Our site being close geographically to this one, we can consider this as good comparative data. Average calculated for Hungarian Bronze Age horses is over 136 cm, so our horses are typical Bronze Age horses on this territory.

Canis familiaris (dog)

The 107 bones found on the site came from a minimal number of only 15 individuals of! Many pits contained partial dog skeletons. According to these bones, most of the animals died in an adult age, only 5 fragments can be defined as subadults, and only 4 as juveniles. This shows that people took good care of their dogs, most of them living a nice number of years. One of the bones was wearing slight gnawing marks (probably from another dog), and one bone looked boiled and was cut. This is analyzed at the description of the Cx4 pit. Also, there was a complete skull found in the pit no. Cx153, along with the horse skull mentioned above. Bones of a juvenile dog were found in ritual pit no. Cx245.

There were only two elements that provided metrical data²³ for withers height calculations:

Element	GL	Bp	Dp	sb	sd	Bd	Dd	wh
femur sin.	186.6	37.4	20	14.3	13.7	33.1	35.7	561.66
femur dext.	154.2	33	15.3	11.6	11.3	26.9	27.3	464.14

Tab. 5: Metrical data of dog bones

Dogs of these sizes are usually called “sheepdogs”, though these two individuals represent two types of very different sizes. Bronze Age dogs are difficult to categorize, because they are not that clearly bred as starting from the Roman Age. Also, they do not

²² According to El Susi (2000)
²³ Abbreviations after Angela von der Driesch (1976)

have an economical importance, so for a long time they were not deeply analyzed. Same situation was noticed at Mîndrișca (Valea Seacă)²⁴ and at Monteoru²⁵: there were no certain types of dogs, but a big variability, with withers heights going from the smaller “palustris” dog (the visibly smaller bones found here) to our bigger type, which is the typical “bronze age dog”, the medium size (shoulder-bone height 53 cm) prehistoric sheep dog, *Canis familiaris matris optima* /Jeittles 1877/²⁶.

Cervus elaphus (red deer)

Some red deer bones were found on the site: 5 antler fragments, one tibia fragment, one metacarpus fragment, one metatarsus fragment and one phalanx II. These appeared in the following pits: Cx15 (two antlers), Cx75 (antler), Cx97 (adult right tibia fragment with cutting marks), Cx195 (antler and nothing else in the pit), Cx224 (adult phalanx II), Cx255 (right metacarpus fragment), ritual pit Cx268 (antler), and Cx329 (right tibia with signs of splitting in more directions on the diaphysis). The presence of red deer not only with antlers indicates that these people were hunting them in a small compass (probably ritually), but also collecting the shed antlers at the end of wintertime. Also, it indicates that deciduous and mixed forests were nearby, dotted with glades and meadows. During the summer, red deer migrate to higher elevations, where food supplies are greater for the calving season, so this explains why only adult bones were found – they were nearby this settlement only in wintertime. Only the phalanx was a complete element, which has a length (GL) of 46.2 mm, and the following parameters²⁷: Bp: 21.1, Dp: 27.2, SD: 14.6, Bd: 18.3, Dd: 26.5.

Lepus europaeus (hare)

29, mostly complete bones were recovered from the site, as follows: a partial skeleton (only post-cranial elements) from pit Cx42 which is interesting because nothing

²⁴ According to Haimovici (1980)
²⁵ According to Haimovici (1994)
²⁶ From Vörös (1996)
²⁷ Abbreviations after Angela von der Driesch (1976)

else was in the pit, a partial skeleton (only post-cranial elements) of a juvenile hare in pit Cx44, one completely burnt tibia fragment in Cx123, another tibia fragment in Cx286, and an ulna fragment in Cx56/S33. The hare lives at similar environmental circumstances, as the red deer: on fields bordering meadows and forests. Presence of these bones and partial skeletons prove that people were hunting them, but probably only ritually or for fun. No cranial elements appeared which means that they probably slaughtered them at the place of hunting, and brought them in the village half-prepared for cooking.

Felis silvestris (cat)

Two cat remains were collected from the site: one metatarsus II from pit S25Cx10, and one metacarpus V from pit Cx123, both adults and without artificial bone alterations. Based on these two small bones, no conclusion can be drawn, only the fact, that cat were present among the animals. Also, these bones could easily have been deposited later than the other ones, or brought in together with the filling soil.

Aves (bird)

Unidentified bird bone (diaphyseal fragment) was found in ritual pit Cx33, without artificial bone alterations, and no possibility to define it more precisely. Still, as this is the only bird remain collected from the whole site, and it happens to be a ritual pit, it is important, because it definitely did not end up in this pit by accident. Even though, no more information exists about it.

Esox lucius (pike)

Usually, fish bones are high in number at sites, but thanks to the collecting methods, they do not end up in the hands of scientists. These bones can be collected only by sieving or sediment-settling methods. Still, sometimes they appear by accident, like this one, stuck in the filling on a Bos taurus humerus fragment. Lucks for us, because

this way we can tell that there were certainly more than this one. It appeared in Cx124, it is a left “mandibular” bone, which is called in fish dentale, with the length of 33 mm. Teeth-like formations are broken, except for 2 of them, the longest one having the height of 7.5 mm.



Pic. 2: *Esox lucius* (pike) – *dentale* bone from medial and superior view, Cx124

Bos primigenius (aurochs)

Many bones were at size limit between Bos taurus and Bos primigenius. For safety, they were all attributed to Bos taurus, but there was one bone fragment which, due to its size, could only be defined as Bos primigenius. It comes from pit Cx239, and although it is a subadultus humerus fragment with strong slashing of the diaphyseal part, and it is broken (so that no sizes can be measured) it still has visibly big dimensions:



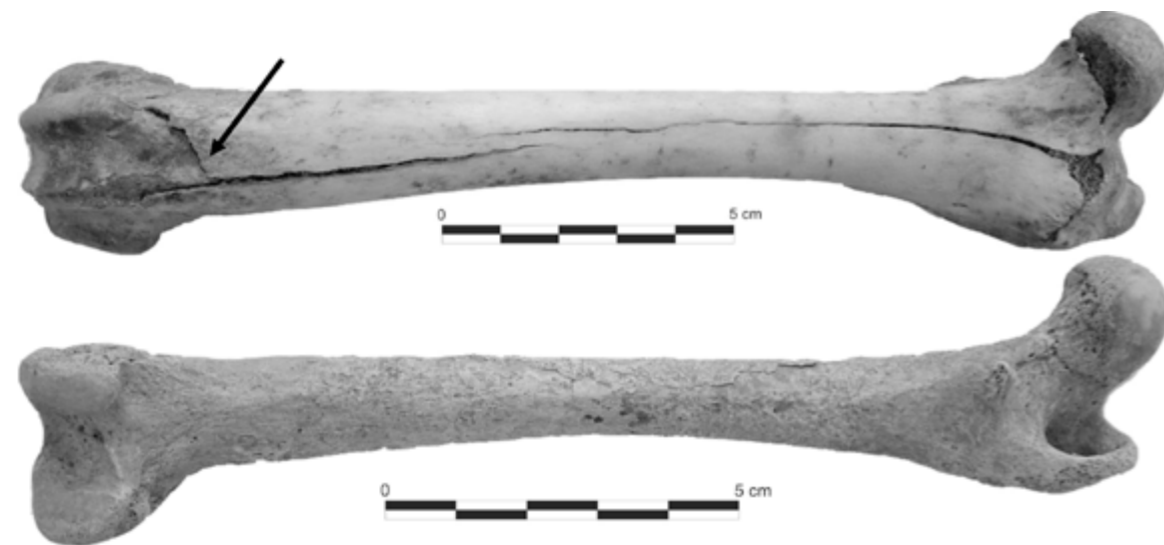
Pic. 3: *Bos primigenius* humerus from pit Cx239 (picture was left with the original background so that the position in space of the ruler remains visible)

II. Description of some pits

There were some pits with interesting bone-content, and some archaeologically determined ritual pits:

Cx4: Content: scapho-cuboid, phalanx 2, and a metatarsus fragment of Bos taurus, skull fragment of a big stature animal, and tibia fragment possibly of Sus scro-

fa. Besides these few fragments and smaller bones the interesting thing is the huge amount of Canid bones, coming from at least 5 different individuals of different ages – there are bones of juvenile dogs, subadults and adults at the same time, in about the same percentage. As expected, cranial bones are very broken, a few teeth are conserved better, and mostly limb bones are more or less complete. Although this is very unusual at this stage, no other uncommon thing appears: no marks, no burns and no sign of eventual butchering. One left femur of an adult is different though in structure: while all the other bones have the same level of weathering, this one looks much better, maybe fresher, maybe even boiled. It has a cutting-mark on the distal part, no conclusions should be drawn however based on this one, though usually it means that the meat was cut down from it.



Pic. 4: left femur of *Canis familiaris* from Cx4 (upper) compared to an average sized and structured right femur bone coming from that particular pit

Cx13: pit defined as ritual, contained more unidentified fragments and splinters, a fragment of cattle rib, some pig bones (a rib, a canine, a mandible fragment, a basisphenoid and a scapula with cutting marks), an Ovicaprinae mandible that was chewed and slashed, and 2 dog bones (maxillar bone fragment and a pelvis fragment). No indication about these bones having been ever connected to each other, thus the pit shows no ritual characteristics from the archaeozoological point of view.

Cx14: In the archaeological description from the site a cranium of an *Ovis aries* was mentioned. Correction is needed, because there is only a *Sus scrofa* cranium in the

bone material, and only one small horn fragment reminds us of a ruminant, but that is *Capra hircus*. The few bones of this pit are all filled with gnawing and cutting marks, except for the almost complete *Sus scrofa* skull.



Pic. 7: Red deer antler from ritual pit no. 268 with measurement points

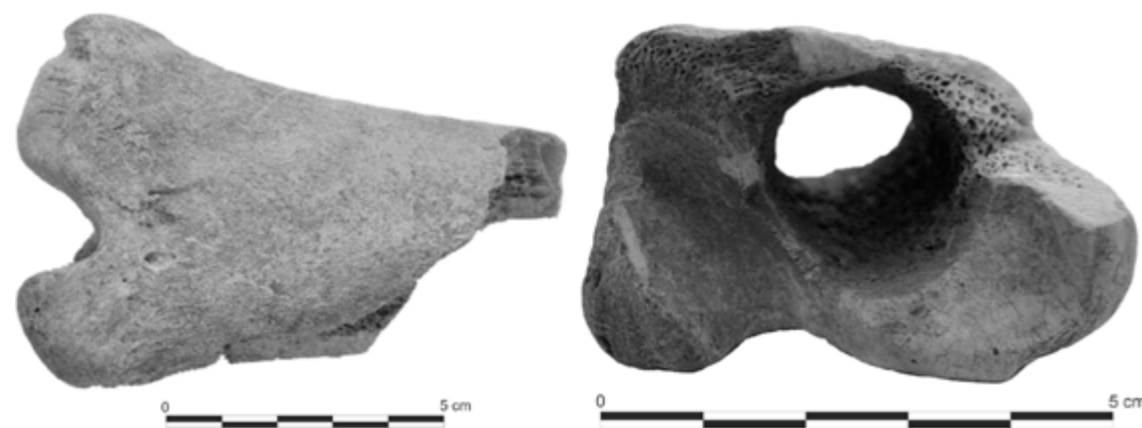
Cx19: Ritual pit, only one diaphysis fragment found in it, coming from a large mammal, but broken into 26 fragments, splinters and bone-ash, so no further information is available.

Cx32: Defined as ritual pit, it contained the following: 5 fragments of unidentified bone elements, a calf's milk-tooth, and the basal part of a cattle horn.

Cx33: Ritual pit, according to the archaeological description, all bones were collected in the inferior part of the pit. Although they were very badly preserved, some of them could still be defined: 16 unidentified fragments, 2 pelvis fragments coming from 2 different, medium sized mammals, 5 cattle bones (a gnawed and cut metacarpus fragment, a cut mandible fragment, 2 upper molars, and a lower premolar), 2 Ovicaprinae teeth (lower premolar and molar), and the only bird bone from the site. Considering the condition of these bones, they were probably under some serious chemical impact, may this be an acid soil, or simply the effect of rotting meat attracting animals, or anything else. However, they were most probably put there on purpose, and interestingly no full body-parts, but individual elements were used.

Cx34: Defined as ritual pit, it contained 2 unidentified bone splinters, 3 cattle bones (gnawed left astragalus, right upper molar, gnawed and very broken scapula), and a slashed sheep or goat mandible fragment.

Cx110: This pit seems to have been interesting also from the archaeological point of view, but there is no information about being any connection though between the worked horse bone and the other findings. It is a right tibia fragment of *Equus caballus*, which has been cut at the medio-distal part, and a smooth, regular hole was drilled in the middle of the distal part, along the longitudinal center of the bone. It may be a grip, a haft/hilt.



Pic. 6: worked horse tibia from pit Cx110, uncertain function

Cx130: The archaeological description mentioned a horse skull, but it was actually a cattle. There were interesting things (pottery, coal, human bones and animal bones) mentioned in the description made on the field, but no afterwards information was communicated about the possibility of a ritual pit. Besides some fragments and teeth of swine, *Ovicaprinae* and one horse tooth, all the other animal bones are coming from *Bos taurus*, at least 3 different individuals, among which partial or complete limbs (right part from pelvis to phalanx, left part from tibia to phalanx, left part from humerus to tarsi), and remains of at least 2 different skulls. This is an unusual composition, but it seems that it had nothing outstanding from the archaeological point of view.

Cx153: The pit provided the fragments and splinters of a horse skull (details at the description of the species) and a dog skull. Interesting appearance together, but it seems that it is only accidental.

Cx176: The pit provided a lot of pig remains, among which at least 3 different individuals could be separated, all were present with partial skeletons, and all were juveniles, even infants! This means that at least 3 small pigs were thrown in this pit. Only one cattle humerus was present near these (besides the unidentified fragments), with strong artificial alterations (gnawed, cutting marks, slashed).

Cx239: The above-mentioned *Bos primigenius* bone was present in this pit, together with a lot of fragments, splinters, an *Ovicaprinae* and a dog tooth, and a *Bos taurus* mandibular fragment. Weren't for the aurochs, the pit would show typical garbage characteristics, but being its presence, this pit must be mentioned separately.

Cx245: Ritual pit, with the following bone-content: 4 cattle bones (2 ribs, a cut metatarsus, a small cranial fragment), one pig upper premolar, 3 juvenile dog bones (cranial fragment, ulna and radius, all with the same slaughter age), and the basal part of a goat horn. Although no information was noted about their positions, still this ensemble deserves the attention.

Cx261: This pit was filled with *Bos taurus* bones (MNE=20), coming from at least 5 different individuals, so no partial skeleton or body-part was deposited. There was a cup mentioned in the archaeological description but no sign of ritual acts here. It is interesting, because one of the interested-looking worked bones (described in the next subchapter) comes from this pit. Also, the right radius found in this pit was wearing abrasion marks on the proximal end. The percentage of 2 out of 20 bones being worked seems unusually high on this settlement.

Cx263: Ritual pit containing bones full of artificial alterations: a rib fragment of a large mammal (gnawed and burnt), two radius fragments of juvenile sheep or goat (both gnawed, one of them burnt), a diaphyseal fragment of a large mammal (slashed), a calcaneus of a calf (severely gnawed and with cutting marks), and a swine scapula (gnawed, cut). Interesting was the presence of a human pelvis (adult male)²⁸ fragment in the pit, which was not noticed by the archaeologists.

²⁸ Defined by Turtóczy József, anthropologist, oral communication

Cx268: Ritual pit containing an undefined cranial fragment, a severely broken femur fragment coming from a large mammal, and a partial antler of a red deer placed on the bottom of the pit. Basal size of the antler is 55.3x45.2 mm, measured right at the pedicle (1). Diameter at the main division (2): 49x31.5 mm. Diameter of the beam: 26.7x28.2 mm (5). Diameter of the brow tine at base: 22x18 mm (3), at middle part: 16.5x16 mm (4). Diameter at the division of bay antler: 38x27 mm (6). Measurement points shown on picture:

This is a shed antler, so no animal was killed by getting it. It was collected by people in the forest nearby, probably at the end of winter/beginning of springtime. This also determines the time of the ritual executed in this pit.



Pic. 7: Red deer antler from ritual pit no. 268 with measurement points

Cx286: Ritual pit with mixed bone content. Besides the unidentified fragments the following bones were found here: tibia of a hare, gnawed metatarsus of a sheep, cut metatarsus of a goat, an almost complete mandible of a goat, a burnt ilium fragment of a sheep or goat, a cut ulna of a pig, and 4 cattle bones (horn fragment, cut pelvis fragment). The other two are interesting: a cranium fragment wearing a broken horn is slashed – this may indicate that people were eating cattle-brain, or they may have slashed it because of some other ritual act. The other cattle bone is a mandible, which

is clearly worked, since it has a slight furbished surface on the labial body. Also, an unidentified small fragment showed an unnaturally plain, polished surface, but as small it was, nothing more can be said about it. This bone ensemble is definitely not accidental, and it strongly confirms the ritual nature of this pit.

III. Worked bones

Many worked bones were found on this settlement, some of them with “usual” artificial marks, some of them highly interesting. Their description will be made in the order of the pit numbers.

- *Bos taurus rib* (Cx9), polished at the ends of the fragment. Typical one, it is the result of rubbing or scrubbing something with it.
- *Bos taurus metatarsus* – medioproximal fragment (Cx31). This is a very interesting worked bone, especially because there were 2 others on the site in different pits (Cx76, Cx261) with the exact same carvings. It is cut and sharpened at the diaphyseal part (medioproximal), drilled at the epiphysis through the whole length of the center of the bone having a regular round shape, and burnt on the inside wall of this whole. The shape reminding of some kind of torches, more theories are made upon these bones’ purpose of use.

First of it is that these bones may have been used to extract tallow-grease for working leather and making it more waterproof (The fat in the marrow can be used to rub into leather making it more water-proof. This fat is called tallow. The holes in the bone could certainly extend through the length of the medullar cavity and are very rounded all through the bone²⁹). This theory lacks the part concerning the bone element: it is usually observed in bones with more marrow (femur, humerus), and they are broken, not deliberately sharpened.

Another theory³⁰ is that they might be some kind of crude lance heads, but these are usually observed in later periods (many such bones from Roman sites with a hole drilled in the proximal end through the length of the tool) being related to metal-working.

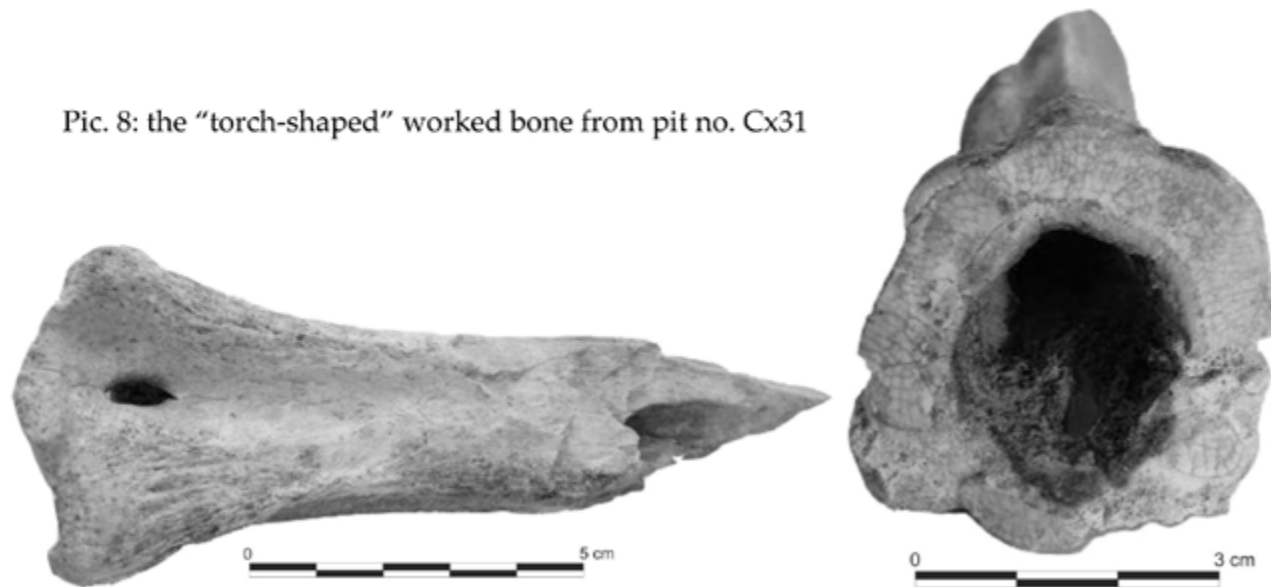
²⁹ Theory provided by Alice Choyke, personal communication

³⁰ Theory provided by François Poplin, personal communication

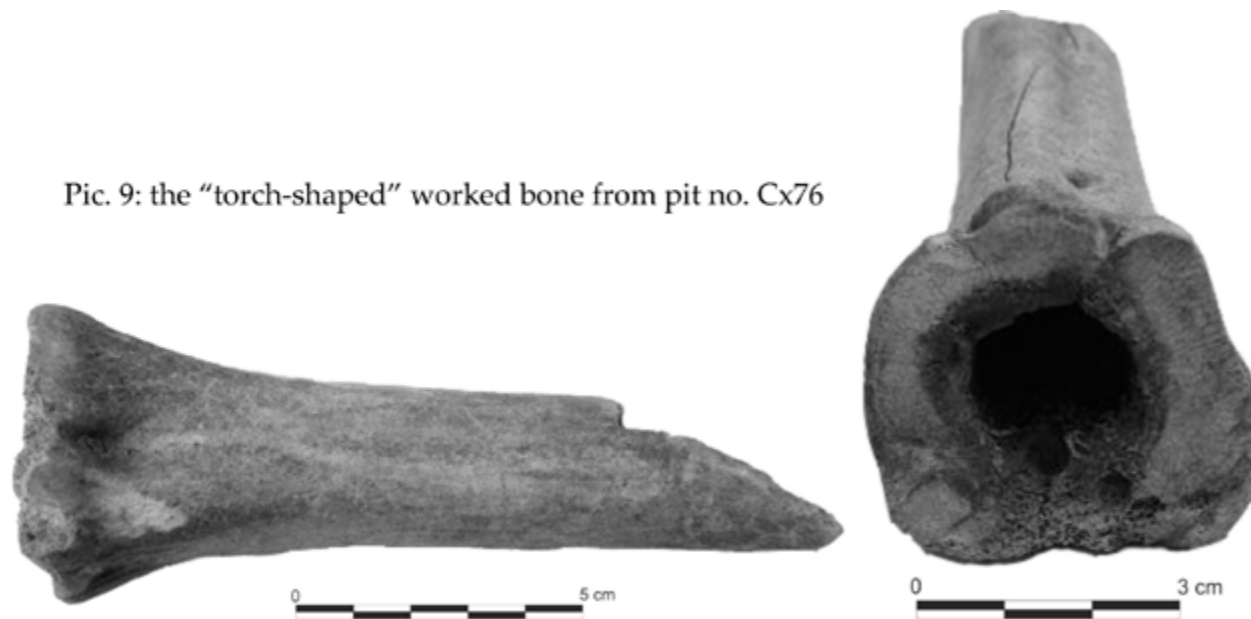
The third theory³¹ is that they might be bone replicas of a type of bronze axe, that are called in France “hache à douille du Bronze final”. This is supported by the fact that they are sharpened at the diaphyseal part, and have a hole at the epiphysis.

Neither of these theories can explain though the fact of the inside burning marks of the drilled holes.

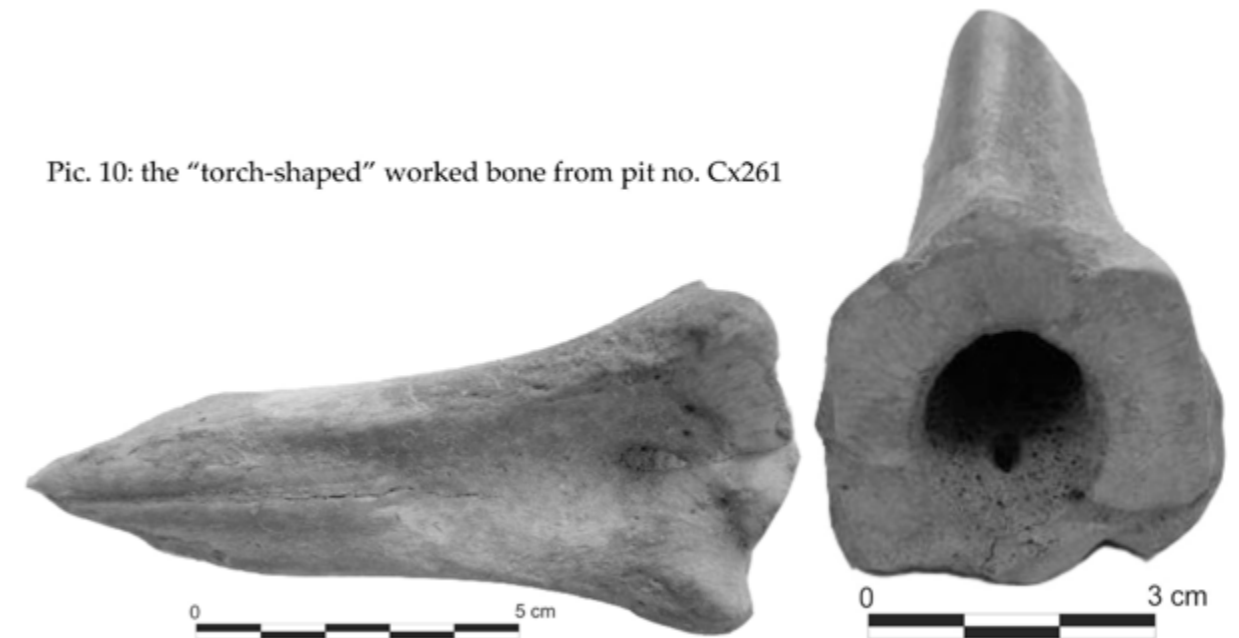
Pic. 8: the “torch-shaped” worked bone from pit no. Cx31



Pic. 9: the “torch-shaped” worked bone from pit no. Cx76



Pic. 10: the “torch-shaped” worked bone from pit no. Cx261



- *Equus caballus* left radius of an adult (Cx62), slight polish marks on the distal end.
- *Equus caballus* right tibia fragment, discussed in the previous chapter at pit no. 110. It may have been used as a grip for something, but in Bronze Age this is difficult to imagine. Also, it could be used in tallow-extraction (method described previously). No evidence whatsoever and no similarities published in Bronze Age.
- Unidentified splinter from a bone tool (Cx110) – unnaturally smooth, shiny and plain surface, but it is too small to describe any more of it.
- Unidentified pelvis fragment (Cx176) with a smoothened surface, probably not a tool, but it was definitely used temporarily for something
- *Equus caballus* left metacarpus (Cx217), cut longitudinally and a “slice” chipped down from it at the proximal part. It is probably a residue of a worked bone, or was just started to be worked on and broke on the way.

³¹ Theory provided by François Poplin, personal communication



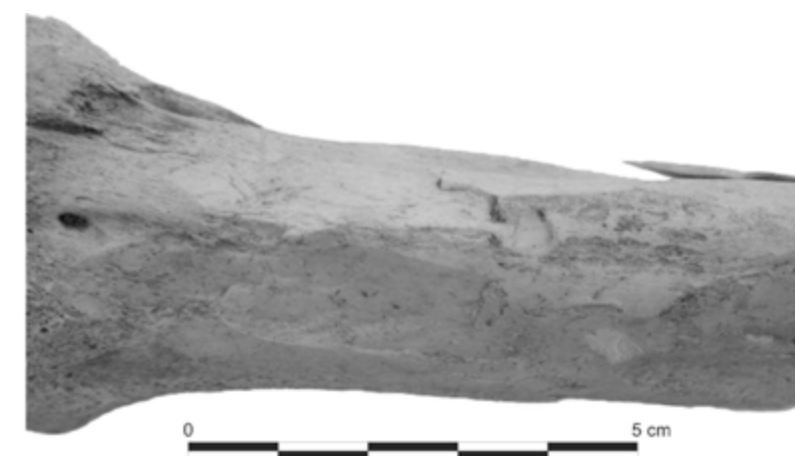
Pic. 11: horse metacarpus (Cx217), slashed and chopped

- *Bos taurus* right radius (Cx261) wearing abrasion marks on the proximal end, which means that it was probably started to be used for something.



Pic. 12: cattle radius from pit no. Cx261 with artificial alteration at the proximal end, complete view (upper) and zoomed on proximal end (lower)

- *Bos taurus* metacarpus (Cx273) with signs of chipping or some kind of carving, the surface of the bone looks as if splinters would have been chipped out of it one after the other.



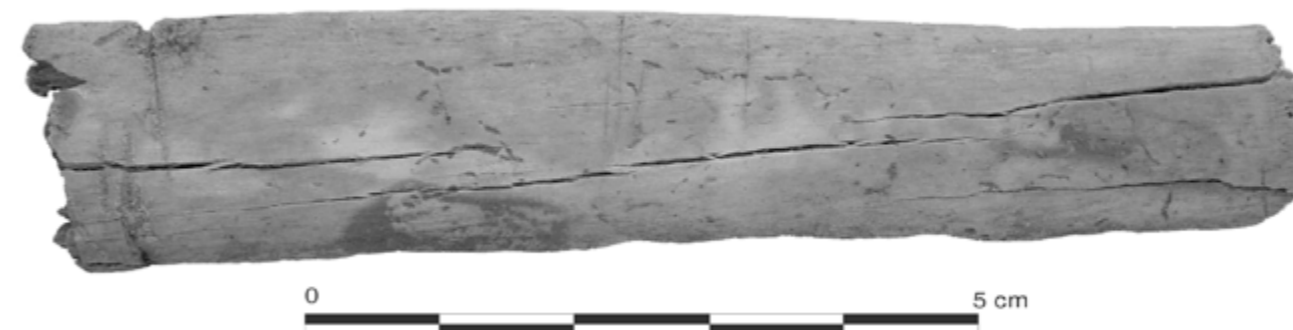
Pic. 13. chipped cattle metatarsus (Cx273)

- Unidentified small fragment (Cx286) described previously, showing an unnaturally plain, polished surface, but as small as it was, nothing more can be said about it
- *Bos taurus* mandibular fragment (Cx286), which has a slightly furbished surface on the labial body, clearly artificial

IV. Some other interesting bone elements

For a final chill-out, let's see some interesting, artificial or natural bone alterations.

- ♦ Cutting marks on a *Bos taurus* rib fragment from pit Cx13, evidence of having the meat sliced down from it with a small, thin, sharp tool:



Pic. 14. cutting marks, pit Cx13

♦ Goat horn which was slashed, or more like sawn, reasons unknown, pit Cx14:



Pic. 15: Sawing mark, Cx14

♦ Bones deposited in anatomical connection – these horse bones (left metatarsus, metatarsi sec., scaphoid, cuboid, big cuneiform) are perfectly fitting to each other, Cx50:



Pic. 16: related horse bones, Cx50

♦ Pathological irregularity on a dog mandible in pit Cx110 – a healed alveolus may be evidence of human care: a dog cannot hunt or eat that well after losing an important tooth, but this individual survived long after.



Pic. 17: healed alveolus in dog mandibula, Cx110

♦ Burnt rabbit tibia from pit Cx123 – the bone was directly thrown into the fire, probably after meal.



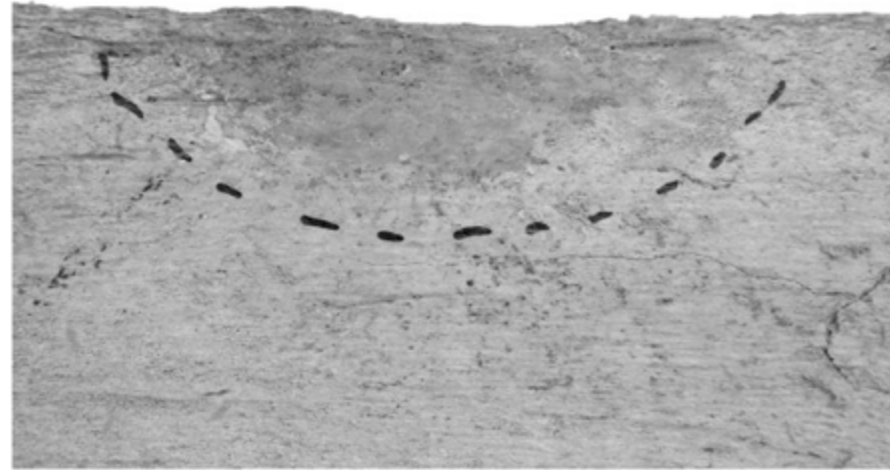
Pic. 18: burnt rabbit tibia, Cx123

♦ Example of plant root-marks on the surface of the bone, as evidence of its being deposited on a relatively high level, close to the ground-surface:



Pic. 19. plant-root erosion on a rib, Cx211

♦ Example of discoloration caused by chemical reaction – usually it turns greenish when some metal object lies next to it for a longer period of time (copper for example) and it is induced by oxidation:



Pic. 20: greenish discoloration, Cx226.03

♦ Cutting, striking, smashing marks on a cattle pelvis fragment, the meat was probably cut down with a bigger, heavier tool:



Pic. 21: heavy cutting marks on a cattle pelvis, C248

♦ Pathological anomaly can be observed on a horse phalanx in the form of small exostosis caused probably by inflammation, arthritis, exertion or maybe a young-age bumping.



Pic. 22: exostosis on a horse phalanx, Cx248

Summary:

The first among domestic animals bred by this population were, as usual in this region, the cattle because they provided besides meat, also milk, leather etc. The other species that follow cattle in number are, also as usual, swine, sheep and goat, horses and dogs, and the site provided minimal, but important amount of wild animals, such as rabbit, red deer, fish, cat, and one indeterminable bird bone. These suggest that deciduous and mixed forests were nearby, dotted with glades and meadows, and people living in these settlements were collecting the shed antlers at the end of wintertime. Presence of pike indicates a sluggish stream or shallow lake nearby. Several bones were worked on and with.

Bibliography

BARTOSIEWICZ, L. (?): *Are "Autochthonous" Animal Breeds Living Monuments?*. Support of: Grant T047228 of the Hungarian Scientific Research Fund entitled „Anatomical and pathological investigations on the skeleton of domestic animals: the use of recent observations in the interpretation of archaeological finds”, p. 33-47

BERENDI, E. (2009): *The Archaeozoological Description of the Faunal Material*, in: *The Late Bronze Age Settlements of Petea-Csengersima*, Editura Muzeului Sătmărean, Satu Mare, p. 181-189

BOESSNECK J., MULLER H. und TEICHERT M. (1964): *Osteologische Unterschiede zwischen Schaf und Ziege*. Kuhn Archiv, 78, p. 1-129

BÖKÖNYI, S. (1982): *Állatmaradványok a tiszalparti bronzkori földvár ásatásai*. In: *Cumania VII*, Archaeologia, Acta Museorum ex Comitatu Bács-Kiskun, Kecskemét, p. 119-132, 269, 270

BÖKÖNYI, S. (1984): *A soroksári botanikusoktól feltárt korabronzkori áldozati gödrök állatmaradványai*. In: *Budapest Régiségei*, XXVI, p. 145-151

DRIESCH, A. von der (1976): *A Guide to the Measurement of Animal Bones from Archaeological Sites*. Peabody Museum Bulletin 1. Peabody Museum of Archaeology and Ethnology Harvard University, p. 19-101

EL SUSI, G. & BURTĂNESCU, F. (2000): *Un complex cu schelete de cai din epoca bronzului descoperit într-un tumul la Ripiceni (Jud. Botoșani)*. In: *Thraco-Dacica*, tomul XXI, nr. 1-2, București, p. 257-263

HAIMOVICI, S. (1980): *Studiul materialului paleofaunistic din așezarea de la Mîndrișca (Valea Seacă) aparținând culturii Monteoru*. In: *Carpica XII*, Bacău, p. 191-201

HAIMOVICI, S. (1987): *Studiul paleofaunei din așezarea eponima a culturii otomani – epoca bronzului*. *Crisia* 17, p. 37-54

HAIMOVICI, S. (1994): *Studiul unui lot de paleofaună provenit din așezarea eponimă a culturii Monteoru*. In: *Arheologia Moldovei*, XVII, p. 309-319

HELMER, D. & ROCHETEAU, M. (1994): *Atlas du Squelette Appendiculaire des principaux Genres Holocènes de Petits Ruminants du Nord de la Méditerranée et du Proche-Orient (Capra, Ovis, Rupicapra, Capreolus, Gazella)*. N° 4 Fiches d'Osteologie Animale pour l'Archéologie, série B: Mammifères. APDCA, Juan-les-Pins, p. 3-21

KIESEWALTER, L. (1888): *Skelettmessungen am Pferde*. Inaugural – Dissertation, Universität Leipzig, p. 1-38

MARTA, L. (2009): *The Late Bronze Age Settlements of Petea-Csengersima*, Editura Muzeului Sătmărean, Satu Mare

Pales, L. et Lambert C. (1971): *Atlas ostéologique pour servir à l'identification des mammifères du Quaternaire, I. Les membres Herbivores*. Éditions du CNRS, Paris

Pales, L. et Lambert C. (1971): *Atlas ostéologique pour servir à l'identification des mammifères du Quaternaire, I. Les membres Carnivores*. Éditions du CNRS, Paris

PRUMMEL, W. (1987): *Atlas for identification of foetal skeletal elements of Cattle, Horse, Sheep and Pig. Part I*. In: *Archaeozoologia*, p. 23-30

PRUMMEL, W. (1987): *Atlas for identification of foetal skeletal elements of Cattle, Horse, Sheep and Pig. Part II*. In: *Archaeozoologia*, vol 1 (2), p. 11-42

PRUMMEL, W. (1988): *Distinguishing features on postcranial elements of cattle, Bos primigenius f. taurus, and red deer, Cervus elaphus*. *Schriften aus der Archäologisch-Zoologischen Arbeitsgruppe, Schleswig-Kiel*, Kiel 1988

RADU, V. (2005): *Atlas for the Identification of Bony Fish Bones from Archaeological Sites*. Editura Contrast, București

SCHMID, E. (1972): Atlas of Animal Bones. Knochenatlas. Elsevier Publishing Company, Amsterdam, London, New York

TEICHERT, M. (1975): Osteometrische Untersuchungen zur Berechnung der Widerristhöhe bei Schafen. In: Archaeozoological Studies, ed. Clason, A.T., Amsterdam-Oxford-New York, p. 51-69

TEICHERT, M. (1993): Size and utilisation of the most important domesticated animals in Central Europe from the beginning of domestication until the Middle Ages. In: Skeletons in her Cupboard, ed. Anneke Clason, Sebastian Payne and Hans-Peter Uerpmann, Oxbow Monograph 34, 1993, p. 235-238

UERPMANN, H.-P. (1973): Animal bone finds and economic archaeology. World Archaeology 4, p. 308-309

VITT, O.V. (1952): Losadi pazyrykskih kurganov. SA 16, p. 163-205

VÖRÖS I. (1995): *Étel- és állatáldozat leletek Nagydém-Középrépáspuszta középső bronzkori temetőjében.* In: Acta Musei Papensis – Pápai Múzeumi Értesítő 5-1995, p. 149-155

VÖRÖS I. (1996): *Dog as building offering from the Bronze Age tell at Jászdózsa.* In: Folia Archaeologica XLV., 1996, Budapest, p. 69-90

VÖRÖS I. (1999): *Szombathely-Kámon késő bronzkori település állatcsontleletei.* In: Savaria - a Vas megyei múzeumok értesítője, Szombathely, Pars Archaeologica 24/3 (1998-1999), p. 291-307

VÖRÖS I. (2001): *Csongrád-sertéstelep bronzkori állatcsontleletei.* In: MFMÉ – StudArch VII (2001), p. 161-175

BIBLIOGRAPHIC ABBREVIATIONS

ActaArchHung	Acta Archaeologica Academiae Scientiarum Hungaricae, Budapest.
AÉ	Archeologiai Értesítő, Budapest.
AMN	Acta Musei Napocensis, Cluj-Napoca.
AMP	Acta Musei Porolissensis, Zalău.
AnBanat	Analele Banatului, Timișoara.
Apulum	Apulum, Acta Musei Apulensis, Alba Iulia.
Bericht RGK	Bericht der Römisch–Germanischen Kommission, Mainz a Rhein.
BiblMarmatia	Bibliotheca Marmatia, Baia Mare.
BiblThrac	Bibliotheca Thracologica, București.
BMA	Bibliotheca Musei Apulensis, Alba Iulia.
BMM	Bibliotheca Musei Marisensis
BMN	Bibliotheca Musei Napocensis, Cluj.
CCAR	Cronica cercetărilor arheologice din România, București.
CercArh	Cercetări Arheologice. Muzeul Național de Istorie a României, București.
ComArchHung	Communicationes Archaeologicae Hungariae, Budapest.
Crisia	Crisia, Oradea.
Dacia	Dacia. Recherches et Découvertes Archéologiques en Roumanie, București.
Dacia N.S.	Dacia, Nouvelle série: Revue d'archéologie el d'histoire ancienne, București.
DMÉ	A debreceni Déri Múzeum Évkönyve, Debrecen.
EphNap	Ephemeris Napocensis, Cluj-Napoca.
FA	Folia Archaeologica. Budapest.
FontesArchPrag	Fontes Archaeologici Pragenses. Praha.
FontesArchHung	Fontes Archaeologici Hungariae. Aedes Academiae Scientiarul Hungarie. Budapest.
Germania	Germania. Anzeiger der Römisch- Germanischen Kommission des Deutschen Archäologischen Instituts, Mainz.
JRGZM	Jahrbuch des Römisch–Germanischen Zentralmuseums zu Mainz, Mainz.
Mamația	Marmația, Baia Mare.
Materiale	Materiale și cercetări arheologice, București.
Marisia	Marisia, Târgu Mureș.
MFMÉ	Móra Ferenc Múzeum Évkönyve, Szeged.
MFMÉ- StudArch	Móra Ferenc Múzeum Évkönyve- Studia Archaeologica, Szeged.
NyJAMÉ	A nyíregyházi Jós András Múzeum évkönyve, Nyíregyháza.
PAS	Prähistorische Archäologie in Südosteuropa.
PBF	Prähistorische Bronzefunde.

RKM	Régészeti kutatások Magyarországon. Archaeological Investigations in Hungary.
PZ	Prähistorische Zeitschrift, Berlin.
RevBistriței	Revista Bistriței, Muzeul Județean Bistrița, Bistrița.
Satu Mare StCom	Satu Mare. Studii și Comunicări, Satu Mare.
SCIV(A)	Studii și cercetări de istorie veche (și arheologie), București.
SlovArch	Slovenská Archeológia, Nitra.
StudHon	Studia Honoria
StudIstBan	
SympThrac	Symposia Thracologica, București.
Thraco-Dacica	Thraco-Dacica. Institutul de tracologie, București.
UPA	Universitätsforschungen zur Prähistorischen Archäologie.
VAH	Varia Archaeologica Hungarica, Budapest.
Východ Prevek	Východoslevenský Prevek, Košice.

BIBLIOGRAPHY

Andrițoiu 1992	I. Andrițoiu, <i>Civilizația tracilor din sud-vestul Transilvaniei în epoca bronzului</i> . BiblThrac 2. București
Bader 1978	T. Bader, <i>Epoca bronzului în nord-vestul Transilvaniei – Die Bronzezeit in Nordwestsiebenbürgen</i> . București 1978.
Bader–Dumitrașcu 1970	T. Bader – S. Dumitrașcu, <i>Săpături arheologice la așezarea de tip Otomani de la Medieșul Aurit. Les foilles archéologiques dans l’etablissement de type Otomani de Medieșu Aurit</i> . Materiale 9, 1970, p. 127-136.
Bader–Lazin 1980	T. Bader, Gh. Lazin, <i>Mărturii arheologice din județul Satu Mare</i> . Satu Mare.
Balahuri 1972	E. A. Balahuri, <i>Šelestvske gorodišce-pamiatka naslenia rannioznoii dobe Zakarpattia</i> , in <i>Doslidjenia starodavnioi istorii Zakarpattia</i> . Užgorod, 1972, p. 9-75.
Bartk 1996	J. Bartík, <i>Sídlinsko sdredodunajkej mohylovrv kultúry vo veselom</i> , SlovArch, XLIV, 2, p. 1989-252.
Bălan 2009	G. L. Bălan, <i>Cronologia și tipologia dălților de bronz cu toc de înmănușare din România</i> [Chronology and typology of the bronze socketed chisels from Romania], <i>Apulum</i> , XLVI, 2009, p. 1-40.
Bejinariu 2001	I. Bejinariu, <i>Late bronze age in the depression of Șimleu</i> . In: (ed. C. Kacsó) <i>Der nordkarpatische Raum in der Bronzezeit. Symposium Baia Mare 7-10 Oktober 1998</i> . p. 157-174.
Bejinariu 2003	I. Bejinariu, <i>Epoca bronzului în Depresiunea Șimleului</i> , (teză de doctorat), Alba Iulia, 2003.
Bejinariu 2005	I. Bejinariu, <i>Contribuții la cunoașterea metalurgiei bronzului în nord-vestul României (cursul superior al Crasnei și Barcăului)</i> [Beiträge zur Kenntnis der Bronzemetallurgie im Nordwesten Rumäniens (unter Berücksichtigung des Oberlaufes von Cransa und Barcău)], inT. Soroceanu (hrsg.) <i>Bronzefunde aus Rumänien. Beiträge zur Verröfentlichung und Deutung bronze- und älterhallstattzeitlicher Metallfunde in europäischen Zusammenhang II. / Descoperiri de bronzuri din România. Contribuții la publicarea și interpretarea descoperirilor de metal din epoca bronzului și din prima vârstă a fierului în context european II</i> . Bistrița – Cluj Napoca 2005, p. 47-74.
Bejinariu 2007	I. Bejinariu, <i>Depozitul de bronzuri de la Brâglez (comuna Surduc, județul Sălaj)</i> [Der Bronzefund von Brâglez], Cluj Napoca 2007.
Bejinariu 2009	I. Bejinariu, <i>The Settlement fron Recea –Sulduba valley, Sălaj county. Contributions to the knowledge of Late Bronze Age Habitat in north-western Romania</i> . In: Berecki S., Németh E.R., Rezi B. (ed.) <i>Bronze Age Communities in the Carpathian Basin. Proceedings of the International Colloquium from Târgu Mureș, 24-26 Oktober 2008</i> , BMM, Seria Archaeologica I., Cluj Napoca 2009, p. 183-201.
Bejinariu 2010	I. Bejinariu, <i>Der Bronzeäxtehort von Fântânele-Rus (Gem. Rus, Kreis Sălaj)</i> . In: T. Soroceanu (ed.) <i>Bronzefunde aus Rumänien III / Descoperiri de bronzuri din România III</i> (under print).
Bejinariu et alii 2004	I. Bejinariu–A. Istrate–D. Pop–P. L. Szöcs, <i>Nyíregyháza – Oros, Űr-Cserétől délre</i> , in RKM, 2004, p. 257

Bejinariu–Lakó 1996 Bejinariu–E. Lakó, Despre sondajul arheologic de la Cehei, punctul „Misig”. In: AMP, 20, 1996, p. 11-33.

Bejinariu–Lakó 2000 I. Bejinariu–É. Lakó, Contribuții la cunoașterea Bronzului Târziu din nord-vestul Românei. Așezarea de la Crasna.-Archäologischen beiträge bei der Kennenlernen der Spätbronzezeit im Nord-Westen Rumäniens. Die Siedlung von Crasna, Kr. Sălaj. AMP 23,1., p. 163–219.

Bejinariu–Lakó–Sana 2004 I. Bejinariu–É. Lakó–D. Sana, Materiale arheologice din epoca bronzului de la Doh (Com. Măieriște), Jud. Sălaj.-Bronze Age Archaeologic Materials from Doh (the Măieriște commune, Sălaj County ActaMP XXVI. p. 111–131.

Bejinariu–Székely–Sana 2008 I. Bejinariu–Z. Székely–D. V. Sana, Régészeti ásatások a Nyíregyházát keletről elkerülő úton (26. és 33. lelőhely) Előzetes jelentés. Az Oros – Űr-Cserétől északra elkerült bronzkori régészeti leletek, in NyJAMÉ, 50, 2008, p. 191-224.

Bejinariu–Székely–Sana 2009 I. Bejinariu–Z. Székely–D. V. Sana, Săpăturile arheologice de salvare pe șoseaua de centură a orașului Nyíregyháza. Descoperirile arheologice din epoca bronzului din punctul „Űr-Csere”, in Marisia, 29, p. 57-85.

Becker 1995 C.Becker, Zur Rekonstruktion von Aktivitätsmustern in spätbronzezeitlichen Haushalten, untersucht am Fundmaterial aus Kastanas (Nordgriechenland). PZ 70/1, p. 96-114.

Becker 1998 C. Becker, Can animal bones reflected household activities? A case study from a prehistoric site in Greece. In: Man and the animal world. Studies in archaeozoology, archaeology and paleolinguistics in memoriam Sándor Bökönyi. Archaeolingua, p. 79-86.

Blischke 1997 J. Blischke, Fingerringschmuck auf dem Bronzezeitlichen Gräberfeld von Tápe in Ungarn, in C. Becker, M.-L. Dunkelman, C. Metzner-Nebelsick, H. Peter-Röcher, M. Roeder, B. Teržan (ed.) Chronos. Festschrift für B. Hänsel, IA Stud-Hon 1, Berlin 1997, p. 325-334.

Boroffka 1994 N. G. O Boroffka, Die Wietenberg-kultur. Ein Beitrag zur Erforschung der Bronzezeit in Südosteuropa. UPA. Bonn.

Boroffka 1994a N. G. O. Boroffka, Probleme der jungbronzezeitlichen Keramik in Ostungarn und Westrumänien. In: H. Ciugudean and N. Boroffka (ed.) The Early Hallstatt Period (1200-700 B. C.) in South-Eastern Europe, p 7-23. Symposium Alba Iulia 10-12 iunie 1993, p. 7-23.

Boroffka 1999 N. G. O. Boroffka, Probleme der späten Otomani-Kultur. Kultura Otomani-Füzesabony-rojwój, chronologia, gospodarka. Materiały z konferencji archeologicznej-Dukla, 27-28.11.1997. Krosno, p. 113-130.

Boroffka–Ridiche 2005 N. G. O Boroffka–F. Ridiche, Der Gußformenfund von Plenița, Kreis Dolj, Rumänien. Descoperiri de tipare pentru turnarea bronzului de la Plenița, județul Dolj. In: T. Soroceanu (ed.), Bronzefunde aus Rumänien/ Descoperiri de bronzuri în România II, Bistrița– Cluj Napoca, p. 133-208.

Borsy 1961 B. Zoltán: A Nyírség természeti földrajza. Dr. Bulla Béla (ed), Akadémiai Kiadó, Budapest, 1961. Földrajzi Monográfiák V. kötet.

Bóna 1959 I. Bóna, Chronologie der Hortfund vom Koszider-typus, ActaArchHung, 9, 1959, p. 213-243.

Bóna 1975 I. Bóna, Die mittlere Bronzezeit Ungarns und ihre südöstlichen Beziehungen. ArchHung 49.

Bóna 1986 I. Bóna, Szabolcs-Szatmár megye régészeti emlékei I. In: Entz Géza (ed.) Szabolcs-Szatmár megye műemlékei. Akadémiai Kiadó, Budapest, p. 15-91.

Bóna 1992 I. Bóna , Bronzeuguß und Metallbearbeitung bis zum Ende der mittleren Bronzezeit. In (ed. W. Meyer–Arendt) Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss, F. am Main, p. 48-65.

Chidioșan 1980 N. Chidioșan, Contribuții la istoria tracilor din nordvestul Românei. Așezarea Wietenberg de la Derșida. Oradea.

Chidioșan–Emődi 1982 N. Chidioșan–I. Emődi, Grupul cultural Igrîța de la sfârșitul epocii bronzului.-Le groupe culturel d’ Igrîța de la fin de l’âge du bronze. Crisia 12. p. 61-86.

Chidioșan–Emődi 1983 N. Chidioșan–I. Emődi, Descoperirile arheologice din peștera Izbândiș (comuna Șuncuiuș) aparținând grupul cultural Igrîța, Crisia 13, 1982, p. 17-23.

Ciugudean 1997 H. Ciugudean, Considerații privind sfârșitul culturii Wietenberg. Cercetări privind epoca bronzului și prima epocă a fierului în Transilvania. BMA, VII. Alba Iulia, p. 65-97.

Demeterová 1984: S. Demeterová, Influence de la culture de Suciu de Sus dans la plaine de la Slovaquie orientale.-Влияние культуры Сучью-де-Сус в Восточнословацкой низменности. SlovArch 32. p. 11-74.

Dietrich 2010 O. Dietrich, Vom Meißel zum Beil? Einige Gedanken zu den frühesten Tüllenbeilen im Karpatenbecken ausgehend von den Tüllenmeißeln vom Typ Bullendorf, in (H. Pop, I. Bejinariu, S. Băcuet–Crișan, D. Băcuet–Crișan ed.) Identități culturale locale și regionale în context european – Studii de arheologie și antropologie istorică. In Memoriam ALEXANDRI V. MATEI, Cluj Napoca 2010 (under print).

Dumitrașcu 1983 S. Dumitrașcu, O nouă cultură arheologică protoistorică recent descoperită și studiată: cultura Biharea (Br.CD-Ha. A1), Carpica, 1983, p. 105-116

Dumitrașcu 1989 S. Dumitrașcu, Contribuții la cunoașterea tehnologiei metalurgiei din epoca bronzului în județul Bihor [Contributions à la connaissance de la technologie de la metallurgie du bronze dans la département de Bihor], Crisia, 19, 1989, p. 119-168.

Dumitrașcu 1994 S. Dumitrașcu, Biharia I. Săpături arheologice (1973-1980). Oradea

Dumitrașcu–Sfrengeu–Sărac 1997 S. Dumitrașcu–F. Sfrengeu–N. Sărac, Două complexe de cult descoperite la Tășad. Contribuții la cunoașterea tehnologiei perioadei de început a epocii fierului (Ha A1–A2). Analele Universității din Oradea, Seria Istorie–Arheologie, VI–VII, 1996-1997, p. 5-17.

Dušek 1969 M. Dušek, Birituelles Gräberfeld der Karpatenländischen Hügelgräberkultur in Dolný Peter. In: Bronzezeitliche Gräberfeld in der Südwestslowakei. ArchSlov-Fontes IV, 1969, p. 50-81.

Eliade 2008 M. Eliade, Tratat de istorie a religiilor, 4, București, 2008.

Emődi 1980 I. Emődi, Necropola de la sfârșitul epocii bronzului din peștera Igrîța. -Das Spätbronzezeitliche Gräberfeld der Igrîța-Höhle. SCIVA 31/2, p. 229-273.

Fischl–Kiss–Kulcsár 2001 K. Fischl–V. Kiss–G. Kulcsár A hordozható tűzhelyek használata a Kárpát-medencében. I. Középső bronzkor. ΜΩΜΟΣ I. Fialat Őskoros Kutatók I. Összjövetelének konferenciakötete. Debrecen, 1997. November 10-13, p. 163-193.

Fischl–Kiss–Kulcsár 2001a K. Fischl–V. Kiss–G. Kulcsár: Beiträge zum gebrauchder tragbaren Feurherde (Pyraunoi) im Karpatenbecken II. (Späbronzezeit-Früheisenzeit). In: (ed. C. Kacsó), Der nordkarpatische Raum in der Bronzezeit. Symosium Baia Mare 7.-10. Oktober 1998, p. 125-156.

Frisnyák 1993 S. Frisnyák Szabolcs-Szatmár-Bereg megye földrajzi képe. In.: (ed. Cservenyák László) Szabolcs-Szatmár-Bereg megye monográfiája. 1. Történelem és kultúra. Nyíregyháza 1993., p. 14-63

Frisnyák 2001 S. Frisnyák, Antropogén tájformálás a Kárpát-medencében. In.: Társadalom, kultúra, természet. Tanulmányok a 60 éves Bellon Tibor tiszteletére. Karcag-Szeged-Szolnok 2001, p. 119-132.

Frisnyák 2002	S. Frisnyák, A kultúrtáj kialakulása és terjedése a Nyírség és a Felső-Tisza vidékén. In: S. Frisnyák (ed.), Nyírség és Felső-Tisza-vidék történeti földrajza. Nyíregyháza, 2002, p. 87-100.
Frisnyák 2004	S. Frisnyák, A kultúrtáj kialakulása és terjedése a Nyírség és a Felső-Tisza vidékén. In: Á. Hanusz (ed.), A kultúrtáj kialakulása a Kárpát-medencében. Történeti földrajzi tanulmányok. Nyíregyháza 2004, p. 23-37.
Emődi 1997	I. Emődi, Descoperiri de la sfârșitul epocii bronzului din Peștera Ungurului (jud. Bihor).-Bronzezeitliche Entdecckungen von Peștera Ungurului. Kreis Peștera Bihor. ActaMN 34/I, p. 485-504.
Furmánek 1980	V. Furmánek, Die Anhänger in der Slowakei. Fundstoff – Verzeichnis der Museen und Sammlungen, PBF XI, 3, München 1980.
Furmánek–Illášová–Marková 1999	V. Furmánek–L. Illášová–K. Marková, Metallgießerei in Vcelince. In: L. Moho–E. Miroššayová (ed.) Archaeometallurgy in the Central Europe, 1999, p. 7-15.
Furmanek–Marková 2001	V. Furmánek–K. Marková, Beitrag der Ausgrabung der Siedlung in Včelnice zur Problematik der Bronzezeit im Theissgebiet. Der Nordkarpatische Raum in der Bronzezeit. Symposium Baia Mare 7-10 Oktober 1998. p.105-124.
Furmánek–Veliačik–Vladár 1991	V.Furmánek–L. Veliačik–J. Vladár, Slovensko v dobe bronzovej.-Die Slowakei in der Bronzezeit. Bratislava.
Gindele et alii 2004	R. Gindele–A. Matei–C. Virag–D. Băcueț-Crișan–S. Băcueț-Crișan, L. Marta, H. Pop, Zs. Székely, I. Bejinariu, D. Sana, Nyíregyháza – Oros, Úr-Csere, in RKM, 2004, p. 257.
Gogáltan 1999	F. Gogáltan, Bronzul timpuriu și mijlociu în Banatul românesc și pe cursul inferior al Mureșului. Cronologia și descoperirile de metal [Die frühe und mittlere Bronzezeit in Rumänischen Banat und am unterlauf der Marosch. Der Chronologie und die Metallfunde], Timișoara 1999.
Gogáltan 2001	F. Gogáltan, The Settlement of Cășeu and Some Problems Concerning the Late Bronze Age in the Center and Northern Transylvania. In: C. Kacsó (ed), Der nordkarpatische Raum in der Bronzezeit. Symosium Baia Mare 7-10 Oktomber 1998. p. 191-214.
Gogáltan 2008	F. Gogáltan, Fortificațiile tell-urilor epocii bronzului din bazinul carpatic. O privire generală. AnBanatului, XVI, p. 81-100.
Gogáltan–Florea 1994:	F. Gogáltan–G. Florea, Săpături arheologice la Gligorești (jud. Cluj). Apulum XXXI, p. 9-38
Gucsi 2001	L. Gucsi, A bronzkori speciális házikerámiák használatának kérdése. The Question of the Use of Special Domestic Pottery in the Bronze Age. ΜΩΜΟΣ I.” Fiatal Őskoros Kutatók”. Összejövetelének konferenciakötete. Debrecen, 1997, november 10-13. p. 195
Gumă 1993:	M. Gumă, Civilizația primei epoci a fierului în sud-vestul României. BiblThrac IV. București.
Gumă 1995	M. Gumă, The end of the Bronze Age and the beginning of the Early Iron Age in south-western Romania, western Serbia and north-western Bulgaria. A short review. Thraco-Dacica 16, p. 93–137.
Gumă 1997	M. Gumă, Epoca bronzului în Banat. Timișoara.
Hänsel–Kalicz 1986	B. Hänsel–N. Kalicz, Das Bronzezeitliche Gräberfeld von Mezőcsát, Kom. Borsod, Nordostungarn. BRGK 67, p. 5-88.
Heeb–Szentmiklósi–Wiecken 2008	B. S. Heeb–A. Szentmiklósi–J. M. Wiecken, Zu den Wallringen von Cornești Iarcuri, Jud. Timiș, Rumänien – Forschungsgeschichte und neueste Untersuchungen. PZ, 83/2, p. 179
Hellebrandt 1991	M. B. Hellebrandt, A Pilinyi kultúra nyomai Emőd-Tűzép lelőheyről, in HOMÉ, 28-29, 1991, p. 19-29.

Hellebrandt 2003	M. B. Hellebrandt, Urzeitliche erdwälle und wasserburgen. In: C. Kacsó (ed.) Bronzezeitliche Kulturerscheinungen im karpatischen Raum. Die Beziehungen zu den benachbarten Gebieten. Ehrensymposium für Alexandru Vulpe zum 70. Geburtstag, Baia Mare, 10-13 Oktober, 2001, Bibliotheca Marmatia 2 , Baia Mare, 2003, p. 217-237.
Hellebrandt 2004	M. B. Hellebrandt, Őskori föld- és vizivárak, in ΜΩΜΟΣ II, 2004, p. 171-186.
Hochstetter 1984	A. Hochstetter, Kastanas. Ausgrabungen in einem Siedlungshügel der Bronze und Eisenzeit Makedoniens 1975 – 79. Die handgemachte Keramik. PAS 3. Berlin.
Horváth 1994	Horváth L., Adatok Délnyugat-Dunántúl késő bronzkorának történetéhez.-Angaben zur Geschichte der Spätbronzezeit in SW-Transdanubien. ZM 5. p. 218–235.
Hügel et alii 2010	P. Hügel–V. Sava–L. Andreica–F. Gogáltan–Nagy I. G.–A. I. Cociș–N. Cioabanu–V. B. Vătavu–L. A. Irimuş–A. L. Ignat–A. Floarea–D. M. Culic–C. E. Cordoș–M. A. Lie, A. Brehuescu–Botha Z. J.–A. Socaci, Șantierul arheologic Sântana, jud. Arad, Cetate Veche, in CCA, Campania 2009, Suceava, 2010, p. 301-302.
Ilon 1996	Ilon Gábor: A késő halomsíros – kora urnamezős kultúra temetője és települése Némethánya határában.-Das Gräberfeld und Tell der Späthügelgräber – Frühurnenfelderkultur in der Gemarkung Némethánya. Acta Musei Papensis 6. p. 89–205.
Ignat 1984	D. Ignat, Așezarea de la sfârșitul epocii bronzului de la Suplacu de Barcău [L`habitat de la fin de l`âge du bronze de Suplacu de Barcău, Dép. De Bihor], Crisia, XIV, p. 9-26.
Illon 2006	G. Illon, Bronzezeitliche Gussformen in den Karpatenbecken. In: J. Kobal` (ed.), Bronzezeitliche Depotfunde – Problem der Interpretation. Materialien der Festkonferenz für Tivodor Lehoczky zum 175. Geburtstag, Usshorod, 5.-6. Oktober 2005, Usshorod 2006, p. 273-301.
Jankovits 1992	K. Jankovits, Spätbronzezeitliche Hügelgräber von Bakonyjákó. ActaArchHung 64. p. 261–343.
Kacsó 1975	C. Kacsó Contributions à la connaissance de la culture Suci de Sus à la lumière des recherches faites à Lăpuș, Dacia 19, 1975, p. 4568.
Kacsó 1981	C. Kacsó, Necropola tumulară de la Lăpuș. Teză de doctorat, Cluj Napoca 1981.
Kacsó 1987	C. Kacsó, Beiträge zur Kenntnis des Verbreitungsgebietes und der Chronologie der Suci de Sus Kultur. Dacia 31. p. 51–75.
Kacsó 1990	C. Kacsó, Bronzul târziu în nord-vestul României. Symp. Thr. 8. Satu-Mare-Carei, p. 41–50.
Kacsó 1993	C. Kacsó: Contribuții la cunoașterea bronzului târziu din nordul Transilvaniei. Cercetările de la Suci de Sus și Groșii Țibleșului/ Beiträge zur kenntnis der Spätbronzezeit im bronzezeit im norden Transsilvaniens. Die ausgrabungen in Suci de Sus und Groșii Țibleșului, RevBistriței VII, p. 2949.
Kacsó 1996	C. Kacsó, Recenzie la Marian Gumă, Civilizația primei epoci a fierului în sud-vestul României. Bucureșt, 1993. AnBanatului 4, p. 237-246.
Kacsó 1997	C. Kacsó, Faza finală a culturii Otomani și evoluța culturală ulterioară acesteia în nord vestul României.-Die Endphase der Otomani Kultur und die darauffolgende kulturelle Entwicklung im Nordwesten Rumäniens. StComSatu Mare 14. p. 85–110.

Kacsó 1999 C. Kacsó, Die Endphase der Otomani-Kultur und die darauffolgende Kulturelle Entwicklung im Nordwesten Rumäniens in: Kultura Otomani-Füzesabony – rozwój, chronologia, gospodarska. Materiały z konferencji archeologicznej, Dukla, 27-28.11.1997 / Die Otomani- Füzesabony –kultur. Entwicklung, Chronologie,Wirtschaft. Materialien der archäologischen Konferenz, Dukla, 27-28.11. 1997, Krosno 1999, p. 85-112.

Kacsó 2001 C. Kacsó, Zur Chronologischen und Kulturellen Stellung der Hügelgraberfeldes von Lăpuș, in: C. Kacsó (hrsg.) Der Nordkarpatische Raum in der Bronzezeit, BiblMarmatia 1, Baia Mare 2001, p. 231-278.

Kacsó 2003 C. Kacsó, Noi descoperiri Suci de Sus și Lăpuș în nordul Transilvaniei. (Neue Suci de Sus und Lăpuș-Funde im Norden Siebenbürgens). Marmatia 7/1. p 105-181.

Kacsó 2004 C. Kacsó, Zu den problemen der Suci de Sus-Kultur in Siebenbürgen. In: J. Bátor- V. Furmányek- L. Veliačik (ed) Einflüsse und kontakte alteuropäischer kulturen. Festschrift für Jozef Vladár zum 70. Geburtstag. Nitra, p. 327-340.

Kacsó 2005 C. Kacsó, Contribuții la cunoașterea bronzului târziu din nordul Transilvaniei. Cercetările de la Bicaz – Igoaie. RevBistriței, XIX, 2005, p. 51-70.

Kacsó 2006 C. Kacsó, Noi date cu privire la descoperirile din epoca bronzului de la Vălenii Șomcutei.-Neue Daten Bezüglich der Bronzezeitlichen Funde von Vălenii Șomcutei. RevBistriței 20, p. 79-102.

Kalicz 1958 N. Kalicz, Későbronzkori urnatemető Igrici község határában. Spätbronzezeitliches Urnengräberfeld bei Igrici. HOMÉ 2, p. 45-72.

Kalicz 1960 N. Kalicz, A későbronzkori Felsőszőcsi csoport leletei és kronologiai helyzete. AÉ 87, p. 3-15.

Kalicz–Koós 1997 N. Kalicz–J. Koós, Oszlár-Nyárfaszög. Late Bronze Age settlement from the 13th Century B.C. In: Utak a Múltba. Az M3-as autópálya régészeti leletmentései / Path into the Past. Rescue excavations on the M3 Motorway, Budapest 1997, p. 71.

Kemenczei 1963 T. Kemenczei, Adatok Észak-Magyarország későbronzkori történetéhez. Angaben zur Geschichte der Spätbronzezeit in Nordungarn. AÉ, 1963, p. 169-188

Kemenczei 1965 T. Kemenczei, Die Chronologie der Hortfunde vom Typ Rimaszombat, HOMÉ, 5, 1964-1965 (1966), p. 105-175.

Kemenczei 1967 T. Kemenczei, Die Zagyvapálfalva-Gruppe der Pilinyer Kultur, Acta AH, 19, 1967, p. 229-305.

Kemenczei 1968 T. Kemenczei, Adatok a kárpátmedencei halamsiros kultura vándorlásának kérdéséhez. Beiträge zur Wanderung der Hügelgräberkultur im Karpatenbecken. AÉ 1968, p. 159-187

Kemenczei 1982 T. Kemenczei, Die Siedlungsfunde der Gáva-kultur aus Nagykovács, in FA, 33, 1982, p. 73-95.

Kemenczei 1982a T. Kemenczei, Nordungarn in der Spätbronzezeit, in Südosteuropa zwischen 1600 und 1000 v.Chr., Berlin, 1, 1982, p. 305-320

Kemenczei 1984 T. Kemenczei, Die Spätbronzezeit Nordostungarns, ArchHung, LI, Budapest 1984.

Kemenczei 1989: T. Kemenczei, Bemerkungen zur Chronologie der spätbronzezeitliche Grabfunde in Donau-Theiß Zwischengebiet. CommArchHung 1989. 73-96.

Kemenczei-Genito 1990 T. Kemenczei, B. Genito The late bronze age vessels from Gyoma 133 s.e. Hungary. ComArchHung 1990, 113-125

Kobal’ 2007 J. Kobal, До питання про хронологію та періодизацію культури Станове. Записи наукового товариства імені Шевченка. Праці археологічної комісії. Львів, p. 583-599.

Koós 2001 J. Koós, Fern Beziehungen zur Zeit einer spätbronzezeitlichen Gemeinschaft Nordostungarns. In: C. Kacsó (ed) Der Nordkarpatische Raum in der Bronzezeit, BiblMarmatia 1, Baia Mare 2001, p. 215-230.

Kovács 1966: Kovács T., A halomsíros kultúra leletei az Észak-Alföldön.-Die Funde der Hügelgräberkultur. Памятники культуры курганных могил на севере большой венгерской низменности. ArchÉrt 93. p. 159-202.

Kovács 1967 T. Kovács, Eastern connection of north-eastern Hungary in the Late Bronze Age, in FA, 18, 1966-1967, p. 28-58.

Kovács 1970 T. Kovács A hajdúbagosi bronzkori temető. – Bronze Age cemetery at Hajdúbagos, FA, XX, 1970, p. 27-47.

Kovács 1975 T. Kovács, Tumulus culture cemeteries of Tiszafüred. RF. II. 17

Kovács 1981 T. Kovács, Zur problematic der Entstehung der Hügelgräber in Ungarn, in SlovArch, 29, 1981, p. 87-95.

Kovács 1984 T. Kovács, Die Koszider-Metallkunst. In: N. Tasič (ed.) Kulturen der Frühbronzezeit des Karpatenbeckens und Nordbalkans, p. 377-387.

Kovács 1986 T. Kovács, Zsadány–Orosi puszta: ein alter Hortfund (Grabfund?) nach der Restaurierung. ComArchHung 1986, p. 27-48

Kovács 1988 T. Kovács, A face pot with dagger representation from Tószeg. FolArch 39, p. 81-92.

Kőszegi 1988 F. Kőszegi, A Dunántúl története a késő bronzkorban.- The history of Transdanubia during the Late Bronze Age. BTM Műhely I. Budapest.

László 1994 A. László, Începuturile epocii fierului la est de Carpați. Culturile Gáva-Holihrad și Corlăteni-Chișinău pe teritoriul Moldovei. Die Anfänge der Eisenzeit im Ostkarpatenraum. Die Gáva-Holihrad- und Chișinău-Corlăteni- Kultur auf dem Gebiet der Moldau. BiblThrac. VI, București.

Kroeger-Michel 1983 E. Kroeger-Michel, Les haches à disque du Bassin des Carpathes. Editions recherche sur les Civilisations, Paris 1983.

Lakó 1987 É. Lakó, Piese de bronz din așezarea de cultură Otomani de la Crasna (jud. Sălaj). – Bronze items from the Otomani-culture in the settlement of Crasna, Sălaj county. Acta MP, XI, 1987, p. 77-81.

László 1973 A. László, Considerații asupra ceramicii de tip Gáva din Hallstattul timpuriu. SCIV, 24/4, p. 575-608.

Lindinger 1999 V. Lindinger: Mittelbronzezeitliche Gefäßdeponierung von Zwerndorf an der March, NÖ. In: A. Krenn-Leeb – J. W. Neugebauer(ed), Depotfunde der Bronzezeit im mittleren Donauraum. Archäologie Österreichs 9/10. (1998/1999) 1999, p. 46–68

Makkay 1978 J. Makkay, Mahlestein und das rituale Mahle in der prähistorischen Opferzeremonien, Acta Archaeologica 30, 1978, 13-36.

Marta 2005 L. Marta, Der bronzene Nadeldepotfund von Petea, Kr. Satu Mare.-Depozitul de ace din bronz descoperit la Petea, jud. Satu Mare. In: T. Soroceanu (ed), Bronzefunde aus Rumänien II. (Descoperiri de bronzuri din România). Bistrița–Cluj-Napoca. p. 75-94.

Marta 2007 L. Marta, Поставлення амфор в поселення періоду пізньої бронзи з Сомешанський рівнині./ Single Amphorae Depositions in the Late Bronze Age Settlements from the Someș Field. Carpatica 36, p. 4-16.

Marta 2008 L. Marta, Groapa 154 a așezării din epoca bronzului de la Lazuri. Depunere aflată în legătură cu producerea berii preistorice? (Pit 154 from Bronze Age settlement in Lazuri. Objects deposition related to the making of prehistoric beer Satu Mare StCom XXIII–XXIV/1, 2006-2007, p. 111–129

Marta 2009 L. Marta, The Late Bronze Age Settlements of Petea–Csengersima. Satu Mare.

Marta 2010 L. Marta, Contribuții la cunoașterea sfârșitului epocii bronzului și începutul epocii hallstattiene în Câmpia Sătmăreană și în Țara Oașului. Teză de doctorat, Alba Iulia, 2010.

Marta et alii 2004 L. Marta–C. Ciprian–Z. Kádas–C. Virag–D. Sana, Nyíregyháza – Oros, Űr-Csere, RKM, 2004, p. 256-257.

Marta et alii 2010 L. Marta – T. L. Kienlin – E. Rung – P.Schramm, Cercetări arheologice recente în așezări fortificate de epoca bronzului din Valea Ierului. in (H. Pop, I. Bejinariu, S. Băcuet–Crișan, D. Băcuet–Crișan ed.) Identități culturale locale și regionale în context european – Studii de arheologie și antropologie istorică. In Memoriam ALEXANDRI V. MATEI, Cluj Napoca 2010 (under print).

Matei et alii 2005 Al. V. Matei–S. Băcuet–Crișan–I. Bejinariu–H. Pop–D. Băcuet–Crișan–A. Cârstea, Șantierul arheologic Pericei „Kellertag”, in CCAR Campania 2004, Mangalia, 2005, p. 259-263.

Matuz–Nováki 2002 E. D. Matuz–G. Nováki, Spätbronzezeitliche, früheisenzeitliche Erdwälle in Nordungarn, Budapest, 2002.

Máthé 1988 M. Sz. Máthé, Bronze Age tells in the Berettyó valley. IPH I. p. 27–122

Medeleț 1987 F. Medeleț, Depozitul-atelier de unelte din bronz descoperite la Timișoara (cartierul Fratelia) [Le dépôt-atelier des outils de bronze decouvert à Timișoara (le quartier Fratelia), StudIstBan, XIII, 1987, p. 1-20.

Medeleț 1995 F. Medeleț, Ein urnenfelderzeitlicher Depotfund von bronzenen Werkyeugen in Fratelia bei Timișoara, in T. Soroceanu (ed.) Bronzefunde aus Rumänien I, p. 229-236.

Miclea–Florescu 1980 I. Miclea–R. Florescu, Preistoria Daciei, București 1980.

Miskolczy 2003 Miskolczy M.: Oros. Jászai Tamás (ed.) Oros Közéleti Egyesület, Oros 2003.

Mozsolics 1960 A. Mozsolics, Der Tumulus von Nyírkárász – Gyulaháza. ActaArchHung 12, p. 113-123.

Mozsolics 1967 A. Mozsolics, Bronzefunde des Karpatenbeckens. Depotfundhorizonte von Hajdúsámson und Kosziderpadlás, Budapest 1967.

Mozsolics 1984 A. Mozsolics, Ein Beitrag zum Metallhandwerk der ungarischen Bronzezeit, Bericht RGK, 65, 1984, p. 19-72.

Nagy 2005 M. Nagy Késő bronzkori település Nyírlugos határában.–Spätbronzezeitliche Siedlung in der Gemarkung von Nyírlugos. NyJAMÉ XLVII. p. 63-105.

Nagy 2005a M. Nagy, A halomsíros kultúra leletei Szentés környékén. Die Funde der Hügelgräberkultur in der Umgebung von Szentés. MFMÉ–StudArch 11, p. 7–36.

Nagy 2007 M. Nagy, Késő bronzkori településrésztlet Nyíregyházán –Spätbronzezeitlicher Siedlungsteil in Nyíregyháza. NyJAMÉ 69, p.121-154.

L. Nagy–Scholtz 2009 M. L. Nagy–R. Scholtz, A késő bronzkori Felsőszőcs-kultúra települése Őr-Őri-tag lelőhelyen. In: Bronze Age Communities int he Carpathian Basin. Proceedings of the International Colloquium from Târgu Mureș, 24-26 October. 2008. Cluj-Napoca. p. 223-257.

Németi 1978 J. Németi, Descoperiri de la sfîrșitul epocii bronzului în zona Careiului.–Découvertes de la fin l'époque de bronze aux environs de Carei. SCIVA 29. p. 99-122.

Németi 1990 I. Németi Contribuții la cunoașterea sfârșitului epocii bronzului din nord-vestul României. SCIVA 41, 1, p. 19-54.

Németi 2009 J. Németi: The Hajdúbagos/Pișcolt–Cehăluț group. In: Bronze Age Communities int he Carpathian Basin. Proceedings of the International Colloquium from Târgu Mureș, 24-26 October. 2008. Cluj-Napoca. p.203-221

Németi–Molnár 2002 J. Németi–Zs. Molnár: A tell telepek elterjedése a Nagykárolyi síkságon és az Ér-völgyében. Kolozsvár.

Németi–Molnár 2007 J. Németi–Zs. Molnár, A tell telepek fejlődése és vége a Nagykároly síkságon és az Ér völgyében. Cluj-Napoca.

Novotná 1980 M. Novotná, Die Nadeln in der Slowakei, PBF, IX,3, München 1980.

Olexa 1992 L. Olexa, Naleziská z doby bronzovej v Nižnej Myšli (Predbežná správa o výsledkoch výskumu opevnených sídlisk a pohrebiska otomanskej kultúry) [Fundstellen aus der Bronzezeit in Nižna Myšl`a (Vorbericht über die Grabungsergebnisse auf befestigten Siedlungen und einem Gräberfeld der Otomani-Kultur)], SlovArch, XL, 2, 1992, p. 189-204.

Ordentlich 1963 I. Ordentlich, Poselenie v Otomani v svete poslednih roskopok, Dacia N.S., VII, 1963, p. 115-138.

Pankau 2004 C. Pankau, Die älterhallstattzeitliche Keramik aus Mediaș/ Siebenbürgen. UPA 109, Bonn

Peterdi 2004 B. Peterdi, Bronzkori és vaskori öntőformak petrográfiai vizsgálat. –Petrographic analysis of Bronze Age and Iron Age casting moulds. In: ΜΩΜΩΣ III. Őskoros kutatók III. Összejövetelének konferenciakötete Hallottkultusz és temetkezés, Szombathely–Bozsok 2002, október 7-9 , Szombathely 2004, p. 487-525.

Petrescu–Dîmbovița 1977 M. Petrescu–Dîmbovița, Depozitele de bronzuri din România [Les dépôts de bronzes de la Roumanie], Biblioteca de Arheologie 30, București 1977.

Pop 2009: D. Pop, The Middle Bronze Age Settlement of Petea Csengersima. Satu Mare

Pop et alii 2007 H. Pop–I. Bejinariu–E. Pripon, D. V. Sana, Șantierul arheologic Șimleu Silvaniei Observator, in CCAR, Campania 2006, Tulcea, 2007, p. 358-361.

Pop et alii 2010 H. Pop–I Bejinariu–D. M. Culic, Șantierul arheologic Șimleu Silvaniei Observator, in CCAR, Campania 2009, Suceava, 2010, p. 178-180.

Poroszlai 1984 I. Poroszlai, Késő bronzkori edény-depot lelet Debrecenből.-Gefäss-depot aus der spätbronzezeit, ein Fund aus Debrecen. DMÉ, p. 75-100.

Poroszlai 1992 I. Poroszlai, Szászhalombatta-Földvár. In: Walter-Meier Arendt (ed), Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss. Frankfurt am Main, p. 1-158

Říhovský 1983 J. Říhovský, Die Nadeln in Westungarn I., PBF XIII, 10, 1983.

Rotea 1994 M. Rotea: Penetrația culturii Otomani în Transilvania. Între realitate și himeră. Apulum 31, p. 39-57.

Rusu 1973 M. Rusu, Considérations sur quelques problèmes de l'époque hallstattiene de Transylvanie. In: actes du VIIIe Congrès internat. de Sciences Préhist. Et Protohist., Beograd 1971, 3, p. 105-112.

Rusu et alii 1996 M. Rusu–E. Dörner–I. Ordentlich, Fortificația de pământ de la Sântana – Arad în contextul arheologic contemporan, in Ziridava, 19-20, 1996, p. 15-26.

Sana 2006 D. V. Sana, Descoperiri ale primei epoci a fierului. In H. Pop–I. Bejinariu–S. Băcuet–Crișan–D. Băcuet–Crișan–D. Sana–Zs. Csók, Șimleu Silvaniei. Monografie arheologică. (I) Istoricul cercetărilor, Cluj Napoca, 2006, p. 45-66.

Sofaer 2006 J. Sofaer, Pots, houses and metal: technological relations at the Bronze Age tell at Százhalombatta, Hungary, Oxford Journal of Archaeology, 25, 2, 2006, p. 127-147.

Somogyi 2000 S. Somogyi, A természeti változások és a társadalmi-gazdasági folyamatok kölcsönhatása az Alföldön a honfoglalás előtt. In: S. Frisnyák (ed.) Az Alföld történeti földrajza. Nyíregyháza, p. 7-24.

Stapel 1999 A. Stapel, Bronzezeitliche Deponierungen im Siedlungsbereich Altdorf – Römerfeld und Altheim, Landkreis Landshut. Tübinger Schriften zur Ur- und Frühgeschichtlichen Archäologie 3. Waxmann Münster–NewYork–München–Berlin.

Sümegi–Kertész 2001	P. Sümegi–R. Kertész, Környezetrégészeti kutatások az Alföldön. In: Társadalom, kultúra, természet. Tanulmányok a 60 éves Bellon Tibor tiszteletére. Karcag Frisnyák Frisnyák-Szeged–Szolnok 2001, p. 133-137.
V. Szabó 1996	G. V. Szabó, A Csorva-csoport és a Gáva-kultúra kutatásának problémái néhány Csongrád megyei leletegyüttes alapján.-Forschungsprobleme der Csorva-Gruppe und der Gáva-Kultur aufgrund einiger Fundverbände aus dem Komitat Csongrád. MFMÉ–StudArch 2, p. 9-109.
V. Szabó 2002	V. Szabó Gábor, Tanulmányok az Alföld késő bronzkori történetéhez. A Proto Gáva-periódus és a Gáva-kultúra időszakának emlékei a Tisza-vidéken, PhD értekezés, Budapest, 2002.
V. Szabó 2004	V. Szabó Gábor, Ház, település településszerkezet a késő bronzkori (BD, HA, HB Periódus) Tisza-Vidéken, in ΜΩΜΟΣ 2. Óskoros Kutatók 2. Összejövetelének konferenciakötete. Debrecen, 2004, p. 137-170.
Szentmiklosi–Draşoveanu 2004	A. Szentmiklosi–F. Draşoveanu, Arta prelucrării Bronzului în Banat. – The art of Bronzeworking in Banat (II-nd millenium BC), Timișoara 2004.
Tárnoki–Csányi 1992	M. Tárnoki–M. Csányi, Túrkeve–Terehalom. In: Walter-Meier Arendt (ed), Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss., Frankfurt am Main, p. 159-165.
Točik 1964	A. Točik, Die Gräberfelder der Karpatenlandischen Hügelgräberkultur. Fontes ArchPrag 7.
Vasiliev 2008	V. Vasiliev, Bemerkungen zu den bitronkonischen Gefässen, die für die Gáva-Kultur Kennzeichnend sind. EphNap XVI-XVII, 2006–2007, p. 7-16.
Vasič 2003	R. Vasič, Die Nadeln im Zentralbalkans (Vojvodina, Serbia, Kosovo und Makedonien) PBF XIII, 11, Stuttgart 2003.
Tóth–Marta 2005	K. Tóth–L. Marta, Gefäßdepot der Felsőszöcs/Suciu de Sus-Kultur in Nyírmada–Vályogvető. – A Felsőszöcs/Suciu de Sus kultúra edénylelete Nyírmada–Vályogvetőn. NyJAMÉ 67. p. 107-143.
Trogmayer 1969	O. Trogmayer, Középső bronzkori leletek Kömpöcről.-Mittelbronzezeitlichen Funde von Kömpöc. MFMÉ 1969-1., p.
Trogmayer 1975	O. Trogmayer, Das bronzezeitliche Gräberfeld bei Tápé. Fontes ArchHung, Budapest.
Vasiliev 1995	V. Vasiliev, Fortifications de refuge et etablissements fortifiés du premier âge du fer en Transylvanie, Bucureşti, 1995.
Vasiliev 2005	V. Vasiliev, Despre epoca bronzului și prima epocă a fierului în Istoria Românilor, vol. I, EphNap, XIV-XV, 2004-2005 (2005), p. 5-22.
Vasiliev et alii 1991	V. Vasiliev–I. A. Aldea–H. Ciugudean, Civilizația dacică timpurie în aria intracarpatică a României. Contribuții arheologice: aşezarea fortificată de la Teleac, Cluj Napoca, 1991.
Veliačik 1991	L. Veliačik, Beitrag des Gräberfeldes in Diviaky nad Nitricou zur Chronologie der Denkmäler der Lausitzer kultur in der Slowakei, SlovArch, XXXIX, 1, 1991, p. 143-214.
Vulpe 1970	A. Vulpe, Äxte und Beile in Rumänien I. PBF, IX, 2, München 1970.
Wanzek 1989	B. Wanzek, Die Gußmodel für Tüllenbeile im Südöstlichen Europa. Ein Beitrag zum bronzezeitlichen Metallhandwerk. UPA 2, Bonn 1989
Werner 1950	J. Werner, Mykenae-Siebenburgen-Skandinavien, in Atti de Congresso Internazionale di Preistoria e Protoistoria Mediterranea, Firenze-Napoli, Roma, 1950, p. 300-400.

AŞEZAREA DIN EPOCA BRONZULUI DE LA NYÍREGYHÁZA-OROS

Rezumat

Stațiunea arheologică de la Nyíregyháza–Oros, punctul „Űr-Csere” a fost cercetată în a doua jumătate a anului 2004 în contextul cercetărilor arheologice preventive care au vizat situurile aflate pe traseul variantei ocolitoare estice a oraşului Nyíregyháza. Este vorba despre o săpătură efectuată în colaborare de către arheologi de la muzee din Ungaria și nord-vestul României, în cadrul unui proiect comun al muzeelor din Nyíregyháza și Satu Mare. În această lucrare se regăsesc doar descoperirile din perioada târzie a epocii bronzului (total 186 de complexe). Cu ocazia săpăturilor au fost însă descoperite și o serie de complexe din eneolitic, bronzul timpuriu, perioada romană, respectiv epoca migrațiilor. Deoarece situl arheologic a fost tăiat de un drum s-a procedat la delimitarea convențională a acestuia în situl nr. 26 (aflat la nord de drum), respectiv situl nr. 33 pentru zona aflată la sud.

Cadrul natural. Așezarea din punctul „Űr-Csere” se află la vest de oraşul Nyíregyháza, spre sud-est de localitatea Oros. Geografic, zona se află în Câmpia Nirului, cu un relief predominant compus din dune de nisip a căror configurație a fost adesea modificată de acțiunea vântului și eroziunea naturală. Pe o astfel de dună de loess nisipos se află și aşezarea de la Oros. Înspre vest, aşezarea este mărginită de valea largă a pârâului Kallai, despre care, pentru perioada medievală există informații că avea un debit mai mare decât acela actual. Spre est coama de dealuri pe care se întinde aşezarea era mărginită de valea pârâului Balkány. La marginea nordică a aşezării de epoca târzie a bronzului, cele două pâraie ce mărginesc coama de dune se unesc, astfel încât aşezarea era înconjurată din trei părți de zone mlăștinoase. Ca urmare, poate poziția dunei de nisip pe care a fost înființată aşezarea de epocă târzie a bronzului este una privilegiată.

Sistemul de fortificare al aşezării. Cercetarea efectuată și observațiile realizate pe teren au permis estimarea suprafeței incintei delimitate de elementele defensive la cca. 9 ha (cca. 400 x 230 m). Pe latura de vest a aşezării a fost urmărit traseul unui șanț pe o lungime de 120-125 m. În profil șanțul are forma literei ”V”, cu adâncimea de 1,2 – 1,5 m de la steril, respectiv deschiderea la gură între 2,5 – 5,5 m. Cam peste tot în suprafața cercetată, pe fundul șanțului apare o lentilă compactă de arsură și cărbune. Se pare că este vorba despre resturile palisadei, care după incendiere s-a prăbușit pe fundul acestuia. Indiciile descoperite sugerează că era vorba despre o palisadă simplă din pari și nuiele împletite. Probabil palisada nu a fost fixată pe

culmea unui val, dealtfel dificil de realizat în condițiile solului nisipos de aici. În șanț au fost surprinse și două cazuri de depuneri a unor vase mari întregi, respectiv o amforă și un vas de provizii (pl. 27/4, 28/2). Spre limita estică a suprafeței cercetate, aproximativ la mijlocul acesteia, șanțul se întrerupe, la capătul său apărând o groapă fără materiale arheologice, deci cu o datare incertă (Complexul nr. 274). Probabil groapa a servit pentru fixarea unuia dintre stâlpii porții de acces în incinta fortificată. Interesant este faptul că pe o suprafață de câțiva metri, tocmai în această zonă, gropile, foarte numeroase în alte carouri din exteriorul și interiorul incintei, lipsesc. Poate fi un argument pentru afirmația noastră, că această suprafață avea rolul de a servi drept cale de circulație.

Complexele arheologice. Dintre complexele arheologice cercetate, 186 pot fi atribuite cu siguranță perioadei târzii a epocii bronzului. Aparent este vorba despre un număr mare de complexe, însă viziunea de ansamblu asupra așezării nu poate fi una integrală, atâta timp cât cercetarea a vizat doar zona estică a acesteia. Alături de elementele defensive, deja menționate, mai apar gropi cu diverse funcționalități și complexe care pot fi încadrate în categoria locuințelor. În ultima categorie pot fi încadrate doar puține descoperiri. Este vorba despre complexul notat cu numărul 281. Acesta avea un plan aproximativ dreptunghiular, cu dimensiunile de 430 x 300 cm (Fig. 18-19). Locuința avea cel mai probabil acoperișul în două ape, susținut de stâlpi dispuși la mijlocul laturilor scurte și în zona mediană a laturii lungi, fapt confirmat de groapa descoperită pe latura de nord-vest și de o adâncitură din zona centrală. Alte două complexe descoperite pe situl nr. 33 socotite anterior gropi, pot fi încadrate în aceeași categorie. Este vorba despre complexul nr. 7 cu un plan aproximativ circular, ce coboară în trepte până la o adâncime maximă de 0,70 m de la nivelul de conturare. Diametrul maxim era de 2 m, iar în centru apărea o groapă de stâlp. Cel de-al doilea este un complex oval, cu dimensiunile de 2 x 2,3 m, cu pereții oblici și fundul drept, mai îngust la bază și mai larg la gură. Adâncimea sa este de 0,45 m de la nivelul de conturare.

Gropile reprezintă categoria cea mai numeroasă. În funcție de profilul sesizat cu ocazia secționării, gropile pot fi diferențiate în alte trei categorii: (1) tronconice, (2) cu profil în formă de sac sau neregulat, (3) cilindrice. Gropile tronconice sunt cele mai numeroase. Aproape toate sunt de mari dimensiuni, cu un diametru de cel puțin 1,20 m și adâncimi cuprinse între 0,30 și 1,20 m. Majoritatea aveau un inventar modest compus din fragmente ceramice, oase, chirpici, pietre, dar au existat câteva lipsite de orice inventar. Gropile cu profilul în formă de sac sau neregulat sunt de asemenea bine reprezentate numeric. În general sunt înguste la gură, cu diametrul mai mare la fund. Ca și dimensiuni, respectiv inventar nu se diferențiază foarte

mult de prima categorie. Gropile cu un profil cilindric în secțiune sunt mai puțin numeroase – 24 la număr. După destinația lor, ipotetică, pot fi împărțite în două categorii: a) Gropi de provizii/Gropi menajere și b) Gropi cu depuneri de ofrande. Cele mai multe dintre gropile descoperite în așezarea de la Oros par să fi servit la depozitarea proviziilor, pentru ca ulterior, după deteriorarea lor să fi fost utilizate drept gropi reziduale.

Gropi cu depuneri de ofrande. Prin natura materialelor din umplutura și prin dispunerea inventarului, cel puțin zece astfel de complexe par să aparțină acestei categorii. În câteva dintre gropile care au servit acestui scop apar vase întregi (mai ales căni, cești, dar și vase de mari dimensiuni), râșnițe, coarne și oase de animale,

Tot din această categorie credem că fac parte și gropile fără inventar descoperite în imediata apropiere a complexelor cu depuneri de ofrande, formând împreună o serie de grupări dispuse aparent haotic. Asocierea lor nu poate fi deloc întâmplătoare. Printr-o abordare exclusiv din prisma interpretării informației arheologice, destinația acestor gropi lipsite de inventar este greu de precizat. Există o serie de texte antice care pomenesc unele practici magico-rituale constând în săparea unor gropi în care se făceau apoi libații cu lichide (vin, apă, miere, lapte, sânge de animale, etc.) fără a fi depuse alte obiecte de inventar, cu un caracter concret, palpabil pentru un arheolog.

Analiza situației concrete surprinse în zona cercetată prin săpături arheologice a așezării din Bronzul Târziu de la Oros, sugerează că există o locuire sporadică în afara incintei fortificate, precum și o zonă destinată depunerii de ofrande situată în sectorul nordic al sitului, de asemenea în afara zonei demarcate de șanț. Aici apar majoritatea complexelor cu depuneri de vase întregi, râșnițe sau craniu de animal. În ceea ce privește interiorul incintei, lipsa complexelor de locuit ne face să credem că zona era destinată exclusiv păstrării proviziilor, casele fiind probabil situate în partea superioară a dunei, la o mai mare distanță de zona mlăștinoasă, fiind ferite astfel de inundații și de umezeală.

Ceramica. Pentru un număr de 494 elemente ceramice, a putut fi determinată forma de la care provin. Repertoriul tipurilor de vase din așezare a fost stabilit pe baza formelor întregi, făcându-se apel și la tipologia formelor de vase stabilite pentru grupul cultural Hajdúbagos-Cehăluț, sau pentru unele situri din cadrul acestuia. Analizând o serie de parametri, precum pasta vaselor, degresantul utilizat, tratarea suprafețelor, arderea etc. pot fi diferențiate trei categorii ceramice. Categoria ceramicii fine reprezintă cca. 14% din totalul fragmentelor aflate în baza de date. Cel mai bine reprezentată este categoria ceramicii semifine cu cca. 57,5 % din total, restul reprezentând ponderea categoriei ceramicii uzuale. În ce privește tehnica de ardere

a ceramicii din aşezarea de la Oros s-a constatat prezenţa mai mare a ceramicii arse în mediu oxidant. Acest tip de ardere este preponderent mai ales în cazul ceramicii de bucătărie şi în cazul vaselor pentru stocat produse: oale, vase-vatră portativă şi vase de provizii. Arderea în mediu reducător este mai frecvent întâlnită la formele ceramice ce ar fi putut fi utilizate la servirea mesei: ceşti, castroane, amfore. Dintre fragmentele de vase incluse în baza de date, doar 9 vase au fost arse astfel încât să devină negre lucioase pe faţa exterioară şi brune, cărămizii sau cenuşii pe faţa interioară. Procentul arderii bicrome este încă mic ceea ce semnifică faptul că acest proces se află încă la începuturile utilizării sale.

Repertoriul formelor ceramice din Bronzului Târziu de la Oros include câteva tipuri de bază, fiecare cu variante definite în funcţie de profil, prezenţa/absenţa torţilor, modelarea buzei, etc. Este vorba despre amfore, vase-sac, vase-vatră portativă, vase de provizii, străchini, ceşti şi căni, precum şi recipiente mai rar întâlnite precum aşa-numitele protectoare de jar.

Decorul ceramicii din aşezarea de la Oros–„Ūr-Cseré” a fost grupat potrivit tehnicii de ornamentare: butoni (grupa de ornamente A), nervuri reliefate, (grupa de ornamente B), alveole (grupa de ornamente C), striuri (grupa de ornamente D), împunsături (grupa de ornamente E), caneluri (grupa de ornamente F) şi incizii (grupa de ornamente G). Atât formele ceramice, cât şi decorul se regăsesc în majoritatea cazurilor în descoperirile de tip Hajdúbagos–Cehăluţ, dar şi în mediile culturale ale Bronzului Târziu din zonele învecinate. Nu lipsesc nici influenţe „străine”, materializate în aşa-numitele „importuri ceramice”. Cităm în acest sens câteva recipiente cu decor Suci de Sus, dintre care un vas cu decor tipic pentru varianta sud-est slovacă a acestei culturi, precum şi un recipient cu analogii certe în aria culturii Piliny, sau câteva exemplare ce sugerează chiar receptarea unor influenţe venite dinspre zona nord-vestică a Banatului.

Piese de metal şi dovezi ale practicării metalurgiei. În câteva dintre complexe ce aparţin locuirii din Bronzul Târziu din aşezarea de la Nyíregyháza-Oros, punctul „Ūr-Cseré” au fost descoperite diverse obiecte de bronz, resturi de turnare şi reziduuri precum zgură de bronz (?). Acestora li se adaugă o serie de piese descoperite în şanţul surprins pe latura de vest a aşezării, precum şi obiecte de metal recuperate din nivelul aşezării care a fost decopertat cu mijloace mecanice. În complexe respective piesele de metal şi artefactele ce se constituie în dovezi ale practicării metalurgiei se asociază de obicei cu ceramică în diverse grade de fragmentare, uneori cu oase, piatră şi chirpici. Activitatea metalurgică desfăşurată în aşezare este temeinic dovedită prin descoperirea unui creuzet şi a cel puţin patru tipare, dintre care unul pentru turnarea unor topoare cu disc şi spin, unul pentru realizarea unor celturi, respectiv un altul

pentru turnarea unor dălţi cu toc. Alte două piese de metal reprezintă unelte indispensabile unui meşter care confecţiona piese de bronz. Este vorba despre un dorn, respectiv o daltă. Acele reprezintă categoria cea mai numeroasă dintre piesele de metal descoperite în aşezarea de la Oros. Este vorba despre 5-6 piese de acest tip. Reprezentativ este un ac cu capul sferic, cu partea superioară a tijei decorată, care poate fi inclus în tipul Diviaky al tipologiei stabilite de către M. Novotná pentru acele din Slovacia. Cu excepţia unui pandantiv de tip potcoavă, majoritatea celorlalte piese de bronz sunt în stare fragmentară, greu de atribuit cu siguranţă unei categorii anume.

Obiecte de piatră şi lut. Cele mai numeroase obiecte litice sunt, fără îndoială, râşniţele şi zdrobitoarele. Din lut au fost confecţionate greutăţi, mai ales de formă piramidală, perforate la extremitatea superioară. În complexul nr. 33 a fost descoperită o placă din lut de formă dreptunghiulară cu marginile îndoite. Utilizarea acesteia este greu de precizat, deşi o piesă oarecum asemănătoare, cu marginea modelată în trepte a fost descoperită într-o groapă rituală, cu un bogat inventar atribuit grupului Hajdúbagos-Cehăluţ de la Şimleu Silvaniei, punctul Observator. Din pereţii unor vase au fost confecţionate două piese circulare, cu o funcţionalitate incertă.

Activităţile desfăşurate în aşezare. Practicarea agriculturii este dovedită direct prin marele număr de râşniţe descoperite, dar şi prin prezenţa lutului pentru lipirea caselor, impregnat cu pleavă de cereale. Oasele descoperite în aşezare oferă indicii asupra activităţii de creştere a animalelor, respectiv a vânătorii. 47% din totalul oaselor identificate provin de la bovine, în timp ce porcii, ovicaprinele, respectiv caii au avut un rol secundar în economia comunităţii. Dintre speciile sălbatice care au fost vâdate se regăsesc cerbul/căpriorul, bourul şi iepurele. Dintre meşteşugurile practicate în aşezare, de departe, foarte bine dovedită prin descoperiri este prelucrarea bronzului, graţie mai ales tiparelor, fragmentelor de creuzet şi bucăţilor de metal brut aflate pe parcursul cercetării. Un alt câştig al cercetărilor efectuate constă în determinarea unei zone din aşezarea Bronzului Târziu care pare să fi fost rezervată practicilor cultice.

Importanţa cercetărilor de la Nyíregyháza Oros referitor la cunoaşterea epocii târzii a bronzului din Bazinul Superior al Tisei (Concluzii). Graţie cercetărilor efectuate, aşezarea de la Nyíregyháza–Oros „Ūr-Cseré” devine una de referinţă pentru arheologia epocii Bronzului Târziu din bazinul superior al Tisei. Situl se află în zona de confluenţă a unor culturi de la sfârşitul epocii bronzului, şi a unor populaţii a căror răspândire nu poate fi precizată cu exactitate în toate cazurile. Cercetările mai vechi stabileau extinderea arealului comunităţilor gru-

pului cultural Hajdúbajos–Cehăluț până în zona așezării de la Nyírlugos–„Szennyespusztá”¹. Mai recent s-a demonstrat că manifestările culturale de tip Hajdúbajos–Cehăluț se extind mai departe spre nord-est. Această afirmație a avut drept suport mai multe descoperiri din zona orașului Nyíregyháza² – zonă ce anterior era atribuită ariei de răspândire a culturii Suci de Sus³. Confuzia a pornit din faptul că în mai multe situri arheologice din apropierea orașului Nyíregyháza (Nyíregyháza–„Bujtos” și Nyíregyháza–„Morgó”) erau prezente materiale ceramice de tip Suci de Sus. În acest moment este tot mai evident că ceramica de tip Suci de Sus descoperită în zonă poate fi considerată un „produs de import”, iar cercetările arheologice de la Oros vin să sublinieze încă o dată această situație. Al treilea fenomen cultural ce intră în discuție pentru perioada târzie a epocii bronzului din zona Nyír este cultura Berkesz⁴. Cercetările recente tind să demonstreze că definirea acestui fenomen cultural, așa cum s-a realizat în urmă cu câteva decenii, a pornit de la premise eronate⁵.

Încadrarea culturală. Pentru atribuirea culturală a materialelor de la Oros este necesară discutarea raportului dintre materialele arheologice atribuite grupului Hajdúbajos–Cehăluț și cele din descoperirile considerate anterior de tip Berkesz. Se consideră că geneza culturii Berkesz, datată în a doua jumătate a etapei RBC și în etapa RBD, se petrece pe un fond de mixtură dintre cultura Suci de Sus și cultura mormintelor tumulare (cultura Egyek), mixtură culturală peste care s-au mai grefat elemente estice, de factură Noua–Komarovo⁶. Culturii Berkesz i-a fost atribuit teritoriul din nord-estul Ungariei ce include zonele Hajdú–Bihar și Nyírség. Materialul ceramic descoperit în partea nordică a teritoriului culturii Berkesz (de ex. Alsóberecki, Vajdácska) diferă parțial de materialul descoperit în siturile din zona estică și sudică a Nyír-ului. Pe unele vase din necropola din Alsóberecki sunt prezente deja ornamente ale culturii Suci de Sus⁷. În cazul siturilor Berkesz–„Csonkás-dűlő”, Demecser–„Borzsovapuszta” sau Nyíregyháza–„Bujtos” și Nyíregyháza–„Morgó”, fragmentele de cești sau de străchini de tip Suci de Sus trebuie considerate importuri. În schimb, pentru siturile din partea estică și sudică s-a considerat că materialele adunate sub denumirea de „cultura Berkesz” aparțin de fapt culturii

Suci de Sus⁸. Totodată, siturile din aria vestică – Nyíregyháza–„Bujtos” și Nyíregyháza–„Morgó” și multe alte situri atribuite culturii Berkesz⁹ – pot fi atribuite, de fapt, perioadei târzii a grupului Hajdúbajos–Cehăluț¹⁰.

În acest context se pune problema modului în care pot fi interpretate piesele de proveniență răsăriteană din cadrul descoperirilor atribuite culturii Berkesz. Este vorba pe de o parte despre ceramică, iar pe de altă parte ne referim la obiectele de metal¹¹. În momentul actual, când ceramica culturii Noua–Sabatinovka este mai bine cunoscută, prezența unor elemente ceramice ale acesteia în zona Tisei Superioare este mai greu de evidențiat, la fel ca și eventualul traseu pe care ar fi putut pătrunde spre această regiune¹². Cele câteva tipuri de arme (pumnale, celturi de transilvănean, seceri cu mânerul în formă de cârlig și ace de tip Noua), pot fi considerate mai degrabă piese de import sau piese realizate sub influența metalurgiei răsăritene sau chiar a celei transilvănene. Pentru aceasta pledează faptul că acele mari cu protuberanțe din bazinul superior al Tisei aparțin unei variante ce poate fi apreciată ca fiind specifică acestei regiuni, chiar dacă la origine tipul pare a fi influențat de un model estic. Mai mult, în toate cele patru cazuri în care acele cu protuberanțe din bazinul superior al Tisei au fost descoperite împreună cu ceramică, aceasta este întotdeauna de factură locală¹³. Depozitele de bronzuri din zona Tisei superioare în care sunt prezente piesele de factură estică/transilvăneană sunt de tip Uriu–Ópályi. În cadrul acestora, piesele de origine răsăriteană sunt depuse împreună cu numeroase piese locale. Ca urmare, piesele răsăritene descoperite pe teritoriul grupului Hajdúbajos–Cehăluț pot fi puse pe seama legăturilor cu metalurgia din mediul Noua-Sabatinovka, la fel ca și în cazul pieselor descoperite în aria culturii Suci de Sus¹⁴. Ma-

⁸ Tóth–Marta 2005, p. 127.

⁹ Tibor Kemenczei (1967) enumeră descoperirile atribuite culturii Berkesz. Majoritatea sunt reprezentate de materiale răzlețe. Loturi ceramice mai importante provin doar din așezările Nyíregyháza–“Bujtos”, Nyíregyháza–“Morgó” și necropolele Berkesz–“Csonkásdűlő” și Demecser–“Borzsovapuszta”.

¹⁰ Nagy 2007, Pl. 1. Este interesant faptul că majoritatea siturilor atribuite în anul 1967 culturii Berkesz sunt poziționate la est de Nyíregyháza și la vest de linia Crasnei. Ele se află deci pe un teritoriu în care poate fi presupusă existența unor așezări cu material arheologic mixt, care în majoritate poartă caracteristicile grupului Hajdúbajos–Cehăluț, alături de care apar adesea și elemente ale culturii Suci de Sus.

¹¹ Sunt considerate a avea origine estică unele forme ceramice (amforele concave cu buză largă, ceștile cu două torți, precum și oalele) și câteva piese metalice (Kemenczei 1981, p. 89–91 Kalicz–Koós 1997, p. 68). Originea acestor tipuri a fost căutată în culturile Noua și Komarovo.

¹² Pentru a argumenta o pătrundere dinspre est lipsesc urme ale culturii Noua în Ucraina de la vest de Carpați. În ceea ce privește situația din Transilvania, cele mai nordice elemente ceramice de tip Noua apar ca importuri / influențe în necropola de la Lăpuș (Kacsó 1975, p. 60), lipsind din zona Sătmăruului. Și la vest de Meseș, în Sălaj elemente „răsăritene” se regăsesc foarte rar în descoperirile ceramice (ex. așezarea de la Zalău- Valea Miții) și sub forma unor produse metalurgice (seceri de tip răsăritean, celturi, vârful de lance de tip Krasnomajak în depozite precum cel de la Crasna, respectiv Marca – Bejinariu 2005, p.62).

¹³ Nyírkársz–Gyulaháza (Mozsolics 1960, p.113-123), Zemplinske-Kopčani (Demeterová 1984, Pl. VI/1), Petea–Csengersima (Marta 2005, p. 83-84) și Seini (piesă recent descoperită, informații Dan Pop).

¹⁴ Kacsó 1983, p. 48.

¹ Kovács 1970, p. 26-47; Zoltay 1909, p. 34-40.

² Tóth–Marta 2005, p. 127-128; Nagy 2007.

³ Kalicz 1960, p. 1-15.

⁴ Kemenczei 1963, p. 182-183; Kovács 1967.

⁵ Tóth–Marta 2005; Nagy 2007.

⁶ Kemenczei 1963, p.182-183, Kovács 1967.

⁷ Kemenczei 1981. Pl. 3/8,4.

terialul ceramic descoperit în așezarea de la Nyíregyháza–Oros nu a evidențiat prezența unor forme ceramice estice, conducând spre ideea că cel puțin o parte a materialului arheologic atribuit anterior culturii Berkesz ar trebui mai degrabă încadrat într-o perioadă recentă din evoluția grupului Hajdúbajos–Cehăluț.

J. Némethi a realizat recent istoricul cercetării grupului cultural Hajdúbajos–Cehăluț, și a sintetizat o serie de elemente definitorii ale acestuia¹⁵. Astfel, aria sa de răspândire cuprinde: zona Careiului și Mlaștina Ecedea, valea Crasnei, Depresiunea Șimleului, partea vestică a Sălajului până la Barcău, zona dintre Barcău și Crișul Repede, zona Nirului, valea Ierului și Dealurile Tășnadului.

Deși au fost întrucâtva mai intense decât în zona ungară a Nyírségului, cercetările referitoare la grupul cultural Hajdúbajos–Cehăluț din nord-vestul României au fost inițial interpretate în mod diferit. T. Bader le-a atribuit fazei Otomani IV¹⁶, pornind de la câteva elemente ceramice ce pot fi apreciate ca moșteniri din faza Otomani III¹⁷. J. Némethi a considerat că aparțin unui fenomen cultural aparte (numit ulterior Pișcolt), plasat cronologic după cultura Otomani și pe care l-a datat anterior culturii Gáva¹⁸. Sever Dumitrașcu a atribuit materialele de epocă târzie a bronzului din nord-vestul României, unui fenomen cultural aparte, numit „cultura Biharea”¹⁹. Carol Kacsó, deși a constatat existența unor similitudini cu grupul Hajdúbajos, pentru descoperirile din nord-vestul României, a propus denumirea de „grup Cehăluț”. S-a pornit de la considerentul că în aria lor de răspândire, descoperirile de tip Hajdúbajos par să evolueze diferit. Dacă în aria nord-vestică ele ar fi urmate pe parcursul etapei RBD de grupul cultural/cultura Berkesz, în aria sud-estică ele continuă să viețuiască și pe parcursul acestei etape cronologice, fapt pentru care a considerat că se impune reunirea lor sub o altă titulatură²⁰. Publicarea și cercetarea unor noi loturi de materiale tinde să arate însă că pe o arie largă din nord-estul Ungariei²¹ și nord-vestul României²² avem aceleași tipuri de materiale, care în diferite microzone geografice din nordul Câmpiei Tisei (Marea Câmpie Maghiară) și nord-vestul Transilvaniei au o evoluție similară, fapt pentru care pot fi atribuite aceluiași fenomen, grupul cultural Hajdúbajos–Cehăluț.

15 Némethi 2009a, p. 203-205; Némethi 2009, p. 31-33.

16 Bader 1978, p. 56-57.

17 Boroffka 1994a, p. 7-18; Boroffka 1999, p. 113-125.

18 Némethi 1978, p. 120-121.

19 Dumitrașcu–Emödi 1980, p. 53 (numite materiale de tip Oradea–Cociuba Mare–Biharea); Dumitrașcu 1983, p. 111; Dumitrașcu 1994, p. 101-111.

20 Kacsó 1981, p. 61, 72; Kacsó 1990, p. 4-41, 50; Kacsó 1997; Kacsó 1999, p. 85-112.

21 Nagy 2005, p. 63-105; Nagy 2007, p. 121-154.

22 Bejinariu–Lakó 1996, p. 11-33; Bejinariu–Lakó 2000, p. 163-219; Bejinariu 2009, p. 183-201.

În zona Nyír-ului, Câmpia Careiului și Bihor, precum și în zona Nyírség-ului, grupul cultural Hajdúbajos–Cehăluț a fost precedat de cultura Otomani, ale cărei tradiții sunt evidente prin prisma perpetuării unor forme și elemente de decor ale ceramicii²³. Pentru unele loturi de materiale este însă greu de precizat dacă aparțin unei faze târzii a culturii Otomani sau dacă ele pot fi atribuite deja grupului cultural Hajdúbajos–Cehăluț²⁴. Pe lângă tradițiile Otomani, în formarea grupului a fost evidențiat aportul culturii mormintelor tumulare²⁵. În urma cercetărilor din anii anteriori s-a constatat că grupul Hajdúbajos–Cehăluț continuă să supraviețuiască pe parcursul perioadei RBD²⁶, în unele situri fiind prezente materiale de tip pre-Gáva, ce sunt datate în a doua jumătate a perioadei RBD și în perioada HA1²⁷.

Cronologia. Descoperirile de metal și tipare, destul de numeroase, ar trebui să reprezinte un suport important pentru precizarea coordonatelor cronologice concrete în care se înscrie evoluția așezării Bronzului Târziu de la Nyíregyháza–Oros, „Úr-Cseré”. La acestea pot fi adăugate elementele de datare obținute pe baza analizei ceramicii și corelațiile cronologice ce se pot face pe baza importurilor din mediile culturale învecinate.

Din păcate, cele mai multe dintre piesele de metal descoperite pe parcursul cercetării așezării de la Oros au o valoare cronologică redusă, fiind vorba în general despre tipuri a căror evoluție nu poate fi restrânsă în cadre cronologice înguste. Poate fi luat în discuție, eventual, tiparul fragmentar pentru turnat topoare cu disc și spin care reprezintă o dovadă pentru producerea unor piese de acest fel în așezarea de la Nyíregyháza–Oros. Cele mai multe topoare cu disc și spin apar în zona Tisei Superioare în depozitele seriei Uriu–Ópályi și este vorba mai ales despre piese întregi, în timp ce în depozitele seriei Cincu–Suseni sunt mult mai rar întâlnite și în general este vorba despre piese fragmentare. Situația sugerează că majoritatea pieselor de acest fel au fost produse într-o perioadă de timp contemporană cu depozitele Uriu–Ópályi, depozite încadrate cu precădere în faza RBD, cu mențiunea că nu excludem posibilitatea ca depunerea unora dintre depozitele de acest tip să continue și la începutul perioadei următoare.²⁸

23 Kemenczei 1963, p. 184-185.

24 Körösszegapáti–„Pál-lapály”, Pir/ Szilágypér–„Rozgaz”, Sărauad/Tasnádszarvas–„Vatra satulu nr. 327”, Zăuan/ Szilágyzovány–„Temetődomb”, Oradea/ Nagyváradi–„Salca”, Mónospetri–„Szemételep”, Budiusslău/ Bogyoszló–„Legelő völgy” (Némethi 2009a, p. 41).

25 După formarea culturii Suciului de Sus apar în partea nord-estică a Câmpiei Maghiare și în vestul Nyírului purtătorii culturii mormintelor tumulare (cultura Egyek) (Bóna 1993, 82, Tóth–Marta 2005, 127.).

26 Nagy 2005; Tóth–Marta 2005, p. 128; Nagy 2007; Bejinariu–Székely–Sana 2008.

27 Nagy 2005; Tóth–Marta 2005, p. 128; Nagy 2007; Bejinariu–Székely–Sana 2008.

28 Kacsó 2003, p. 277; Kacsó 2007, p. 37. Alte opinii despre datarea mai largă a depozitelor de tip Uriu–Ópályi – Gumă 1993, p. 262; Gogăltan 2001, p. 196.

În urma analizei materialului ceramic de la Oros s-a observat că un număr mare de forme și majoritatea ornamentelor sunt întâlnite în aproape toate siturile culturii Hajdúbagos–Cehăluț, dar și în descoperirile de tip Berkesz. Chiar dacă până acum a fost adusă în discuție o evoluție a grupului cultural Hajdúbagos–Cehăluț pe parcursul a două faze, aceasta a rămas doar la stadiul teoretic, nefiind oferite elemente concrete de departajare. Existența unor elemente de departajare cronologică între situri poate fi presupusă, pornindu-se de la principiul că materialele mai vechi păstrează mai pregnant tradițiile ceramicii Otomani, iar cele mai recente conțin elemente specifice manifestărilor culturale ce urmează grupului cultural Hajdúbagos–Cehăluț, respectiv descoperirile de tip pre-Gáva și Lăpuș II–Gáva I.

În acest sens, o analiză comparativă a formelor și decorului vaselor evidențiază existența unor deosebiri între ceramica descoperită la Oros și anumite situri Hajdúbagos–Cehăluț ce prezintă elemente mai timpurii. Se poate constata că în ceramica de la Oros, deși a fost prelucrat cel mai mare lot din cadrul grupului Hajdúbagos–Cehăluț, lipsesc registrele de linii incizate, ce umplu zonele triunghiulare care flanchează spațiile dintre arcade. Ornamentul este prezent în mai multe situri de pe cursul superior al Crasnei și a Barcăului²⁹, în Sătmar³⁰ și Hajdú–Bihar³¹. În stațiunile arheologice în care acest ornament apare, se poate constata că există și argumente suplimentare de datare ce le plasează în perioada timpurie a evoluției grupului cultural Hajdúbagos–Cehăluț. Este cazul așezărilor de la Otomani–„Cetatea de pământ” și Pișcolt–„Nisipărie”, în care au fost descoperite piese de bronz (ac cu capul în formă de pecete, pandantiv în formă de potcoavă) ce se datează în principal pe parcursul perioadei tumulare mijlocii și evolute³². În cazul așezării de la Pișcolt, o datare a sa în faza timpurie a grupului cultural Hajdúbagos–Cehăluț este confirmată de încadrarea în faza Suciului de Sus IIa a numeroaselor importuri ceramice cu decor tipic acestei culturi³³. Perpetuarea unor tradiții Otomani și relativ sporadica apariție a elementelor specifice culturii tumulare în așezările de la Körösszakál–„Gál tanya” și Körösszegapáti–„Pál-lapály” a făcut ca acestea să fie incluse în fazele timpurii ale grupului Hajdúbagos–Cehăluț, fiind datate în perioada RBB2-BC³⁴. În cimitirul de la Hajdúbagos–„Daraboshegy”, datat pe parcursul fazei faza RBC³⁵, tradițiile Otomani sunt mai slab sesizate, iar elementele tumulare sunt deja pregnante.

29 Bejinariu–Lakó 2000, 169 (Crasna); Bejinariu–Lakó 1996, Pl. III/1, IV/4 (Cehei).

30 Némethi 1978, pl. 1/1, 7/8-9 (Andrid, Pișcolt); Kacsó 1997, pl. VI/1,4, VII/9 (Acâș).

31 L. Nagy 2007, Pl. III/4-6, VI/2-5, X/4,7, XIII/5,8.

32 Kacsó 1997, p. 88.

33 Marta 2009, p. 96-98.

34 Nagy 2007a, p. 35.

35 Kovács 1970.

Multe puncte comune are materialul ceramic din așezarea de la Nyíregyháza–Oros cu o parte a vaselor necropolelor de incinerare în urne de la Berkesz–„Csonkásdűlő” și de la Demecser–„Borzsovapuszta”. În niciuna dintre necropolele menționate nu sunt prezente forme și motive ornamentale mai „târzii”, caracteristice perioadei RBD și începutului perioadei HA1³⁶. În cadrul ambelor situri, importurile Suciului de Sus³⁷ pot fi apreciate ca aparținând fazei clasice a culturii.

Pe de altă parte, după cum s-a văzut din capitolul rezervat analizei ceramicii, în cazul așezării de la Oros nu poate fi eludată apropierea de orizontul cronologic ce urmează grupului Hajdúbagos–Cehăluț. Acest fapt s-a putut deduce în cazul unor forme de vase (străchini cu umăr puternic profilat sau amfore), a unor ornamente (canelura verticală deasă, caneluri orizontale pe gâtul vaselor), dar și în prezența unor vase arse bicrom, negru la exterior și brun-cărmiziu la interior. Pe baza acestor elemente s-ar putea invoca o anumită apropiere cronologică cu situl de la Suplacul de Barcău–„Lapiș”, în care sunt deja prezente o serie de elemente târzii, ce apar și în necropola de la Lăpuș³⁸. Și ceramica de la Biharea prezintă o serie de elemente certe de datare recentă, bazate pe prezența materialelor de import de tip Igrița, Cruceni-Belegis³⁹ sau Lăpuș.⁴⁰

În zona Nyír, ceramica de la Oros are analogii în cadrul descoperirilor de la Nyírlugos și Nyíregyháza–TESCO, respectiv stația de benzină Shell⁴¹. În materialul ultimelor două situri sunt prezente însă un număr mai mare de vase specifice perioadei de sfârșit a etapei Reinecke BD și perioadei de început a etapei Müller-Karpe HA1. Astfel, în cazul așezărilor cercetate în zona magazinului TESCO și a stației de benzină Shell din Nyíregyháza, există indicii pentru o eventuală datare mai recentă decât în cazul așezării de la Oros. Pentru zona Hajdú–Bihar putem aminti ca analogie depozitul de vase de la Debrecen, datat în perioada RBD⁴².

Importurile descoperite în așezare cuprind materiale de tip Suciului de Sus, Igrița, Piliny și elemente specifice bazinului Košice. Acestea pot fi utilizate pentru o mai bună corelare cronologică a sitului, prin stabilirea unor convergențe cu aceste medii culturale învecinate.

Prezența unei cești de tip Suciului de Sus în așezarea de la Nyíregyháza–Oros (Pl. 3/2) atestă legături cu respectiva cultură arheologică aflată la sud și est. Cantitatea redusă a materialelor Suciului ne conduce spre concluzia că acestea reprezintă doar dovezi ale unor importuri

36 Kovács 1967, Pl. 11-13. Materialele din siturile Nyíregyháza-Bujtos și Morgó sunt în faza de prelucrare, însă materialele specifice grupului Hajdúbagos–Cehăluț sunt foarte numeroase, fapt ce nu ridică semne de întrebare referitor la atribuirea lor culturală.

37 Kovács 1968, Pl. 11/ 1.

38 Kacsó 1997, p. 88.

39 Dumitrașcu 1994, p. 109.

40 Dumitrașcu 1994, p. 106, Pl. XLIV/2; XLV/8.

41 Nagy 2005; Nagy 2007.

42 Poroszlai 1984.

de vecinătate, și nicidecum ale unei prezențe atât de puternice a culturii Suciu de Sus, încât să susțină un mixaj cultural⁴³. Importurile din faza clasică a culturii Suciu de Sus în mediul Hajdúbagos-Cehăluț și în general spre vest sunt bine documentate⁴⁴. Acestea sunt reprezentate de un număr limitat de forme bogat decorate utilizate la servitul mesei (cești, castroane) pe care le schimbă cele două culturi⁴⁵. Modul în care sunt reprezentate ceștile decorate în serviciul de vase de la Nyírmada face trimitere spre interpretări ce sugerează că prezența vaselor de servit masa în medii străine poate să fie plasată în contextul unor exprimări identitare⁴⁶. În ce privește datarea ceștii Suciu de Sus de la Oros, decorarea sa prin incizie lată și excizie ne determină să optăm spre o datare a sa pe parcursul fazei Suciu de Sus II, respective a fazelor Reinecke BC-BD⁴⁷.

Prezența unei cești cu decor spiralic realizat prin incizie superficială, în canal îngust (Pl. 29/4), pune problema unei eventuale apartenențe la o perioadă mai timpurie a etapei Suciu de Sus II, respectiv la subfaza Suciu de Sus IIa. Însă incizia fină prin care este realizat decorul, dar și motivul spiralic în sine – spirale simple, formate din incizii puțin adânci și înguste, ce coboară dinspre umăr și se opresc în centrul spiralei – au analogii foarte apropiate în estul Slovaciei⁴⁸, în cadrul unor materiale datate pe parcursul etapelor Reinecke BC2 și BD⁴⁹. Vase originare din zona de est a Slovaciei ajung să coboare spre sud în zona Tisei superioare⁵⁰, chiar până în centrul Sătmăruului⁵¹.

Una dintre cările cu picior (Pl. 39/1), deși are o formă comună cu alte numeroase vase din așezare, diferă de acestea nu numai prin ornament, ci și prin factura sa. Acest fapt ne determină să considerăm că nu este de factură locală. După modul de ornamentare, originea ei ar trebui căutată înspre nord, unde decorul realizat prin impresiuni punctate se regăsește în arealul culturii Piliny⁵². Ornamentarea gâtului prin registre de impresiuni își găsește analogii printre vasele unui mormânt tumular din necropola din Tápe⁵³.

Relațiile așezării de la Nyíregyháza–Oros cu alte situri contemporane, situate la sud de arealul grupului Hajdúbagos–Cehăluț sunt evidențiate de o parte din materialele descoperite aici. Așa cum s-a putut vedea și în capitolul dedicat ceramicii, o serie de forme ceramice sunt mult mai numeroase în cadrul manifestărilor grupului Igrîța. Este vorba aici în special despre amforele bitronconice sau biconice, cum le-am mai numit, cu buza evazată, ce aparțin tipurilor 1, 4 și 6, toate având bune analogii în mediul grupului cultural mai sus pomenit⁵⁴. La acestea se mai pot adăuga ceștile cu buza evazată și corpul aplatizat (variante 1B), de asemenea, bine documentate în aria Igrîța⁵⁵.

Contribuția cercetărilor de la Oros la cunoașterea epocii târzii a bronzului din zona Tisei Superioare. Cercetările de la Nyíregyháza–Oros au adus elemente noi referitoare la structura unei așezări a grupului Hajdúbagos–Cehăluț și la forma complexelor prezente în cadrul acesteia. Este una dintre puținele așezări ale acestei culturi în care s-a putut surprinde o zonă a sa delimitată de un șanț, care, probabil, a avut rol defensiv⁵⁶. Un element nou în cadrul acestui grup cultural este identificarea unei zone de depuneri rituale la marginea așezării, aspect important ce a putut fi surprins și în cadrul altor culturi învecinate. A fost evidențiată desfășurarea unor activități umane în interiorul așezării, iar analizele osteologice au oferit indicii asupra modului în care comunitatea interacționa cu mediul natural. Prezența a numeroase piese de metal, prelucrarea statistică a unui lot ceramic relativ mare, oferă indicii referitoare la evoluția grupului cultural Hajdúbagos–Cehăluț, fixând datarea așezării într-o perioadă târzie a evoluției acesteia, pe parcursul etapei RBD. Relațiile cu mediile culturale învecinate au putut fi surprinse ca urmare a pieselor de import prezente în așezare, fiind posibilă stabilirea unor corelații între evoluția materialelor de tip Hajdúbagos–Cehăluț și acelora de tip Suciu de Sus/Lăpuș.

Plasarea evoluției așezării de la Oros într-o perioadă târzie a evoluției grupului Hajdúbagos–Cehăluț, impune o prezentare a legăturilor pe care grupul Hajdúbagos–Cehăluț le are cu manifestările culturale ce îi urmează, respectiv a moștenirilor culturale pe care le transmite orizontului cultural Lăpuș II–Gáva I și pre-Gáva. Existența unor vase negre, lustruite la exterior sau cu colorit dublu, negru la exterior și cărămiziu la interior, deși limitate cantitativ printre descoperirile noastre, prefigurează trăsăturile distinctive ale viitoarei culturi Gáva, la nașterea căreia considerăm că și-a adus aportul și grupul cultural Hajdúbagos–Cehăluț. Numărul mic al vaselor cu caracteristicile mai sus menționate ne face să credem că locuirea din punctul „Ūr-

43 În cantitate asemănătoare a fost prezentă ceramica de Suciu de Sus în situl din apropierea Nyíregyháza-Tesco, pompa de benzină Shell (Nagy 2007).

44 Némethi 2009a, p. 41, cu bibliografia.

45 Deși mai slab evidențiate pot fi documentate și importuri de cești și castroane Hajdúbagos în așezări ale culturii Suciu de Sus (Kacsó 2005, p. 53; Marta 2009, Pl. 49/6)

46 Toth–Marta 2007, p. 132-134.

47 O delimitare mai strânsă în cadrul fazei Suciu de Sus II (IIa și IIb) poate fi realizată doar în cazul unor loturi ceramice mai consistente (Marta 2009, p. 96-101).

48 Demeterová 1984, Pl. XXVI/2.

49 Demeterová 1984, p.46.

50 Kovács 1967, Pl. 14/3.

51 Marta 2009, Pl. 24/2.

52 Kemenczei 1984, Pl. XI/13, XIII/3.

53 Trogmayer 1975, Pl. 46/1-2.

54 Chidioșan–Emődi 1982, Pl. 1; Chidioșan–Emődi 1983, Pl. 4/1; Emődi 1997, Pl. 1, 3.

55 Chidioșan–Emődi 1982, Pl. 6/1-3; Chidioșan–Emődi 1983, Pl. 6/6-9, 8/1; Emődi 1997, Pl. 7/14-15.

56 Cercetări de dată recentă (anul 2009) au reușit să surprindă existența unor structuri defensive (palisadă) și pe o latură a așezării grupului Hajdúbagos–Cehăluț de la Șimleu Silvaniei: cercetări I. Bejinariu.

Csere” a luat sfârșit într-o perioadă în care procesul de transformare ce va duce la adoptarea pe scară largă a ceramicii negre canelate abia începuse.

După cum s-a văzut la analiza tipurilor și variantelor ceramicii de la Oros, numeroase elemente ale ceramicii de tip Hajdúbagos–Cehăluț continuă să fie prezente în cultura materială a orizontului cultural pre-Gáva⁵⁷. Este cazul amforelor de tip 1, 3, 4 și 6 sau a tuturor variantelor străchinilor de tip 2 și 3. Nu este exclus ca tradiția vaselor cu picior sau a străchinilor cu buza lobată prezente în ceramica de tip pre-Gáva să își aibă originea în ceștile/cănille cu picior din grupul cultural Hajdubagos–Cehăluț. Pe ceramica de tip pre-Gáva continuă să fie prezente un mare număr de ornamente ce erau definitorii pentru ceramica Hajdubagos–Cehăluț (butoni, nervuri, caneluri). Sunt bine reprezentate și motivele incizate, punctate și alveolate. În schimb anumite forme ceramice, cum ar fi vasele-vatră portativă sau unele variante de căni înalte cu picior, destul de numeroase în repertoriul ceramic al grupului menționat nu se mai regăsesc în perioada ulterioară. Și acest aspect este de natură să scoată în evidență unele transformări profunde ce se petrec în cadrul ceramicii din zona centrală a Câmpiei Maghiare, odată cu încetarea grupului cultural Hajdúbagos–Cehăluț. În acest sens trebuie precizat că pentru partea finală a perioadei RBD - începutul perioadei HaA, a fost sesizată pătrunderea spre nord a unor elemente culturale din zona Banatului și Voivodinei⁵⁸. Fondul tumular pe care se constituie toate aceste manifestări culturale din zonele menționate, vizibil pregnant și în cazul culturii locale Hajdúbagos–Cehăluț face greu de decelat aportul particular al manifestărilor din cele două regiuni în formarea ceramicii de perioadă HaA din nordul Câmpiei Maghiare. Acest aspect face destul de dificilă precizarea foarte exactă a aportului pe care l-a adus grupul Hajdúbagos–Cehăluț la formarea manifestării culturale de tip pre-Gáva.

Numeroase forme de vase prezente în cadrul locuirii de epoca bronzului de la Oros au analogii apropiate în cadrul orizontului cultural Lăpuș II–Gáva I: amforele cu gât lung arcuit și cilindric (tipul 1 și 6), amforele bitronconice, majoritatea tipurilor de oale, vasele-vatră portativă, variantele de străchini 1Aa, 1Ac și toate variantele tipurilor 2, 3 și 4, respectiv ceștile de tip 1C, 2 și 3. Analogiile acestor vase în ceramica Lăpuș II–Gáva I au fost menționate cu ocazia prezentării fiecărei variante ceramice, ele fiind bine reprezentate în așezările de la Berveni, Carei și Petea–Csengersima⁵⁹. În ce privește decorul, aproape fiecare ornament reliefat, alveolat sau canelat își găsește analogii în una dintre cele trei așezări ale orizontului cultural

Lăpuș II–Gáva I. În schimb constatăm o slabă transmitere a ornamentelor punctate. Numărul redus al fragmentelor ceramice cu ardere bicromă, neagră la exterior și brună-cărămizie la interior, nuanțează problema originii acestei tehnici de ardere a vaselor. În acest sens se remarcă o situație similară cu așezarea din perioada târzie a culturii Suci de Sus de la Petea–Csengersima. Dacă cele două așezări se află aproximativ pe același palier cronologic în cadrul fazei RBD – așa cum sugerează importurile reciproce – atunci se poate constata o adoptare oarecum sincronă a noului procedeu de ardere a ceramicii. Deși noua tehnologie câștigă pondere în timp, constatăm că încă de la începuturile utilizării arderii bicrome negre-roșii, pare să aibă loc o transmitere rapidă a informației referitoare la acest procedeu. Sub acest aspect nu se constată decalaje vizibile între o manifestare culturală vestică, cu puternice influențe tumulare (cultura Hajdúbagos–Cehăluț) și o cultură aflată la est, ancorată în tradițiile bronzului mijlociu din spațiul carpatic (cultura Suci de Sus).

Analiza comparativă a ceramicii orizontului Lăpuș II–Gáva I din zona Careiului cu aceea din Câmpia Sătmăruului, a scos în evidență faptul că pe lângă numeroase elemente comune, sunt prezente și câteva elemente regionale⁶⁰. Ceramica din zona Careiului se individualizează în primul rând prin prezența brâielor alveolate⁶¹ și prin ponderea mare a străchinilor invazate⁶². Proveniența lor este pusă pe seama moștenirilor din grupul Hajdúbagos–Cehăluț, ce coboară până în cultura Otomani⁶³. Ele sunt elemente care scot în evidență amprenta Hajdúbagos–Cehăluț ce apare în orizontul de locuire HaA din zona Careiului.

În încheiere, se poate considera că cercetările de la Nyíregyháza-Oros sunt de natură să ofere elemente noi referitoare la evoluția târzie a grupului cultural Hajdúbagos–Cehăluț și să precizeze mai exact aportul pe care acesta l-a adus în procesul de naștere a manifestărilor culturale ce îi urmează în nordul Câmpiei Maghiare și în nord-vestul Transilvaniei.

⁵⁷ Pentru comparația cu ceramica de tip pre-Gáva am utilizat lucrările lui V. Szabó (1996, 2004).

⁵⁸ Kemenczei 1984.

⁵⁹ Némethi 1990; Marta 2009, p. 274–275, pl. tipologică 5-6.

⁶⁰ Marta 2009, p. 88-91.

⁶¹ Némethi 1990, p. 40, Pl. 1/15, 11/3, 13/5.

⁶² Némethi 1990, p. 41.

⁶³ Némethi 1990, p. 42, 46.

NYÍREGYHÁZA-OROS KÉSŐBRONZKORI TELEPÜLÉSEI

Kivonat

A Nyíregyháza Oroson végzett régészeti kutatások során az „Úr Csere” lelőhelyet 2004 második felében tártuk fel mentőásatások keretén belül, melyek a Nyíregyházát keletről elkerülő út nyomvonalán található lelőhelyeket érintették. Az ásatásokat a nyíregyházi Jósza András Múzeum és a Szatmár megyei múzeum közös projektjeként végezték magyarországi és északnyugat-romániai régészek. A kötet csak a későbronzkori leleteket tárgyalja (összesen 186 komplexumot). Az ásatások során a későbronzkori objektumok mellett több komplexumot sikerült feltárni a rézkorból, a kora bronzkorból, a császárkorból és a népvándorláskorból is. Mivel a régészeti lelőhelyet egy út kettévágta, az úttól északra fekvő a 26-os, az úttól délre fekvő pedig a 33-as számot kapta.

Természeti környezet. Az Úr Csere lelőhely Nyíregyházától nyugatra és Oros településtől délkeletre terül el. Földrajzilag a Nyírségben található, felszínét homokdűnék uralják, amit a szél és a természet erői gyakran átrendeznek. Egy ilyen homokos löszdűnén található Oros. Nyugati irányban, a középkori források szerint, a hajdan sokkal nagyobb vízhozamú Kállai patak széles völgye határolja. A települést alkotó dombok keleti irányban lenyúlnak egészen a Balkány patak partjáig. A késő bronzkori település északi oldalán a két, dűnéket határoló patak egyesül, így a települést három oldalról mocsaras terület határolja. Így elmondhatjuk, hogy a dűne elhelyezkedése, amelyen a késő bronzkori település kialakult kivételes adottságokkal rendelkezett.

A település erősítési rendszere. A kutatások és a területen végzett megfigyelések egy kb. 9 hektáros (kb. 400 x 230 m) védművekkel ellátott belterületet állapítottak meg. A település nyugati oldalán egy árok nyomvonalát lehetett követni 120-125 méteren keresztül. Az árok „V” profilú, mélysége a steril rétegtől számított 1,2-1,5 méter, szélessége pedig 2,5 – 5, 5 m között váltakozik. A kutatott terület szinte minden részén megjelenik egy-egy kompakt, égésnyomokat és szén tartalmazó elszíneződés. Úgy tűnik ezek a védőpalánk nyomai, amelyik miután felgyulladt összedőlt és az árok mélyére került. A körülmények alapján úgy tűnik egy egyszerű, vesszőfonatos, karókból emelt védvonalról beszélünk. Feltehetőleg egy magaslat tetejére építhették, a talaj homoktartalma miatt ugyanis nehéz lett volna máshol rögzíteni. Az árokban két esetben találtunk nagyméretű, egész edényeket, pontosabban egy amforát és egy hombáredényt (Pl. 27/4, 28/2). A kutatott terület keleti vége felé, a közepe táján, az árok meg-

szakad, végén pedig egy gödör jelenik meg régészeti anyag nélkül, vagyis keltezése bizonytalan (274. objektum). Ez a gödör lehetséges, hogy egy kapuoszlop beállítására szolgált, ami a védett terület bejárata lehetett. Érdekes, hogy pontosan ezen a területen hiányoznak a cölöplyukak, amelyek a terület több részén igen nagy számban megtalálhatóak. Ez is alátámaszthatja feltevésünket, hogy ez a terület közlekedési útvonalként szolgálhatott.

Régészeti komplexumok. A tanulmányozott komplexumok közül 186 késő bronzkori. Látszólag nagy számú objektumról van szó, ennek ellenére nem adnak teljes rálátást a település egészére, mivel a kutatások csak a terület keleti oldalát érintették. A védvonal mellett megjelennek még különböző funkciójú gödrök is, valamint lakóházkomplexumok is. Ez utóbbi kategóriába csak kevés lelet sorolható. A 281. objektum ilyen jellegű. Alaprajza téglalapszerű, 430 x 300 cm (18-19 kép). A ház valószínűleg nyeregtetős volt, amit a rövid oldalak közepén, és a hosszú oldal közepe táján elhelyezett lyukakba valamint a közepén talált mélyedésbe helyezett cölöpök tarthattak fenn. Másik két komplexum, amelyeket a 33. lelőhelyen találtak és amit eredetileg gödörnek véltek, ugyanebbe a kategóriába sorolhatóak. A 7-es, kör alaprajzú objektum lépcsőzetesen halad legmélyebb pontjáig a faltól számítva 0,7 m-ig. Legnagyobb átmérője 2 m, közepén pedig egy cölöplyuk található. A másik egy ovális komplexum, méretei 2 x 2,3 m, fala ferde, alja pedig egyenes, szűkebb mint a szája. Mélysége, a faltól számítva 0,45 m.

Legnagyobb számban gödrök kerültek feltárássra. A feltáráskor megállapított formájuk alapján a gödröket még három kategóriába sorolhatjuk: 1. csonkakúp alakúak, 2. zsákformájúak vagy szabálytalan alakúak, 3. henger alakúak. A csonkakúp alakú gödrök vannak túlsúlyban. Szinte mindegyik nagyméretű, legkevesebb 1,20 m átmérővel és 0,30 és 1,20 m mélységgel. Többségük szerény leletanyaggal rendelkezett, amit kerámia töredék, csontok, patics darabkák, kövek alkottak, de volt közöttük teljesen üres is. A zsákformájú vagy a szabálytalan alakúak szintén nagy számban vannak. Általában szűk szájúak az aljuk viszont szélesebb. Méreteik és leletanyaguk nem sokban különbözik az első kategória gödreitől. A henger alakú gödrök már kisebb számban voltak jelen, összesen 24-et sikerült azonosítani. Feltételezett hasznosításuk alapján két kategóriába sorolhatóak: a) Tároló gödrök/hulladék gödrök és b) Áldozati depókat rejtő gödrök. A legtöbb orosi gödör úgy tűnik tárológödörként szolgált, majd később miután tönkrement hulladéktárolásra használták.

Áldozati depókat rejtő gödrök. A gödrök leletanyagának alapján körülbelül 10 objektum tartozik ehhez a csoporthoz. Az ilyen célokat szolgáló gödrök némelyikéből egész edények is előkerültek (kannák, bögrék, nagyméretű edények), örlőkövek, agancsok és állati csontok is.

Szintén ebből a kategóriából származnak a lelet nélküli gödrök is, amelyeket az áldozati tárgyakat rejtő komplexumok közvetlen közelében találtunk, ezek csoportjai látszólag kaotikus formában voltak elrendezve. Összekapcsolásuk egyáltalán nem véletlen. Régészeti szempontból ezeknek a lelet nélküli gödröknek a hasznát nagyon nehéz megmagyarázni. Léteznek azonban olyan antik források, melyek mágikus rítusokról beszélnek. Ezek során gödröket ástak, és ott folyadékokkal mutattak be italáldozatokat (bor, víz, méz, tej, állati vér stb.) anélkül, hogy tárgyakat raktak volna le az adott gödörbe. Így a régész számára a kézzelfogható valóságot nem tudja megjeleníteni.

Az orosi késő bronzkori településen végzett régészeti ásatások helyzetének konkrét elemzése azt sugallja, hogy szórványosan bár, de a védvonalon kívül is laktak, valamint volt egy olyan terület is ahová az áldozati depókat tették. Ez a lelőhely északi kerületében volt, szintén az árok alkotta védvonalon kívül. Itt került elő a legtöbb egész edényeket, örlőköveket és állati koponyákat tartalmazó komplexum. Ami a védvonalon belüli területet illeti, a lakóháznyomok hiánya azt a gondolatot ébreszti bennünk, hogy ez a terület kizárólag a tárolást szolgálta, a házak pedig a dűnék magasabb pontjain helyezkedtek el, távolabb a mocsártól, az árvíztől és a nedvességtől is védve.

A kerámia. 494 kerámiatöredék esetében lehetett az eredeti formát meghatározni. A település edénytípusainak a repertóriumát az egész edények alapján lett összeállítva, amelyeket formai elemzés alapján a Hajdúbagos–Cehăluț csoport műveltségébe soroltunk vagy egyes ehhez a kultúrához tartozó lelőhelyek anyagának sorába. Több paraméter szerint elvégzett analízis alapján, mint az edények alapanyaga, a soványításhoz használt anyag, a felület kezelése, az égetés stb., három kerámia kategóriát különböztethetünk meg. A finom kerámia a teljes anyag kb. 14%-a. A legjobban reprezentált a félfinom kerámia kategóriája, amelyik 57,5%-át teszi ki az anyagnak. A többit a használati kerámia képezi. Ami az Oroson előkerült kerámia égetését illeti, nagyobb mértékben fordul elő az oxidációs égetés. Ez a típusú égetés főleg a konyhai és a tároló edényeknél figyelhető meg: fazekak, hordozható tűzhelyek, és hombáredények. A redukciós égetés gyakoribb az asztali edények kategóriájánál: bögrék, tálak, amforák. Az adatbázisba sorolt edények közül mindössze 9 edénynek volt ilyen típusú égetése, hogy fényes fekete színt kapjon a külseje és barna, téglavagy homokszínű legyen a belseje. Az ilyen kétszínű égetés százalékaránya még igen alacsony, mivel ez a technológia még alkalmazásának kezdeti szakaszában volt.

Az orosi későbronzkori kerámia formák repertóriumát néhány alaptípust foglal magába, mindegyik variánst profilja alapján meghatározva: füles vagy fületlen, a száj formája stb. Am-

forákról, fazekakról, hordozható tűzhelyekről, hombáredényekről, táláról, bögrékről valamint parázsfogó edényekről van szó.

A Oros - „Űr-Csere” településen előkerült kerámiát díszítőmotívumai alapján is csoportosítottuk: bütykös díszítés (A díszítési csoport), kiemelt borda díszítés (B díszítési csoport), alveolák (C díszítési csoport), barázdált díszítés (D díszítési csoport), bebökődések (E díszítési csoport), kannelúrák (F díszítési csoport), és bekarcolások (G díszítési csoport). Úgy a kerámia formák mint a díszítés módjai az esetek többségében mind megtalálhatóak a Hajdúbagos–Cehăluț csoport kerámiájában és a szomszédos területek késő bronzkori kultúrkörnyezetében is. Nem hiányoznak az „idegen” hatások sem, amelyek az import kerámia formájában jelennek meg. Megemlítünk itt néhány Felsőszőcs típusú edényt, közülük is egy délkelet szlovákiai variánst, valamint egy a Piliny kultúra területén biztos analógiával rendelkező edényt, de néhány példányát azoknak az edényeknek is, amelyek egyes északnyugat-bánáti hatások átvételét tükrözik.

Eszközök és tárgyak, amelyek a fémfeldolgozás bizonyítékai. Nyíregyháza-Oros „Űr-Csere” késő bronzkori lakóövezetében több bronzöntési salak(?) és maradvány is előkerül. Ezekhez járulnak még a különböző tárgyak, amelyeket a település nyugati oldala mellett futó árokban találtunk, valamint a településen belül talált bronztárgyak is. Ezekben a komplexumokban a bronztárgyak és a bronzművességre utaló egyéb eszközök együtt jelennek meg a kerámiatöredékekkel, esetenként csontokkal, kövekkel és paticsdarabokkal. A tény, hogy a település területén gyakorolták a fémművességet bizonyítást nyert egy olvasztótégely és négy darab öntőforma felfedezésével, amelyek között volt tüskés korongos csákány, tokosbalta és egy tokosvéső öntőformája. Másik két fémtárgy pedig szintén bronzöntő mester elmaradhatatlan szerszáma: egy lyukasztó és egy véső. Az orosi település bronztárgyainak nagy részét a tűk képviselik, 5-6 ilyen tárgyról van szó. Közülük egy gömbfejű, szárának felső részén díszített tű emelkedik ki, amelyiket a Diviaky típusba sorolhatunk az M. Novotná által létrehozott, a szlovákiai tűkre vonatkozó tipológia szerint. Egy patkó alakú függő kivételével az összes többi bronztárgy töredékes, emiatt nehéz bizonyossággal bármelyik kategóriába besorolni.

Kő és agyag tárgyak. A legtöbb kőtárgyat kétségtelenül az örlő- és a zúzókövek alkotják. Agyagból nehezekeket készítettek, leginkább piramis formájút, amelyeknek a felső része ki volt lyukasztva. A 33. objektumban egy négyszögű agyaglapot találtak melynek szélei be voltak hajlítva. Alkalmazhatóságát nehéz meghatározni, de egy hasonlót, mintázott szélekkel már találtak Szilágysomlyó, Observator lelőhelyen is egy rituális célokat szolgáló gödörben, melynek gazdag leletanyaga a Hajdúbagos–Cehăluț csoportéhoz tartozott. Néhány edény falából két hengeres tárgyat készítettek amelyeknek szintén nem ismerjük a funkcióját.

A település területén végzett tevékenységek. A földművelés bizonyítékai a nagy számban előkerült őrlőkövek, de a házak tapasztására elkészített agyag és gabonapelyva keverék is ezt támasztja alá. A településen talált csontok bizonyítékai az állattartásnak illetve a vadászatnak. A csontok 47% bizonyítottan szarvasmarhától származik, miközben a disznóknak, juhoknak, kecskéknak, lovaknak csak mellékszerep jutott a késő bronzkori gazdaságokban. Az elejtett vadak közül megemlíthjük a szarvast, az őzet, a bölényt és a nyulat. A településen űzött mesterségek közül kiemelkedő a már említett bronzművesség, amit messzemenően bizonyítanak a feldolgozás eszközei, főleg az öntőformák, az olvasztótégely töredék és a nyersfém maradványok. A kutatások másik jelentős eredménye a késő bronzkori település egy olyan részének meghatározása volt, amit kultikus tevékenységek lebonyolítására használtak.

A Nyíregyháza – Oros térségben végzett kutatások jelentősége a Felső-Tisza vidék késő bronzkori időszakának megismeréséhez (Concluzii). Nyíregyháza – Oros „Úr Csere” a Felső-Tisza vidék késő bronzkori régészetének meghatározó településévé vált az elvégzett kutatásoknak köszönhetően. A lelőhely késő bronzkori kultúrák találkozási pontjánál helyezkedik el, de minden bizonnyal olyan késő bronzkori népek találkozási helyénél is, amelyek elterjedési területét nem mindig lehet pontosan meghatározni. A régebbi kutatások a Hajdúbagos-Cehăluț csoport elterjedési területét Nyírlugos–„Szennyespusztá” település környékéig határozták meg⁶⁴. Újabban azonban bebizonyosodott, hogy a Hajdúbagos-Cehăluț típusú régészeti műveltség lelőhelyei sokkal messzebbre nyúlnak észak-keleti irányban. Ezt több, Nyíregyháza⁶⁵ környékén végzett feltárás támasztja alá – mely környéket eddig a Felsőszőcs kultúra elterjedési területének tartották⁶⁶. A tévedés valószínűleg abból adódott, hogy több, a város közelében található lelőhelyen (Nyíregyháza–„Bujtos” és Nyíregyháza–„Morgó”) is találtak Felsőszőcs típusú kerámiát. Ma már egyre nyilvánvalóbb, hogy a környéken talált felsőszőcsi kerámiát import árunak tekinthetjük, és megerősítik ezt a tényt az orosi ásatások is. A harmadik műveltség, amelyik szóba kerülhet a Nyírség területén a késő bronzkor időszakában, az a Berkesz kultúra⁶⁷. Az újabb kutatások úgy tűnik azt bizonyítják, hogy a több évtizede meghatározott kultúra téves feltevéseken alapult⁶⁸.

Kulturális besorolás. Az Oroson feltárt régészeti anyag kulturális besorolása előtt meg kell vizsgálnunk a Hajdúbagos-Cehăluț csoportnak tulajdonított leleteket és azokat, amelyeket

előzőleg a Berkesz kultúrába soroltunk. Korábban úgy tartotta a kutatás, hogy az RBC időszak második felére, RBD időszaakra keltezett Berkesz kultúra létrejött a Felsőszőcs és a halom-síros (Etyek) kultúra keveredése nyomán történt meg, valamint hatással voltak rá a Noua–Komarovo kultúra keleti elemei is⁶⁹. A Berkesz kultúra elterjedési területeként Magyarország északkeleti részét határozták meg, ami magába foglalja Hajdú–Bihar és a Nyírség vidékét. A Berkesz kultúra északi területein (pl. Alsóberecki, Vajdácska) talált kerámiaanyag különbözik bizonyos mértékben a Nyírség keleti és déli területein talált lelőhelyek anyagától. k a Berkesz kultúrának tulajdonított leletek között talált keleti eredetű darabokAz alsóberecki temető egyes edényein már láthatóak a Felsőszőcs kultúra díszítései⁷⁰. A Berkesz–„Csonkás-dűlő”, Demecser–„Borzsovapuszta” vagy Nyíregyháza–„Bujtos” és Nyíregyháza–„Morgó” lelőhelyek esetében a Felsőszőcs típusú bögréket és tálakat importárúként kell kezelnünk. A keleti, illetve a déli területeken található lelőhelyekről származó, de a Berkesz kultúrába sorolt anyag a felsőszőcsi régészeti műveltséghez tartozik⁷¹, míg a terület nyugati részén található lelőhelyek – Nyíregyháza–„Bujtos” és Nyíregyháza–„Morgó” és mások is amelyeket a Berkesz kultúrába soroltak⁷² – pedig valójában a Hajdúbagos–Cehăluț csoport késői periódusához tartoznak⁷³.

Ebben a kontextusban viszont felmerül a kérdés, hogyan magyarázzuk. Ez alatt egyrészt kerámiaanyagot másrészt pedig fémtárgyakat értünk⁷⁴. Ma már amikor a Noua–Sabatinovka régészeti műveltséghez tartozó kerámiát sokkal jobban ismerjük, már nehezebb meghatározni jelenlétét a Felső-Tisza vidéken akár csak az útvonalat amelyiken át a ebbe a régióba kerülhetett⁷⁵. Az a néhány fegyvertípus (török, erdélyi tokosbalták, horgosnyelű sarlók és Noua típusú tűk) inkább tekinthetőek importárúnak vagy a keleti fémművesség hatásának, vagy talán éppen az erdélyiének. E mellett szól az a tény is, hogy a Felső-Tisza vidéken talált nagyméretű

69 Kemenczei 1963, 182-183.o., Kovács 1967.

70 Kemenczei 1981. 3/8,4. pl.

71 Tóth–Marta 2005, 127.o.

72 Tibor Kemenczei (1967) felsorolja a Berkesz kultúrába sorolt felfedezéseket. Nagy részüket elszórt leletanyag képezi. Fontosabb kerámiaanyag csak Nyíregyháza–„Bujtos”, Nyíregyháza–„Morgó” településekről és a Berkesz–„Csonkásdűlő” és Demecser–„Borzsovapuszta” temetőkből került elő.

73 Nagy 2007, Pl. 1. Érdekes, hogy 1967-ben a Berkesz kultúrába sorolt lelőhelyek többsége Nyíregyházától keletre a Kraszna vonalától pedig nyugatra esik. Tehát olyan területről származnak ahol vegyes régészeti anyagot tartalmazó települések lehetnek, a Hajdúbagos–Cehăluț csoportra jellemzőek, de mellettük gyakran Felsőszőcs elemek is feltűnnek.

74 Keleti eredetűnek tartanak néhány edényformát (homorú falú, széles szájú amforák, kétfülű bögrék, valamint a fazekakat) és néhány fémtárgyat (Kemenczei 1981, 89–91 o. Kalicz–Koós 1997, 68 o.). Eredetüket a Noua és a Komarovo kultúrákban keresték.

75 Egy kelet felőli betörés alátámasztásához hiányoznak a Noua kultúra maradványai Ukrajnában a Kárpátoktól nyugatra. Ami az erdélyi helyzetet illeti a legészakibb Noua típusú kerámia elemek importként/hatásként jelennek meg a láposi sírleletben (Kacsó 1975, 60. o.), de Szatmár vidékén hiányoznak. A Mesztől nyugatra is a keleti elemek egyre ritkábban jelennek meg a kerámia leletekben (pl. Zilah - Valea Miții) és mint a fémművesség termékei (keleti típusú sarlók, tokos, füles balták, Krasnomajak típusú lándzsahegyek, bronzdepókban mint amilyen a krasznai vagy a márkaszéki (Marca) – Bejinariu 2005, 62. o.).

64 Kovács 1970, 26-47.o.; Zoltay 1909, 34-40.o.

65 Tóth–Marta 2005, 127-128.o.; Nagy 2007.

66 Kalicz 1960, 1-15.o.

67 Kemenczei 1963, 182-183.o.; Kovács 1967.

68 Tóth–Marta 2005; Nagy 2007.

gumós tűk egy olyan változathoz tartoznak, amelyeket úgy is értékelhetünk, mint erre a régióra jellemzőt, még akkor is, ha egy keleti modell hatására jöttek létre. Sőt, ha továbbmegyünk, a Felső-Tisza vidéken ezek a nagyméretű, gumósnyakú tűk mind a négy esetben kerámiával együtt kerültek elő, és a kerámia minden esetben helyi gyártmányú volt⁷⁶. A Felső-Tisza vidéki bronzdepók, amelyek keleti/erdélyi eredetű tárgyakat tartalmaznak, Uriu–Ópályi típusúak. Ezekben a keleti típusú tárgyak számos helyi jellegű eszközzel együtt vannak elhelyezve. Tehát, a Hajdúbagosa–Cehăluț csoport területén felfedezett keleti jellegű tárgyak a Noua–Sabatinovka kultúra környezetének fémművességével kialakított kapcsolatokkal hozhatóak összefüggésbe, akárcsak a Felsőszöcs kultúra kiterjedési területén talált anyag is⁷⁷. A Nyíregyháza-Oros településen feltárt kerámiaanyag nem mutatott keleties formavilágot, ami arra enged következtetni, hogy legalább is egy részét az eddig a Berkesz kultúrába sorolt anyagnak átértékeljük és a Hajdúbagosa–Cehăluț csoport fejlődésének fiatalabb szakaszába helyezzük át.

Németi János készítette el nemrég a Hajdúbagosa–Cehăluț csoport kutatástörténetét, rendszerezve annak sok meghatározó elemét⁷⁸. Ennek alapján láthatjuk, hogy a csoport elterjedési területe átfogta Nagykároly környékét és az Ecsedi lápot, a Kraszna völgyét, a Somlyói medencét, Szilágy megye nyugati részét egészen a Berettyóig, a Berettyó és a Sebes-Körös közé eső területet, a Nyírség vidékét, az Ér völgyét és a Tasnádi dombságot.

Észak-Románia területén több a Hajdúbagosa–Cehăluț csoportba sorolható lelet van mint a Nyírség területén, bár eredetileg másképp értékelték őket. Bader Tibor például az Ottomány kultúra IV. fázisába⁷⁹ sorolta a leleteket néhány kerámia elemből kiindulva, amit az Ottomány III. fázisába⁸⁰ lehetett helyezni. Németi János úgy tartotta, hogy egy különálló régészeti műveltséget képviselnek (amit utólag Piskolt csoportnak keresztelt), és amit az Ottomány kultúrát követő és a Gáva kultúrát megelőző időszakra keltezett⁸¹. Sever Dumitrașcu az Északnyugat-Románia területén talált késő bronzkori anyagot szintén különálló régészeti műveltségnek minősítette és Bihari kultúrának nevezte el⁸². Kacsó Carol jóllehet megállapított hasonlatosságot a Hajdúbagosa csoporttal, de a Románia északnyugati vidékein tett leletanyagra a Cehăluț csoport elnevezést javasolta. Szerinte az elterjedési területükön a Hajdúbagosa

csoport különbözőképpen fejlődött. Az északnyugati területeken úgy tartotta, hogy a RBD időszak során a Berkesz kultúra követte a csoportot, ezért úgy vélte, hogy új név alatt kell ezeket elkülöníteni⁸³. De a meglévő anyagok publikálása és az új feltárások azt bizonyítják, hogy Északkelet-Magyarország⁸⁴ egy nagy kiterjedésű területén és Északnyugat-Romániában⁸⁵ is azonos típusú régészeti anyagunk van, amelyek az Alföld északi területének különböző földrajzi kistérségeiben és Északnyugat-Erdélyben hasonló fejlődést mutatnak, így nyugodtan besorolhatjuk őket ugyanabba a régészeti jelenségbe vagyis a Hajdúbagosa–Cehăluț csoportba.

A Nyírség területén, a Nagykárolyi síkságon és Biharban a Hajdúbagosa–Cehăluț csoport minden esetben az Ottomány kultúrát követte, amelynek hagyományai nyilvánvalóak, mivel a kerámiaformák és díszítések tovább éltek⁸⁶. Egyes leletanyagokról azonban nehéz meghatározni, hogy még az Ottomány kultúrához tartoznak-e vagy már besorolhatjuk a Hajdúbagosa–Cehăluț csoportba⁸⁷. Az Ottomány tradíciók mellett, a csoport kialakulásában nagy szerepet játszottak a halomsíros kultúra elemei is⁸⁸. Az utóbbi évek feltárásai alapján láthatjuk, hogy a Hajdúbagosa–Cehăluț csoport tovább él az RBD időszak folyamán is⁸⁹, és egyes lelőhelyein a pre-Gáva típusú anyagok is megtalálhatóak, amelyeket az RBD időszak második felére valamint a HA1 idősakra kelteztek⁹⁰.

Kronológia. A fémleletek és az öntőformák igen nagy száma, fontos támpontot jelenthetne a Nyíregyháza-Oros, „Úr-Csere” késő bronzkori település pontos keltezéséhez. Ezt kiegészítik még a kerámia elemzése során kapott időbeli besorolások, és azok a kronológiai összefüggések, amelyeket a szomszédos kultúrkörnyezetekből származó importanyag alapján állapítunk meg.

Sajnos az Oroson talált fémtárgyak nagy többségének azonban meglehetősen alacsony a keltezési értéke, olyan tárgyakról van ugyanis szó, amelyeket nem lehet szűk időrendi korlátok közé vonni. Pontosabb keltezést adhat esetleg az a töredékes öntőforma, amelyet a tuskés korongos csákányok előállításához használtak, és bizonyítja, hogy ilyen eszközöket Nyíregyháza–Oros településen belül is készítettek. A legtöbb tuskés korongos csákányt a Felső-Tisza vi-

76 Nyírkársz–Gyulaháza (Mozsolics 1960, 113-123 o.), Zemplinske-Kopčani (Demeterová 1984, pl. VI/1), Petea–Csen-gersima (Marta 2005, 83-84 o.) és Seini (Szinérvérálja) (frissen felfedezett darab, információ: Dan Pop).

77 Kacsó 1983, 48. o.

78 Németi 2009a, 203-205; Németi 2009, 31-33. o.

79 Bader 1978, 56-57. o.

80 Boroffka 1994a, 7-18. o.; Boroffka 1999, 113-125. o.

81 Németi 1978, 120-121. o.

82 Dumitrașcu–Emödi 1980, p. 53 o. (Oradea–Cociuba Mare–Biharea típusúnak nevezett anyag); Dumitrașcu 1983, 111.o.; Dumitrașcu 1994, 101-111. o.

83 Kacsó 1981, 61.o., 72; Kacsó 1990, 4-41.o., 50; Kacsó 1997; Kacsó 1999, 85-112.o.

84 Nagy 2005, 63-105.o.; Nagy 2007, 121-154.o.

85 Bejinariu–Lakó 1996, p. 11-33.o.; Bejinariu–Lakó 2000, 163-219.o.; Bejinariu 2009, 183-201.o.

86 Kemenczei 1963, 184-185.o.

87 Körösszegapáti–„Pál-lapály”, Pir/ Szilágypér–„Rozgaz”, Sărauad/Tasnádszarvas–„Vatra satului 327. sz.”, Zăuan/ Szilá-gyrovány–„Temetődomb”, Oradea/ Nagyvárads–„Salca”, Mónospetri–„Szeméttelep”, Budiuslău/ Bogyoszló–„Legelő völgy” (Németi 2009a, p. 41.o.).

88 A felsőszöcs kultúra kialakulása után jelennek meg a Pannon-Alföld északkeleti részén és a Nyírség nyugati vidékén a halomsíros kultúrák képviselői (Egyek kultúra) (Bóna 1993, 82.o., Tóth–Marta 2005, 127.o.).

89 Nagy 2005; Tóth–Marta 2005, 128.o.; Nagy 2007; Bejinariu–Székely–Sana 2008.

90 Nagy 2005; Tóth–Marta 2005, 128.o.; Nagy 2007; Bejinariu–Székely–Sana 2008.

déken az Uriu–Ópályi depókban találtak, ezek főleg ép példányok voltak, míg a Cincu-Suseni féle depókban már ritkábbak és általában töredékesen kerülnek elő. Ez pedig azt sugallja, hogy ezeket a tárgytipusokat leginkább az Uriu–Ópályi depók időszakában gyártották, és általában az RBD fázisba soroljuk azzal a fenntartással, hogy nem zárhatjuk ki azt sem, hogy némelyik raktárleletet a következő időszak elején rejthették el⁹¹.

Az orosi kerámiaanyag elemzése nyomán megfigyelhető, hogy a formák és a díszítések nagy többsége szinte minden Hajdúbagos–Cehăluț csoporthoz tartozó lelőhelyen megtalálható, akárcsak a Berkesz kultúrához tartozó leletekben is. Még ha volt is szó arról, hogy a Hajdúbagos–Cehăluț csoport fejlődése két fázisra osztható, mind ez ideig csak elméleti szinten maradt, mert nem voltak kézzel fogható bizonyítékok a szétválasztásra. A lelőhelyek időrendi szétválasztását feltételezheti például, hogy a régebbi anyag elsősorban az Ottomány típusú kerámia hagyományait hordozza, az újabbak viszont a Hajdúbagos–Cehăluț csoportot követő, pre-Gáva és Lápos II–Gáva I jellegűek.

Ebben az értelemben, az edénydíszítések és formák összehasonlító elemzése nyomán kitűnnek bizonyos különbségek az Oroson feltárt kerámia és egyes Hajdúbagos–Cehăluț lelőhelyeken talált anyag között. Megállapíthatjuk, hogy az orosi kerámiánál hiányoznak azok a bekarcolt vonalakkal kialakított díszítések, amelyek kitöltik az ívek közötti tereket kísérő háromszögeket. Ezt a díszítésmódot több lelőhelyen is megtaláljuk, a Kraszna és a Berettyó felső folyásánál⁹², Szatmárban⁹³ és Hajdú–Biharban⁹⁴. Azokon a régészeti lelőhelyeken, ahol ez a díszítő elem feltűnik, láthatjuk, hogy további keltezési elemek is léteznek, és mindezek alapján a Hajdúbagos–Cehăluț csoport korai szakaszába sorolhatjuk. Ilyen települések az Ottomány–„Cetatea de pământ” (Földvár) és Piskolt–„Nisipărie” (Homokdomb), ahol bronztárgyak is előkerültek (pecsétfejű tű, patkó alakú függő), amelyek leginkább a halomsíros kultúra középső és fejlett szakaszára jellemzőek⁹⁵. A piskolti település esetében a keltezést a Hajdúbagos–Cehăluț csoport korai szakaszába alátámasztja számos a Felsőszőcs kultúra II. fázisából származó, jellegzetes díszítésű, import kerámia lelet⁹⁶. Az Ottomány hagyományok továbbélése és a halomsíros kultúra jellegzetességeinek szórványos előfordulása a Körösszakál–„Gál tanya” és Körösszegapáti–„Pál-lapály” településeken azt mutatja, hogy ezek a Hajdúbagos–Cehăluț csoport korai fázisára, a RBB2- BC idősakra keltezhetőek⁹⁷. A Hajdúbagos–

„Daraboshegy” sírleleteiben, amit a RBC fázisba kelteztek⁹⁸, az Ottomány hagyományok már csak gyengén érvényesülnek, a halomsíros kultúra elemei viszont annál inkább.

A Nyíregyháza–Oros település területén talált kerámiaanyag több szempontból hasonlóságot mutat a Berkesz–„Csonkásdűlő” valamint a Demecser–„Borzsovapuszta” hamvasztásos sírjainak egyes edényeivel. Egyik említett temetőben sem találtak „későbbi” formai vagy díszítési motívumokat, amelyek az RBD időszak vagy a HA1 periódus kezdeti időszakának jellegzetességei lennének⁹⁹. Mindkét lelőhely esetében a felsőszőcsi importok¹⁰⁰ a kultúra klasszikus fázisába sorolják a lelőhelyeket.

Másfelől pedig, amint azt a kerámia elemzése során láttuk, az orosi település esetében nem kerülhető meg a Hajdúbagos–Cehăluț csoportot követő időszak kérdése. Néhány edényforma esetében (erősen profilált válú tálak, vízszintes kannelúrák az edények nyakán), és egyes kétszínűre égetett, kívül fekete, belül barna edények jelenlétéből feltételezünk bizonyos időrendi egyezést a Berettyószéplak – „Lapiș” (Suplacul de Barcău - „Lapiș”) régészeti lelőhelyhez, ahol már sok késői elem is megtalálható, amelyek a láposi sírleletekben is megjelennek¹⁰¹. A bihari (Biharea) kerámia is hordoz több olyan elemet, amelyek alapján bizonyossággal keltezhetjük fiatalabb idősakba, az Igrița, Temeskeresztes-Belegis (Cruceni-Belegis)¹⁰² vagy Lápos (Lăpuș)¹⁰³ típusú import anyagok alapján.

A Nyírség területén az orosi kerámiának a nyírlugosi és Nyíregyháza–TESCO, illetve a Shell üzemanyagtöltő állomáson feltárt lelőhelyeken van analógiája¹⁰⁴. A két utóbbi lelőhelyen viszont nagy számban fordulnak elő a Reinecke BD periódus végéről és a Müller-Karpe HA1 időszak elejéről származó jellegzetes edények. Ennek alapján a TESCO áruház, illetve a Shell üzemanyagtöltő állomáson feltárt településeket fiatalabb idősakra is keltezhetjük mint az orosit. A hajdú-bihari környékhez kapcsolódóan analógiaként megemlíthetjük a debreceni edénydepót, amit az RBD periódusra kelteztek¹⁰⁵.

A leletanyagban felfedezett importok Felsőszőcs, Igrița, és Piliny típusú anyagot foglalnak magukba valamint a Kassai-medencére jellemző elemeket is. Ezeket a lelőhelyek még pontosabb időrendbe sorolására használhatjuk, a szomszédos műveltségekkel megállapított összefüggések alapján.

91 Kacsó 2003, 277.o.; Kacsó 2007, 37.o. Más vélemények az Uriu–Ópályi típusú depók szélesebb periódusba keltezéséről – Gumă 1993, 262.o.; Gogăltan 2001, 196.o.

92 Bejinariu–Lakó 2000, 169 o. (Crasna), Bejinariu–Lakó 1996, III/1; IV/4 pl. (Cehei).

93 Németi 1978, 1/1, 7/8-9 pl. (Andrid, Pișcolt); Kacsó 1997, VI/1,4, VII/9 pl. (Acâș).

94 L. Nagy 2007, III/4-6, VI/2-5, X/4,7, XIII/5,8. pl.

95 Kacsó 1997, 88.o.

96 Marta 2009, 96-98.o.

97 Nagy 2007a, 35.o.

98 Kovács 1970.

99 Kovács 1968, 11/1. pl.

100 Kovács 1968, 11/1. pl.

101 Kacsó 1997, 88.o.

102 Dumitrașcu 1994, p. 109.o.

103 Dumitrașcu 1994, 106.o., XLIV/2; XLV/8. pl.

104 Nagy 2005; Nagy 2007.

105 Poroszlai 1984.

Nyíregyháza–Oros településen egy, a Felsőszőcs kultúrához tartozó bögre (Pl. 3/2) alátámasztja a kapcsolatot a tőle délre és keletre kifejlődött kultúrával. A felsőszőcsi anyag kis mennyisége viszont arra enged következtetni, hogy ezek csak a környező területekről importált darabok és semmiképpen nem a Felsőszőcsi kultúra olyan erejű jelenlétét mutatják, hogy itt egy kultúrák közötti keveredésről beszélhessünk¹⁰⁶. A Felsőszőcs kultúra klasszikus időszakából származó importok a Hajdúbagosa-Cehăluț könyezetben és egyáltalán nyugaton nagyon jól dokumentáltak¹⁰⁷. Ezek, a két kultúra közötti cserék viszonylag kis számúak, és a gazdagon díszített, főként étkezéseknél használatos bögréket, tálakat foglalják magukba¹⁰⁸. Az alapján, ahogyan a díszített csészék a nyírmadai leletben megtalálhatóak, azt feltételezhetjük, hogy az asztali edények jelenléte idegen környezetben az identitás kifejezésének a kontextusába is tehetőek¹⁰⁹. Ami az orosi felsőszőcsi kultúrához tartozó bögrét illeti, a széles bemetszésekkel és kivágásokkal kialakított motívumai alapján a felsőszőcsi kultúra II. fázisára keltezzük, pontosabban a Reinecke BC-BD fázisba¹¹⁰.

Egy felszínes, keskeny árkú bemetszéssel díszített bögre (Pl. 29/4) a felsőszőcsi kultúra egy korábbi fázisába, a Felsőszőcs IIa alfázisba sorolható. Ezt támasztja alá a finom bemetszés, amivel a díszítést elkészítették, de maga a spirálos motívum is – egyszerű spirálok, felületi keskeny bemetszéssel kialakítva, amelyek az edény válláról indulnak és a spirál közepén fejeződnek be – amelyeknek nagyon közeli analógiáit találjuk Szlovákia keleti részén¹¹¹, néhány Reinecke BC2 és BD periódusba keltezett régészeti anyagban¹¹². A Szlovákia keleti részéről származó edények eljutnak a Felső-Tisza vidékére¹¹³, sőt egészen Szatmár középső területeire is¹¹⁴.

A talpas bögrék egyike (Pl. 39/1.), bár formailag a település több edényével is megegyezik, díszítésben és a kivitelezésében mégis eltérést mutat, ami miatt feltételezzük, hogy nem helyi készítésű volt. Díszítése alapján eredetét északi irányban lehet keresni, ahol a bebökődött pontokkal történő díszítés fellelhető a Piliny kultúra területén¹¹⁵. Illetve erre a díszítésére

analógiákat találunk a tápéi temető egyik halomsírijának edényei között¹¹⁶.

A Nyíregyháza-Oros településnek lehettek kapcsolatai más, a Hajdúbagosa-Cehăluț csoport elterjedési területétől délre eső lelőhelyekkel is, amelyek az itt talált régészeti leletanyag egy részében is megnyilvánulnak. Ahogyan azt a kerámia elemzésekor láttuk, több kerámiaforma nagyobb mennyiségben előfordul az Igrita csoport leleteiben. Itt elsősorban a kiszélesedő szájú bitronkónikus és a bikónikus amforákat értjük, az 1, 4 és 6-os típust, amelyekre jó analógiákat találunk a fent említett műveltségi csoport környezetében¹¹⁷. Ezekhez hozzátehetjük még a kiszélesedő szájú, nyomott testű (1B variáns) bögréket, amelyeket szintén jól dokumentáltak az Igrita csoport elterjedési területén¹¹⁸.

A Nyíregyháza-orosi lelőhely jelentősége a Felső-Tisza vidék késő bronzkori kutatásában. A Nyíregyháza–Oroson végzett kutatások új elemeket hoztak a Hajdúbagosa-Cehăluț csoport egyik településének struktúrájára vonatkozóan, valamint a benne talált komplexumok formájának tekintetében is. Egyike azon kevés településeknek a csoport keretein belül, ahol egy árokkal elkülönített terület van, ami valószínűleg védelmi célokat szolgált¹¹⁹. Új elem ebben a csoportban, hogy a település szélén azonosítottunk egy területet, ahová rituális depókat helyeztek. Ezt más, szomszédos kultúrához tartozó településeken is megtalálták. A település belsejében emberi tevékenységre utaló nyomokat is azonosítottunk, a csontanalízisek pedig adatokat szolgáltatnak arra nézve, hogy milyen kölcsönhatások alakultak ki a közösségek és a természeti környezet között. A nagy számú fémtárgy és egy viszonylag nagy mennyiségű kerámialelet statisztikai feldolgozása adatokkal szolgál a Hajdúbagosa-Cehăluț csoport fejlődésének megismeréséhez, a települést pedig fejlődésének egy későbbi szakaszába keltezi, mégpedig az RBD időszakra. Kapcsolatait a szomszédos kultúrák környezetével az import tárgyakon keresztül figyelhetjük meg, valamint fontos összefüggések megállapítására nyílik lehetőség a Hajdúbagosa-Cehăluț és a Felsőszőcs/Lápos (Suciul de Sus/ Lăpuș) típusú leletek között.

Az orosi település elhelyezése a Hajdúbagosa-Cehăluț csoport fejlődésének egy későbbi szakaszába kíváncsi, hogy bemutassuk kapcsolatait az utána következő régészeti műveltségekkel, pontosabban azt a kulturális örökséget, amit a Lápos II–Gáva I és pre-Gáva horizont felé továbbít. Leleteink között volt néhány fekete, fényezett külsejű edény, vagy kettős, kívül fekete belül téglaszínű. Annak ellenére, hogy kis mennyiségben fordul elő lele-

106 Hasonló mennyiségben találtak Felsőszőcs típusú kerámiát a Nyíregyháza-Tesco közeli és a Shell benzinkút melletti lelőhelyen is (Nagy 2007).

107 Némethi 2009a, 41.o., irodalommal.

108 Bár gyengébben, de kimutathatóak Hajdúbagosa-Cehăluț típusú importok, bögrék és tálak, a Felsőszőcs kultúrához tartozó településeken is (Kacsó 2005, 53.o.; Marta 2009, 49/6 pl.)

109 Toth-Marta 2007, 132-134. o.

110 Szorosabb besorolás a Felsőszőcs kultúra II. fázisának keretein (IIa és IIb) csak nagyobb mennyiségű kerámiaanyag esetén lehetséges (Marta 2009, 96-101. o.)

111 Demeterová 1984, XXVI/2. pl.

112 Demeterová 1984, 46. o.

113 Kovács 1967, 14/3. pl.

114 Marta 2009, 24/2. pl.

115 Kemenczei 1984, XI/13, XIII/3. pl.

116 Trogmayer 1975, 46/1-2. pl.

117 Chidioșan-Emődi 1982, 1 pl.; Chidioșan-Emődi 1983, 4/1 pl.; Emődi 1997, 1, 3. pl.

118 Chidioșan-Emődi 1982, 6/1-3 pl.; Chidioșan-Emődi 1983, 6/6-9, 8/1 pl.; Emődi 1997, 7/14-15 pl.

119 A legújabb kutatásoknak (2009) sikerült védelmi rendszereket azonosítani (palisádok) a Szilágyosmlyón (Șimleu Silvaniei) talált Hajdúbagosa-Cehăluț csoport településének egyik oldalán: I. Bejinariu kutatása.

teink között, mégis előrevetíti a következő régészeti műveltséget, a Gáva kultúrát, amelynek megszületéséhez véleményünk szerint a Hajdúbagos–Cehăluț csoport is hozzájárult. A fent említett edények viszonylag alacsony száma arra enged következtetni, hogy a Nyíregyháza-Oros, „Úr Csere” lakóhely megszűnt, mégpedig egy olyan átmeneti időszakban amikor még nem terjedtek el széles körben a fekete, kannelúras díszítésű kerámiák.

Amint azt a típus- és változat elemzésnél már láttuk az orosi kerámia esetében, számos eleme a Hajdúbagos–Cehăluț csoport kerámiájának továbbra is jelen van a pre Gáva horizont anyagi kultúrájában¹²⁰. Ilyenek az 1, 3, 4, és 6-os típusú amforák vagy a 2 és 3 típusú tálak összes változata. Az sincs kizárva, hogy a pre Gáva kerámia talpas edényeinek és csücskös szájú tálainak a gyökerei a Hajdúbagos–Cehăluț csoport talpas bögréiben/kannáiban találhatók. A pre-Gáva kerámiákon továbbra is jelen vannak azok a motívumok, amelyek meghatározóak voltak a Hajdúbagos–Cehăluț csoport edényein (bütykök, vonaldíszek, kannelúrák). Jól reprezentáltak a bekarcolt, a pontozott és az alveolás motívumok. Bizonyos kerámiaformák azonban, mint például a magas, talpas bögrék, amelyek igen nagy számban fordulnak elő az említett csoport kerámiaanyagában, már nem tűnnek fel az azt következő időszakban. Ez az aspektus is kiemel néhány alapvető változást ami az Alföld középső területén ment végbe a kerámia fejlődés területén, egyidejűleg a Hajdúbagos–Cehăluț csoport megszűnésével. Ez a helyzet meglehetősen körülményessé teszi a Hajdúbagos–Cehăluț csoport hozzájárulását a pre Gáva kultúra kifejlődéséhez.

Az orosi bronzkori település több edényformájának közeli analógiái vannak a Lápos II-Gáva I kulturális horizontban: a hosszú, ívelt és hengeres nyakú amforák (1-es és 6-os típus), a bitronkónikus amforák, a legtöbb fazéktípus, a hordozható tűzhelyek, az 1Aa és 1Ac táltípusok, a 2, 3 és 4-es típus minden variánsa, valamint az 1C, 2 és 3-as típusú bögrék. Ezeknek az edényeknek az analógiáit megtalálhatjuk a Lápos II-Gáva I kerámia edényei között, és különösen jól reprezentáltak Börvely, Nagykároly és Pete-Csengersima településeken¹²¹. Ami a díszítést illeti, szinte mindegyik kidomborodó, alveolás vagy kannelúras motívum analógiáját megtalálhatjuk a három Lápos II-Gáva I kulturális horizonthoz tartozó település valamelyikében. Gyenge átvitelt tapasztalunk viszont a pontozott díszítéseknél. A kétszínű, kívül fekete, belül téglaszínű égetéssel készült edények alacsony száma árnyalja ennek az égetési módnak az eredetét. Ezzel kapcsolatban megemlítjük, hogy hasonló a helyzet a késő Felsőszőcs műveltségű Pete-Csengersima településen is. Amennyiben mindkét település azonos időrendi síkon hely-

ezkedik el a RBD fázison belül - legalább is az importárúk alapján – akkor megállapíthatjuk, hogy egyidejűleg alkalmazhatták az új típusú égetési technológiát. Bár az új módszer csak idővel válik gyakorivá, de azt megállapíthatjuk hogy már a kétszínű égetés megjelenésének a kezdetén gyorsan elterjedt ennek a módszernek a technológiája. Ebből a szempontból nem tapasztalható látványos csúszás egy nyugati, erősen halomsíros hatás alatt álló műveltség (a Hajdúbagos–Cehăluț csoport) és egy keleti kultúra között, amely a Kárpát-medence középső bronzkori hagyományaira támaszkodik (a Felsőszőcs kultúra).

A Lápos II-Gáva I horizont Nagykároly és a Szamos síksági kerámiájának összehasonlító elemzése nyomán kiderült, hogy a számos közös elem mellett néhány regionális elemet is tartalmaz¹²². A Nagykároly környéki kerámia elsősorban az alveolás övével válik egyedivé¹²³, valamint itt a leggyakoribbak a behúzott szájú tálak¹²⁴. Eredetüket a a Hajdúbagos–Cehăluț csoport hagyatékával magyarázzák, ami visszanyúlik egészen az Ottomány kultúráig¹²⁵. Ezek azok az elemek amelyek előtérbe helyezik a Hajdúbagos–Cehăluț csoport hatását, ami a nagykárolyi HaA horizontban jelentkezik.

Befejezésképpen megállapíthatjuk, hogy a Nyíregyháza-Oroszon végzett kutatások a Hajdúbagos–Cehăluț csoport késői időszakára vonatkozóan új adatokkal szolgáltak és hozzájárultak annak a pontosabb meghatározáshoz is, hogy ez a csoport milyen mértékben járult hozzá az utánna következő régészeti műveltségek kilakulásához az Alföldön és Erdély északnyugati részén.

120 A pre-Gáva típusú kerámia összehasonlítására V. Szabó munkáit használtuk(1996, 2004).

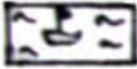

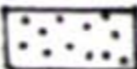




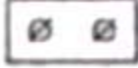









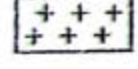

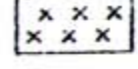



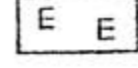

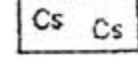

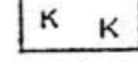
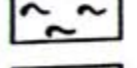
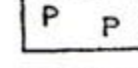
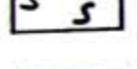
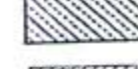
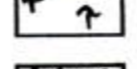
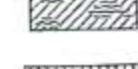
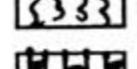
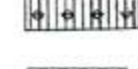
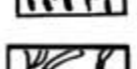


121 Némethi 1990; Marta 2009, 274–275 o, 5-6. tipológiai pl.

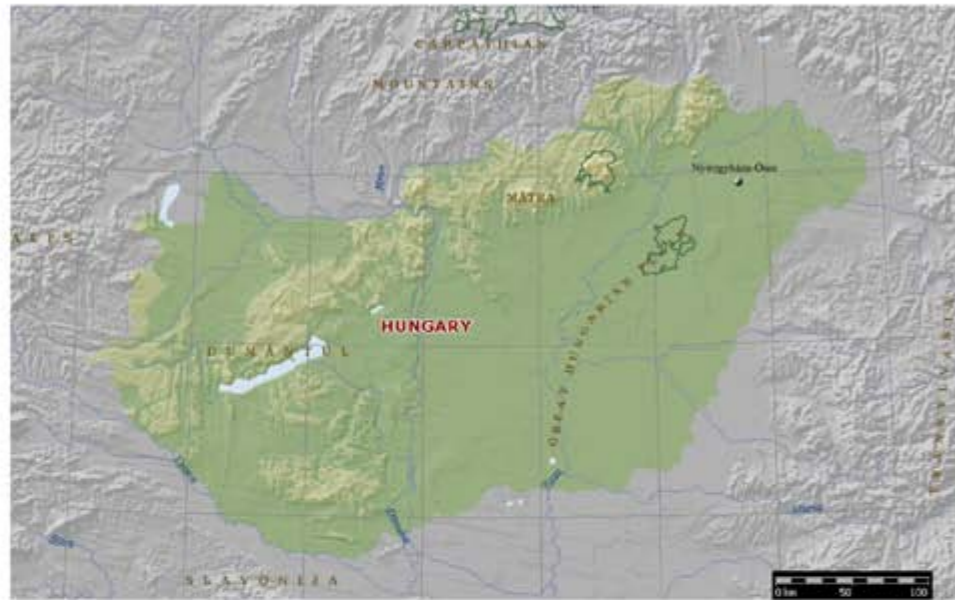
122 Marta 2009, 88-91 o.

123 Némethi 1990, 40.o, fig. 1/15, 11/3, 13/5.

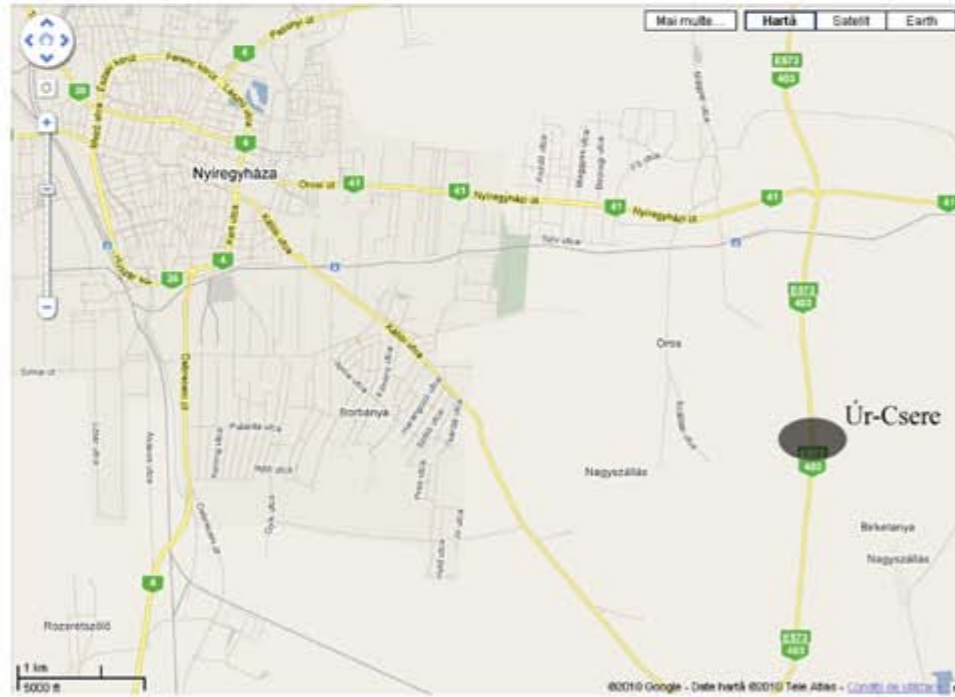
124 Némethi 1990, 41. o.

125 Némethi 1990, 42, 46.o.

	water		white lenses
	black sand		yellow lenses
	yellow clay		brown lenses
	brown clay		dark brown lenses
	dark brown clay		red lenses
	yellow soil		grey lenses
	brown soil		black lenses
	dark brown soil		soot
	grey soil		ashes, ashes mixed
	dark soil		burnt layer
	grey-brown soil		luting
	subsoil		pottery, pot sherds
	yellow-gray-brown striped mixed		bone, bone tool
	modern		stone
	grey mud		burnt clay
	dark gray mud		light brown sand mixed with soil
	mixed mud		yellow clay mixed with dark brown soil
	yellowish-gray/gray-yellowish		yellow granular mixed with gray soil
	dark gray		
	pottery		



A

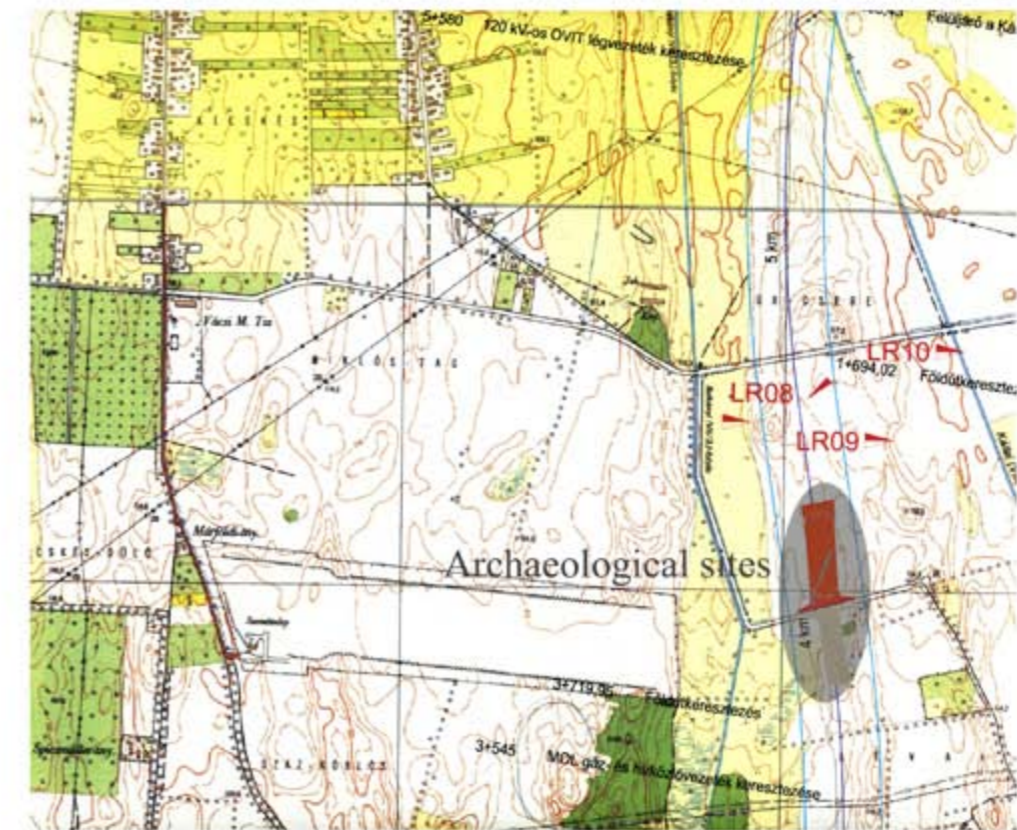


B

Figure 1. A. Location map for Nyíregyháza; B. Ór-Csere point location on the map.



A



B

Figure 2. A. Excavations plan and the settlement limits, superimposed over an aerial view; B. Location of archaeological sites on the geographic map of the area.

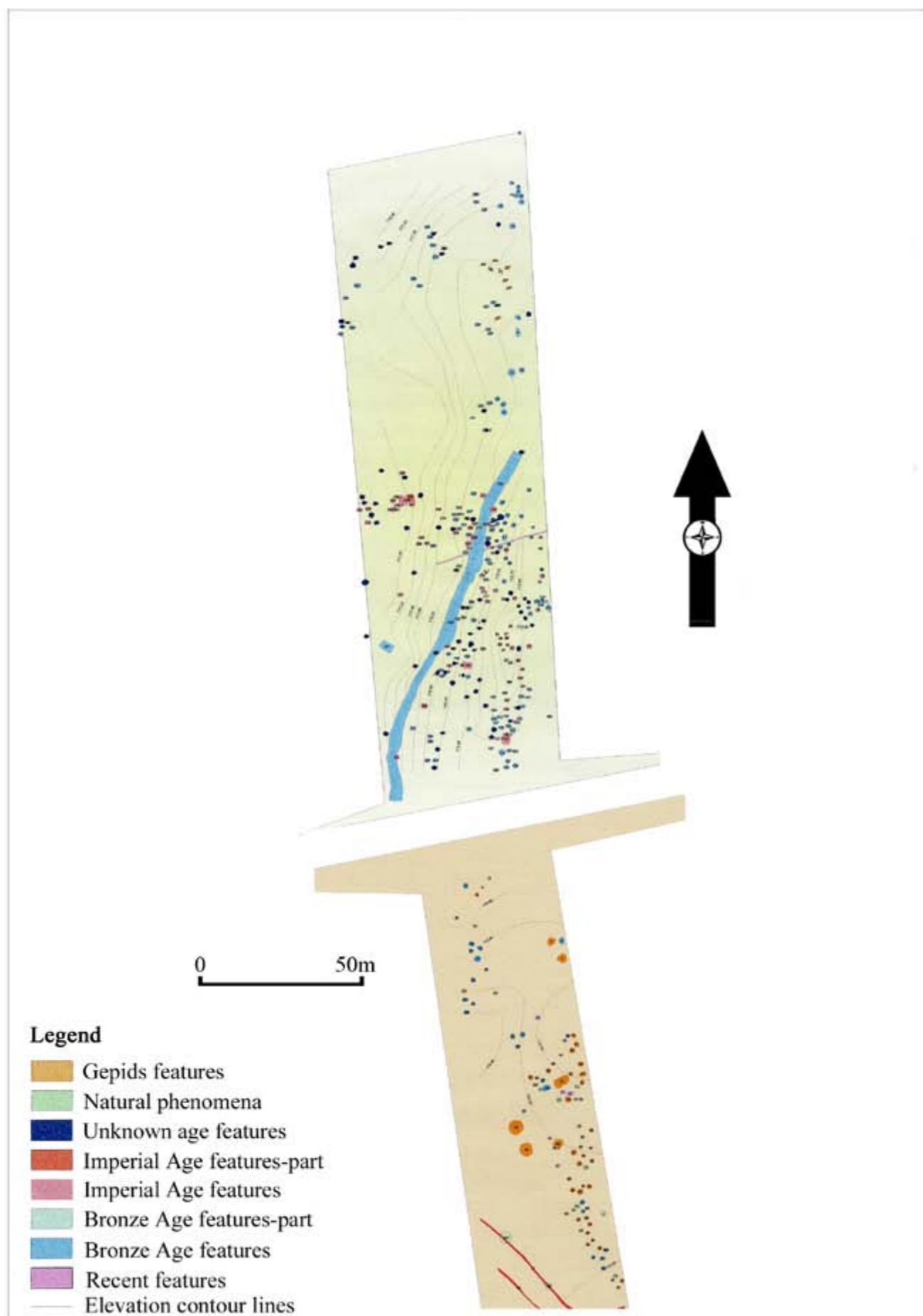


Figure 3. General plan of excavations.

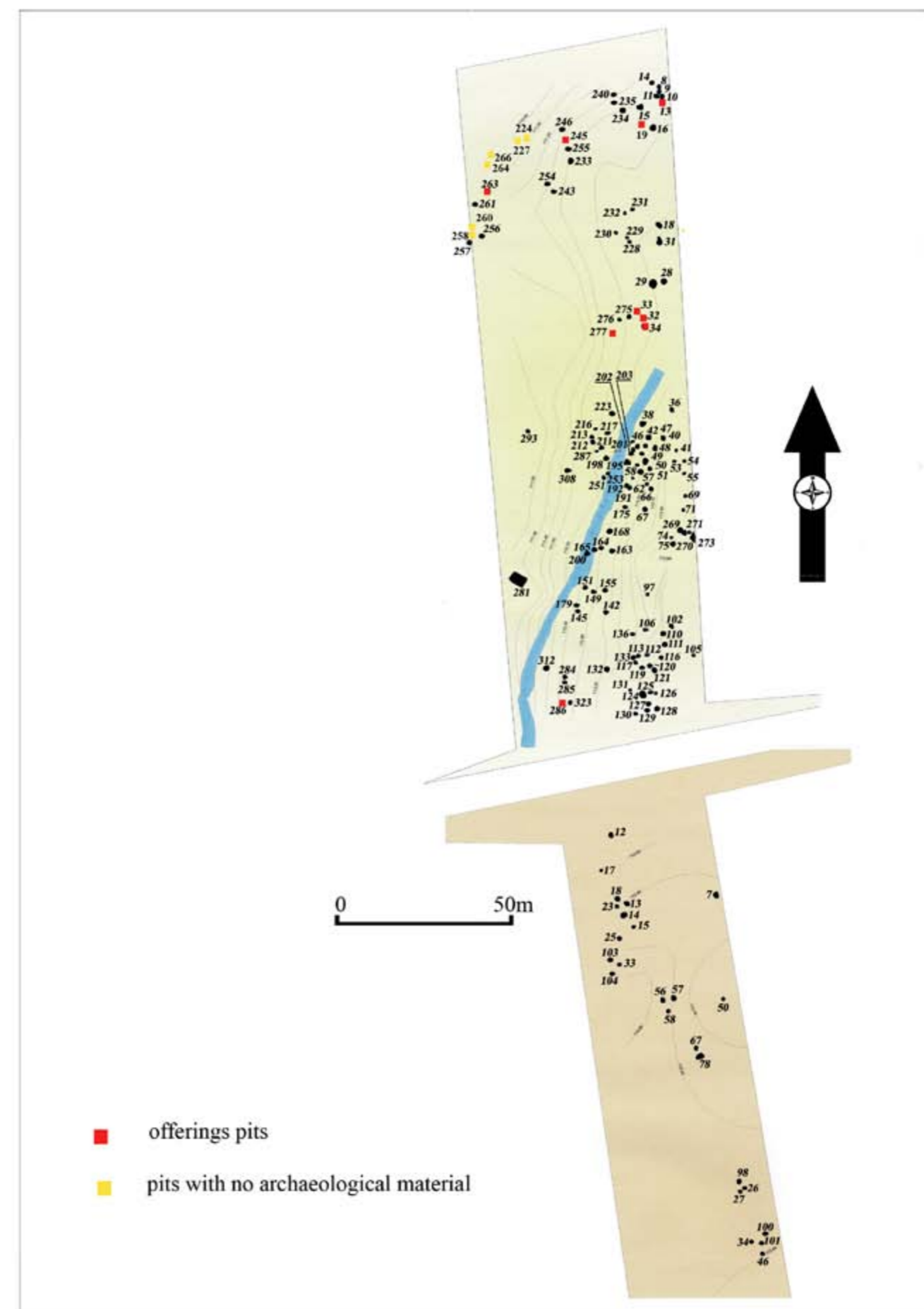


Figure 4. Bronze Age features.



Figure 5. Aerial view of sites.



Figure 6. Aerial view detail with excavations on the site 26.

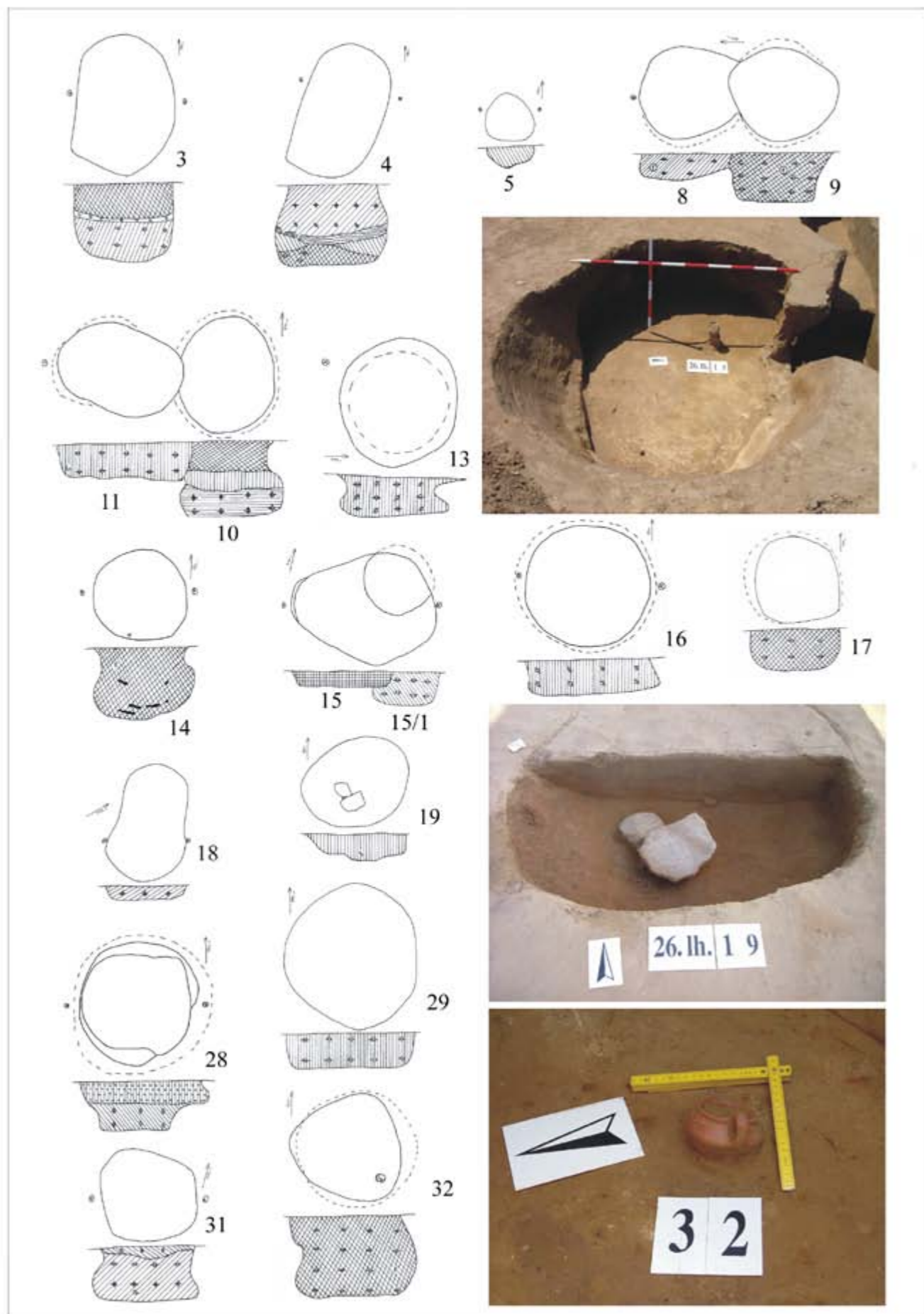


Figure 7. Archaeological features from site 26: drawings plans and profiles; photo details.

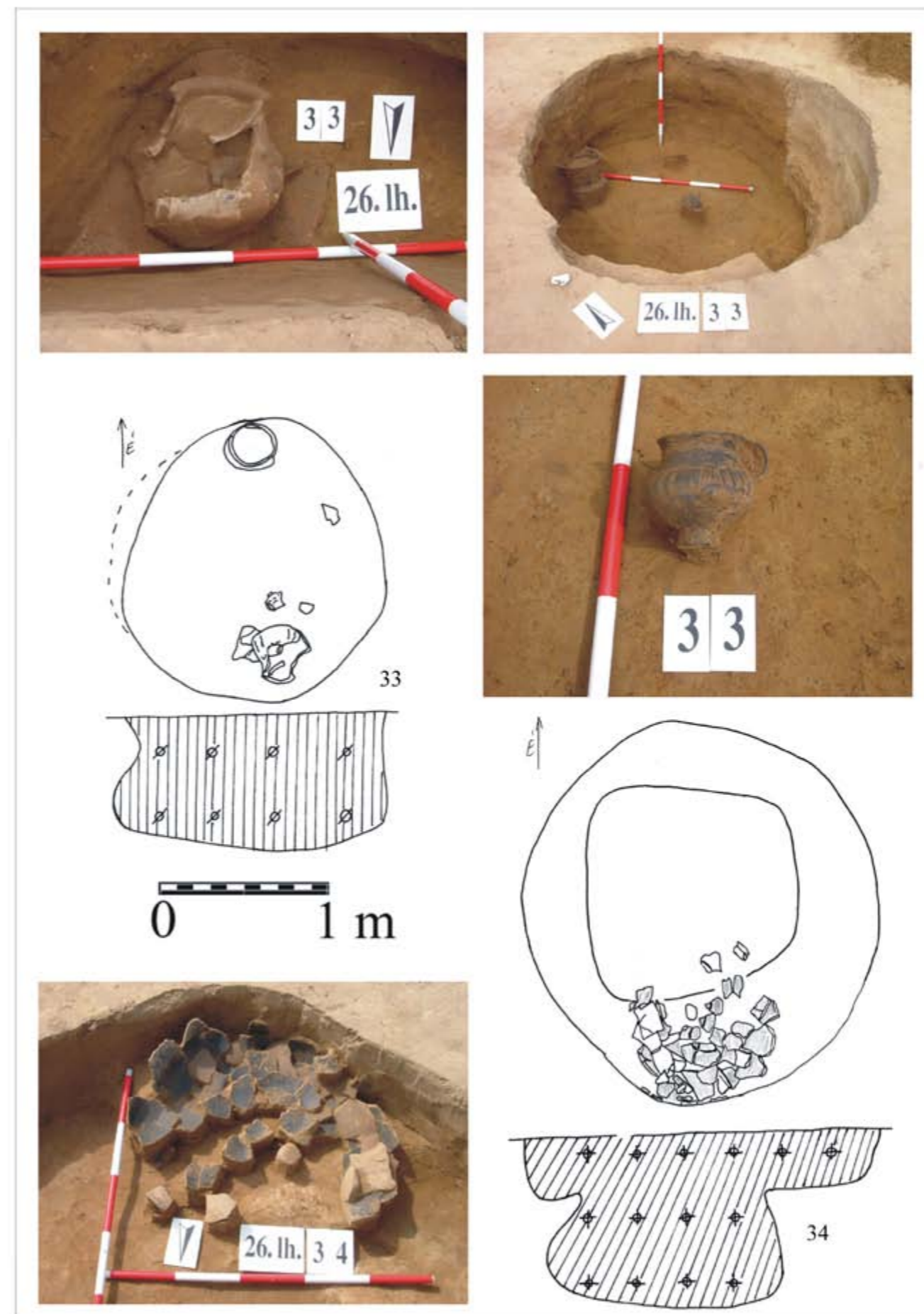


Figure 8. Archaeological features from site 26: drawings plans and profiles; photo details.

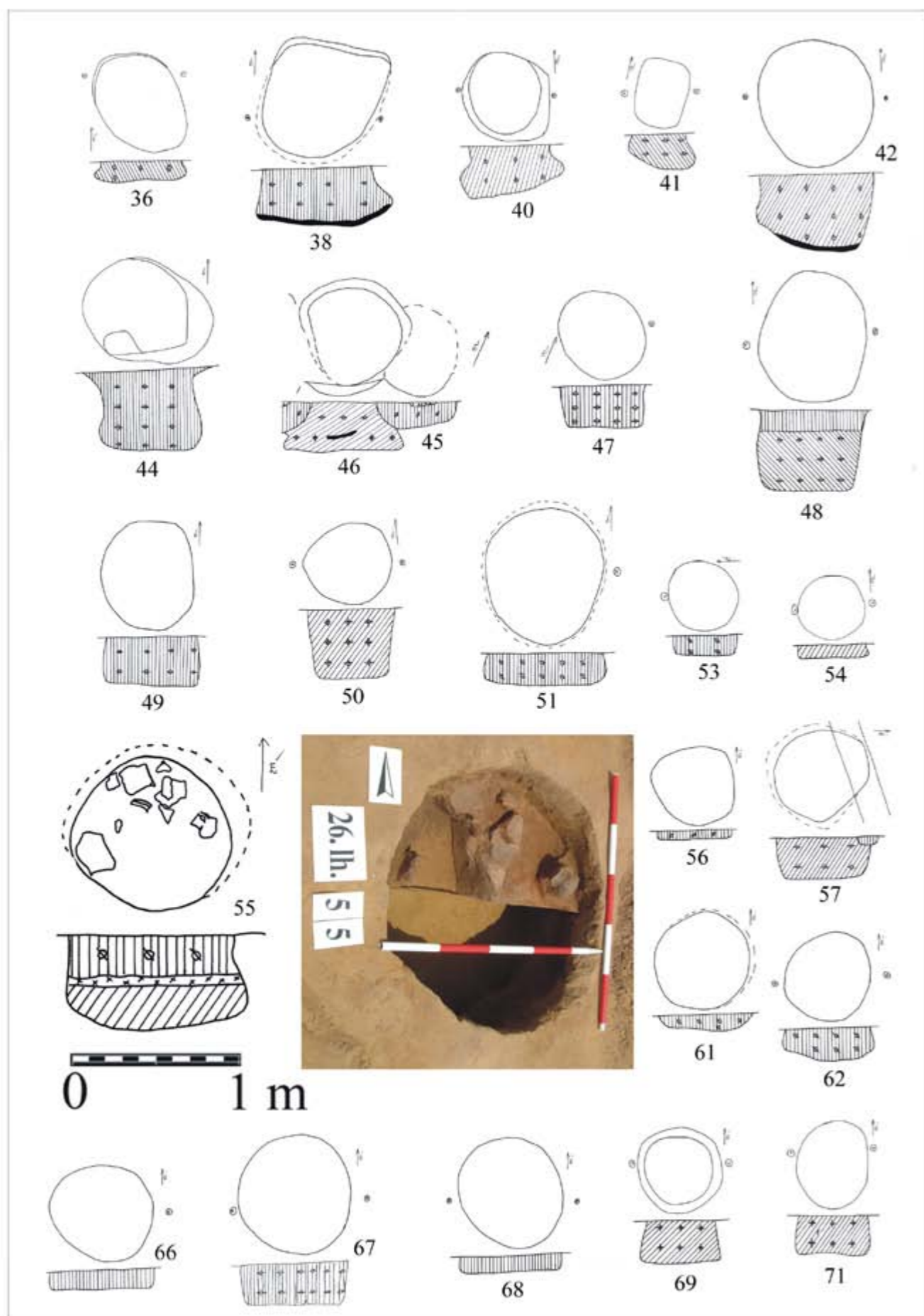


Figure 9. Archaeological features from site 26: drawings plans and profiles; photo details.

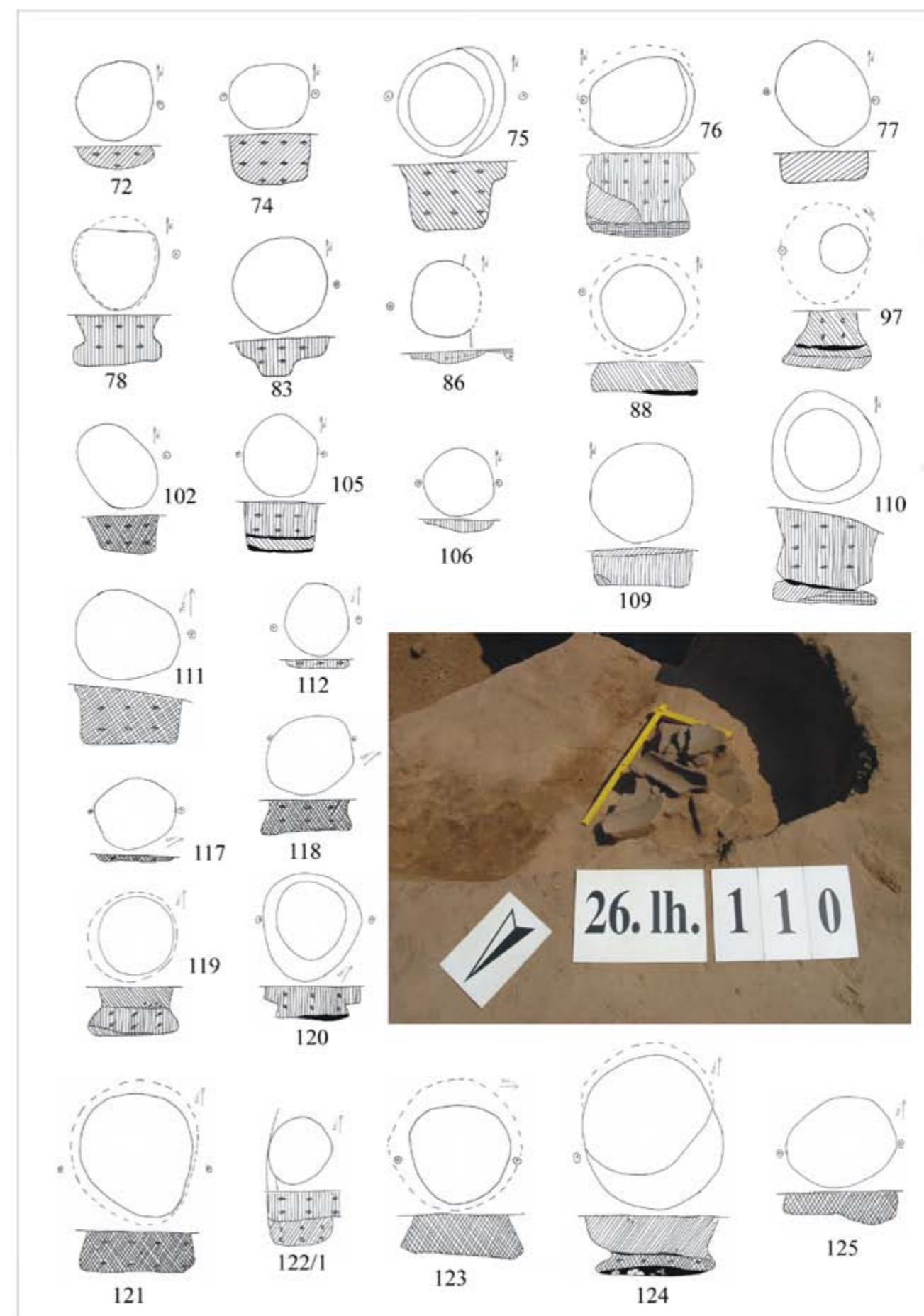


Figure 10. Archaeological features from site 26: drawings plans and profiles; photo details.

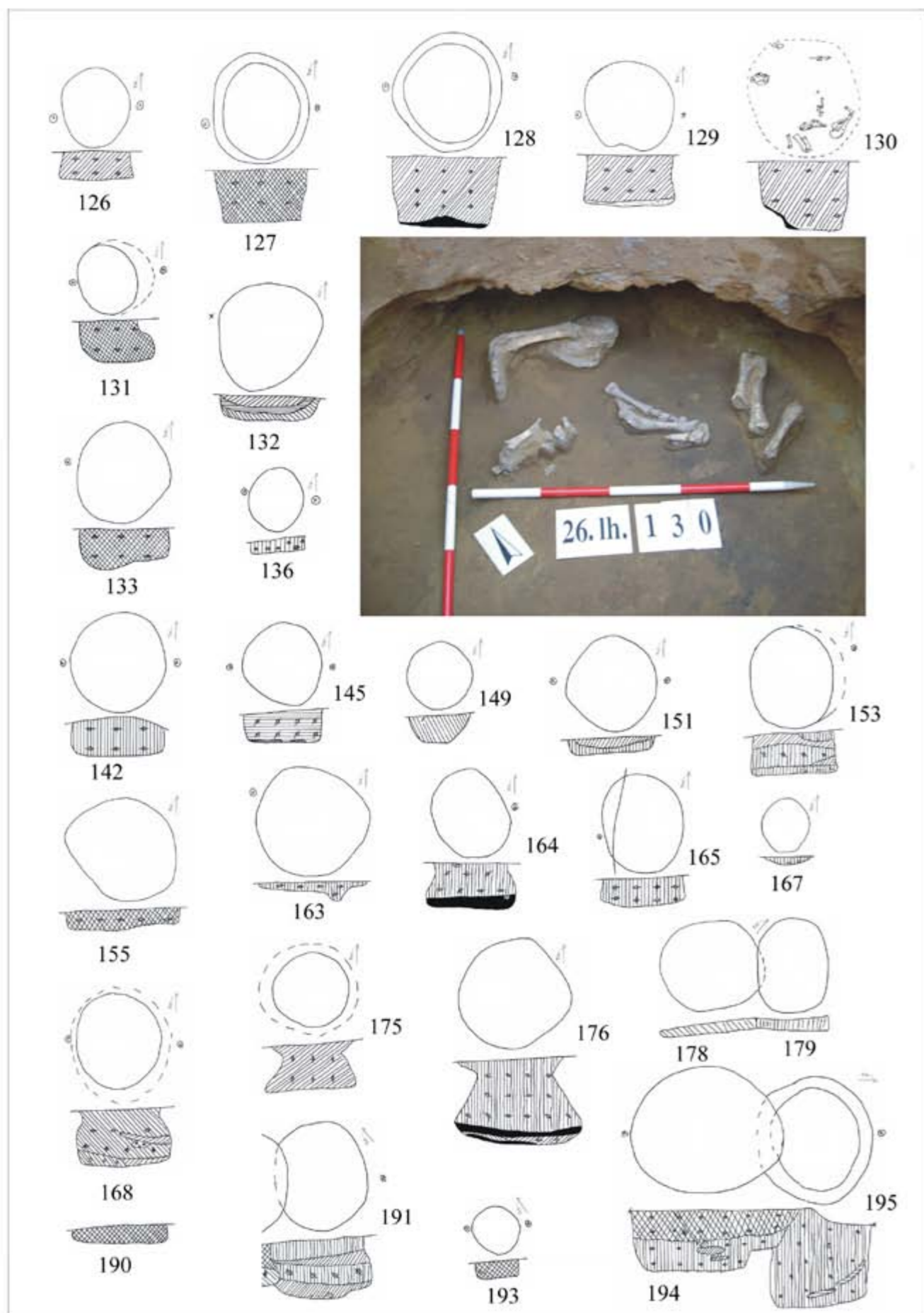


Figure 11. Archaeological features from site 26: drawings plans and profiles; photo details.

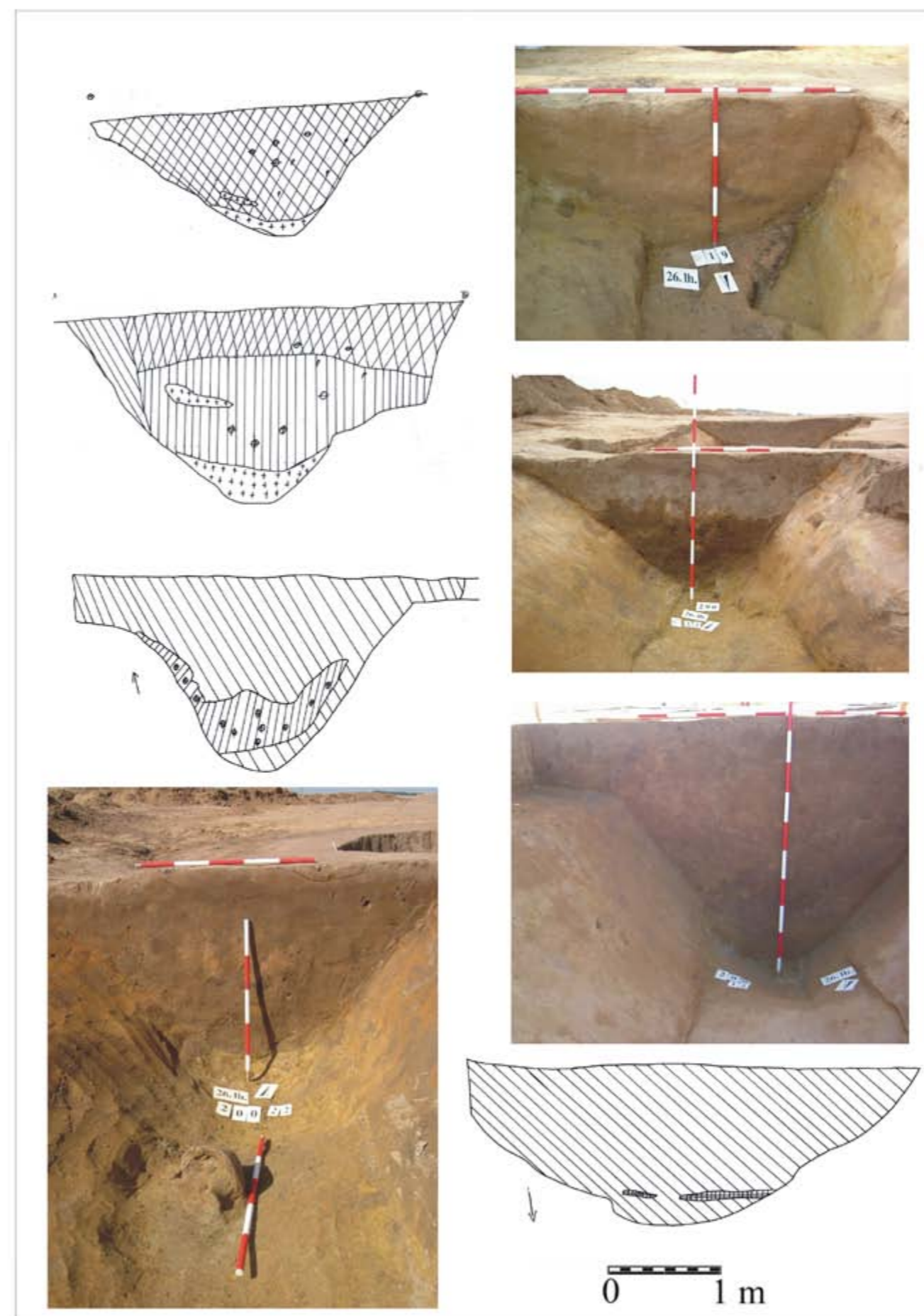


Figure 12. Site 26, feature 200: drawings profiles and photo details.

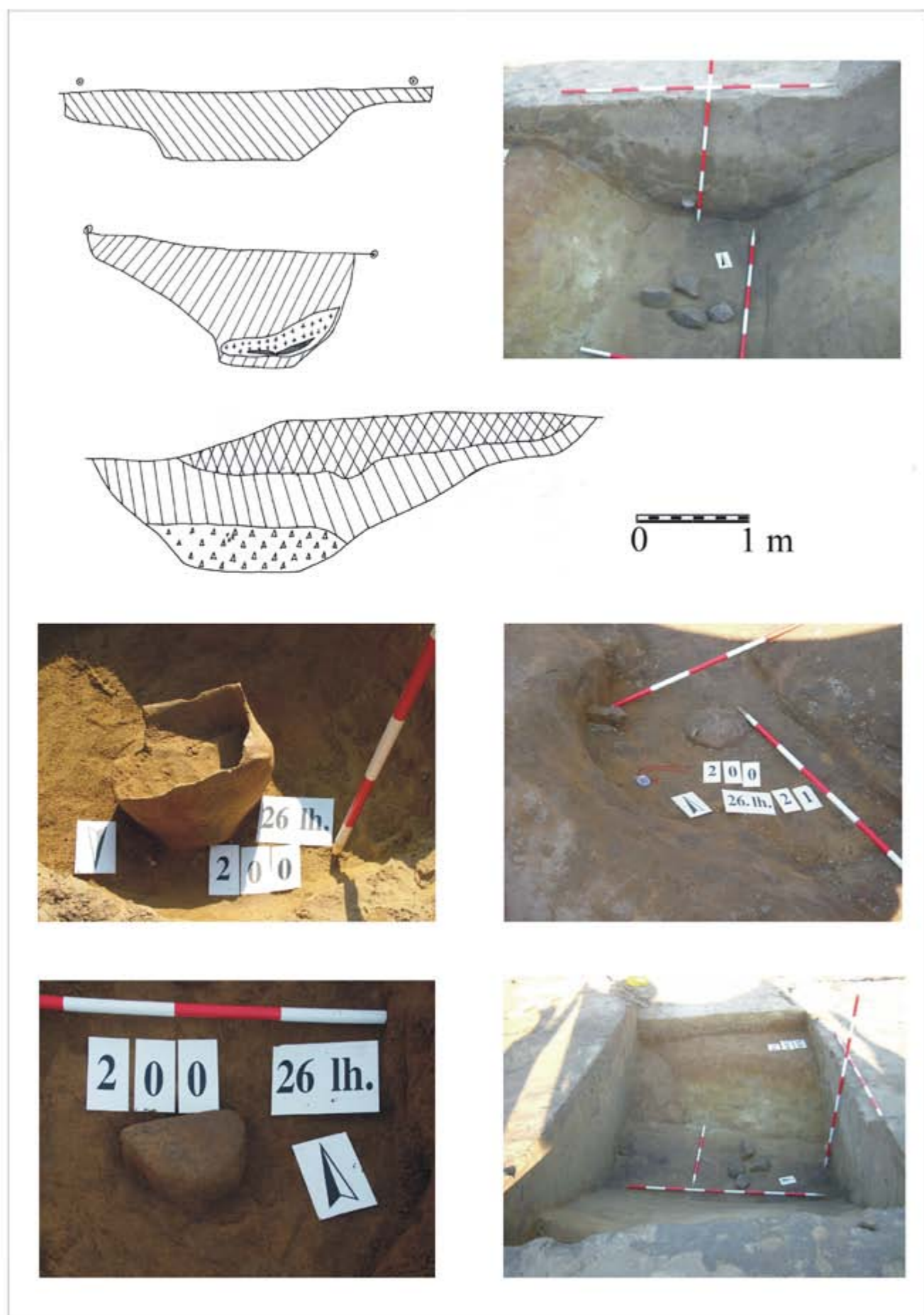


Figure 13. Site 26, feature 200: drawings profiles and photo details.

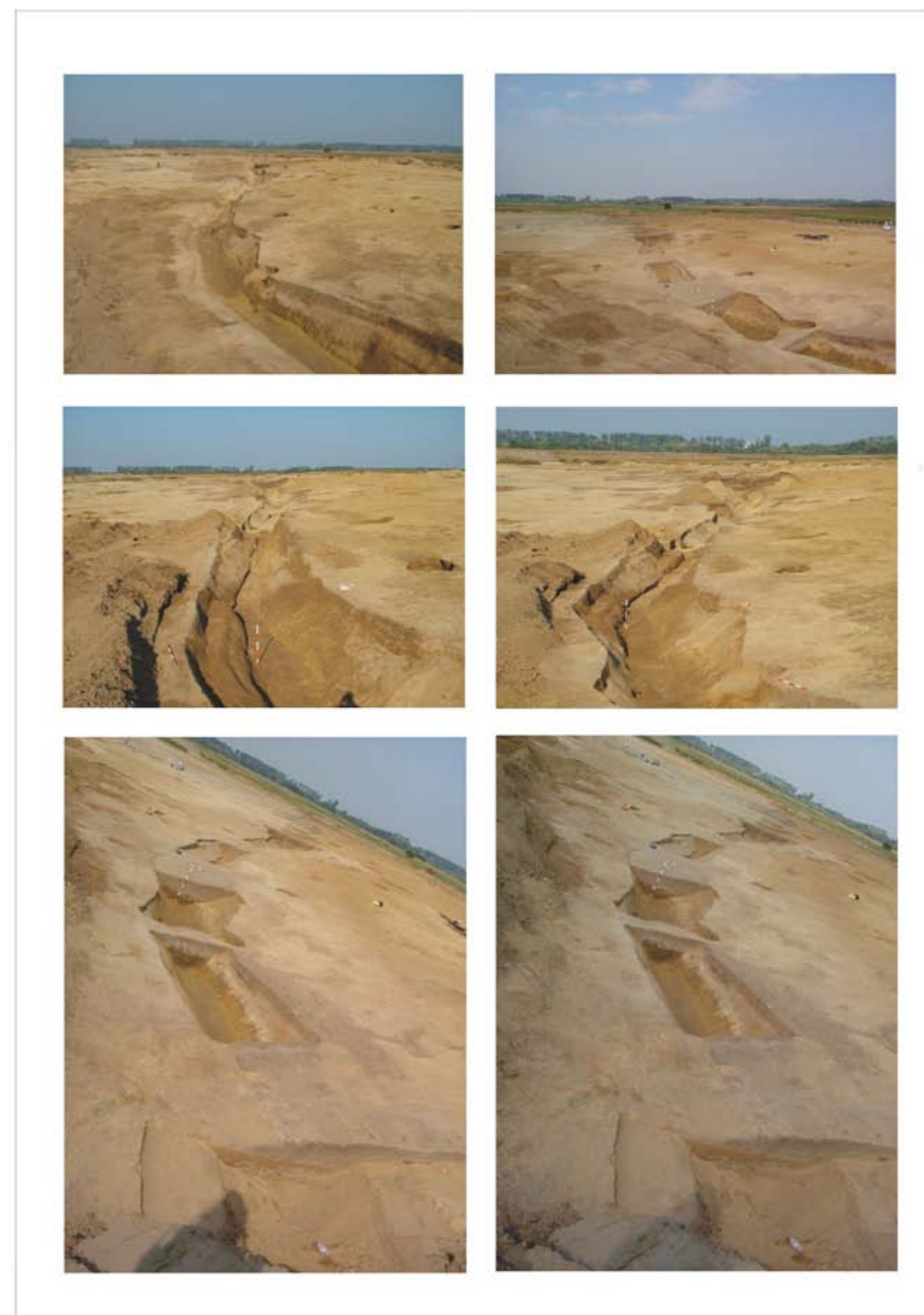


Figure 14. Site 26, feature 200: photo details.

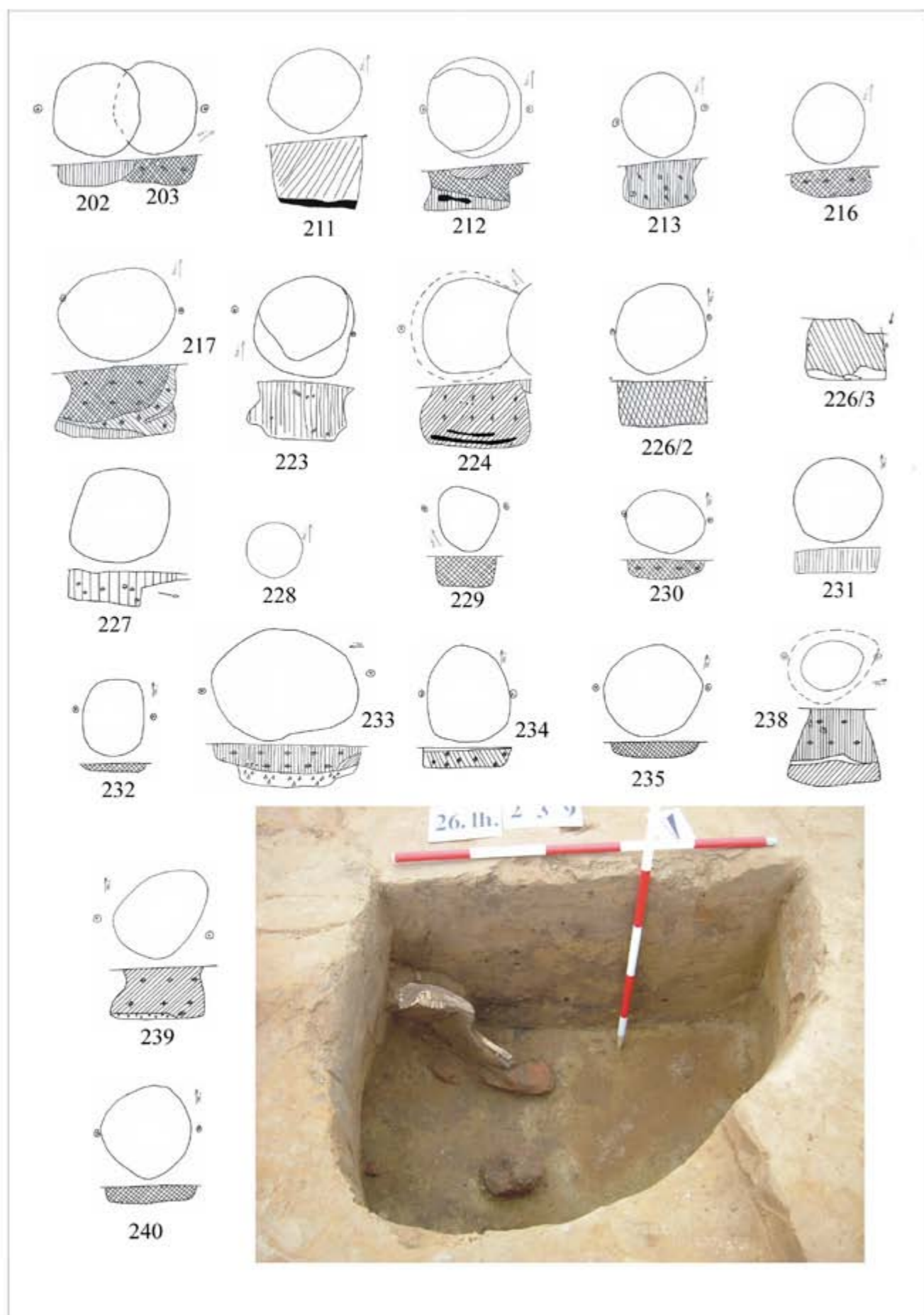


Figure 15. Archaeological features from site 26: drawings plans and profiles; photo details.

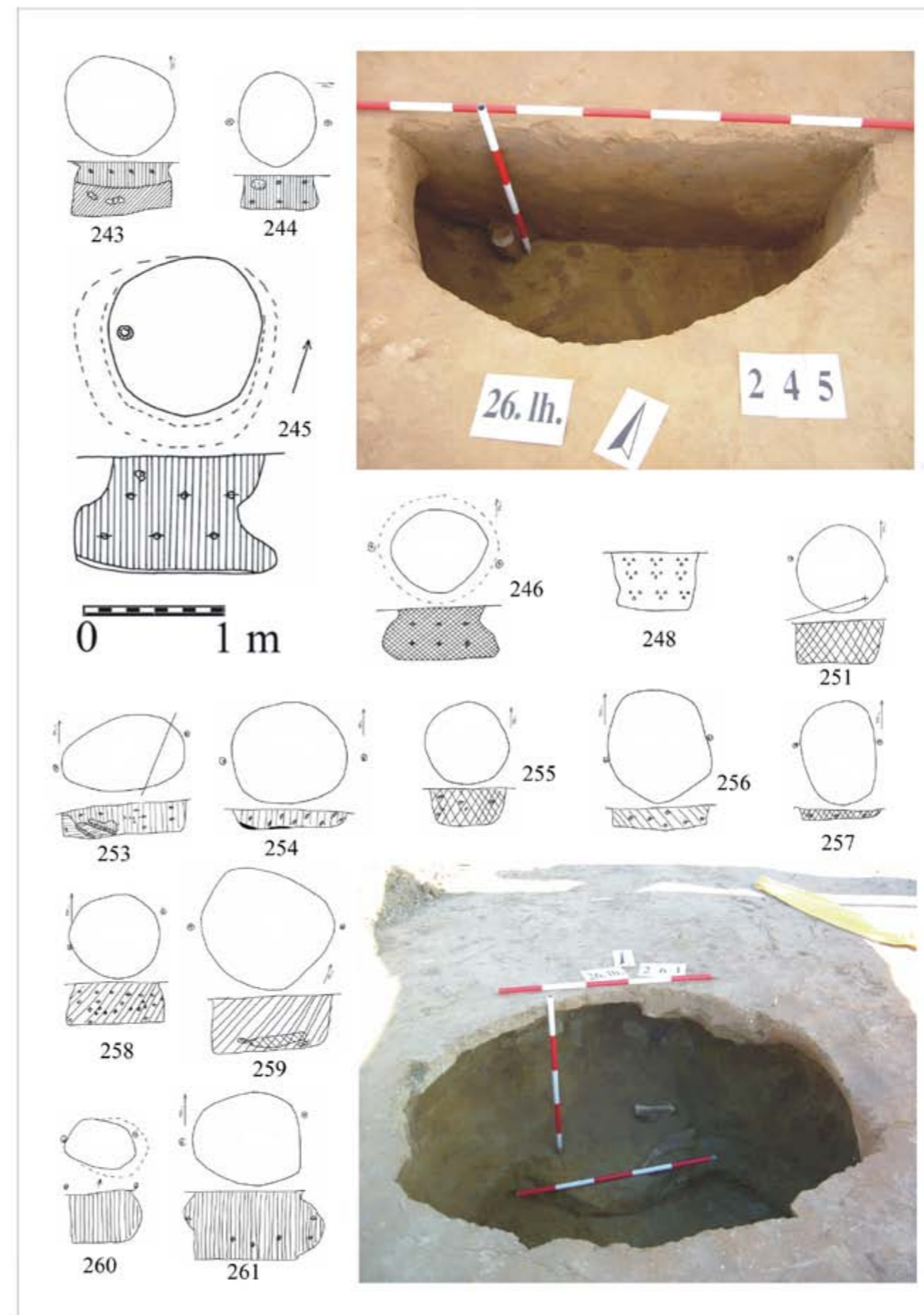


Figure 16. Archaeological features from site 26: drawings plans and profiles; photo details.

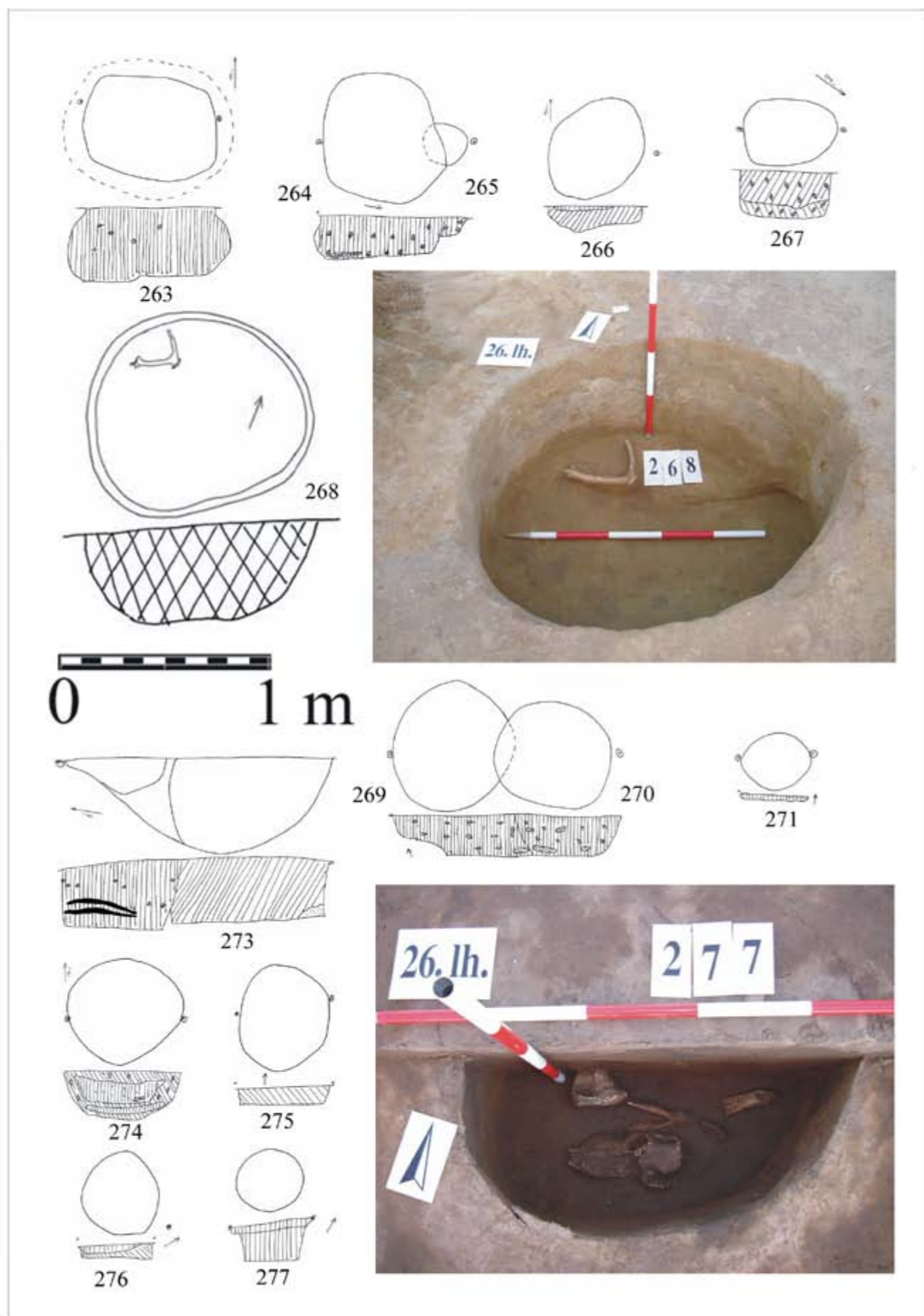


Figure 17. Archaeological features from site 26: drawings plans and profiles; photo details.

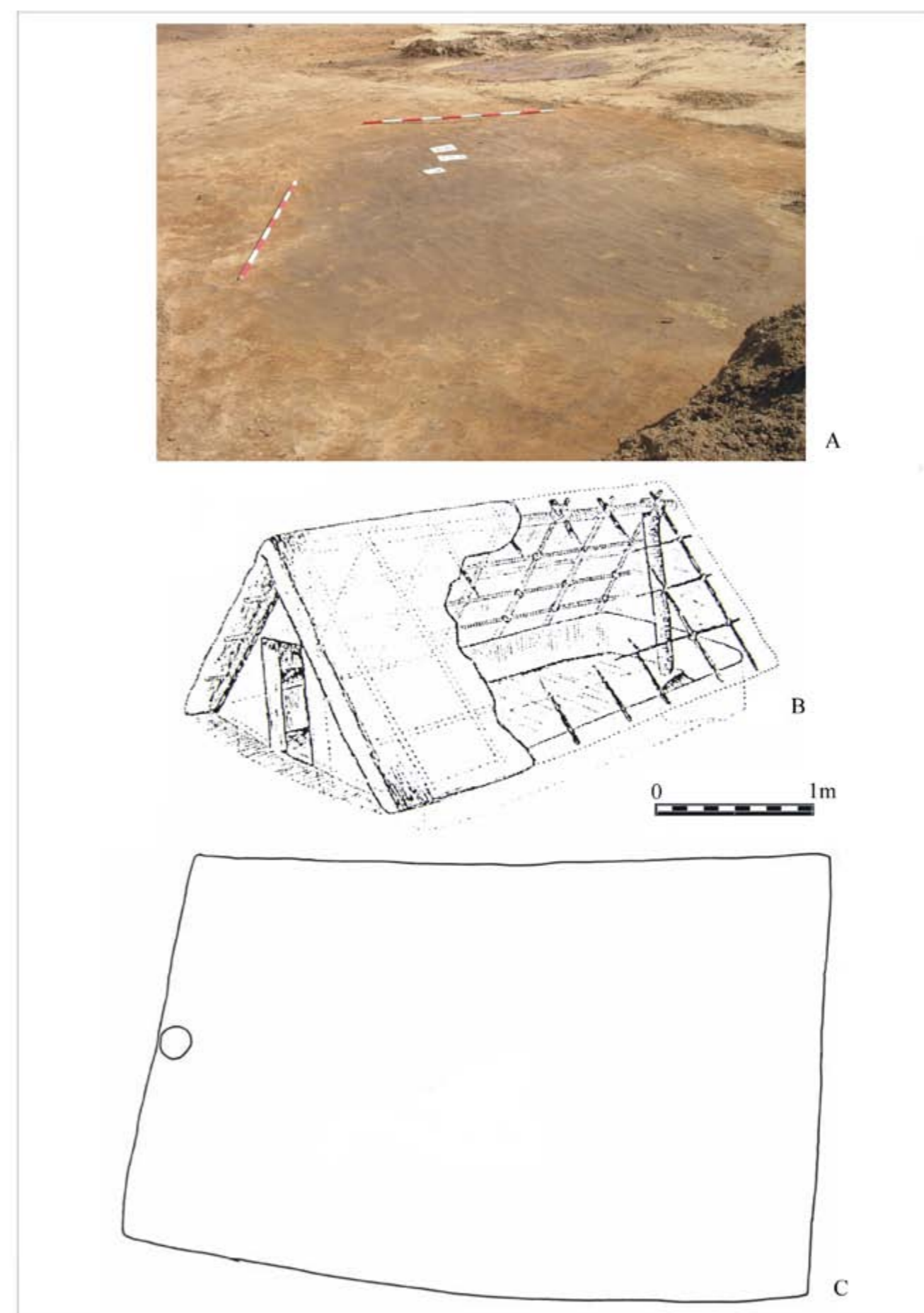


Figure 18. Site 26, features 281: A. photo details; B. graphic reconstruction (Acsa, after Patay); C. drawing plan of the feature.

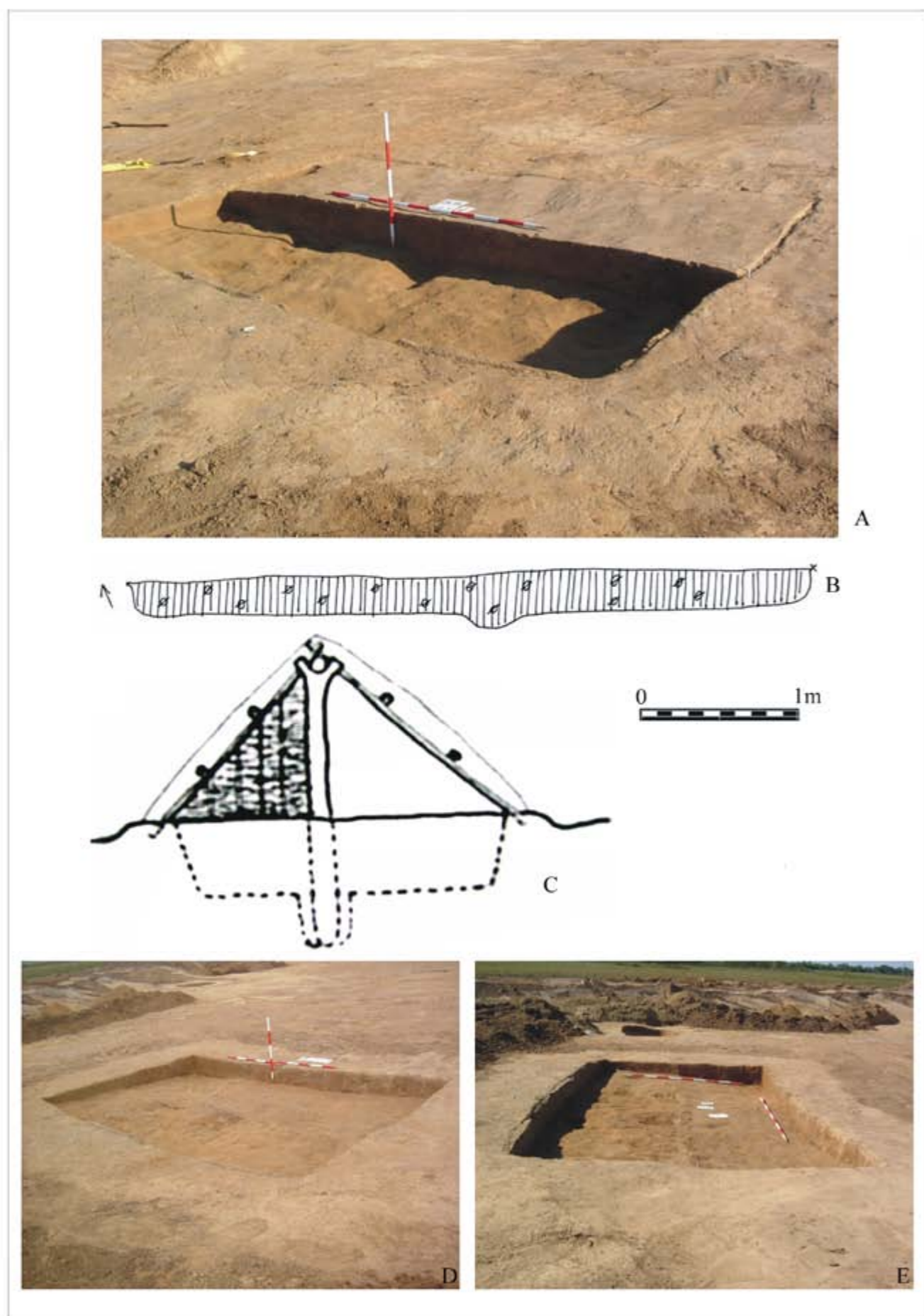


Figure 19. Site 26, features 281: A, D-E. photo details; B. drawing profile; C. graphic reconstruction (Lébény, after Pusztai).

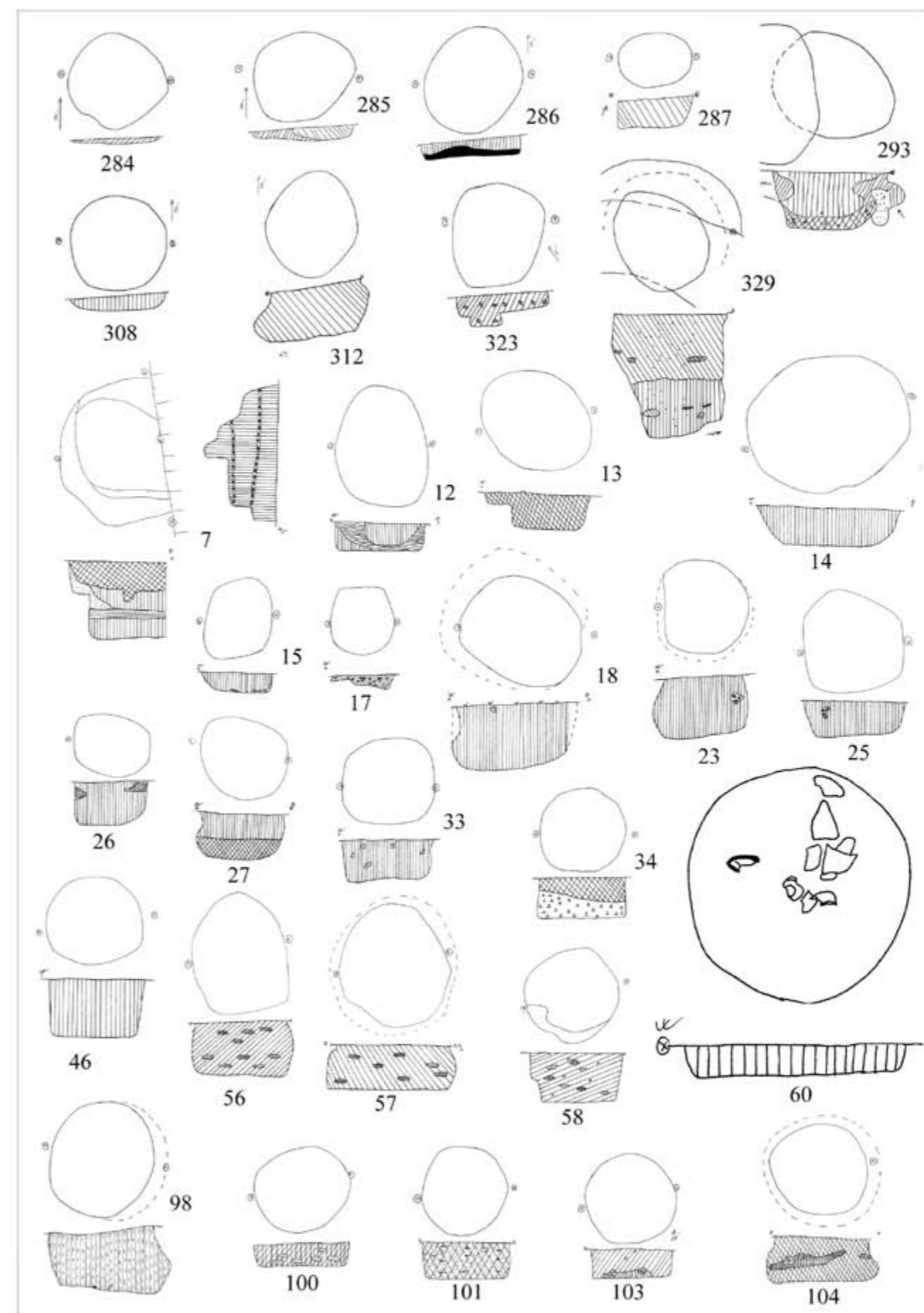
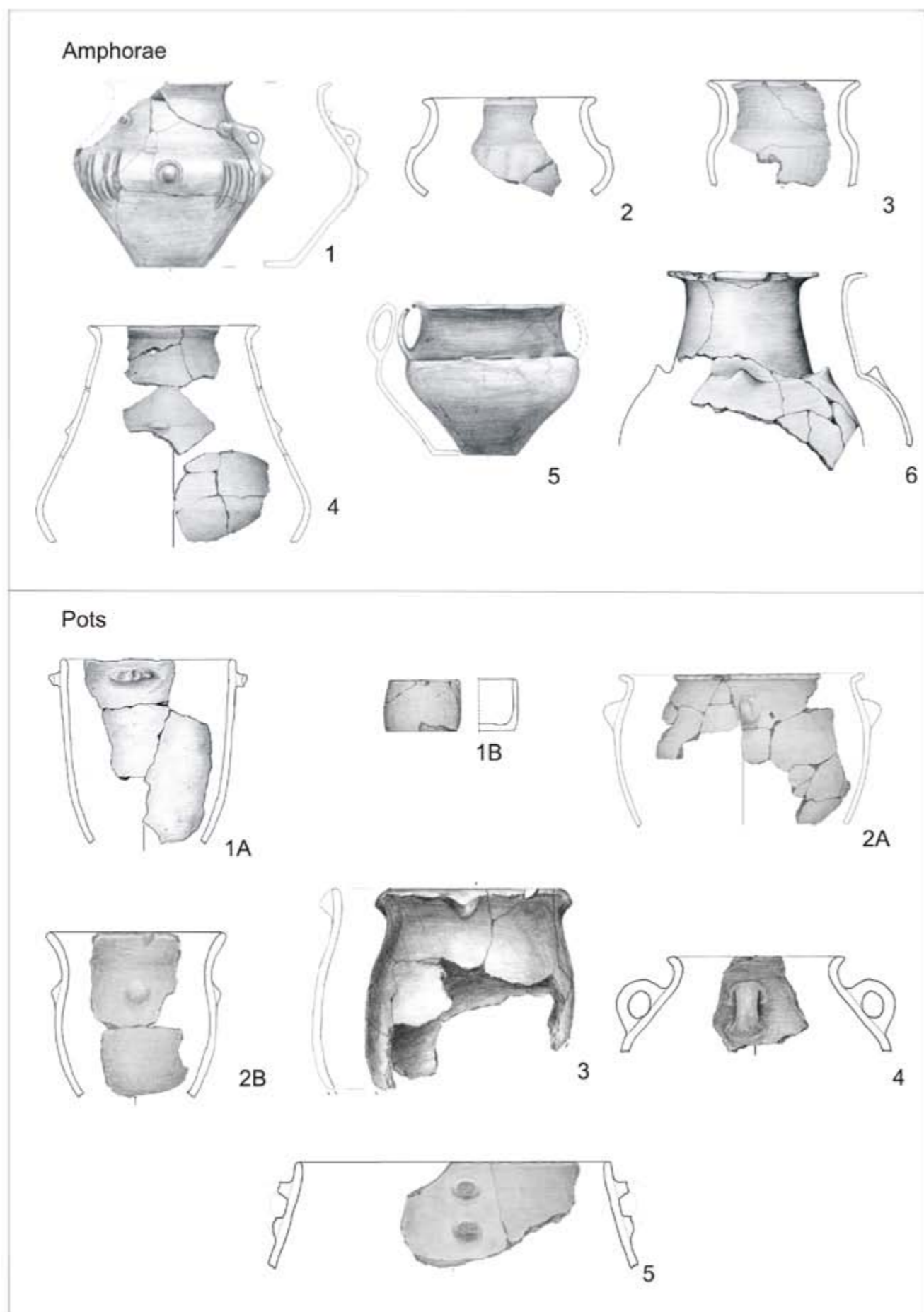
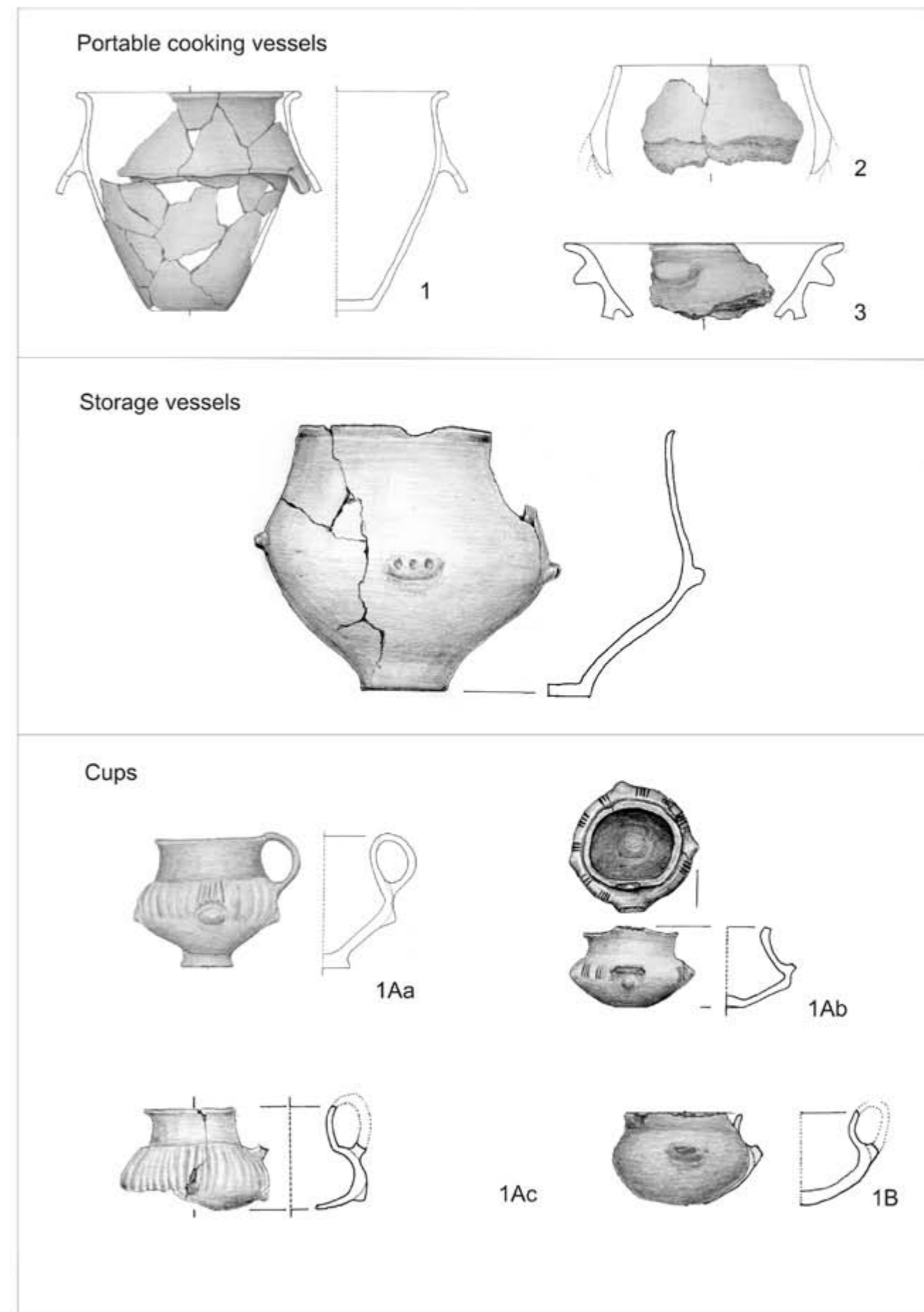


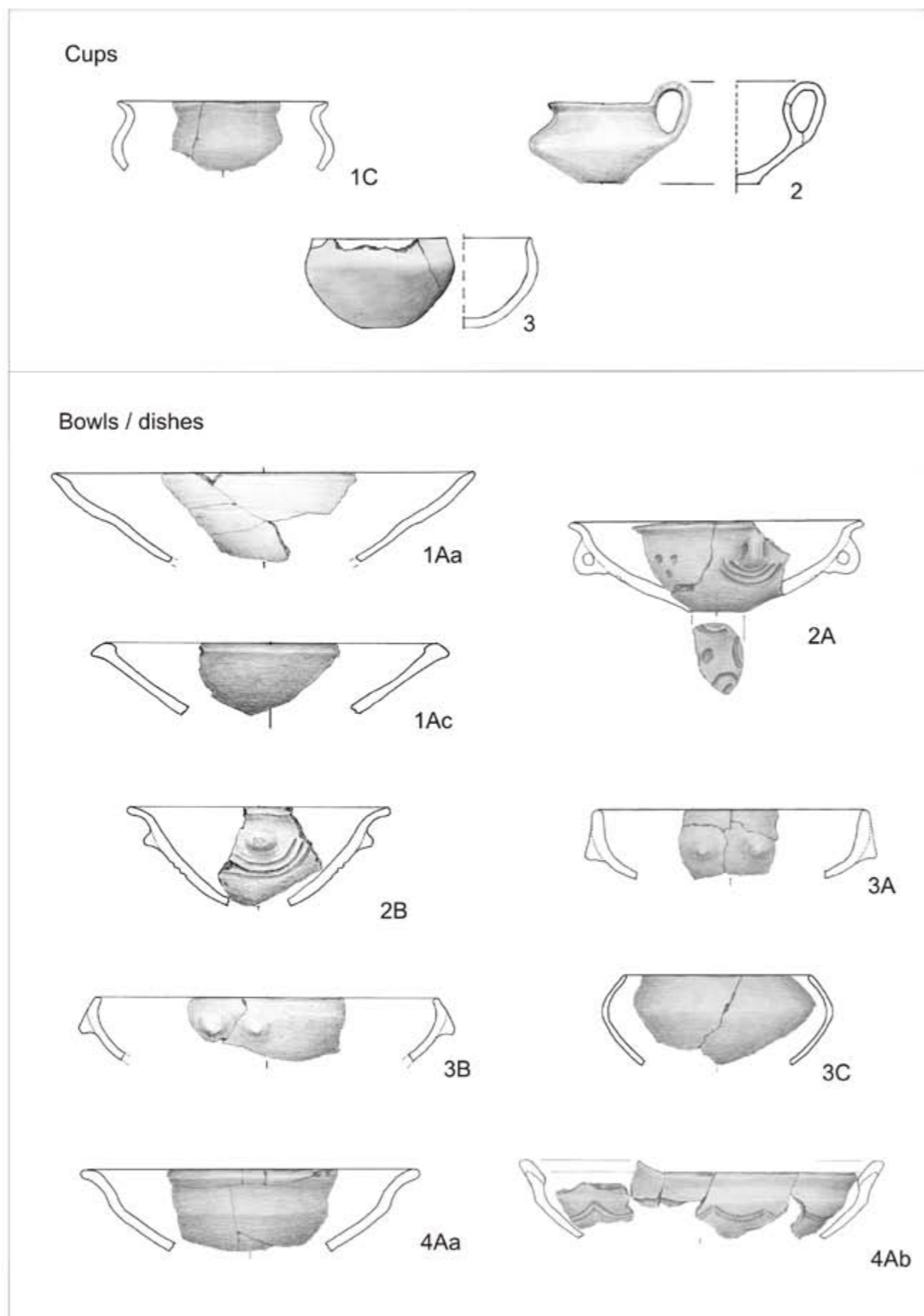
Figure 20. Archaeological features from site 26 and 33: drawings plans and profiles.



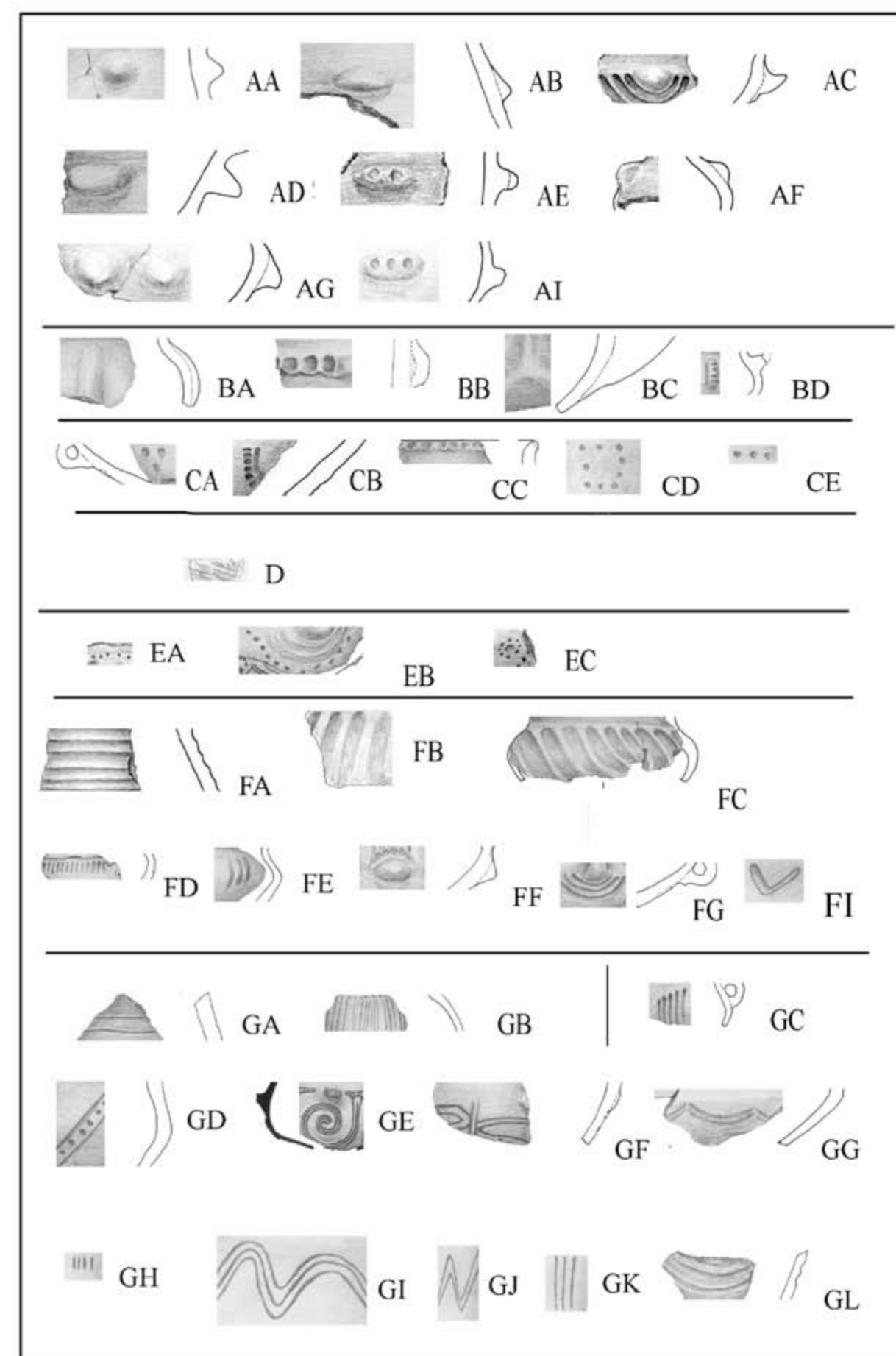
Typological plate 1.



Typological plate 2.



Typological plate 3.



Typological plate 4. Ornamental motifs.

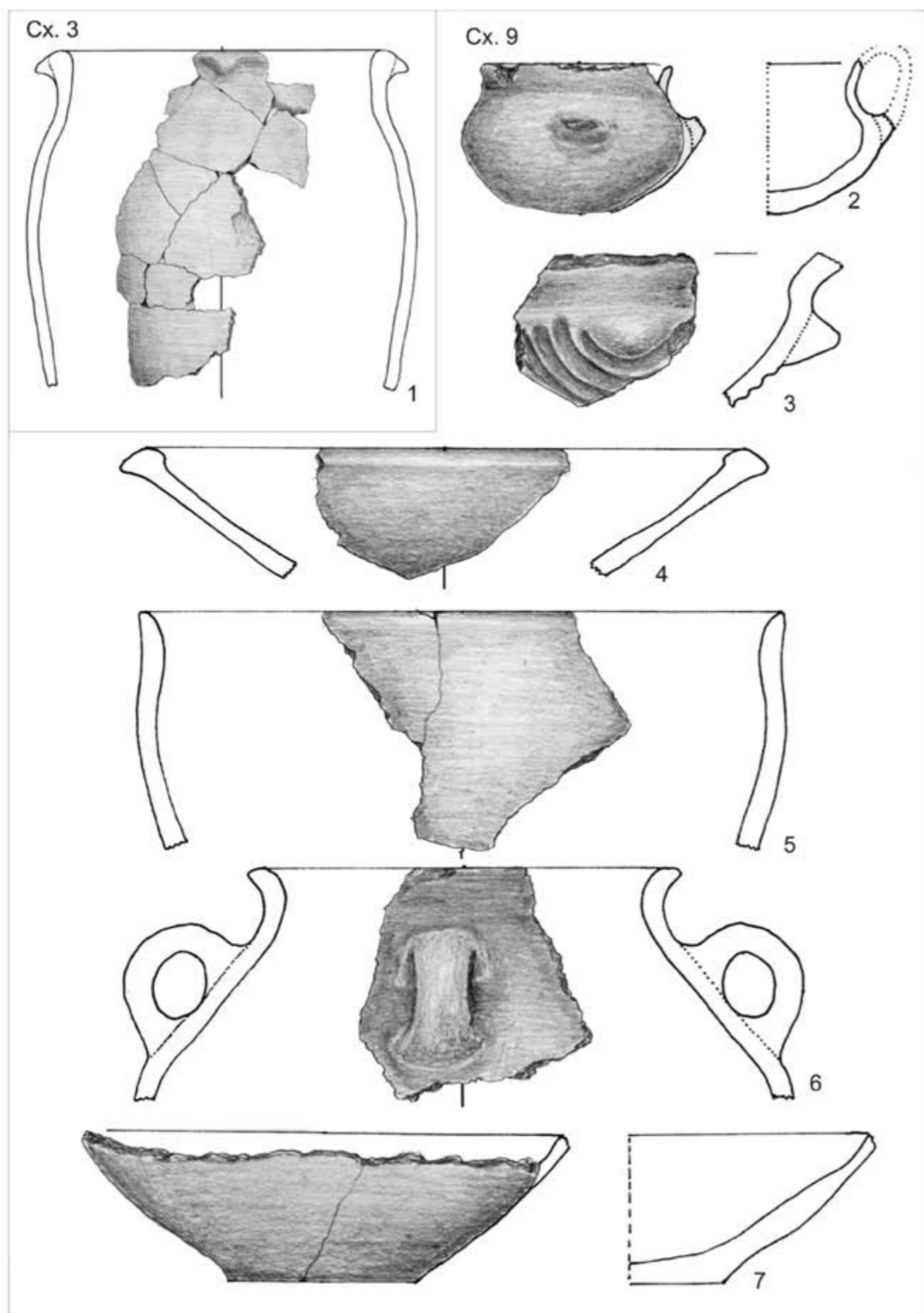


Plate 1. Site 26. Pottery. Scale 1:2.

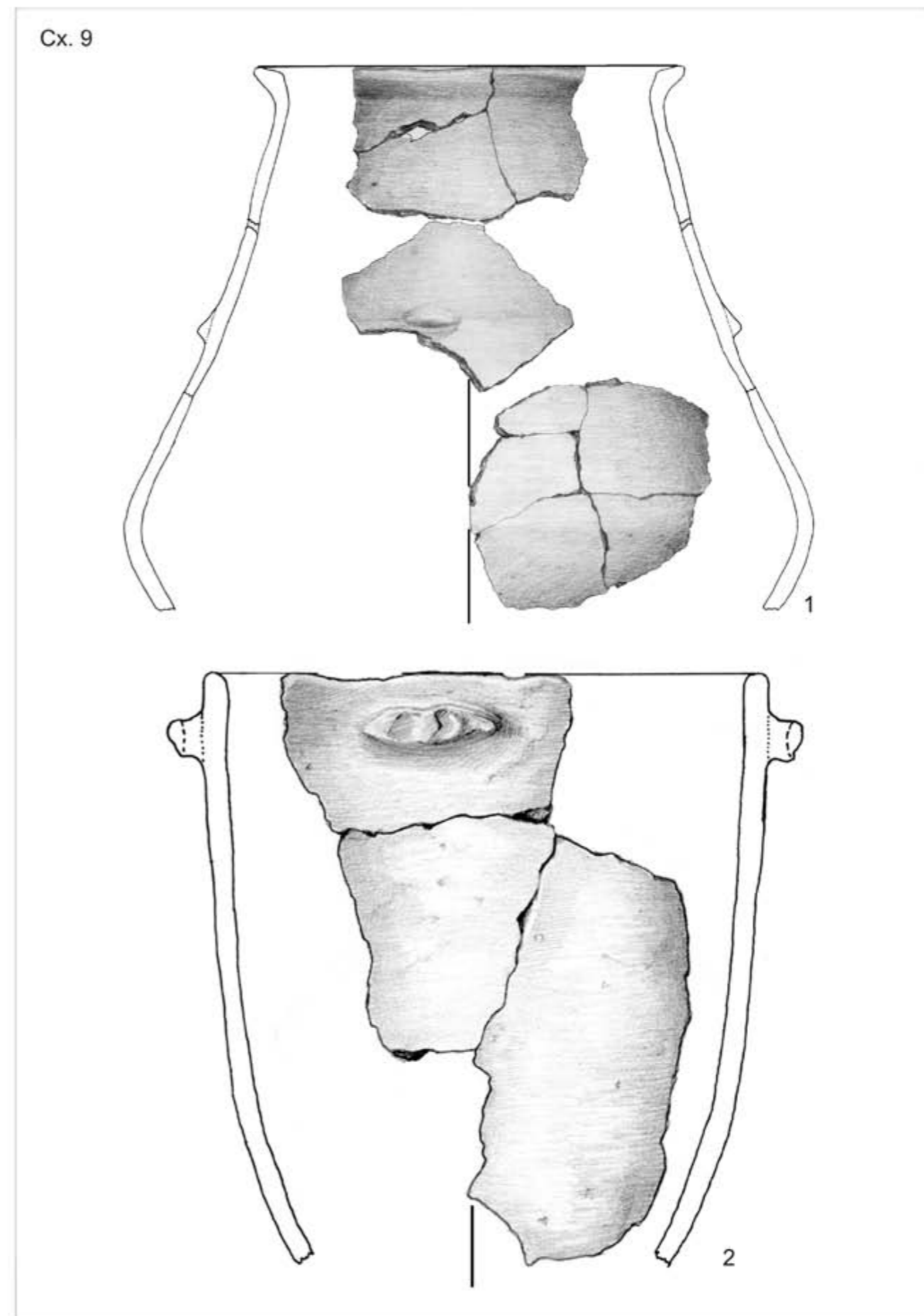


Plate 2. Site 26. Pottery. 1 Scale 1:4; 2 Scale 1:2.

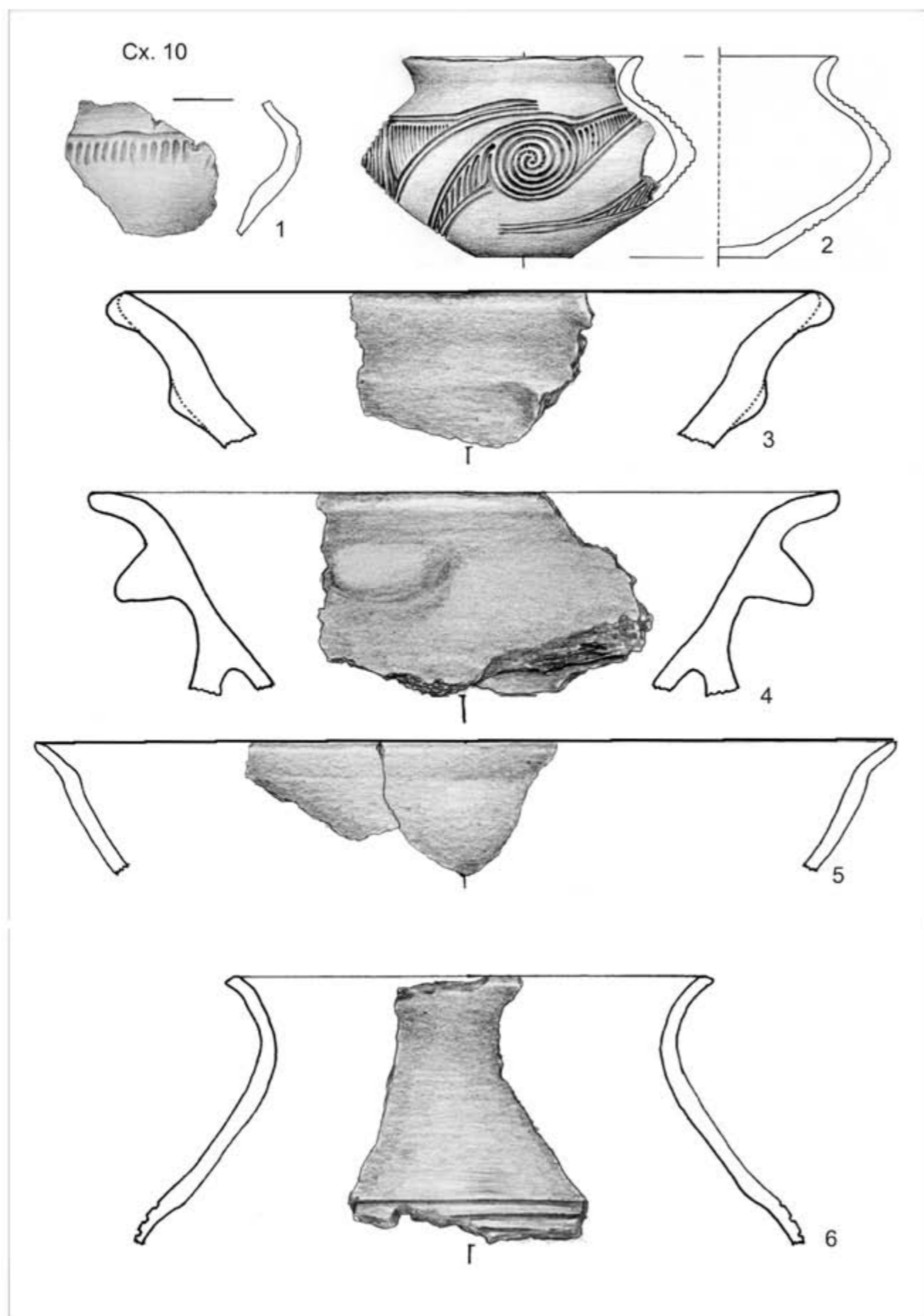


Plate 3. Site 26. Pottery. Scale 1:2.

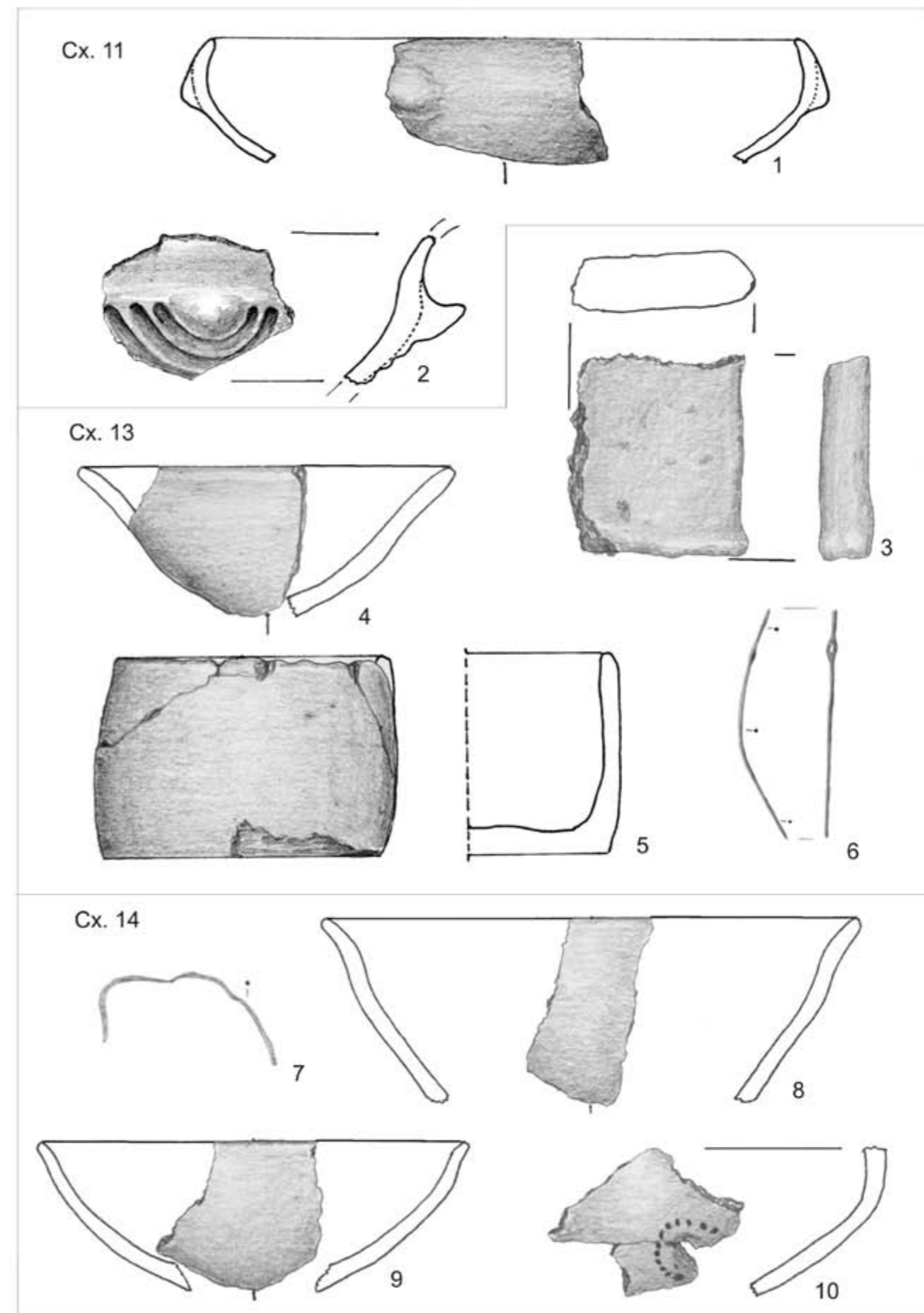


Plate 4. Site 26. 1-5, 8-10 Pottery; 6-7 Bronze. Scale 1:2.

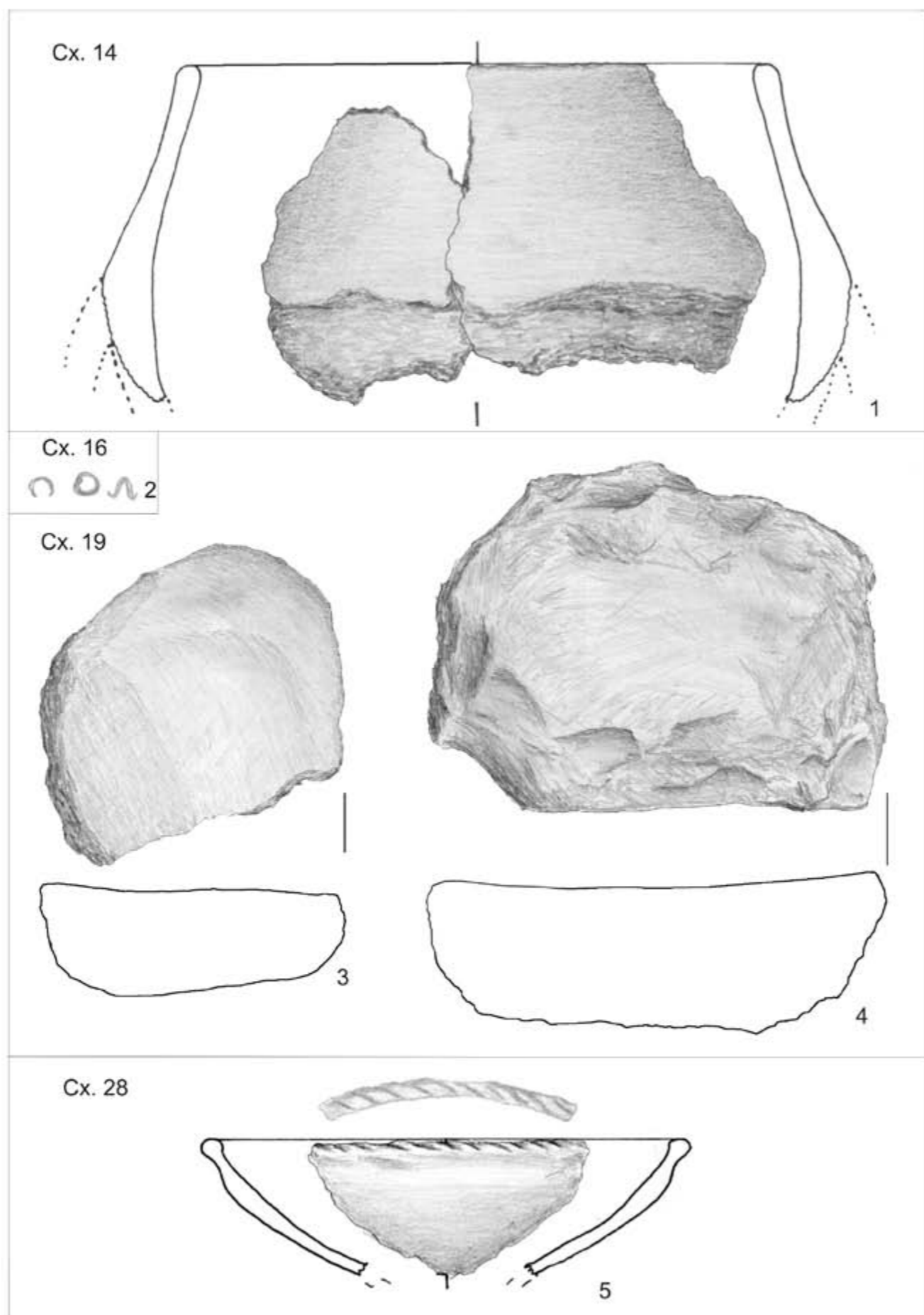


Plate 5. Site 26. 1, 5 Pottery; 2 Bronze; 3-4 Stone. 1, 2, 5 Scale 1:2; 3, 4 Scale 1:4.

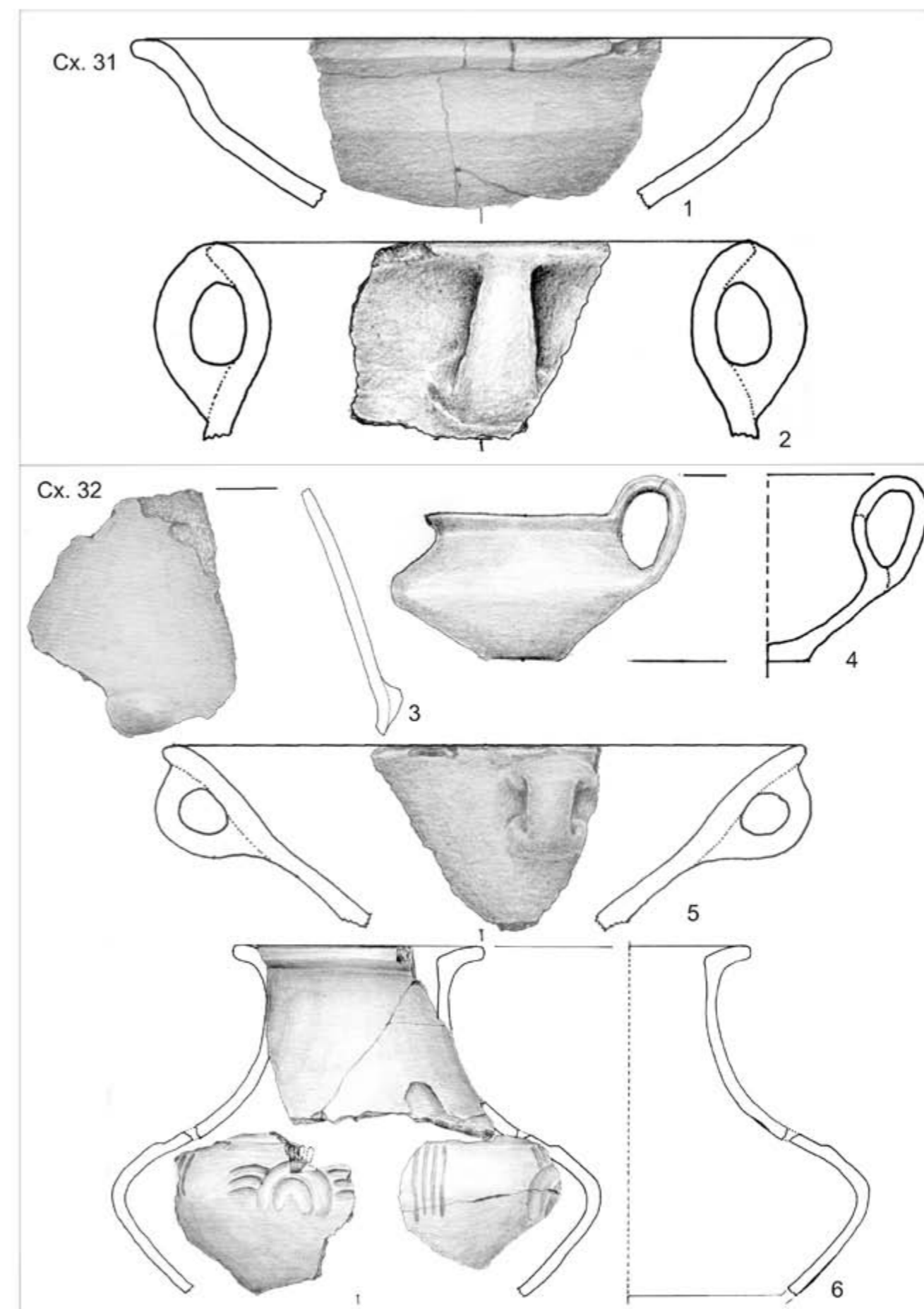


Plate 6. Site 26. Pottery. 1-5 Scale 1:2; 6 Scale 1:4.

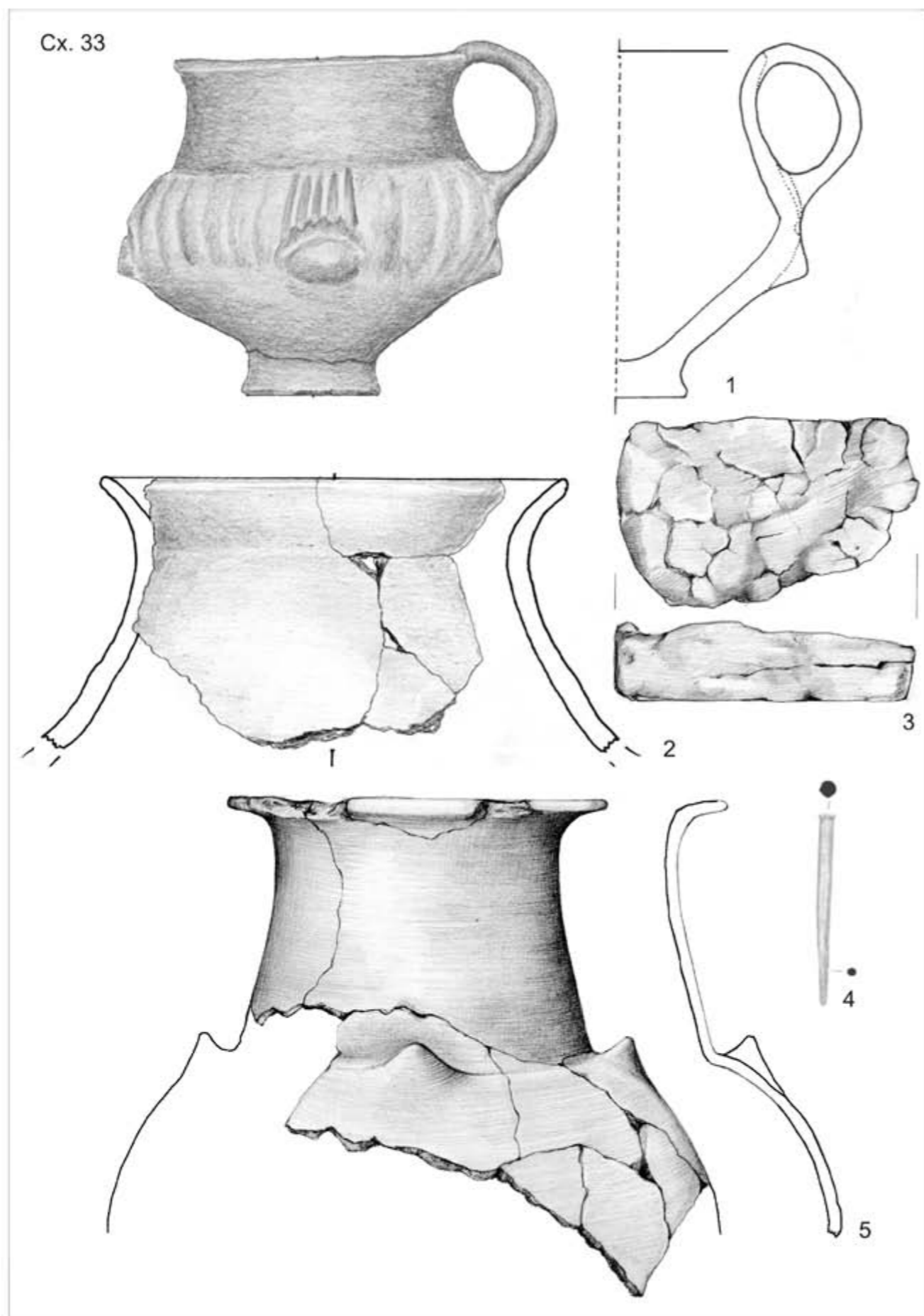


Plate 7. Site 26. 1-2, 5 Pottery; 3 Stone; 4 Bronze. 1-4 Scale 1:2; 5 Scale 1:4.

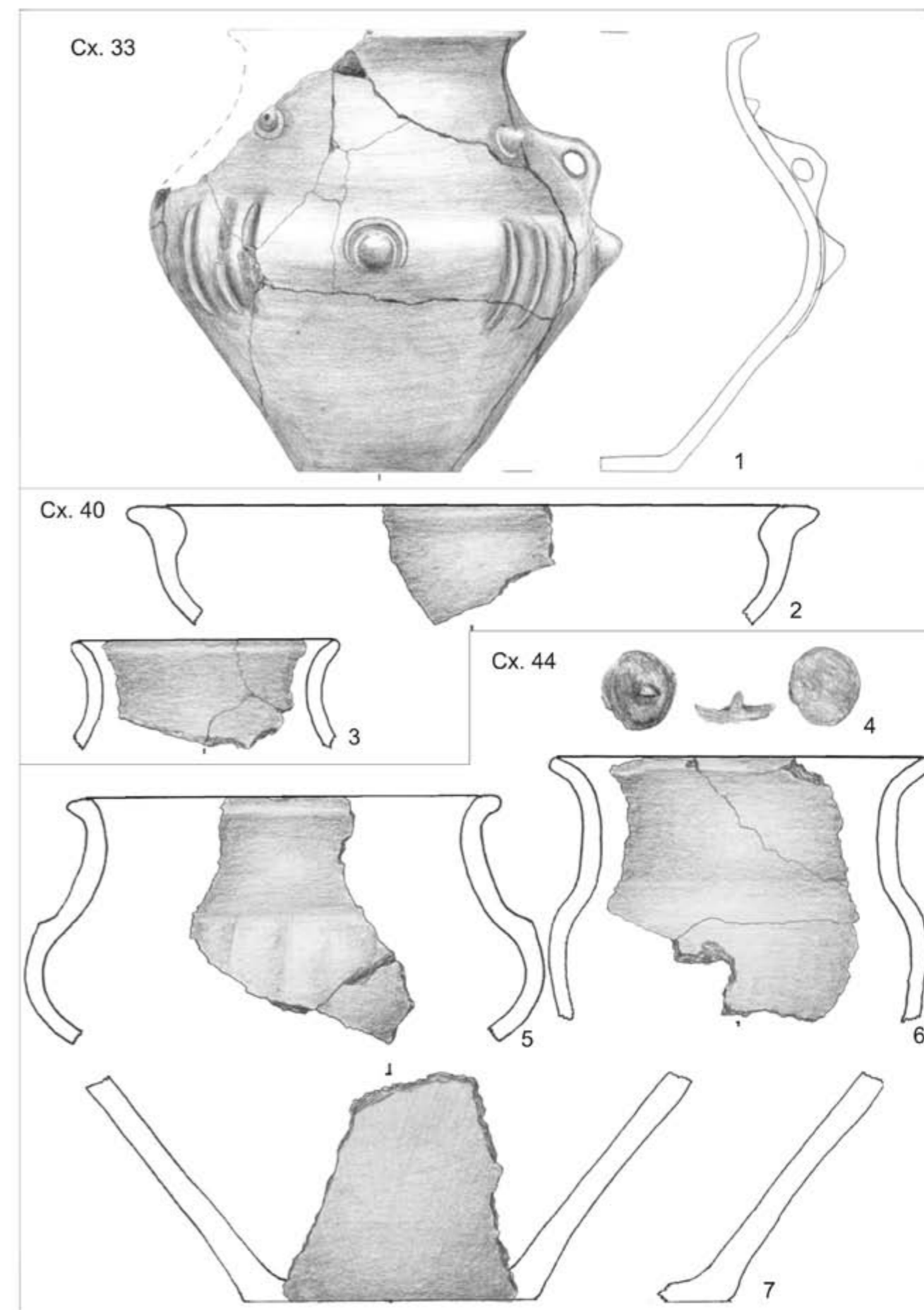


Plate 8. Site 26. 1-3, 5-7 Pottery; 4 Bronze. 1 Scale 1:4; 2-7 Scale 1:2.

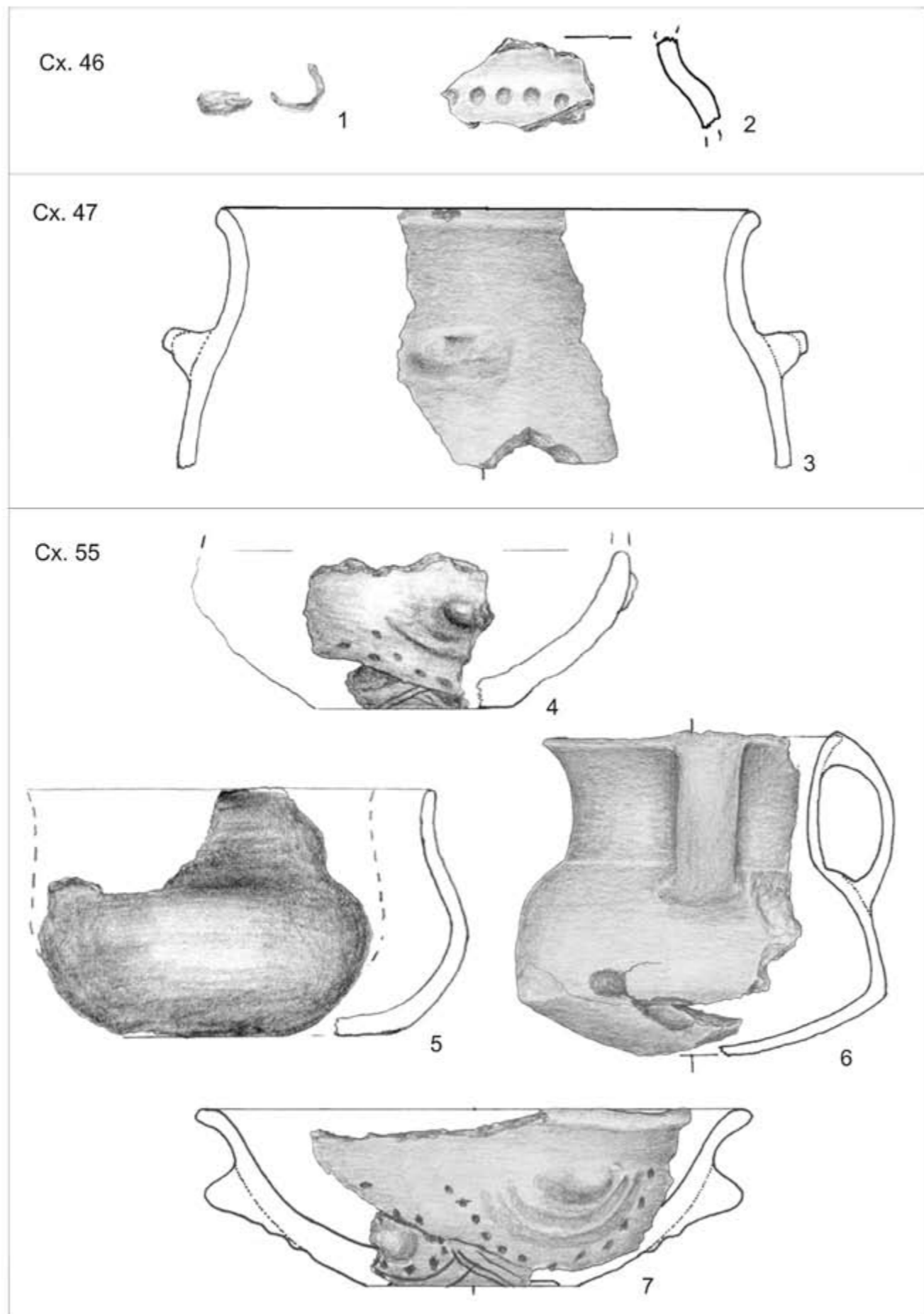


Plate 9. Site 26.1 Bronze; 2-7 Pottery. Scale 1:2.

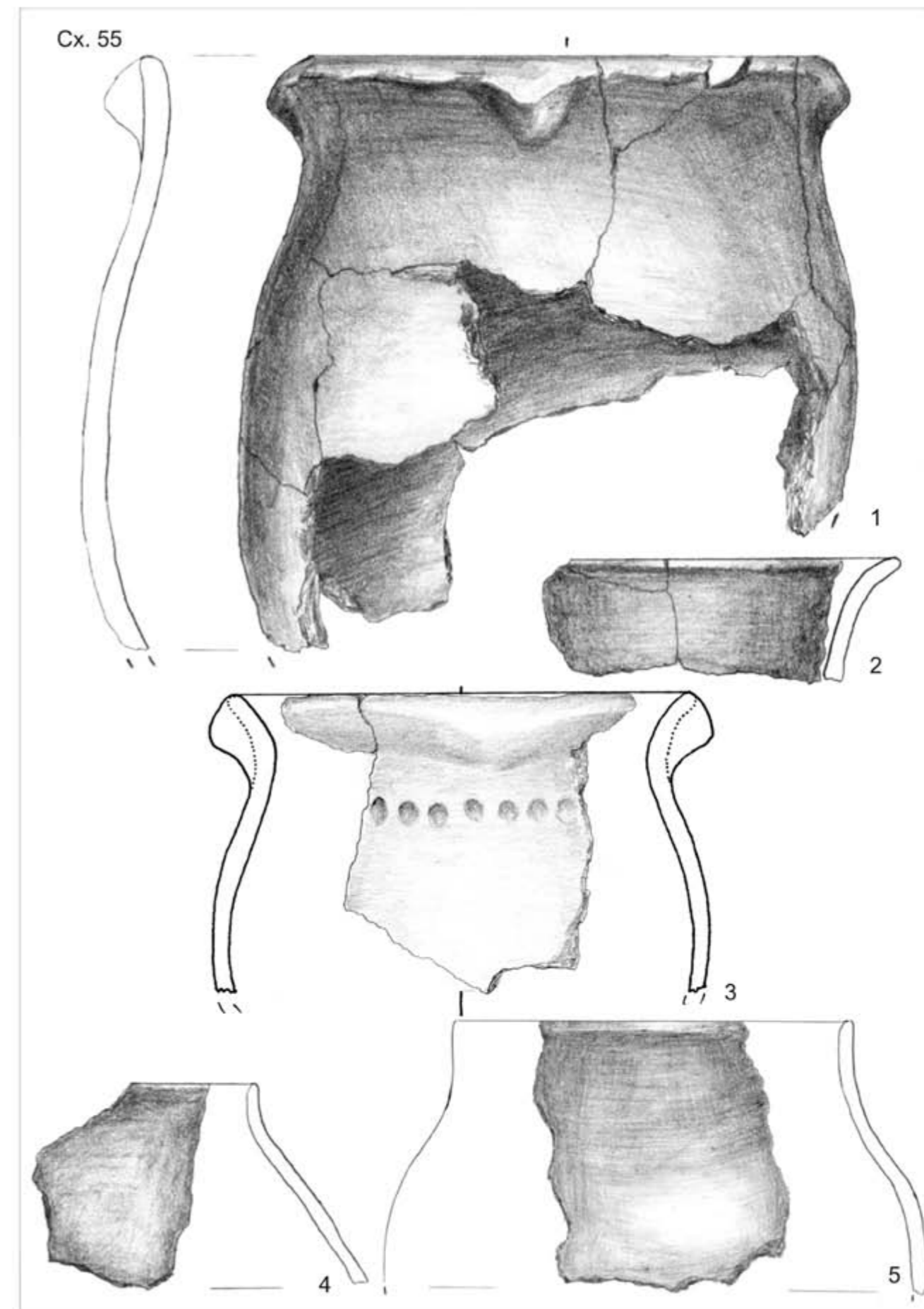
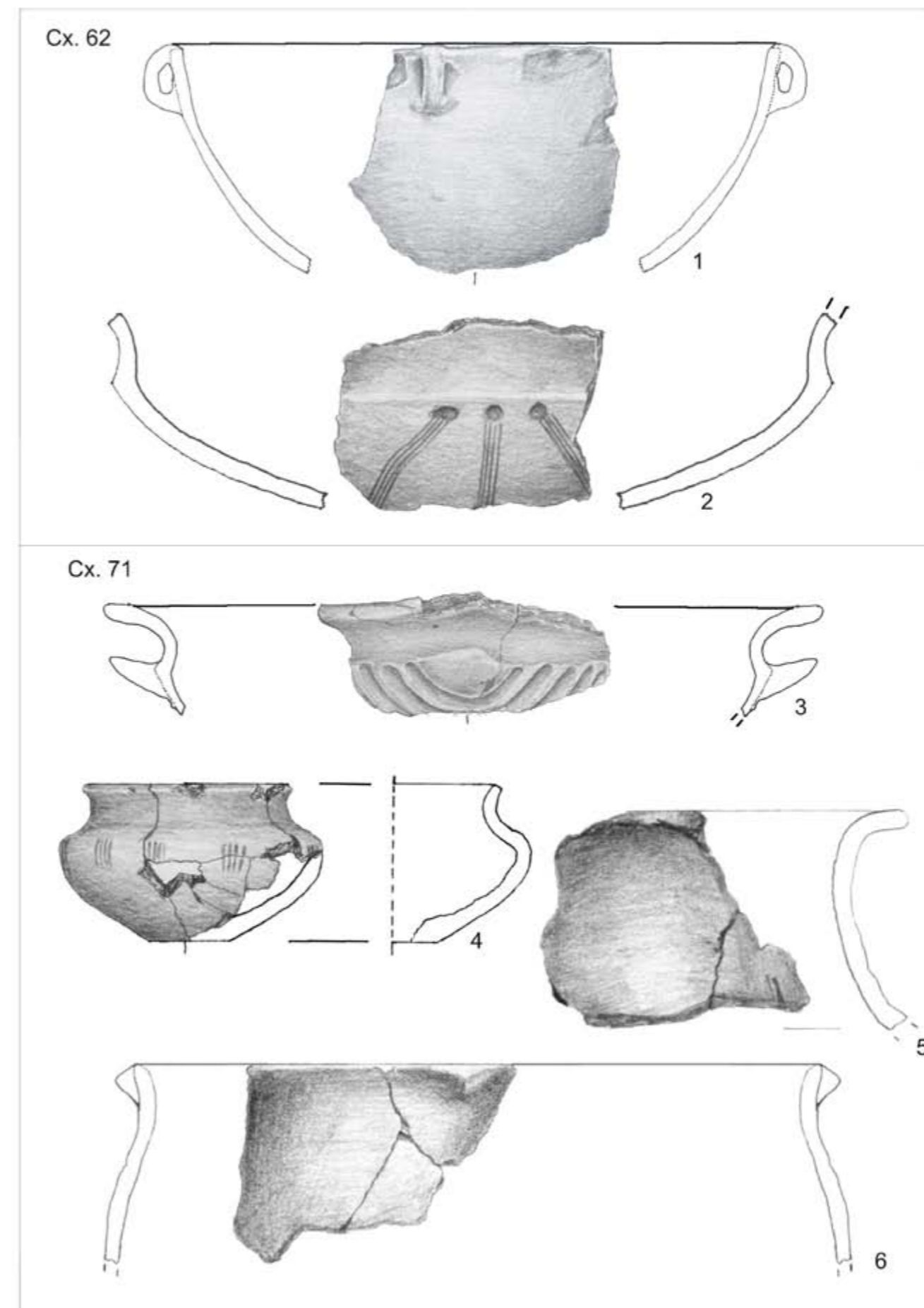
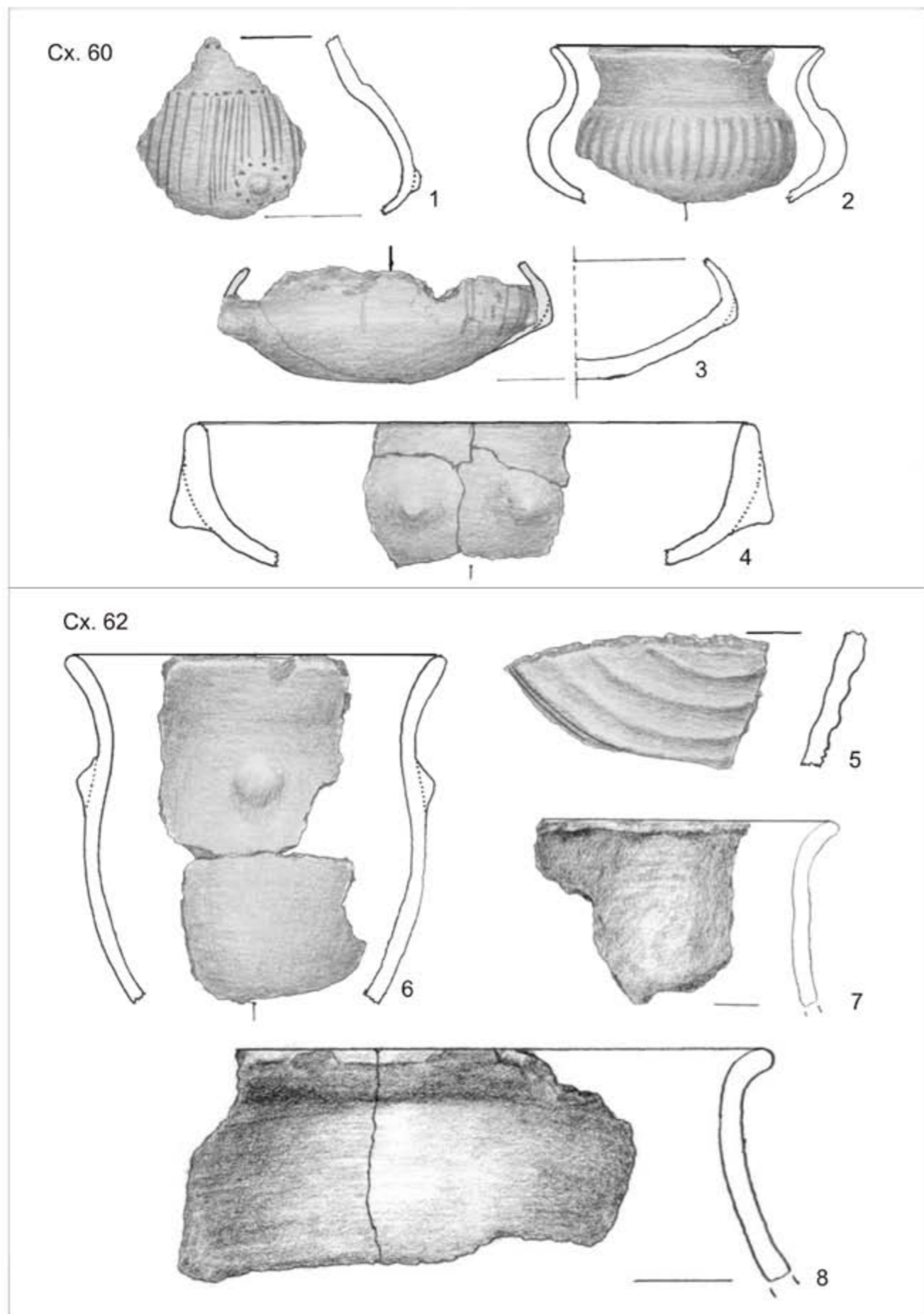


Plate 10. Site 26. Pottery. Scale 1:2.



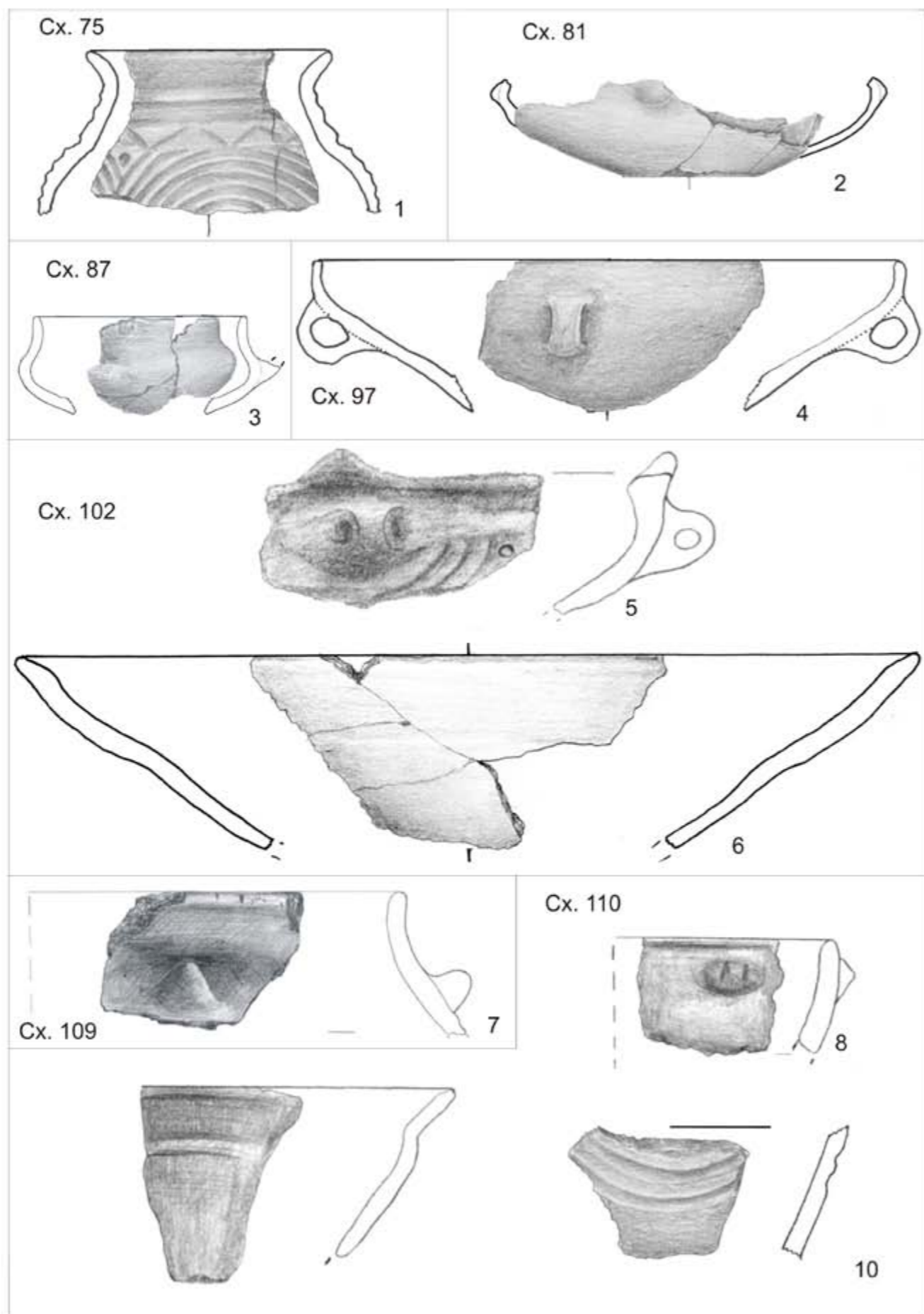


Plate 13. Site 26. Pottery. Scale 1:2.

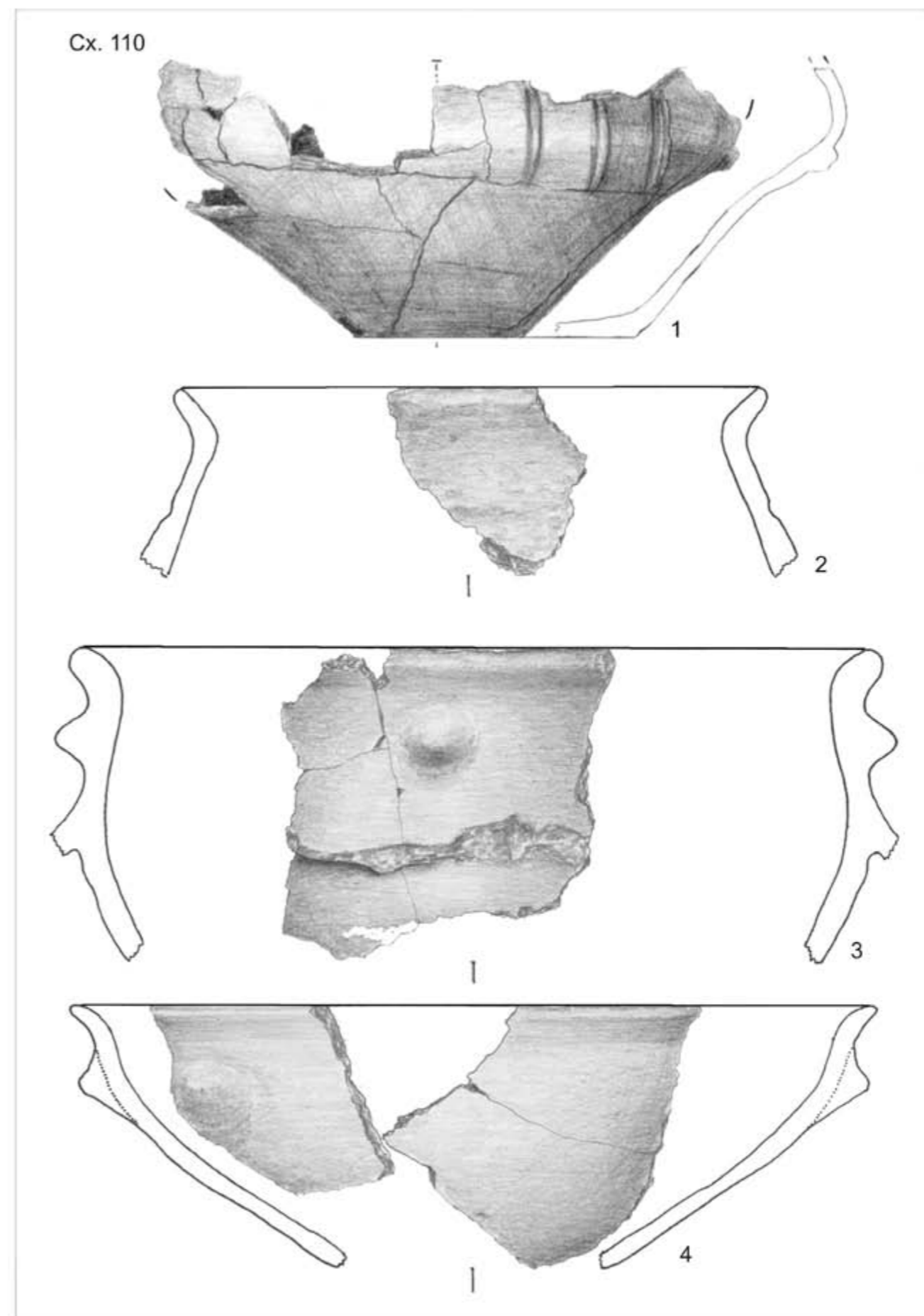


Plate 14. Site 26. Pottery. 1 Scale 1:4; 2-4 Scale 1:2.

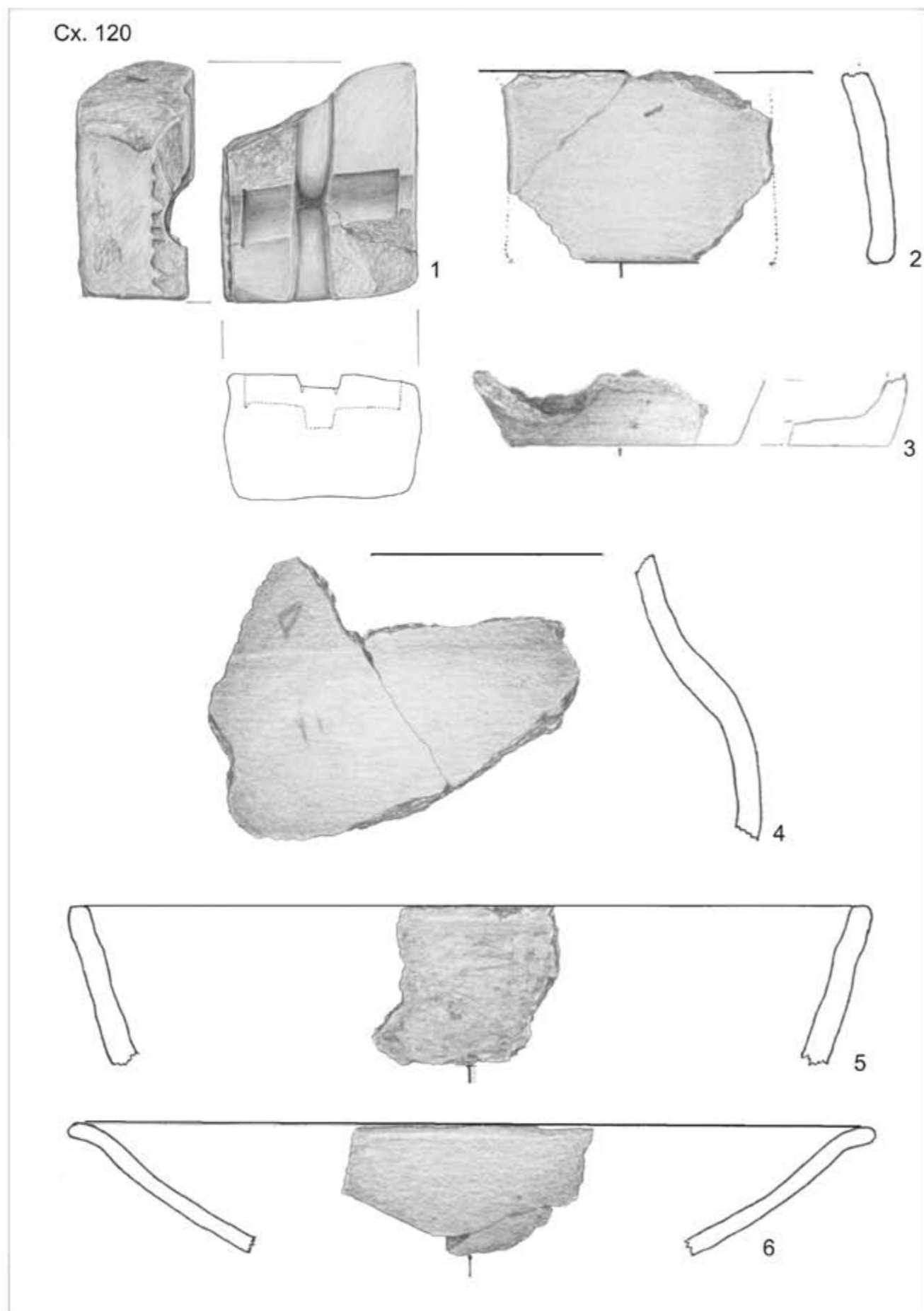


Plate 15. Site 26. 1 Stone; 2-6 Pottery. Scale 1:2.

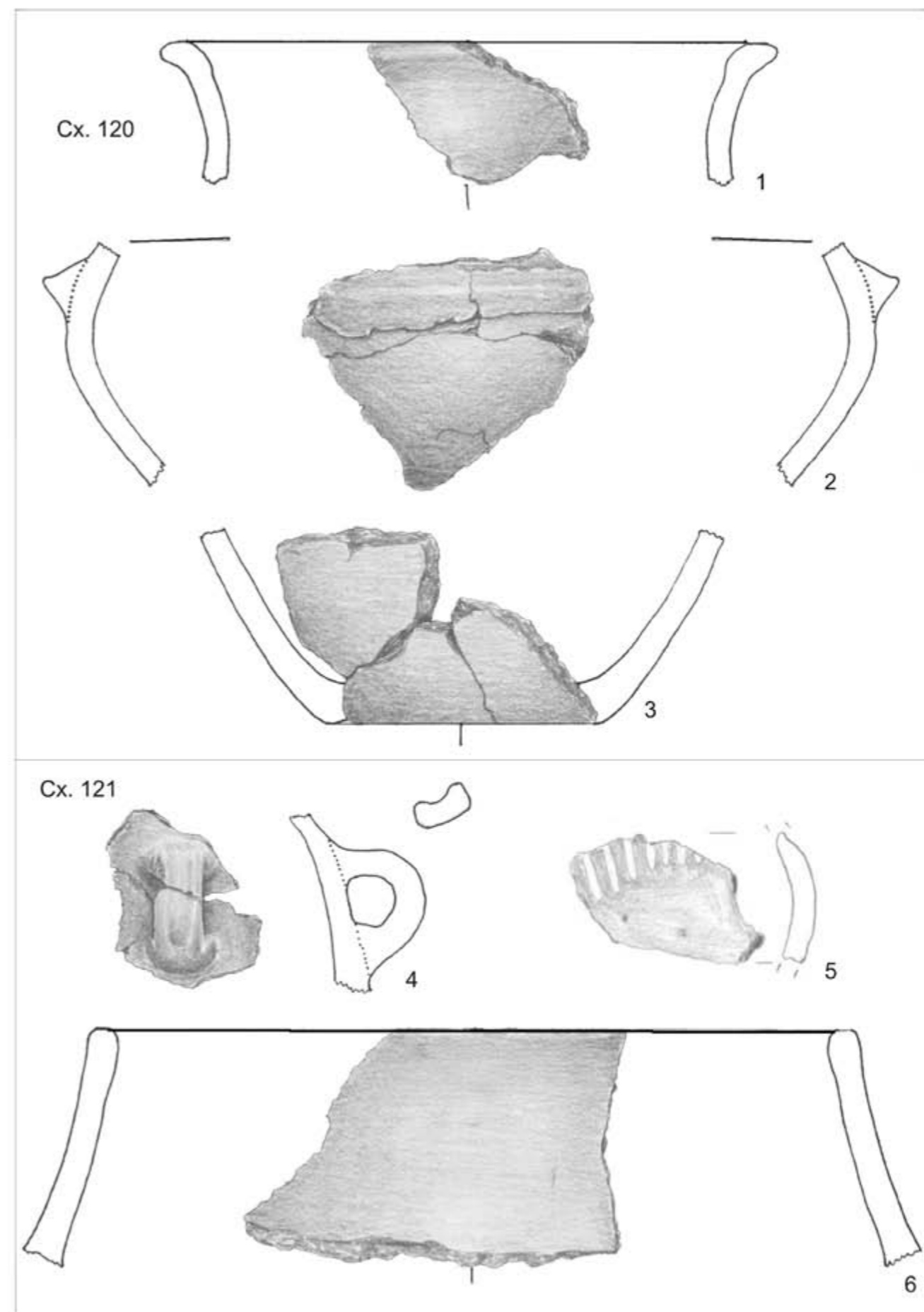


Plate 16. Site 26. Pottery. Scale 1:2.

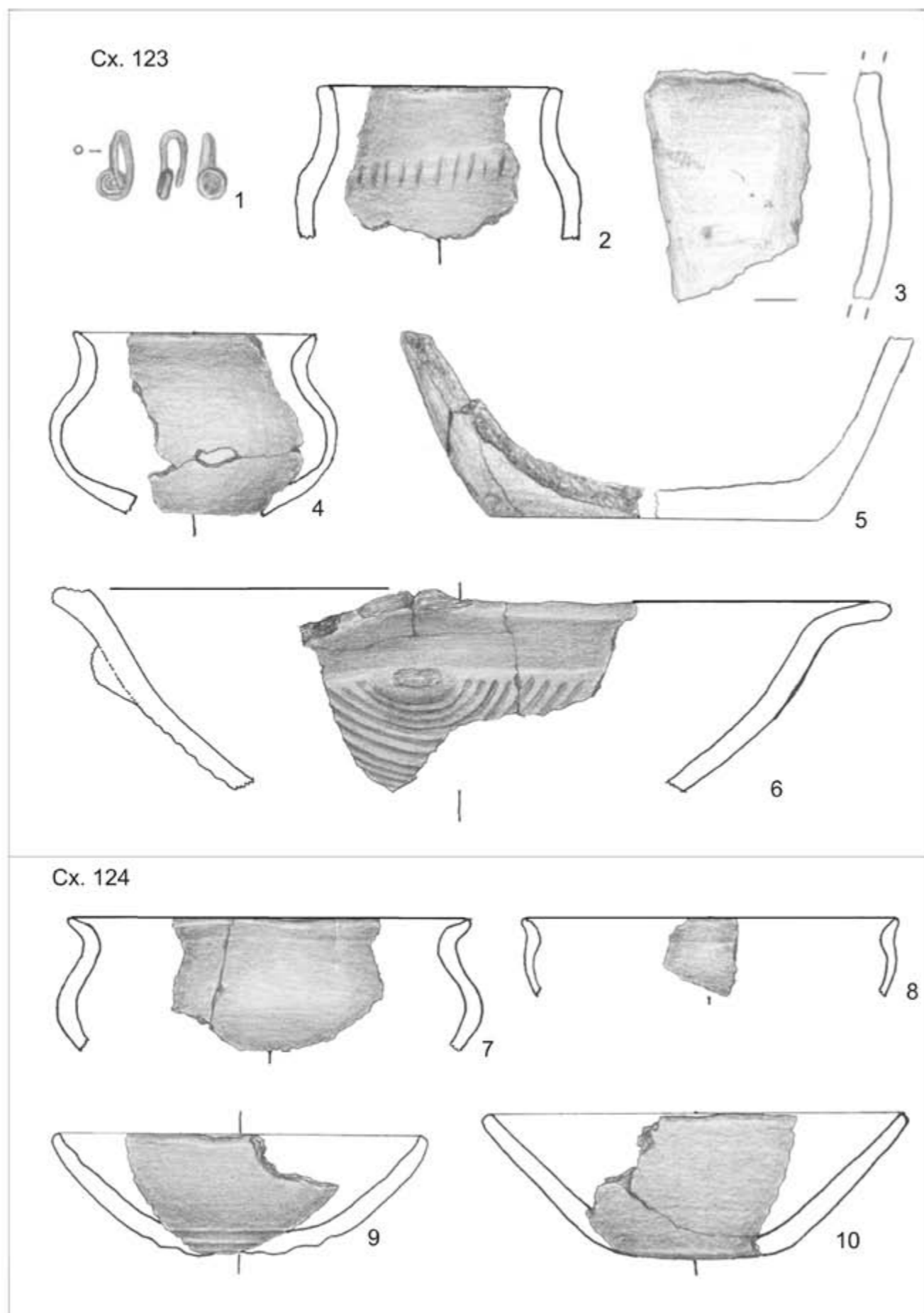


Plate 17. Site 26. 1 Bronze; 2-10 Pottery. 1 Scale 1:1; 2-10 Scale 1:2.

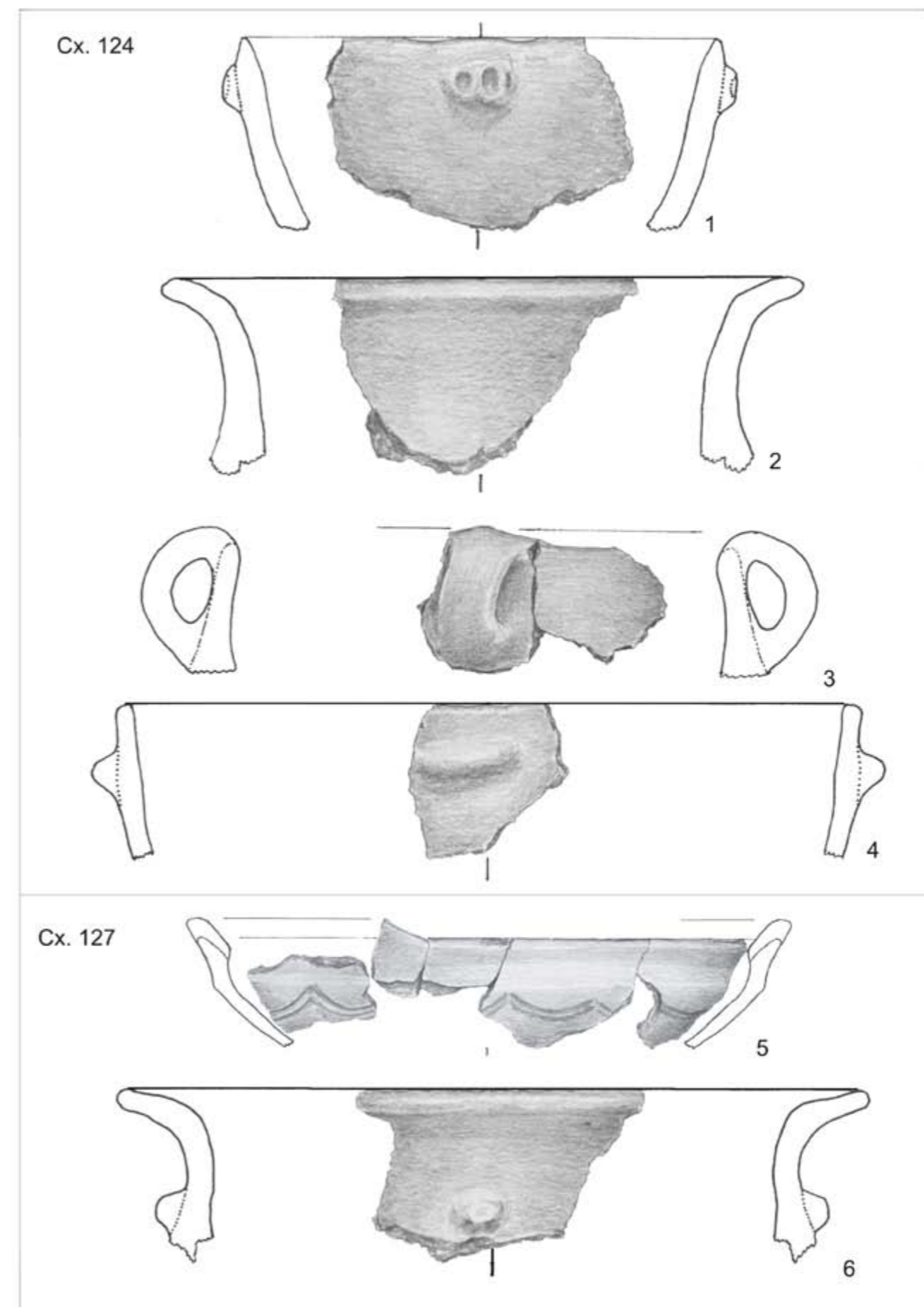
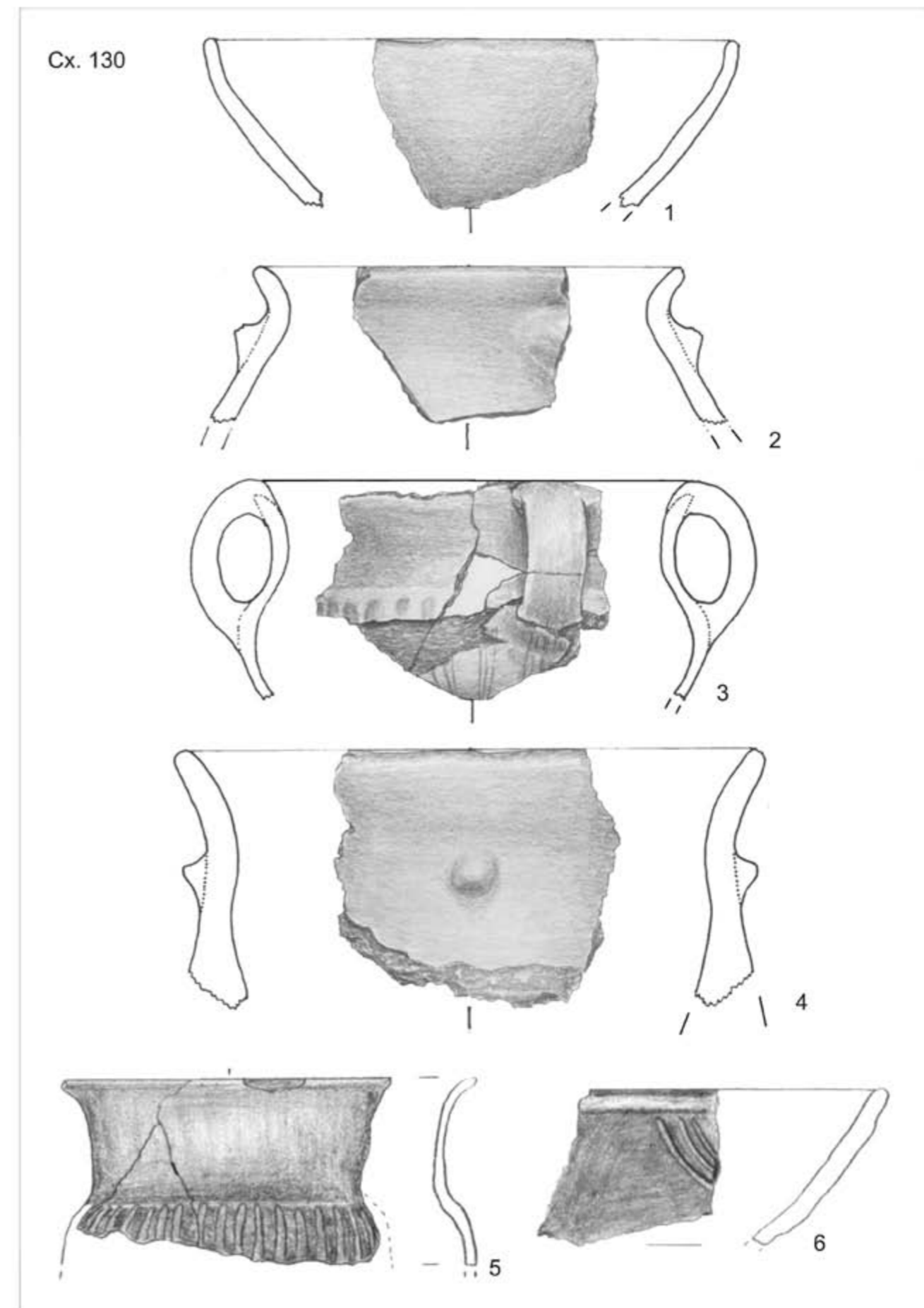
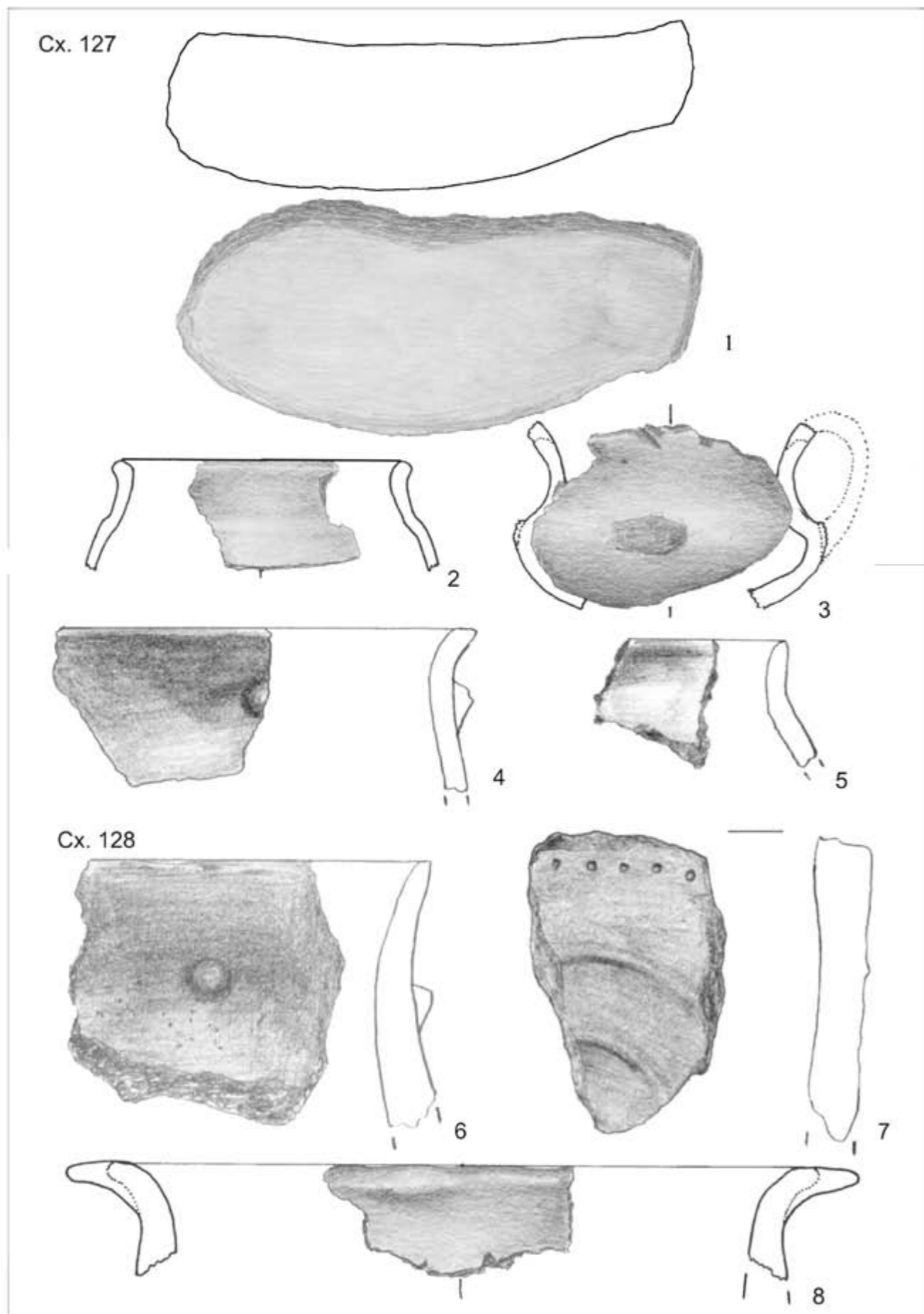


Plate 18. Site 26. Pottery. Scale 1:2.



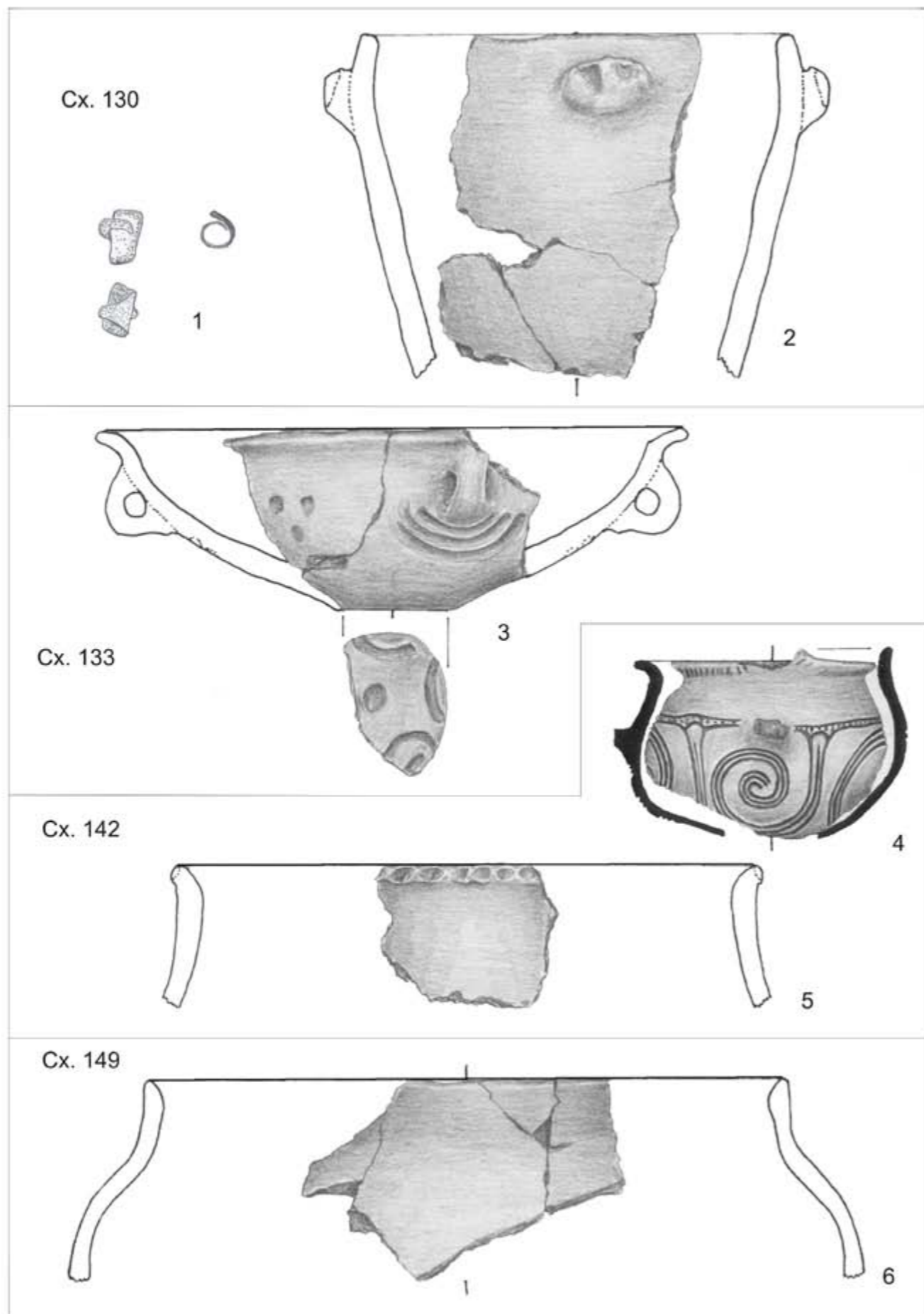


Plate 21. Site 26. 1 Bronze; 2-6 Pottery. 1 Scale 1:1; 2-6 Scale 1:2.

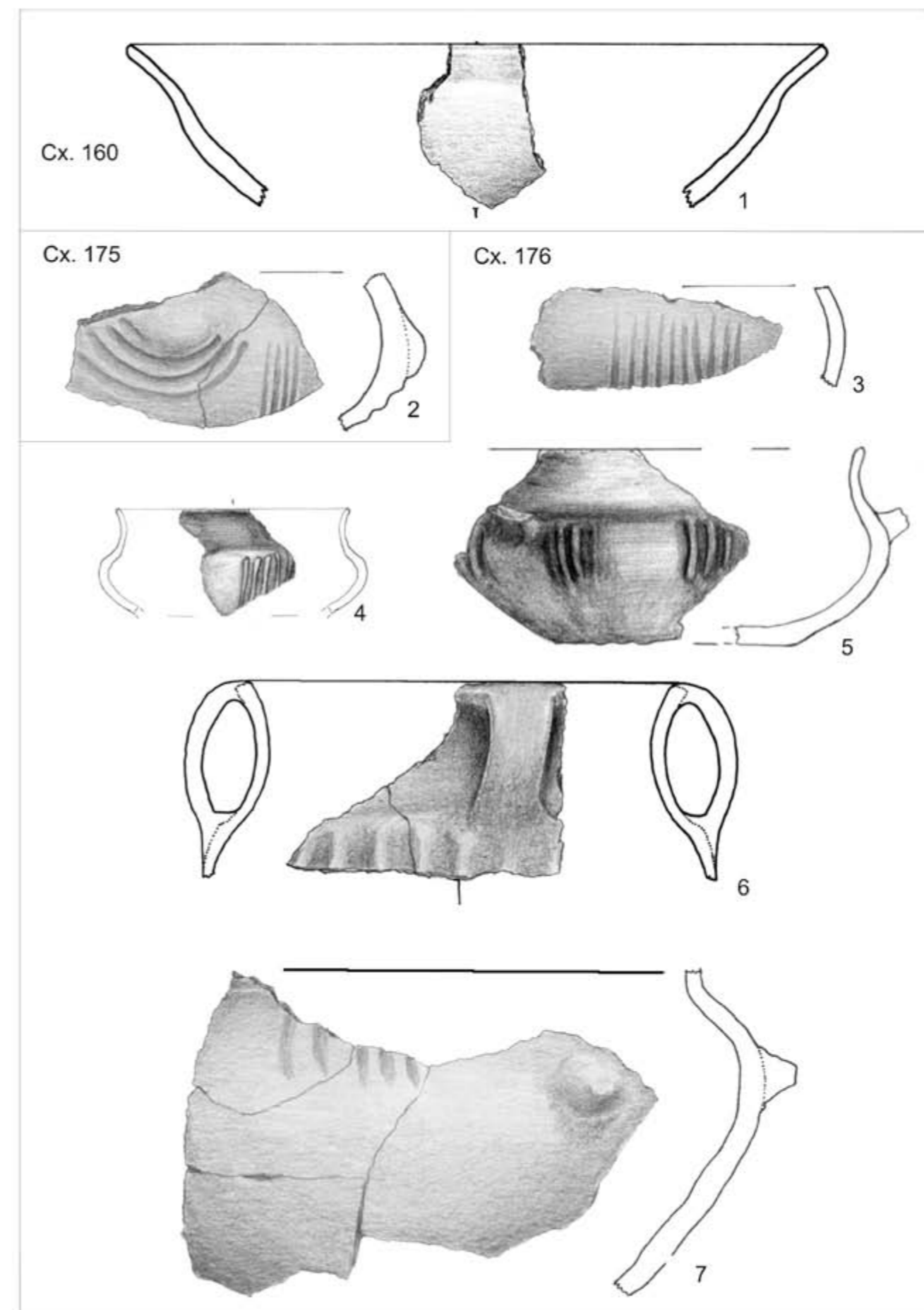


Plate 22. Site 26. Pottery. Scale 1:2.

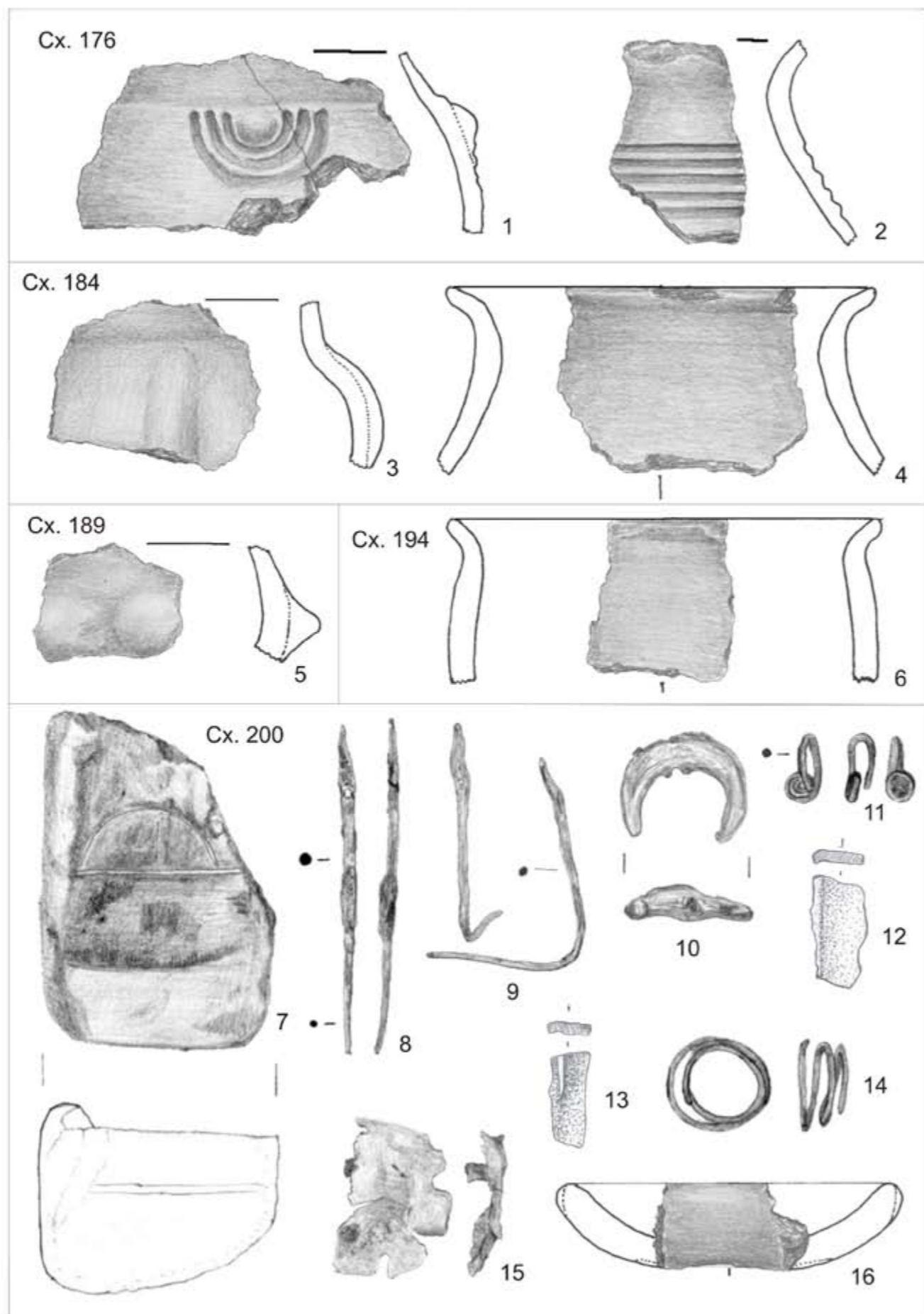


Plate 23. Site 26. 1-6, 16 Pottery; 7 Stone; 8-15 Bronze. 1-6 Scale 1:2; 7-16 Scale 1:1.

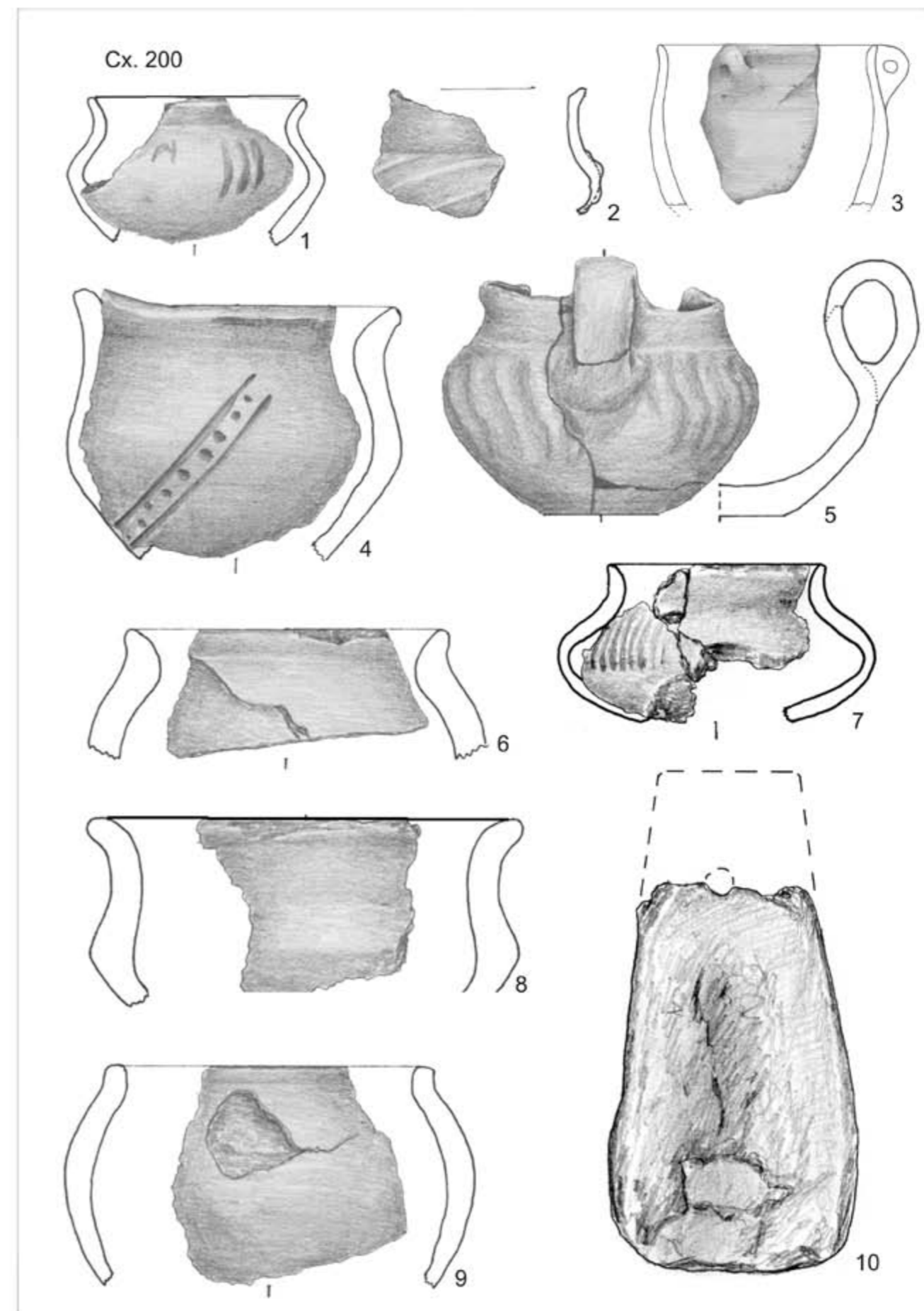


Plate 24. Site 26. 1-9 Pottery; 10 Clay. Scale 1:2.

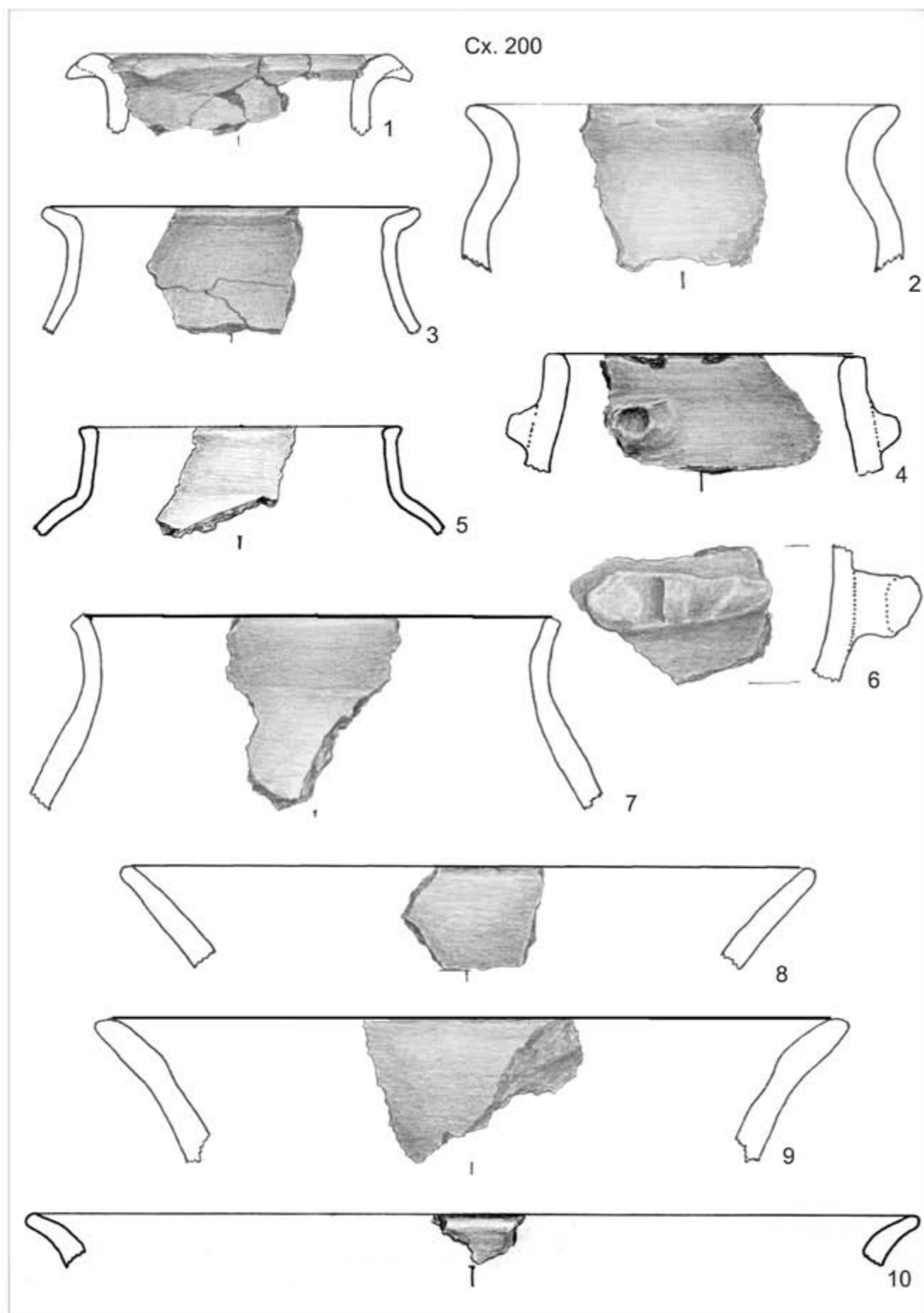


Plate 25. Site 26. Pottery. Scale 1:2.

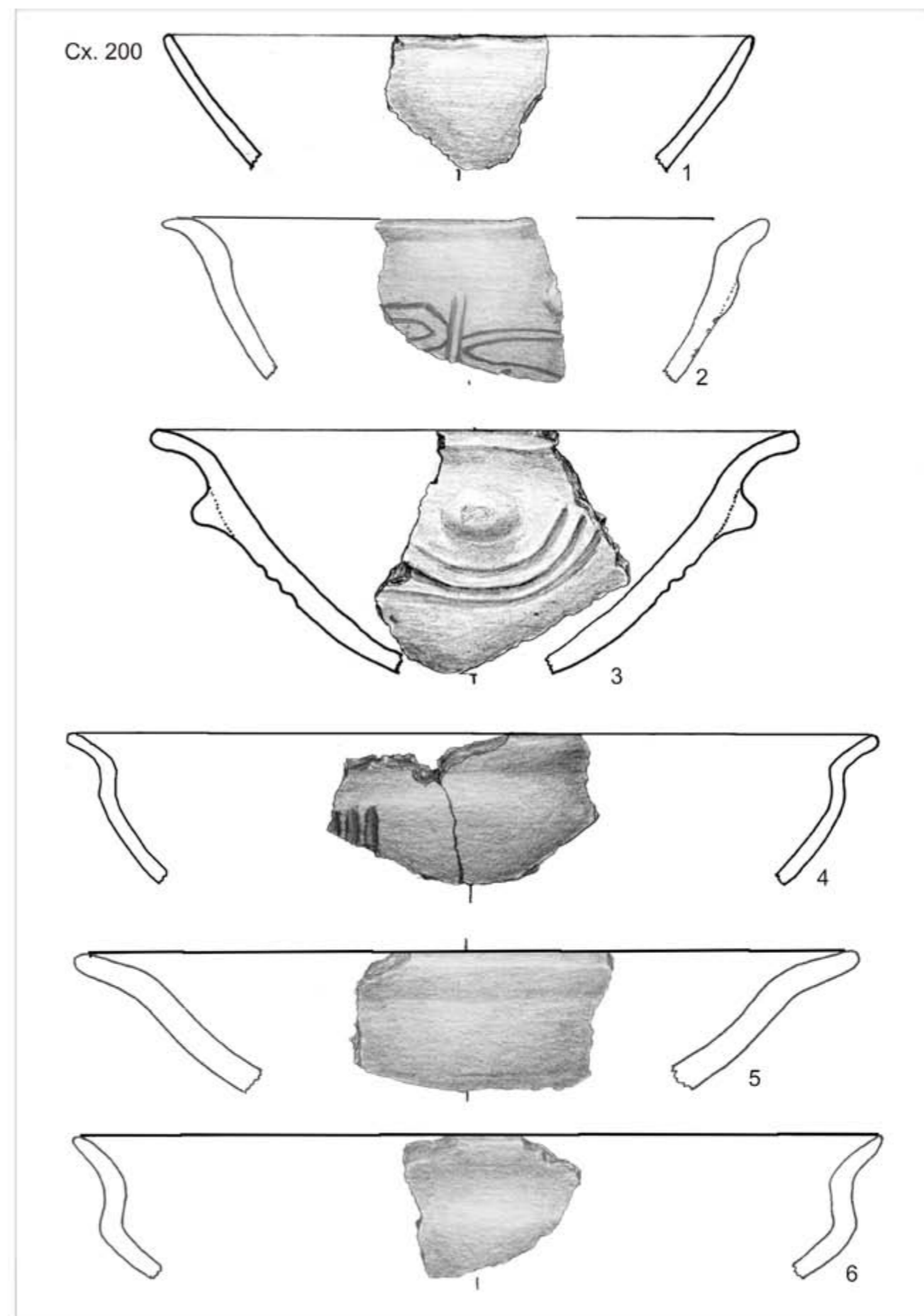


Plate 26. Site 26. Pottery. Scale 1:2.

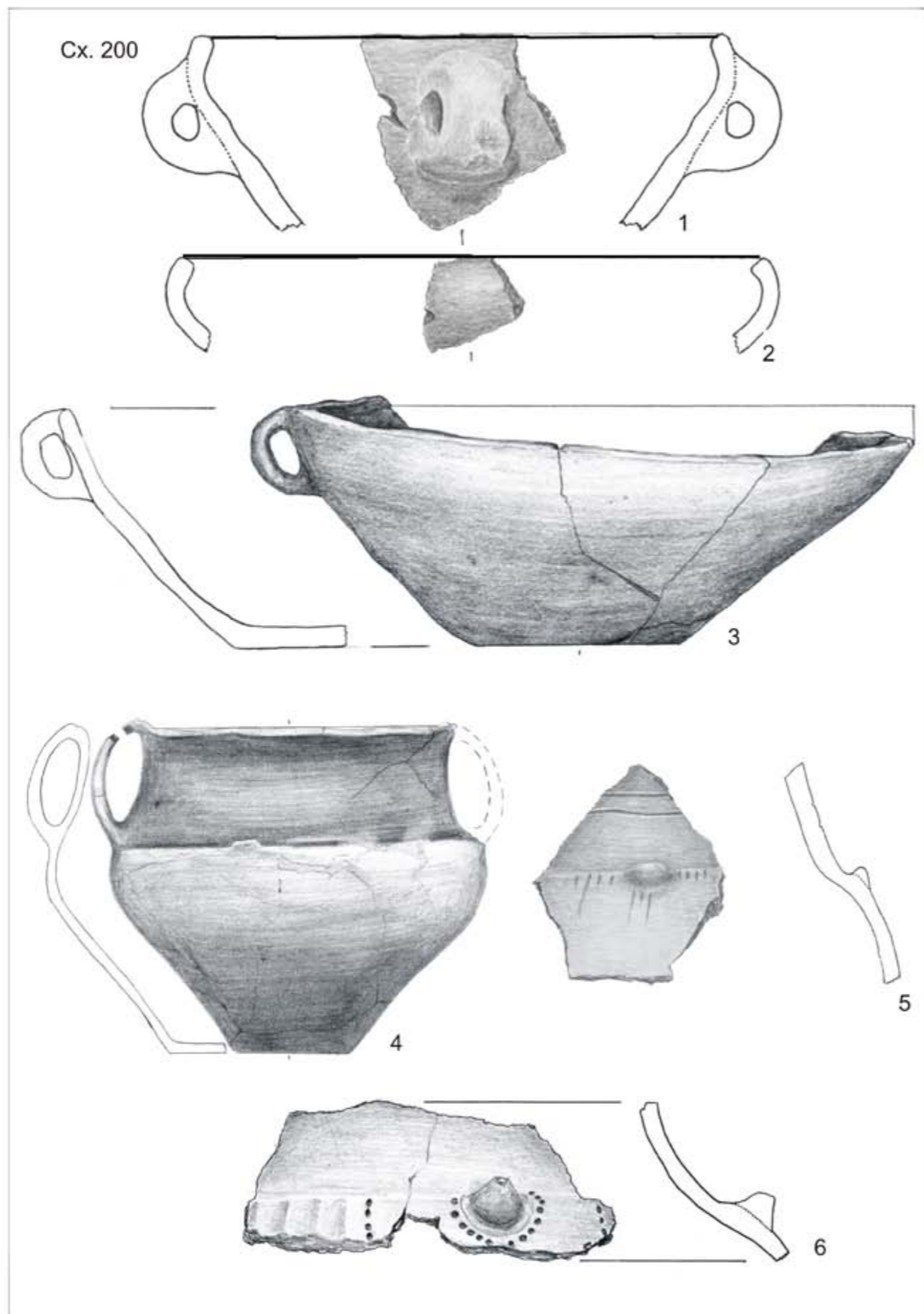


Plate 27. Site 26. Pottery. 1, 2, 5, 6 Scale 1:2; 3, 4 Scale 1:3.

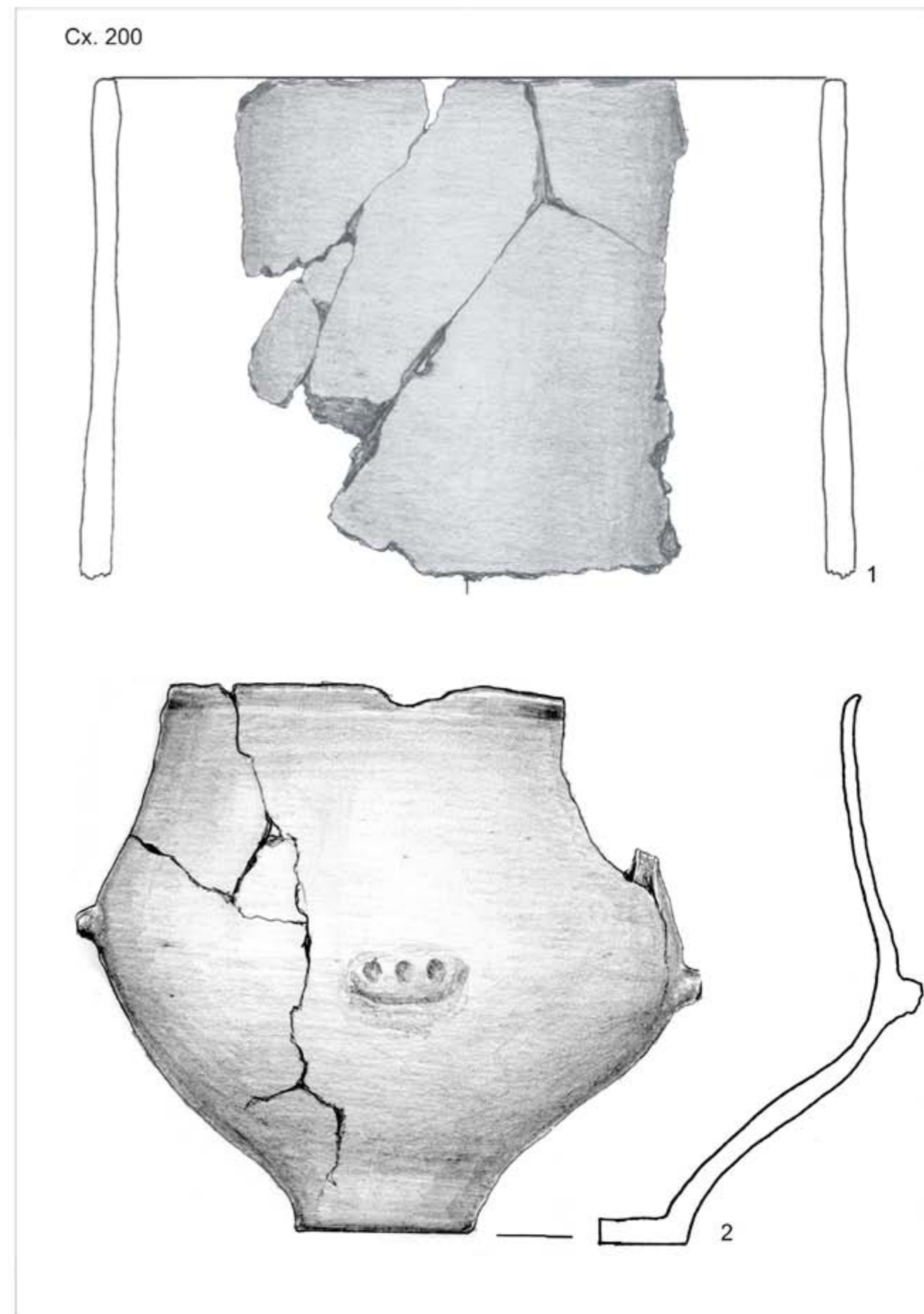


Plate 28. Site 26. Pottery. 1 Scale 1:2; 2 Scale 1:4.

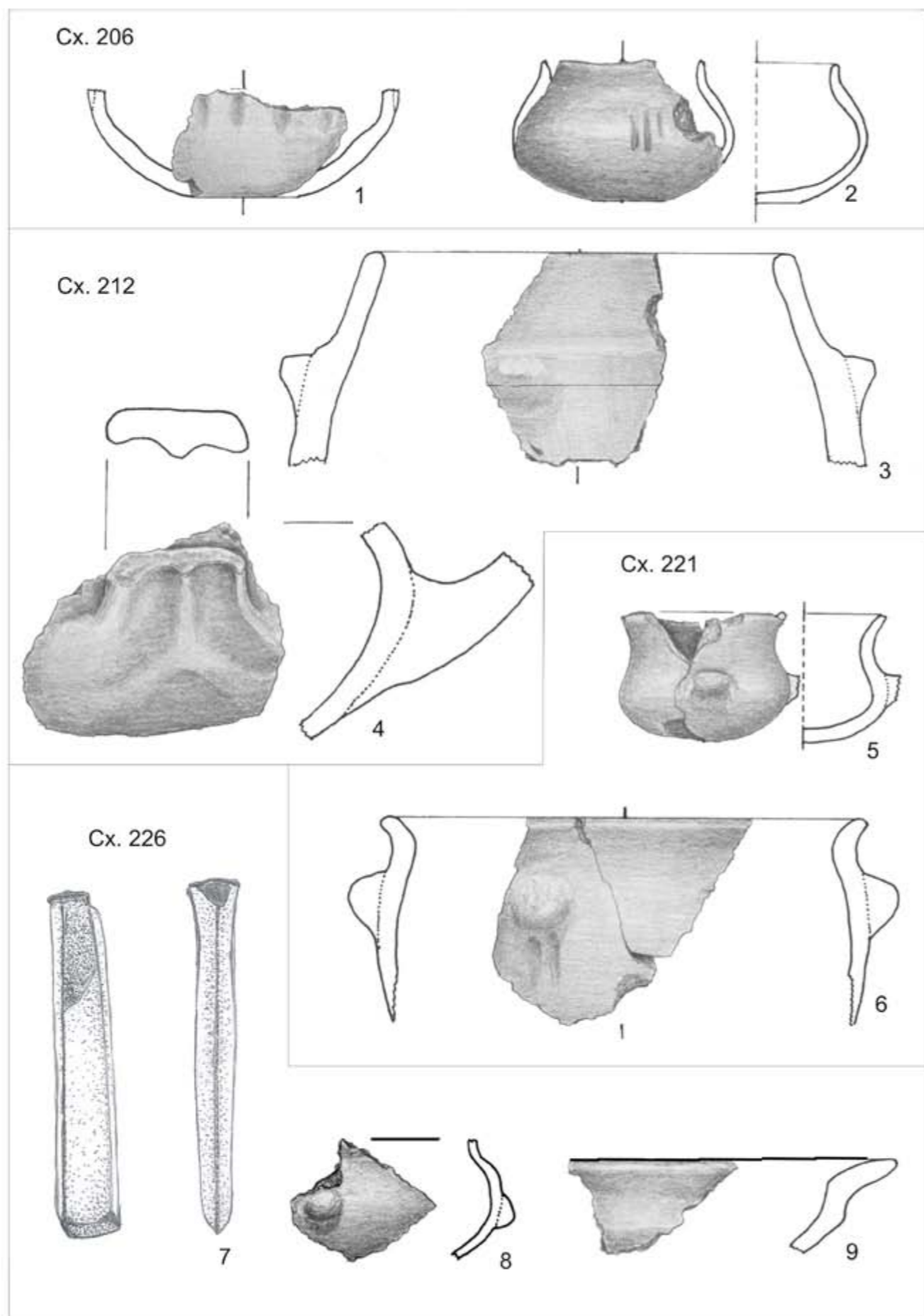


Plate 29. Site 26. 1-6, 8-9 Pottery; 7 Bronze. 1-6, 8-9 Scale 1:2; 7 Scale 1:1.

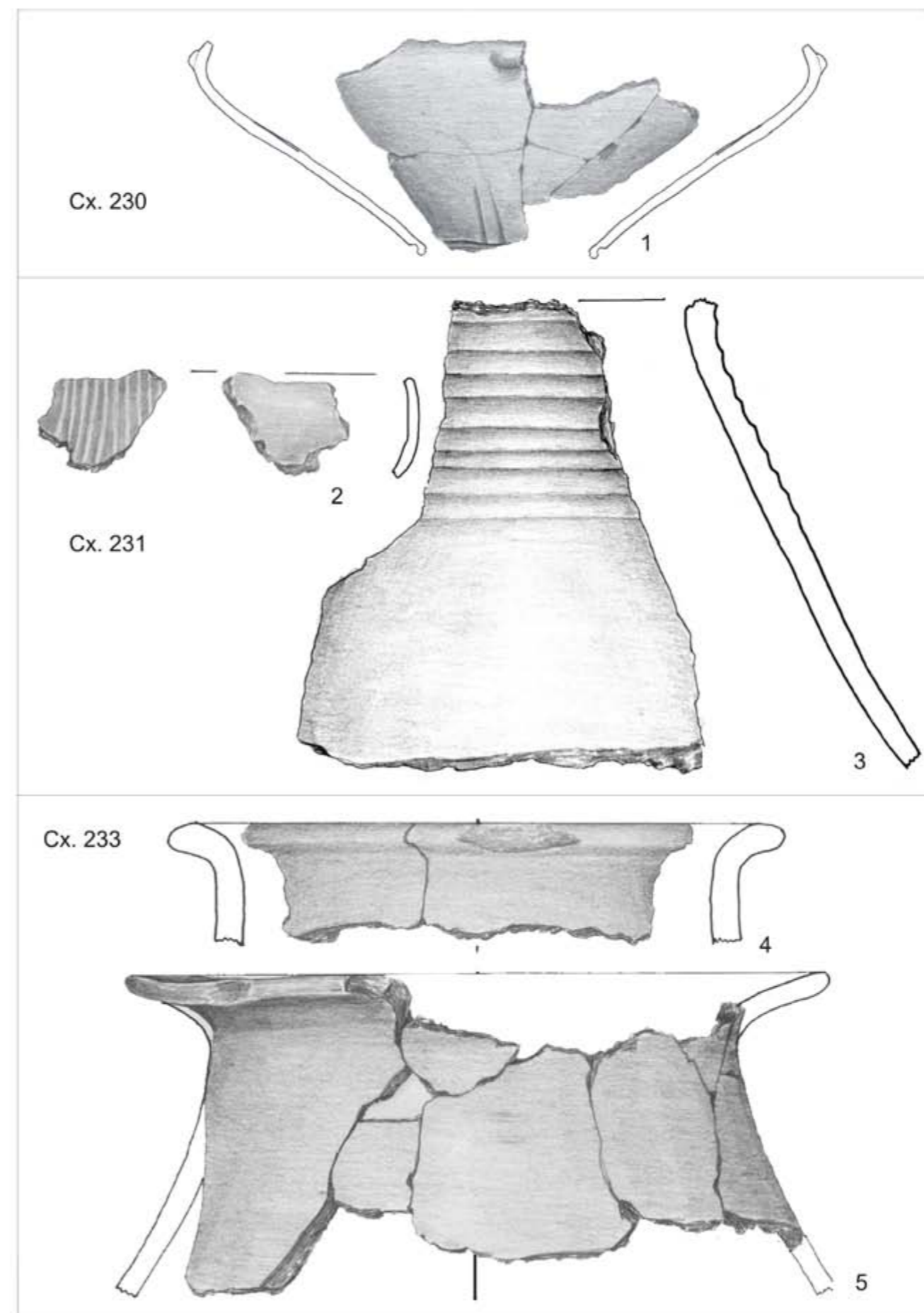


Plate 30. Site 26. Pottery. 1 Scale 1:3; 2-5 Scale 1:2.

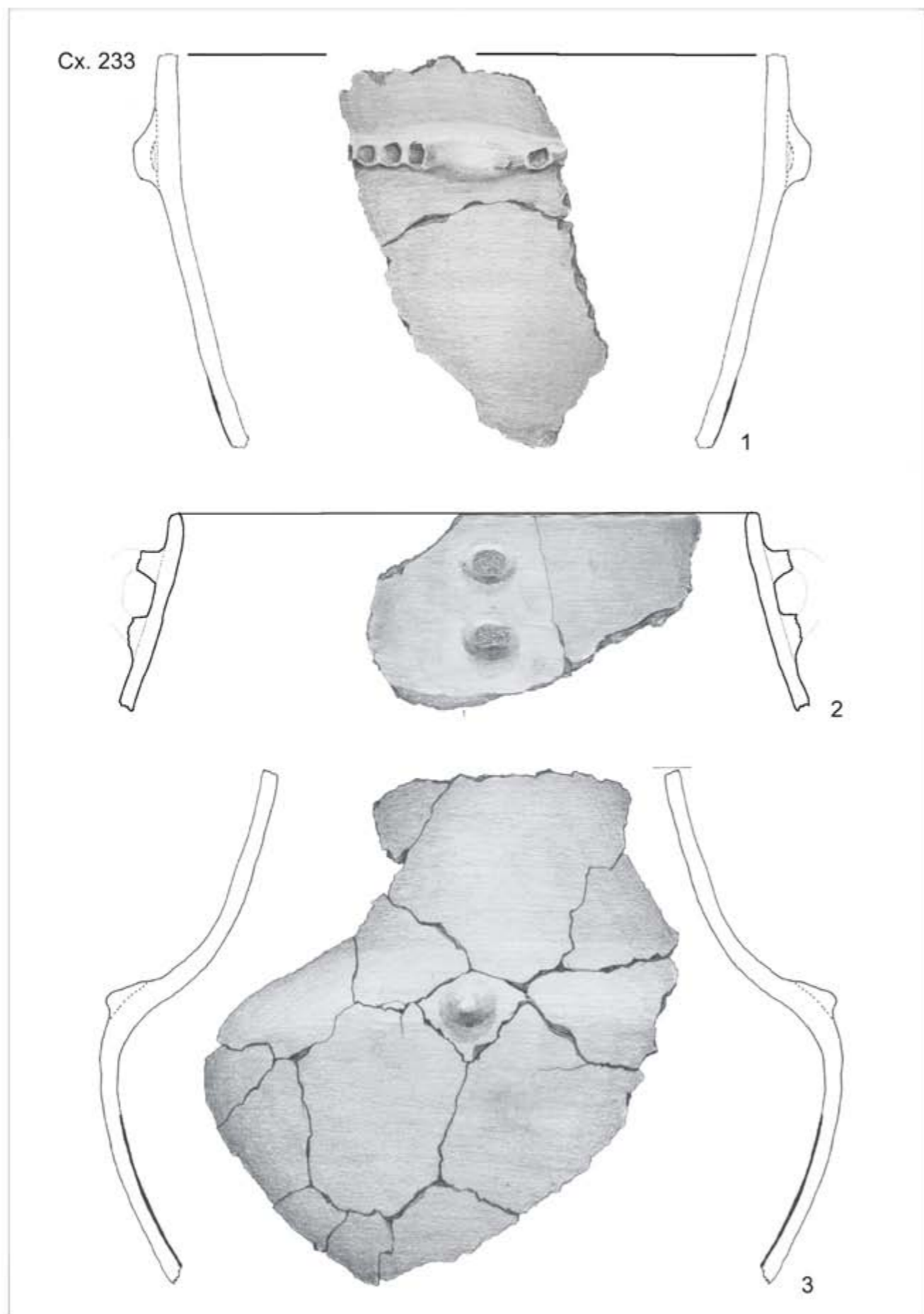


Plate 31. Site 26. Pottery. 1, 3 Scale 1:3; 2 Scale 1:4.

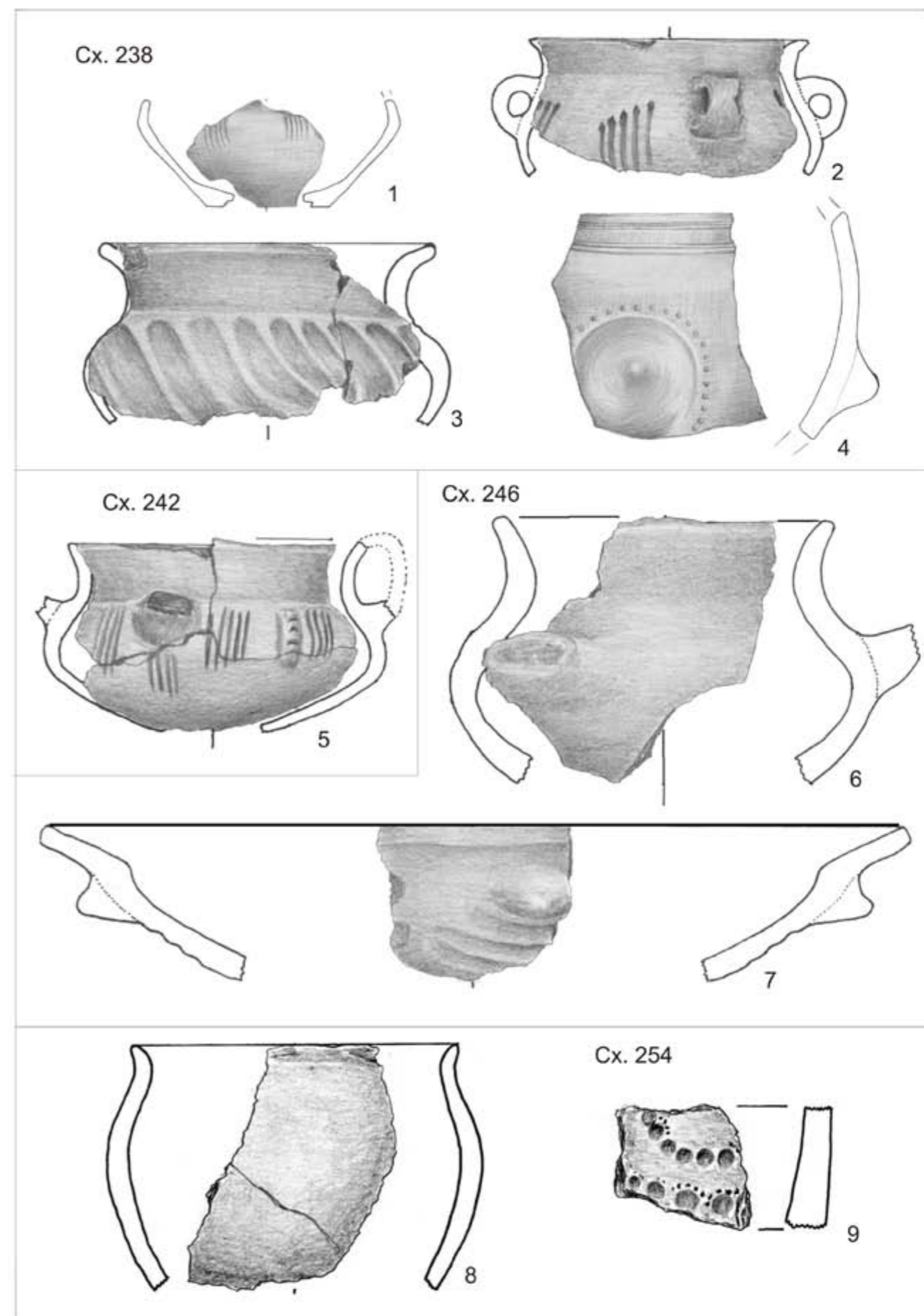


Plate 32. Site 26. Pottery. Scale 1:2.

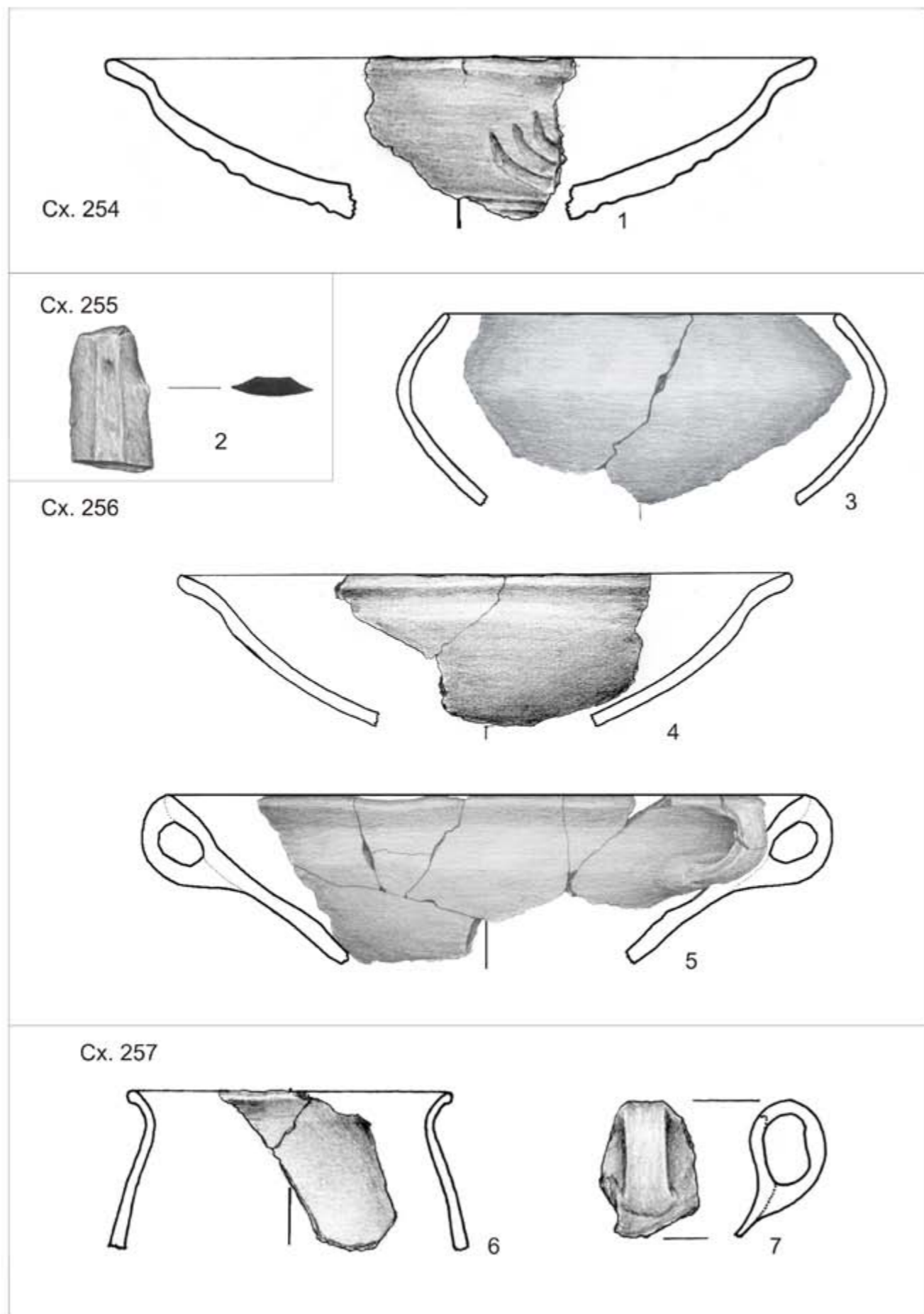


Plate 33. Site 26. 1, 3-7 Pottery; 2 Stone. Scale 1:2.

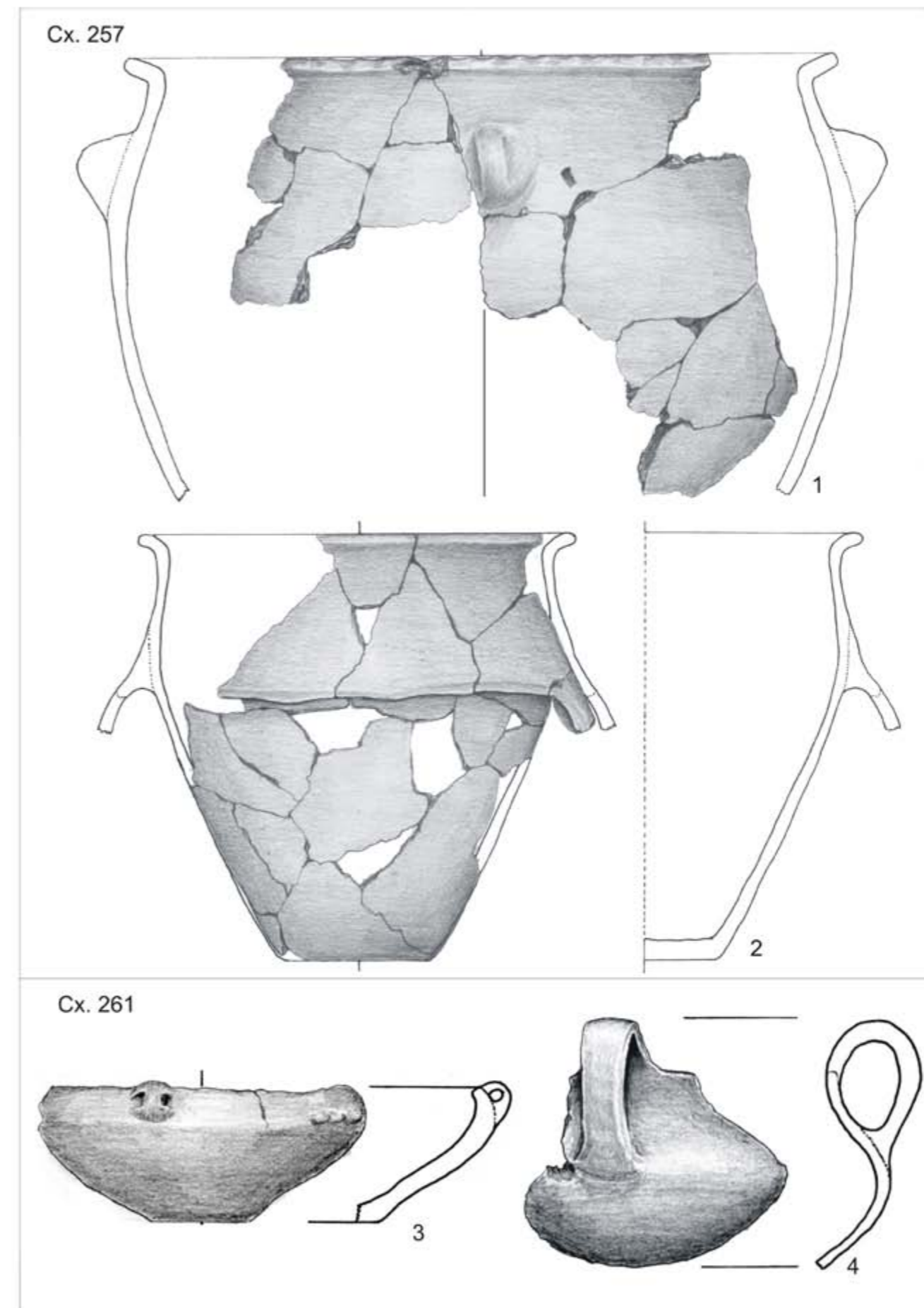
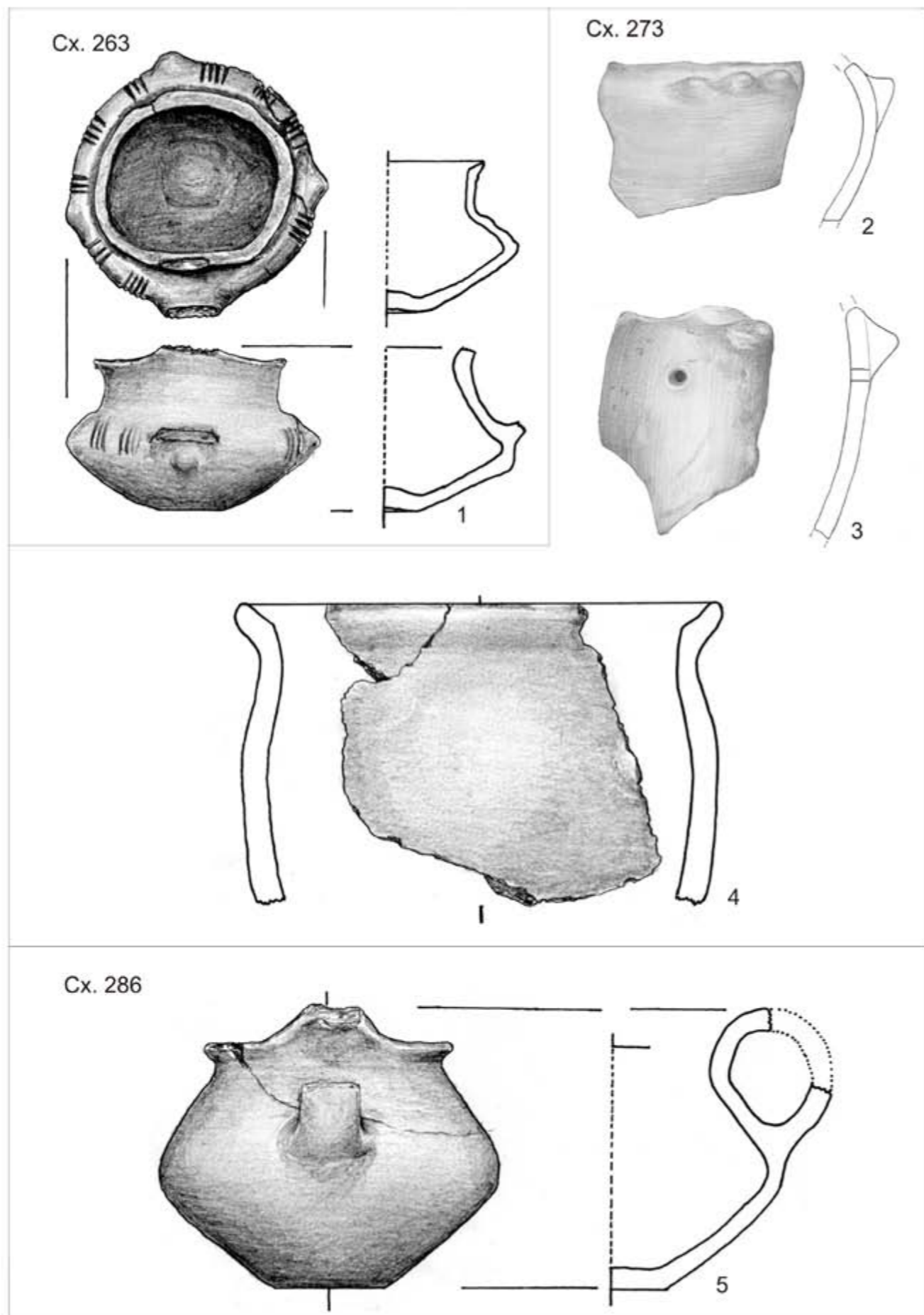


Plate 34. Site 26. Pottery. 1, 2 Scale 1:3; 3, 4 Scale 1:2.



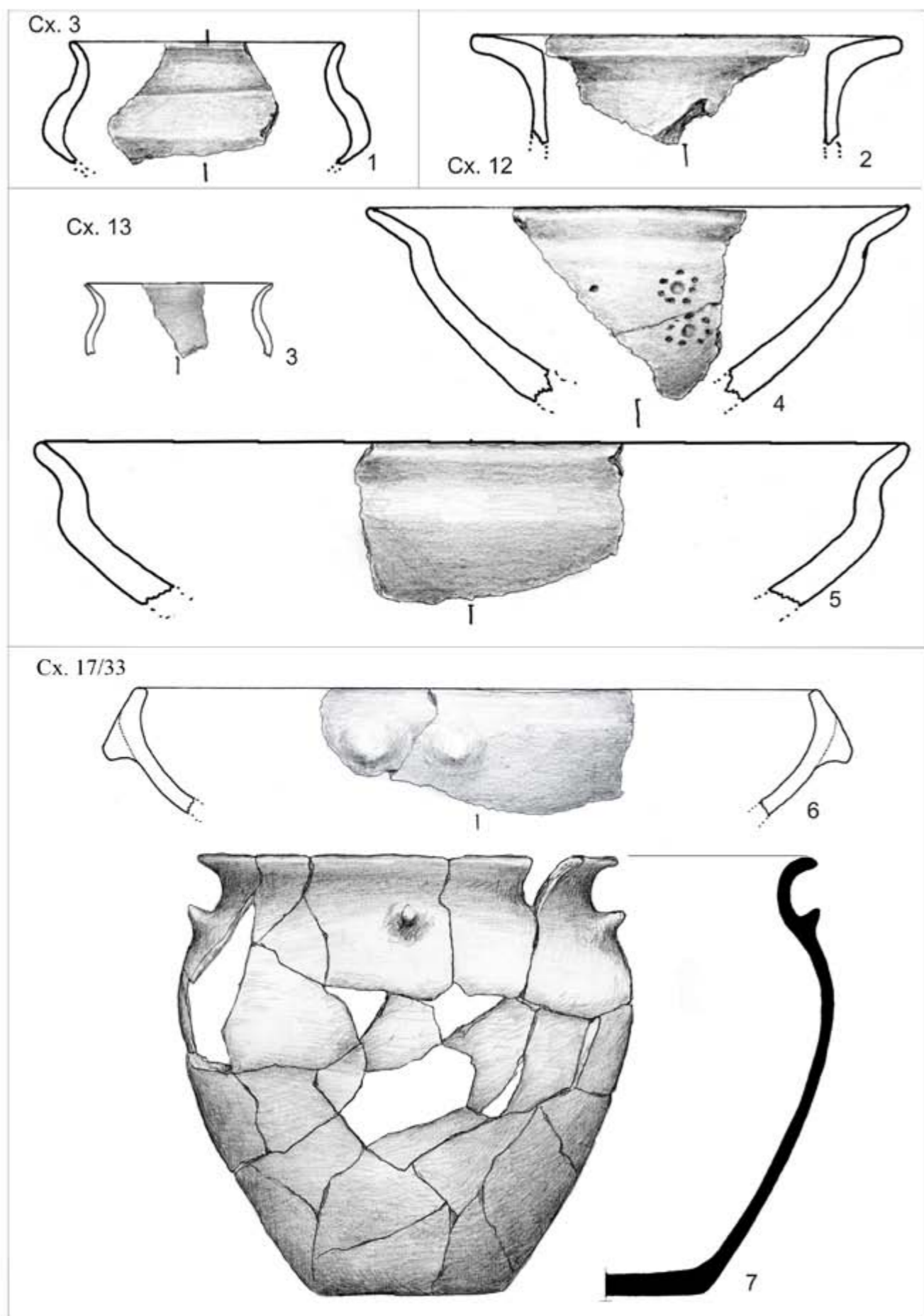


Plate 37. Site 33. Pottery. 1-6 Scale 1:2; 7 Scale 1:3.

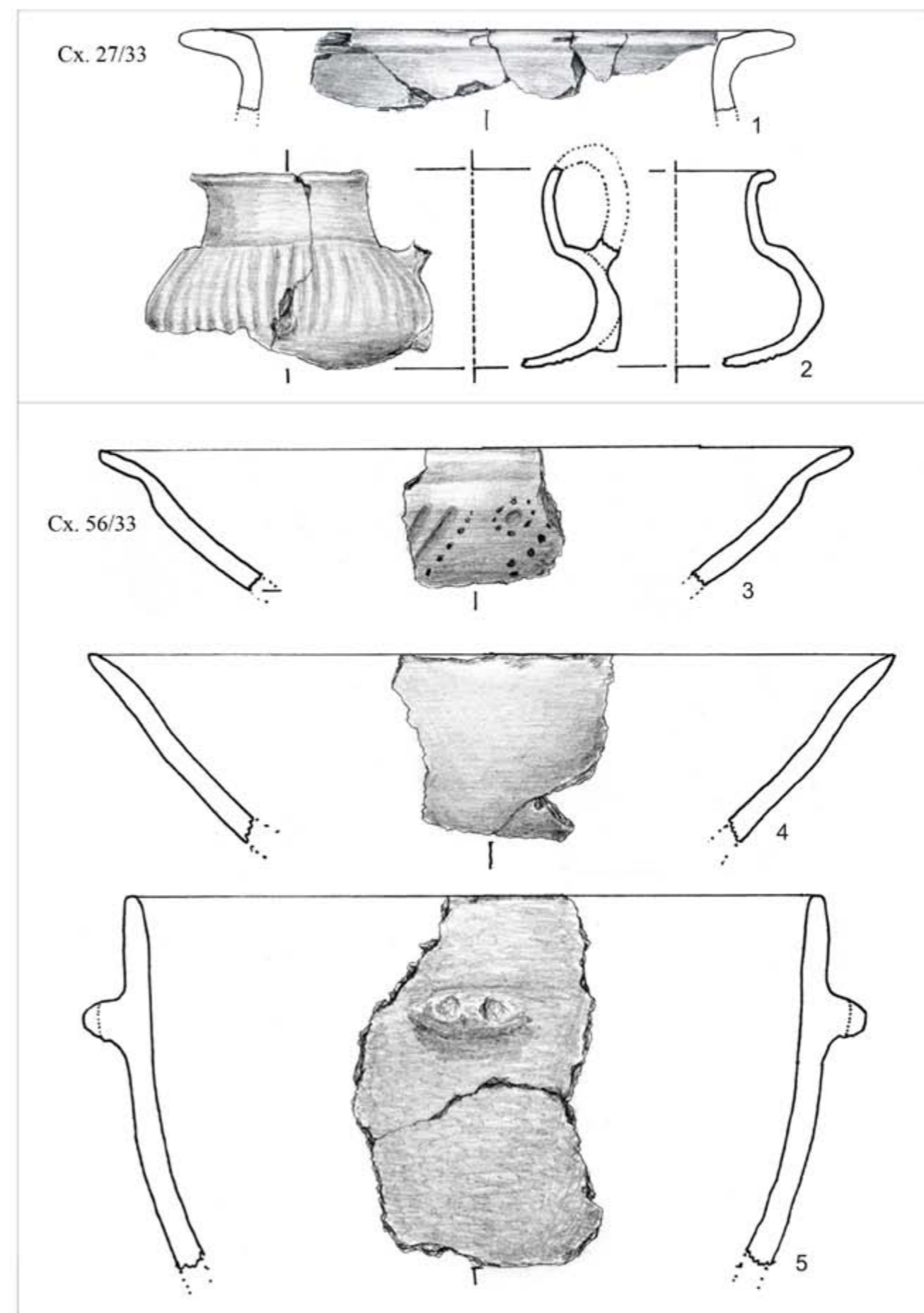


Plate 38. Site 33. Pottery. Scale 1:2.

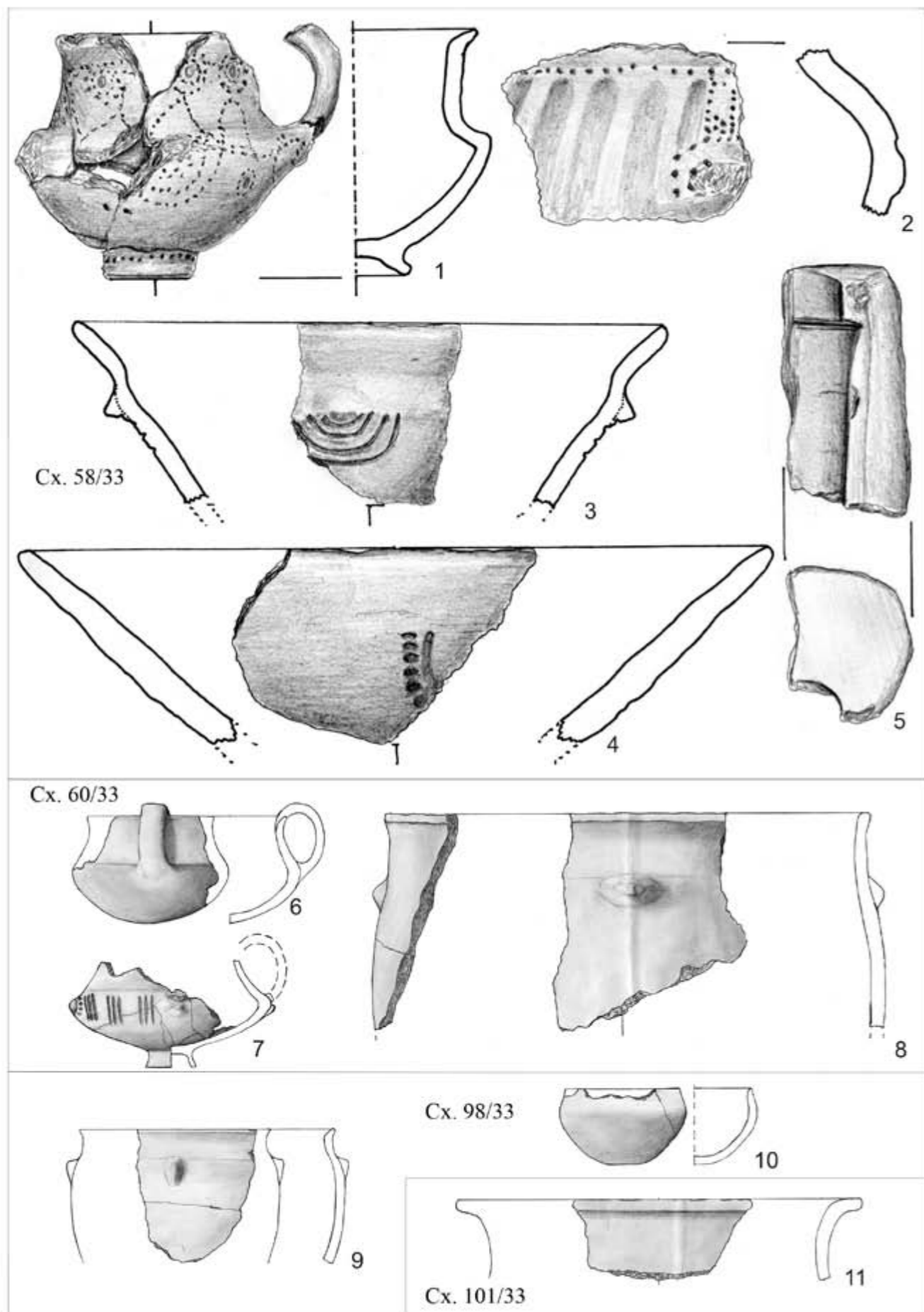


Plate 39. Site 33. 1-4, 6-11 Pottery; 5 Stone. Scale 1:2.



Plate 40.



Plate 41.

