

New research on the Urnfield period of Eastern Slovenia. A case study of Rogoza near Maribor

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Izvleček

Arheološko najdišče Rogoza je bilo odkrito v sklopu gradnje slovenskega avtocestnega križa in je še pred celotno publikacijo postalo domala vzorčni primer pozno-bronastodobne naselbine. Območje je bilo poseljeno tudi v drugih časovnih obdobjih, kar smo ugotovili na podlagi keramičnega gradiva ter delno podkrepili tudi z radiokarbonskimi datacijami. Gre za najdbe iz zgodnje bronaste dobe, starejše in mlajše železne dobe ter antičnega obdobja.

Prispevek obravnava keramične, kovinske in kamnite najdbe iz pozne bronaste dobe ter ob tem vključuje tudi ugotovitve naravoslovnih analiz kovin, kamnitih najdb, kosti in rastlinskih ostankov. Osvetljuje pa tudi razvoj naselbine v Rogozi ter poselitveno sliko širše vzhodne Slovenije v pozni bronasti dobi, ki jo je zadnje desetletje pospešenega arheološkega terenskega dela dodobra spremenilo.

Ključne besede: pozna bronasta doba, vzhodna Slovenija, keramika, kovinske najdbe, metalurgija, naselja, poselitvena slika

Abstract

The construction of the motorway network in Slovenia uncovered an archaeological site at Rogoza, which became a case study for an Urnfield period settlement even before it was fully published. Pottery and radiocarbon dates, to some extent, indicate that the area was inhabited in other periods as well. It yielded finds from the Early Bronze Age, the Early Iron Age, the Late Iron Age and the Roman period.

This paper introduces pottery, metal and stone finds from the Urnfield period and includes results of analyses of metal, stone finds, bones and plant remains. It also presents the development of the settlement at Rogoza and the Urnfield period settlement patterns in eastern Slovenia, knowledge of which has considerably increased during the last decade, marked by intense archaeological fieldwork.

Keywords: Urnfield period, Eastern Slovenia, pottery, metal finds, metallurgy, settlements, settlement patterns

INTRODUCTION

The Rogoza archaeological site was discovered during construction of the Slovene motorway network in 1998 and 1999, with the excavation area comprising c. 600 × 50m (*fig. 1*). This paper discusses the Urnfield period occupation of the area, with finds indicating earlier as well as later activity. The earliest identifiable remains date to the Early Bronze Age and are ascribed to the Kisapostag Culture. After the Urnfield period we can follow a change in the intended use of place, which is indicated by four barrows, dating to the

Early Iron Age. Evidence of later activities is dispersed; they do not belong to closed archaeological contexts and can be dated to the Late Iron Age, Roman and Late Roman periods.¹

¹ The article (which was concluded in 2009) is a part of the author's PhD dissertation titled *Rogoza pri Mariboru in njeno mesto v bronasti in starejši železni dobi Podravja*, which was prepared under the supervision of Prof. Biba Teržan at the Department of Archaeology (Faculty of Arts, University of Ljubljana, 2009). I would also like to thank the director of the excavations, Mira Strmčnik Gulič, who granted access to the material and the documentation of the site and allowed its publication.



Fig. 1: Position of the Rogaža site (© GURS, www.geopedija.si).

Sl. 1: Rogaža. Lega najdišča (© GURS, www.geopedija.si).

GEOGRAPHICAL REVIEW

Rogaža is situated at the extreme north-west of the Dravsko-Ptujsko polje (Drava-Ptuj field), just below the south-eastern slopes of the Pohorje mountains, i.e. at the intersection of two of geographical units, the Pannonian and the Alpine (fig. 1).

The western part the Dravsko-Ptujsko polje represents a basin next to the tectonic edge of the Pohorje and Kozjak mountains, which it then expands into a wide river valley. During the Pleistocene the Drava filled the basin with siliceous gravel, which covers as much as three quarters of the surface. The remaining area is covered with clayey loam alluvia,

deposited above the gravel by the streams draining from the south-eastern Pohorje and Slovenske gorice mountains. Remains of at least three of such watercourses are also visible on the archaeological site in question. One can also notice that the area was subjected to drainage in the form of ditches in the recent past, due to excessive amounts of water.

The occupation of the area was also influenced by soil. Distric rankers and distric brown soil with different thickness of humus covered noncarbonated gravel and sand over a large area of the Dravsko-Ptujsko polje. They are both good quality soils for growing cultigens.²

² Lovrenčak 1998, 179–181.

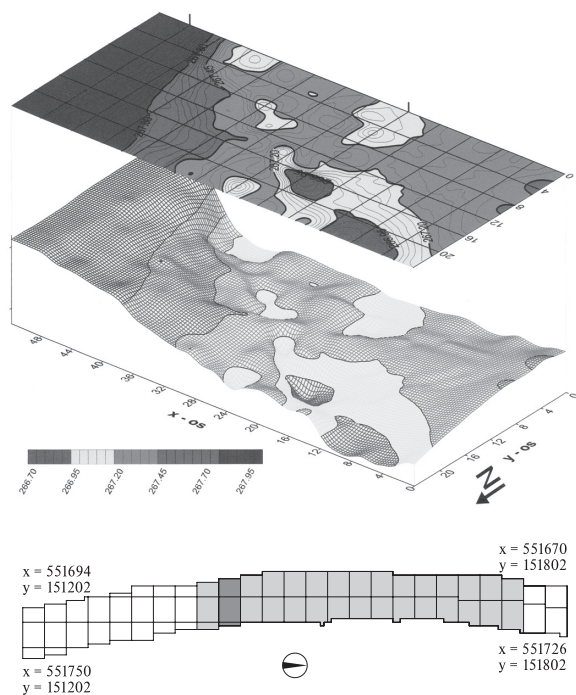


Fig. 2: Rogoza. Digital model of the relief for the area where the palaeochannel turns towards the south-east (according to Novšak et al. 1999).

Sl. 2: Rogoza. DMR – digitalni model reliefa geološke podlage na območju, kjer je nekdanji vodotok zavil proti jugovzhodu (po Novšak et al. 1999).

The southern part of the site remained unoccupied and the negative archaeological structures are present mainly in its central part, which is also clearly visible on the plan of the settlement (*inserts 2, 3*). Why is this so? The answer is evident when we look at the data on stratigraphic layers from the southern, central and northern parts of the site.

The southern sectors include relatively late alluvia with a vague chronological sequence, because the layers have been disturbed, which is a proof of frequent floods in the area. We can partly follow a similar sequence on the far northern part of the site. However, the fluvial activity is less extensive here and it occurred even later. The central part of the settlement is slightly raised, with its geological base, i.e. the Pleistocene Drava gravel, rising to a greater height, being located immediately below the modern ploughsoil in some places.

Sectors where the watercourse turns towards the south-east, close to the edge of the terrace, are most important in understanding the activities; the stream channel is not visible towards the South (*fig. 2; inserts 2, 3*). The terrace rose over 0.80m towards the north-east and the settlement area,

located towards the east, was therefore located above the floodplain. Watercourses gradually deposited different alluvia at the foot of the terrace prior to formation of the documented stream channel. Changes in the intensity of hydrological regime are seen in the different granulation of the alluvia. A breakthrough occurred in this period, i.e. the moment when the stream channel was formed.

Similar processes continued, because the alluvia were still under deposition in the areas in a southerly direction. Moreover, the stream often meandered on this area, because of softer layers and, consequently, its channel was not identified here.

The central place, with its gravel subsoil, offered conditions that were suitable for occupation and people repeatedly utilized it. Other layers, also of an alluvial origin, were documented as covering the terrace in some places. Postholes, storage pits and other settlement structures of unknown purpose were cut into them.

CLASSIFICATION OF THE DISCOVERED MATERIAL

A wide selection of archaeological finds that was the object of post-excavation analysis comprised more than 70,000 pieces of pottery, almost 3000 pieces of burnt clay daub and several thousand other finds.

The corpus was reduced to 1335 pieces after a selection of finds suitable for further analysis was made; 1150 fragments of pottery were ascribed to the Urnfield period. Fifteen metal finds that were discovered in the settlement, including finished and part-finished products, probably lost metal and slag, are most probably contemporary. The identification of stone finds is harder, because they were often found with no reliable contexts and are chronologically hard to determine if we observe only their form. However, they become more significant once we determine how they were made and utilised. In addition, analyses of animal bones and other organic remains also contributed to the integrity of the research.

Only a selection of objects is presented in plates at the end of this article, i.e. objects that are diagnostic for the dating of individual Urnfield period structures, while the technological and typological analyses, which encompass the entire pottery assemblage from the site, are published elsewhere.³

³ Črešnar 2011.

The finds in the mentioned publication are listed according to certain codes (from G1 to G1335) and therefore a table, which eases correlation of both publications, is added at the end of the paper (*insert 1*). Each find presented here, in Figure or Plate, has a code ascribed to it, which was given to it in the catalogue of the primary publication.

Granularity / zrnavost	
very fine / zelo fina	0 - 0.25 mm
fine / fina	0.25 - 0.50 mm
medium / drobna	0.50 - 2.00 mm
coarse / groba	2.00 - 3.00 mm
very coarse / zelo groba	over / nad 3.01 mm
Surface treatment / obdelava površine	
perfunctory sponging / površno brisanje	rough features are visible / vidne grobe poteze obdelave
sponging / brisanje	fine features are visible / vidne fine poteze obdelave
smoothing / glajenje	features of treatment are not visible / poteze obdelave so nezaznavne
burnishing / poliranje	the surface is shiny / površina sij
Hardness / trdota	
soft / mehko	1., 2. after Mohs / po Mohsu
hard / trdo	3., 4. after Mohs / po Mohsu
very hard / zelo trdo	5., 6. after Mohs / po Mohsu
extraordinarily hard / izredno trdo	7., 8. after Mohs / po Mohsu

Fig. 3: Parameters used when analysing technological characteristics of the pottery.

Sl. 3: Parametri, uporabljeni pri določanju značilnosti keramike.

CERAMIC FINDS

Characteristics and making of pottery

Here we present results of the technological analysis of 1150 ceramic objects, the majority of them belonging to vessels and a small amount to other functional objects.

We determined granularity of fabric, surface treatment, firing technique and hardness for each piece of pottery (*fig. 3*).⁴

⁴ Thirteen percent (13%) of the analysed pottery sherds were damaged to such an extent that some of the observed parameters could not be determined. Probable reasons for this could be the influence of secondary fire, water activity, moist environment and other post-depository factors.

Pottery production

The largest percentage among granularity classes is presented at c. 39% by fine-grained and medium-grained fabrics. Both occur among all typological groups of vessels, from pots to dishes and even cups. Very fine fabric is characteristic for the latter and is also present in other vessels. Some 11% of the analysed pottery was produced in such a fabric and approximately the same percentage of vessels is coarse-grained. Very coarse-grained fabric is very rare and it mainly occurs in sherds of large oval pots.

Mica and quartz prevail among inclusions that were recognized in the fabric on a macroscopic level. They were included in nearly all sherds, only the size of grains and their incidence differ from one fragment to another. Their presence is not unexpected, because this is an area located on Pleistocene siliceous gravel alluvial deposits of the Drava River, which are covered by clayey loam deposits from the Pohorje. A smaller or larger amount of inclusions could be natural to the fabric, although some fragments with exceptionally increased concentration of mostly mica and with sharp-edged inclusions make us suspect quite the opposite. Intentional adding of tempera that raise resistance to temperature changes is undoubtedly proved by crushed pottery. However, they are exceptionally rare. We also noticed natural clay pellets and particles of unburnt organic substances, which were natural inclusions or were added deliberately into the fabric. The presence of the latter can indicate incomplete firing.

All pottery was hand-thrown. All but one miniature vessel, that was most probably formed by pinching, were made with coiling (using round or flattened coils), which is clearly visible on some perfunctory sponged vessels that are exceptionally rare. Many more, some 33%, were well-sponged, which means that the surfaces of pre-fired or not completely dry vessels were rubbed but partly stayed uneven and coarse. In contrast, smoothing makes the surface even and with almost no irregularities; 60% of the pottery was treated in this manner. We have to add that smoothed surfaces are substantially differentiated from one another; the smoothing of many cups and dishes strongly resembles burnishing. The latter was only determined in a handful of objects, where the surface was burnished to a high gloss; the surface of the object was partly dried in order to achieve this.

Some vessels exhibit different treatment of exteriors and interiors. This does not occur often and was mainly noticed on high vessels with inverted rims, where the interior was hard to reach and was not visible, so it did not affect the appearance of the product.

Slightly more than half of all analysed pottery was fired under oxidising conditions. The process was not completed in almost half of these vessels. Some 14% of products were fired under reducing conditions, and a further 24% under reducing conditions with oxidising conditions used at the end of the firing process. Some three percent show incomplete or complete oxidation with reducing phase at the end of the process or uncontrolled firing.

The hardness of pottery is also relevant. Analysis determined 57% of objects as very hard, some 24% as extraordinarily hard, 18% as hard, and an almost negligible number of vessels as soft.

Based on the above, we can present somewhat different results to those introduced by the author some years ago, after the analysis of material from the Ruše II urnfield. There is more than one reason for this; we can firstly mention the different character of vessels; urnfields generally contain specially chosen pottery with only a few fragments of storage pots, which are the most common type of pottery in settlements. Secondly, the terrain itself is important; Ruše does not lie on marshy ground and the area was not subjected to such extensive and intense agricultural destruction as at Rogoza.⁵

Determination of colour is more problematic. Two questions arise here: how accurate do we need to be at this point to be able to guarantee comparisons of results that are, in spite of standardized use of the Munsell Soil Colour Charts, often questionable, and is there any sense in this sometimes excessive accuracy. Namely, sherds of the same vessel, discovered in the same stratigraphic unit, sometimes appear of a totally different colour.

When a great variation in colour of the interior as opposed to the exterior of the vessels was determined, both colours were assigned to the vessel. The same principle was followed with regard to uneven coloured surfaces that were noticed on some 10% of pottery.

Almost half of the objects with evenly coloured surfaces are brown, followed by red (21%), yellow (19%) and grey (12%). Brown tones prevail also on the external surfaces of multi-coloured objects,

while internal surfaces are mainly darker and grey. Moreover, the percentage of brightest yellow and red tones is perceptibly reduced.

Many reasons for differently coloured surfaces exist and the final appearance of pottery is probably a sum of all of them. One of the reasons is a difference in air inflow to external and internal surfaces of pottery during firing, which is dependent upon the type of kiln used, distribution of fuel and the position of vessels during the firing process. The second reason is how the vessel was used, whether it was exposed to an open fire, used to serve food etc. Last but not least are processes that influenced the pottery after its disuse and deposition. The objects studied here were deposited in a high moisture environment and were subjected to physical and chemical impacts of intense agriculture. Some types of vessels characteristically bear handles and lugs, which were often attached in two different manners. The first and most common is a technique using an indentation and a plug, where the body of pottery is perforated and the plug, formed on internal side of a lug or a handle, is fitted into the perforation. The area surrounding the indentation can be embossed, which allows for a better grip. The second technique did not use perforation for easier attachment of the lugs/handles. Absence of any trace of surface treatment of some vessels indicates that the surfaces were not preliminarily additionally treated.

Pottery decoration

The major characteristic of pottery, introduced here only from technological and statistical point of view, is its decoration. Among 1150 studied objects, 414 or 36% were decorated. They carry different types of decoration, which were executed on raw, unfired surfaces. Different applied decorations are the most widespread, with ornamented ribs strongly prevailing, while extrusions and smooth ribs are less common. They represent as much as 36% of all decorations. They are followed by channelled decoration at over 20%, mostly as bands of oblique lines. All impressed and punched decoration techniques make a total of 15.5% and are more common than facets at 11% and incisions at 9%. Decoration with grooves is, at 3%, the least frequent among individual decorations.

Let us also mention combinations of different ornaments that were documented on some 6% of

⁵ Črešnar 2006, 108–116.



Fig. 4: Types of ornamentation, motifs and location.
Sl. 4: Načini krašenja posod, motivi in mesta okrasa.

the decorated objects. Incisions occur in combinations with different types of prints of tools, while grooves, channelled decoration and facets usually occur independently. Fingertip impressions and impressions of sharp or blunt tools occur independently⁶ or in the already mentioned combinations. Fingertip impressions besides this only occur on plastic ribs. The latter can be undecorated, as with extrusions and other hand-formed appliqués, but these are exceptionally rare.

The mentioned decorative techniques were used in a selection of motifs; they also differ from one another according to their locations on the vessels. Incisions (*fig. 4: 1–16*) most often occur as horizontal lines, either single (*fig. 4: 1*), double (*fig. 4: 2*) or arranged in bands (*fig. 4: 3*). They are located on the shoulder, shoulder-to-neck transition and exceptionally also in the interior of the rim of a dish (*fig. 4: 4*); their position is indefinable on many body fragments. It is interesting that a single line appears only on the shoulder-to-neck transition, which is visually emphasised as a result, while sequences of horizontal lines are mainly present elsewhere. Oblique straight lines appear as independent decoration only once, as a set of parallel straight lines on a body fragment of a smaller vessel (*fig. 4: 5*). Single or double zigzag lines are rare (*fig. 4: 6*).

Combined motifs are formed by horizontal and oblique incisions (*fig. 4: 8*) or hatched triangles (*fig. 4: 7*), horizontal and zigzag lines (*fig. 4: 10, 11*). An interesting motif is a circular band of bunches of alternating incisions, found on the interior of the base of a vessel (*fig. 4: 12*).

Complex motifs consist of combinations of incisions and wheel-stamped impressions (*fig. 4: 13*) or impressions of dots (*fig. 4: 14, 15*); as an exceptional motif we have to emphasise the so-called triangle with two pennants on the top, which is represented only once (*fig. 4: 16*).

Grooved horizontal lines mostly occur independently (*fig. 4: 17*) or as a band (*fig. 4: 18*). They are always located on the shoulder-to-neck transition. A band, encircling a vessel, can also appear as a vertical (*fig. 4: 19*) or oblique (*fig. 4: 20*) straight line. Both are present on shoulders and upper parts of lower bodies, while the latter also covers the rim of one dish (*fig. 4: 21*).

Combined motifs consist of bands of horizontal and bunches of vertical lines (*fig. 4: 22*), bunches of

oblique lines, running in opposite directions (*fig. 4: 23*); the latter also occur in combination with horizontal lines (*fig. 4: 24*). These mostly appear on the shoulder, although they also extend down the body, while another example carries decoration on the neck.

Channelled decoration (*fig. 4: 25–39*) appears as single (*fig. 4: 25, 26*) or double horizontal lines (*fig. 4: 27, 28*). These mostly occur on the shoulder-to-neck transition and rarely below or on the rim. Rare examples of several channels occur on shoulders (*fig. 4: 29*), necks (*fig. 4: 30*) or rim interior (*fig. 4: 31*). Vertical channelled decoration is often present only on lugs and handles, once on a rim (*fig. 4: 32*) and once on a rim-to-neck transition (*fig. 4: 33*). Oblique channelled decoration is the most common, forming bands of differently dense lines on shoulders of tall vessels (*fig. 4: 34*) and they are even more common on rims of dishes with inverted rims (*fig. 4: 35*). Somewhat unusual motifs are those of undulating channelled decoration on the rim of a dish (*fig. 4: 36*) and two curved channels, which are also present on a dish (*fig. 4: 37*).

Only one type of complex ornaments with channelled decoration is present, where they occur together with extrusions that can be encircled by them (*fig. 4: 38*), or include extrusions into a channelled decoration without any changes to the known concept (*fig. 4: 39*).

Facets (*fig. 4: 40–43*) always occur independently. Even if some other type of decoration covers the same vessel, these are probably not combinations. This decoration is most often present on internal edges of the rims of tall vessels and probably has a functional meaning. The number of facets varies (*fig. 4: 40, 41*). Moreover, facets, similarly to channelled decoration, also decorate shoulders (*fig. 4: 42*) and rim exteriors of different dishes with everted rims (*fig. 4: 43*).

Applied decoration is the most common type of decoration (*fig. 4: 44–65*). Tiny circles are the smallest decoration of that kind. They only occur once and form a horizontal line (*fig. 4: 44*). Extrusions are more frequent; they can be conical (*fig. 4: 45*), rounded (*fig. 4: 46*) or pyramidal (*fig. 4: 47*). Two conical (*fig. 4: 48*) or pyramidal (*fig. 4: 49*) extrusions can form a lug with two horn-like projections. The lug with three horn-like projections is similarly formed (*fig. 4: 50*) and both indicate a functional nature of extrusions. Smooth plastic ribs can be horizontal (*fig. 4: 51*), curved with no apparent shape (*fig. 4: 52, 53*) or they can form different geometrical forms (*fig. 4: 54, 55*).

⁶ The expression *tool* stands for an instrument which causes different forms of impressions.

Central Europe / Srednja Evropa (Müller-Karpe)		Terms used in this article / termini, uporabljeni v tem članku	
Bd C1	Mittlere Hügelgräberzeit	Late Middle Bronze Age	pozna srednja bronasta doba
BD C2	Jüngere Hügelgräberzeit		
Bd D	Späte Hügelgräberzeit / Frühe Urnenfelderzeit	Initial Urnfield period	zgodnje žarnogrobiščno obdobje
HaA1	Ältere Urnenfelderzeit	Early Urnfield period	starejše žarnogrobiščno obdobje
Ha A2			
Ha B1/2	Jüngere Urnenfelderzeit	Late Urnfield period	młajše žarnogrobiščno obdobje
Ha B3	Späte Urnenfelderzeit	Final Urnfield period	pozno žarnogrobiščno obdobje

Fig. 5: Chronological table used in the article.

Sl. 5: Kronološka tabela, uporabljena v članku.

Decorated cordons are numerous and with a wide selection of impressions, but almost uniform in shape and are most characteristic for large oval storage pots. They can be attached to different areas, most often to upper parts of vessels, on and above the maximum girth, where they supplement the function of lugs. They are also present on fragments of portable oven lids. Only a few variants of oblique (*fig. 4: 63*), curved (*fig. 4: 64*) or double cordons (*fig. 4: 65*) are known. We recognized not only several variants of fingertip impressions, which are a characteristic feature of ornamented ribs (*fig. 4: 56–59*), but also impressions made on each side of the rib (*fig. 4: 60,63*) and impressions made with tools (*fig. 4: 61,62*).

Fingertip impressions, which are so common in combination with applied cordons, are a typical type of decoration also among simple decorations (*fig. 4: 60–73*). They are very similar to each other, and all but one (*fig. 4: 72*) occur solely in a single line. They were used on many different types of vessels, from dishes with inverted (*fig. 4: 66*) and everted rims (*fig. 4: 67,68*) to large storage pots (*fig. 4: 69,70*). They are most often present on rims, exceptionally also on bodies of vessels (*fig. 4: 71,72*), usually just above the base (*fig. 4: 73*).

A smaller number of more varied impressions were made with different tools that are not easy to identify. Different sizes of dots appear that, apart from the previously mentioned combinations with incisions, occur also independently. Single (*fig. 4: 74,75*) and double (*fig. 4: 76*) lines and undeterminable samples (*fig. 4: 77*) are present. A single spindlewhorl was decorated with small circles that were made by impressions of a hollow object with a circular cross-section (*fig. 4: 78*). Wheel-stamped impressions with characteristic swagging decora-

tion (*fig. 4: 79*) and hanging triangles (*fig. 4: 80*) below the horizontal lines also occur. To conclude, let us list the impressions executed with a sharp tool, running in different directions as single (*fig. 4: 81*) and double lines (*fig. 4: 82,83*). The latter still contain encrustation.

In conclusion, mention should also be made of some interesting data that are not directly connected with the techniques of pottery production, but with their maintenance. Namely, some pottery fragments were covered with a layer of resin.⁷ It covered several larger holes that were a result of vessel damage and permitted further use of these vessels. Moreover, some isolated finds dating to the Urnfield and the Early Hallstatt periods show evidence of patching. Two techniques were used. Apart from the one already mentioned, also seen on a footed dish from barrow 2 at Rogoza, it is possible to notice another technique. This appears to be used when another type of damage occurred, i.e. cracking. A cup and two pitchers from the Ruše I urnfield had a small hole drilled on each side of the crack. Cords were most probably threaded through them and consequently strengthened the damaged body of the vessel.⁸

POTTERY TYPOLOGY AND CHRONOLOGY (Figs. 5–23)

Pottery finds were categorised as pottery vessels and other ceramic objects; they are marked with

⁷ That is the object G1153 (Črešnar 2011). Information about the type of the coat was provided by A. Žibrat Gašparič, who determined the substance.

⁸ Müller-Karpe 1959, T. 111: G1; 112: K; 114: D3.

abbreviations.⁹ Vessels were classified as dishes (S), bowls (Sk), cups (Skd), tray, pitcher, amphorae (A), pots (L), portable oven lids (P) and strainers. In addition, we studied sherds that we connected with forms of pottery to which they most probably belong. The category “other ceramic objects” comprises functional objects. All objects, if a significant difference in morphology of a certain part was noticed, were categorised according to types (1-x) and variants (a-x).

Ceramic vessels

Dishes (S) – figs. 6–8.

Dishes with everted rims (So) – fig. 6

Type So1 (fig. 6)

Rounded dishes with slightly convex bodies and vertical rims or rims that are leaning outwards. We distinguish four variants, based on morphology.

The first variant (So1a) comprises shallow dishes with rounded rims, which lean outwards (*pl. 7: 1*); the interior of one of these dishes is decorated with uneven horizontal incisions or comb-like decoration.¹⁰

The second variant (So1b) comprises shallow dishes with rims, which lean outwards and are internally obliquely cut (*pl. 3: 5*).¹¹

The third variant (So1c) is a shallow dish with vertical, rounded rim (*fig. 6: G945*).

The fourth variant (So1d) comprises dishes with vertical or upright bodies and rounded rims; the majority of them are undecorated (*pls. 7: 3; 9: 11; 14: 11; 16: 12*). Only three carry a decoration below the rim; one shows two curved channels, the second carries incisions formed as a zigzag line (*pl. 16: 12*) and the third is decorated with an ornamented rib. Bodies of dishes, classified as variant four, can be slightly bevelled (*pls. 7: 2; 12: 8; 15: 3; fig. 6: G487, G798*) with rounded or cut rims. Some of them have or had lugs attached. Only one of them was decorated with shallow impressions (*pl. 12: 8*).¹²

All of these dishes show good comparisons with eastern Slovenian settlements. The first variant (So1a) occurs in horizon I from Gornja Radgona, dated to Ha A2, while a similar vessel from the

Pobrežje settlement is probably somewhat later.¹³ The second variant (So1b) has analogies in the second layer phase of Brinjeva gora, which is the later one, dated to Ha A; its shape is rather unusual and uncharacteristic for wider surroundings.¹⁴ Its form can be compared with a dish found in the highest layer of Pečina na Leskovcu in the Trieste Karst. Leben ascribed its material to the Late Bronze Age. An analogous dish from the Gradina settlement on Brioni was dated to the Late Bronze Age phase of the Istrian Culture that, according to Batovič, shows connections with eastern Slovenia.¹⁵ The third variant (So1c) is perhaps somewhat later and was found in the third phase at Brinjeva gora and at Slivnica, where the Urnfield period date has not yet been confirmed.¹⁶ Moreover, a comparable dish was discovered at the Kapfsteiner Kogel settlement, where it was dated to the Ha B/Ha C transition.¹⁷

The earliest comparison to dishes with bevelled bodies of the So1d variant can be found at Šiman near Gotovlje or Dolge njive near Šikole. A great quantity of somewhat later examples, dating to the Early/Late Urnfield period transition, were found at the site of Oberravelsbach in Lower Austria; They are characteristic for the Initial and Early Urnfield periods in Pannonia, but can also be found in later periods.¹⁸ All other comparisons from the Drava region in Slovenia are later. They were discovered in settlements at Pobrežje, Orehova vas, Gornja Radgona, Slivnica and Hajndl near Ormož.¹⁹ Parallels can also be found among the sporadic finds from the Ruše II cemetery, as well as in grave 86 and in grave 38 from Pobrežje. The former is dated to the early Ha B on the basis of a spectacle fibula with a coiled figure-eight loop, whilst the bracelets decorated with alternating incisions and a twisted neck-ring in the latter undoubtedly date to a later phase of the site, which is analogous to the Ha B2 according to Müller-Karpe.²⁰ Such vessels are furthermore present at

⁹ The typology is based on the work of several authors (Patek 1968; Vinski Gasparini 1973; Oman 1981; Vrdoljak 1994; Horvat, M. 1999; Dular et al. 2002).

¹⁰ This variant also includes objects G109, G522, G523, G1121 and G1229 (Črešnar 2011).

¹¹ This variant also includes object G258 (Črešnar 2011).

¹² This variant also includes objects G25, G267, G414, G463, G519, G536, G567, G540, G882, G943, G1065, G1096 and G1176 (Črešnar 2011).

¹³ Šavel 1994, 48: 11, Strmčnik Gulič et al. 2006, t. 25: 261.

¹⁴ Oman 1981, 148–150, t. 15: 1.

¹⁵ Leben, 1967, 61, t. 13: 4; Batovič 1983, 295–301, footnote 53, t. 42: 9.

¹⁶ Oman 1981, t. 24: 9; Strmčnik Gulič et al. 2000, t. 170: 1.

¹⁷ Penz 2001, T. 2: 12.

¹⁸ Patek 1968, 99–100, 103–105, T. 6: 25. 7: 1; Lochner 1986b, T. 4–5.

¹⁹ Šavel 1994, pril. 49: 15; Velušček 2002, t. 22: 1; Strmčnik Gulič et al. 2000, t. 341: 4; Mele 2003, t. 2: 4.

²⁰ Pahič 1957, t. 17: 4; 1972, t. 9: 9, 17: 3; Müller-Karpe 1959, Abb. 51: 10.

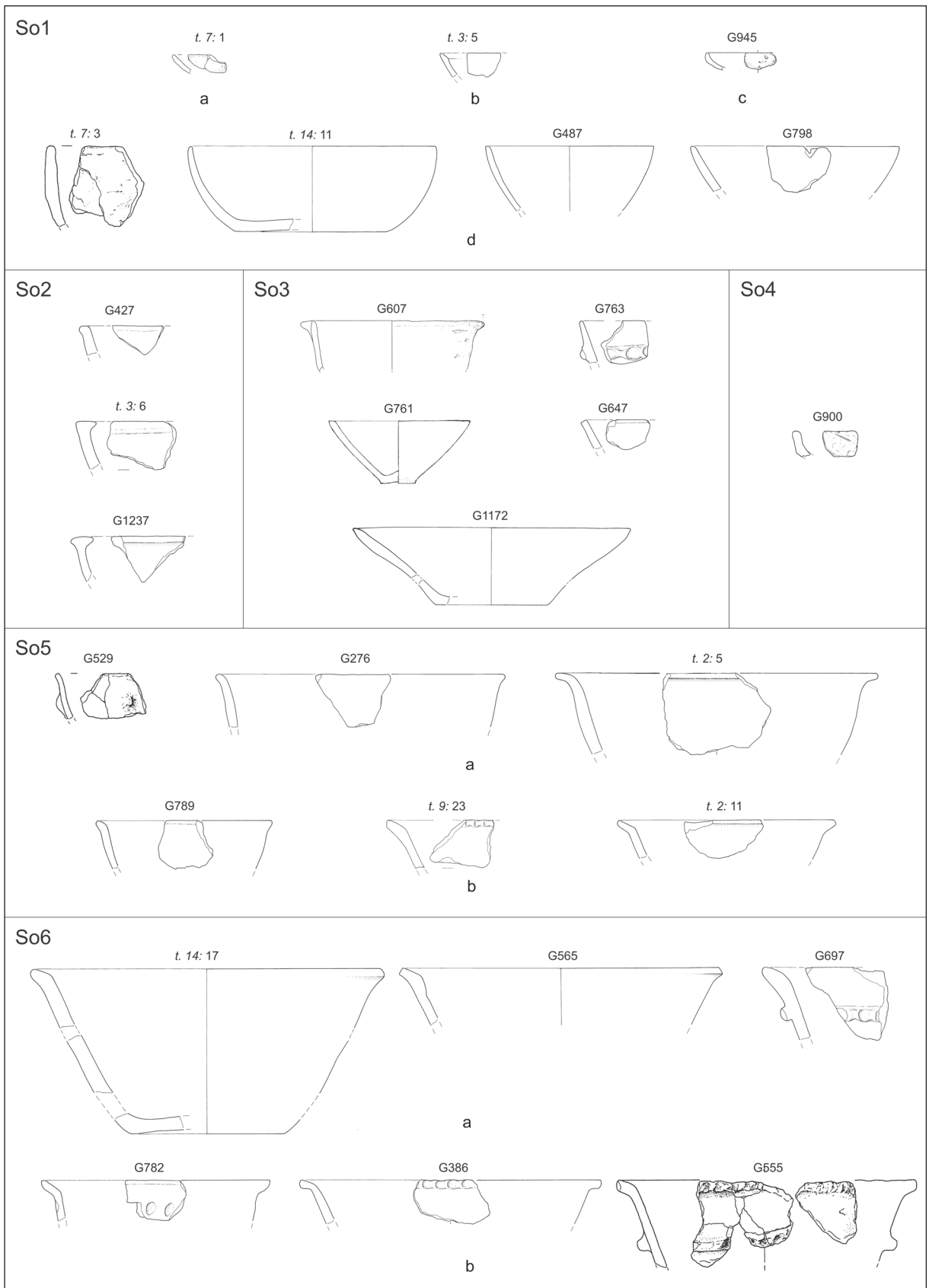


Fig. 6: Typological table of dishes with everted rims (So). Scale = 1:5.

Sl. 6: Tipološka delitev odprtih skled (So). M. = 1:5.

the Dobova cemetery, with grave 14 dated to the latest phase of it, i.e. the Ha B2. Grave 395 can perhaps even be slightly later, as a dish with a foot decorated with oblique channelling dates it to the final stages of the Ruše I cemetery according to Müller-Karpe. Moreover, a pot or a dish with an accentuated shoulder-to-neck transition has a good analogy at Lepa ravna below Poštela.²¹ Even later analogies, dated to the Ha B/Ha C transition, can be found at a settlement at Kapfsteiner Kogel in south-eastern Austrian Styria and in the upland settlement at Poštela.²²

Somewhat deeper dishes with more upright rims, classified as the same variant (So1d), have analogies with dishes with occasionally thickened rims from Oloris near Dolnji Lakoš, dating to the late Middle Bronze Age and the Initial Urnfield period (Br C/Br D). They may also be compared to examples from Hajndl near Ormož, where they date to the end of the Urnfield period and to the beginning of the Iron Age.²³ Incised decoration, formed as a zigzag line, most probably dates it to the Late Urnfield period. This and other types of decoration are, together with settlement finds, best studied at Brinjeva gora and, are independently or in combination with other decorations, are present in almost all cemeteries of the Ruše group, which date to the Late Urnfield period.²⁴ Very similar forms are present in Pannonian bowls with handles on or below rims, which are dated to the Br D/Ha A and Ha B.²⁵

Type So2 (fig. 6)

Dishes with rims thickened on one side (*pl. 3: 6; fig. 6: G427*) or bilaterally, i.e. T-sectioned rim (*fig. 6: G1237*).²⁶ Only one of the dishes is decorated; a line of fingertip impressions is visible on the exterior of the thickened rim. Many sherds are highly fragmented and forms are therefore hard to distinguish; dishes can be rounded or conical. One dish has a handle attached below its rim.

Analogies are present at Oloris and Rabelčja vas near Ptuj. Dishes of this type date to the final stages of the Middle Bronze Age and to the beginning of the Urnfield period. This is confirmed by finds

from Šiman near Gotovlje and Selska cesta at Ptuj.²⁷ Otherwise a bilaterally thickened rim has only been found at Slivnica, whereas rims, thickened on one side can be found at Slivnica, Pobrežje and Orehova vas.²⁸ Internally or bilaterally thickened rims are also present at the Bakony mountain range, where they occur in the Early (Br D) as well as the Late (Br D/Ha A) period of the local barrow cemeteries.²⁹ Externally thickened rims have even more comparisons. This type of rim is present on a conical vessel found at the settlement of Dolge njive near Šikole, where a handle with channelled decoration, a probable part of a "Säulchenschüssel" type vessel, dated to Ha A1, dominates the context (stratigraphical unit - SE 22), which otherwise contains several finds that are suitable for comparisons. This type of rim on a rounded dish also occurs in grave 108 from Pobrežje, which dates to the early stage of the cemetery according to S. Pahič. Another example comes from grave 21, from the second urnfield from Ruše, which is even later.³⁰ Analogous late comparisons come from the Kalakača settlement on the right bank of the Danube, where such a dish dates to the phase Bosut IIIa, which corresponds with HaB1 and probably finishes with the end of Ha B2, according to the central European chronology.³¹

Type So3 (fig. 6)

Conical dishes that differentiate from one another in inclinations of bodies and lips, but are studied as a single group because of indistinct diversity and their fragmentary preservation.

Among them there are dishes with a more upright (*fig. 6: G607, G763*) and those with a bevelled body (*fig. 6: G647, G761*). One of the latter is decorated with fingertip impressions and the other with comb-like impressions.³² Only one dish has a base with a concave transition to body preserved. Three of them are decorated, one with fingertip impressions, one with an extrusion attached below its rim and the third one with an ornamented rib below its rim. One of the dishes has a handle attached to the rim.³³ The dish with a slightly curved body is of a similar form (*fig. 6: G1172*).

²¹ Dular 1978, t. 1; Stare, F. 1975, t. 7: 6, 13: 1, 29: 15, 39: 4, 47: 4, 55: 6; Teržan 1990, t. 58: 9, 60: 2.

²² Teržan 1990, 35: 16; Penz 2001, T. 3: 2.

²³ Dular et al. 2002, fig. 8: S6; Magdič 2006, t. 66: 4.

²⁴ E.g. Müller-Karpe 1959, T. 112: H2; Pahič 1972, t. 4: 9; 1981, pril. 3: 17–5; Tomanič-Jevremov 1988–1989, t. 9: 3.

²⁵ Patek 1968, 103–109, t. 7: 5, 36.

²⁶ This variant also includes objects G21, G90, G112, G241, G927, G1083 and G1292 (Črešnar 2011).

²⁷ Dular et al. 2002, fig. 7: S1, S2; Filipidis 2008, t. 7: 2; Strmčnik Gulič 1988–1989, t. 1: 11, 4: 18; Tomažič 2000, t. 17: 6, 22: 4, 41: 8, 49: 3.

²⁸ Strmčnik Gulič et al. 2000, t. 147: 3, 264: 4; 2006, t. 18: 220; 2007, t. 2: 4, 5: 7.

²⁹ Jankovits 1992, 76–77.

³⁰ Pahič 1957, t. 8: 4–5; 1972, t. 22: 1.

³¹ Medović 1988, sl. 311: 1; Teržan 1990, 40.

³² This variant also includes objects G517, G877 and G1071 (Črešnar 2011).

³³ This variant also includes objects G117, G140, G500, G858, G860 and G961 (Črešnar 2011).

Those with bevelled bodies have comparisons in the settlement at Dolge njive near Šikole, in the earliest Urnfield period phase at Brinjeva gora, at Slivnica, Hajndl and Poštela.³⁴ We have to mention the Kapfsteiner Kogel settlement in Austrian Styria, where similar forms of dishes date to the Ha B/Ha C transition.³⁵

Dishes with a slightly more upright wall have the earliest comparisons at Šiman near Gotovlje, dated to Br C/Br D; they later occur at Dolge njive near Šikole, i.e. a settlement from the Early Urnfield period, and also in a later layer, dated to Ha A at Brinjeva gora. They are present in the earliest horizon at Gornja Radgona, at Orehova vas and finally at Hajndl near Ormož, where such dishes date to the Late Urnfield period and to the beginning of the Early Iron Age.³⁶ This type of dishes is also present in grave 38 of the Ruše I urnfield.³⁷ Analogous forms also occur at the Horn cemetery, which dates to the developed phase of the Baierdorf-Lednice or Ha A1 period and is perceptibly later at the Kapfsteiner Kogel settlement, dating to the transition from the Urnfield period to the Early Iron Age.³⁸ Another comparison comes from the Kalakača settlement in the Vojvodina where, it dates to the phase Bosut IIIa.³⁹ Lips of dishes are often decorated with fingertip impressions, which can be traced in the area from Kalakača to the Drava region in Slovenia.⁴⁰ One of these dishes (G607) has a lug attached to the rim. This decoration is often present at the Sarvaš settlement, located close to a palaeochannel of the Drava near Osijek. It is a representative of the Belegiš II group, with the most intense inhabitation during the Ha A period.⁴¹ The same goes for Meljski Hrib, which was also occupied in the Urnfield period. However the find is dated to the Eneolithic without any independent evidence.⁴² Dishes with somewhat transformed rims interestingly have mainly Urn-

field period comparisons, as they can be found on the settlement at Kalnik near Križevci, which is according to Vinski-Gasparini dated to the second and third phase of the Urnfield Culture in north-eastern Croatia, or the Ha A with some later elements. Such dishes continued to be used in later periods, which can be seen at Slivnica, Orehova vas, Pobrežje and Hajndl near Ormož. All these sites show an interestingly low percentage of this type of dishes in comparison to low dishes with inverted rims.⁴³

Patek referred to this type as *conical dishes*. Although she did not further categorise them, however, she dated them to the Pannonian Urnfield period with continuation in the Hallstatt period.⁴⁴

Type So4 (fig. 6)

Dish with bevelled body with a slight carination at the transition to a slightly outward leaning rounded rim (fig. 6: G900).

Good analogies can only be found at Ormož, where both dishes occur in the first phase of the settlement and are dated to Ha B.⁴⁵

Type So5 (fig. 6)

Deep rounded dishes with everted rims. We distinguish two variants, based on morphology of the rim.

The first variant (So5a) comprises dishes with a body with smooth transition to an everted, rounded rim. Among them, let us first mention dishes with rounded slightly everted rims, some of them with a slight external thickening (fig. 6: G276, G529).⁴⁶ One of these is decorated with an extrusion. Moreover, also dishes with longer and rounded or narrowed everted rims (*pls.* 2: 5,10; 9: 5)⁴⁷ occur. Their sizes vary considerably; the diameter of the largest dish (*pl.* 2: 5) is over twice as long as the diameter of the smallest one.

The second variant (So5b) comprises dishes with a body, transitioning with a slight carination to an everted, mostly straight rim that could be partly transformed (*pls.* 2: 11; 7: 14; 9: 23; 14: 5,14; fig. 6: G789).⁴⁸

Many analogies to the first variant of dishes (So5a) exist, starting with Oloris, where they are

³⁴ Oman 1981, t. 6: 7; Teržan 1990, t. 35: 14; Strmčnik Gulič et al. 2000, t. 161: 3, 343: 7; Tomažič 2000, t. 17: 6; Kovač 2004, t. 4: 7; Žižek 2005, t. 7: 1.

³⁵ Penz 2001, T. 3: 11.

³⁶ Oman 1981, t. 7: 6; Šavel 1994, t. 48: 16; Tomažič 2000, t. 40: 11; Mele 2003, t. 2: 7; Žižek 2005, 20: 5; Strmčnik Gulič et al. 2006, t. 25: 257; 2007, t. 1: 4.

³⁷ Kaerner 1989, T. 79: 1, who publishes three more pots than Müller-Karpe (1959, T. 109: H).

³⁸ Lochner 1991a, T. 10: 21–22, 40: 28; Penz 2001, T. 3: 7.

³⁹ Medović 1988, sl. 307: 4.

⁴⁰ Magdič 2006, t. 42: 7; Medović 1988, 389.

⁴¹ Šimić 1992, t. 2: 2–4.

⁴² Kavur 2001, 356, t. 1: 2.

⁴³ Vrdoljak 1994, t. 23: 1; Strmčnik Gulič et al. 2000, t. 142: 6, 259: 4; 2006, t. 16: 169; 2007, t. 6: 8, 10: 11; Kovač 2004, t. 44: 2.

⁴⁴ Patek 1968, 101, T. 6: 24.

⁴⁵ Lamut 1988–1989, t. 5: 1, 8: 1.

⁴⁶ This variant also includes objects G920, G923, G933, G1283, G1293, G1314 (Črešnar 2011).

⁴⁷ This variant also includes objects G273, G399, G481, G586, G643, G915 (Črešnar 2011).

⁴⁸ This variant also includes objects G217, G516, G645 (Črešnar 2011).

– often decorated with smooth ribs – categorised as type S8. Chronologically, they occur from the late Middle Bronze Age to the Initial Urnfield period.⁴⁹ They were also recognized at Šiman near Gotovlje and in the second phase at Brinjeva gora, which is dated to Ha A, at Slivnica. An example was also found at Pobrežje, probably dating to the Later Urnfield period, and at Ormož, where it was found in the first horizon, dated to the Ha B.⁵⁰ Velika Gorica supplements this image. There, a dish with roller-stamped impression, similar to the one known from Rogoza (fig. 4: 80), was discovered. It is dated to Vinski-Gasparini's fourth phase of the Urnfield Culture, which corresponds with Ha B1 and partly Ha B2 after Müller-Karpe.⁵¹ Such vessels were also studied by E. Patek, who dated them to the Ha A and Ha B.⁵²

The earliest comparisons to the second variant (So5b), among the material from contemporary settlements, were recognised at Brinjeva gora, where two dishes were documented in the first Ha A layer.⁵³ Another, similar dish form, is dated to probably the somewhat later first and the following second horizon of Gornja Radgona. Further parallels were recognised at Slivnica and Orehova vas. They are also found in the pottery assemblage of the first horizon at Ormož and at Hajndl near Ormož, where this type of dish was dated to the Urnfield period/Early Iron Age transition.⁵⁴ One comparison comes also from the Late Urnfield necropolis in Maribor.⁵⁵ Earlier parallels were yielded from the Baierdorf, dating to the Baierdorf-Lednice phase, i.e. Br D/Ha A1 transition, and the Horn cemetery, dating to the developed Baierdorf-Lednice phase, i.e. Ha A1.⁵⁶

Type So6 (fig. 6)

Large, deep, conical dishes, with a smooth or slightly carinated transition from a body to an everted rim. We distinguish two variants, based on morphology.

The first variant (So6a) comprises dishes with short, slightly everted rims that are often transformed (*pls.* 8: 2; 14: 17; *fig.* 6: G565, G697).⁵⁷ Two dishes have an ornamented cordon applied below their rims. One dish has a preserved base (*pl.* 14: 17), which is concave with a rounded transition to the body.⁵⁸

The second variant (So6b) comprises dishes with a long, strongly everted, straight rim with a slight carination at the transition to the body. As above, rims can be transformed (*fig.* 6: G386, G555, G782).⁵⁹ The body of one dish (*fig.* 6: G782) and rims of four dishes are decorated with fingertip impressions (*fig.* 6: G386, G782), an ornamented cordon is attached below the rim of one dish, and one dish shows both types of decoration (*fig.* 6: G555). Body to rim transition is emphasised with channelled decoration on the exterior of one dish.⁶⁰

This type includes a great diversity and rather specific solutions of rim forms. It is therefore not easy to compare with material from other sites, but the chronology that was ascribed to some of the simplest forms can probably represent an orientation point also for some of the other forms.

Variant So6a was discovered in the Ha A phase of Dolge njive near Šikole, in context SE 22, together with four other objects comparable to Rogoza, at Orehova vas and Hajndl near Ormož, which proves the occurrence of this variant also in the period of transition to the Early Hallstatt period.⁶¹ The early comparisons have contemporary finds at the Horn cemetery (Niederösterreich / Lower Austria), dated to Ha A1.⁶² The second variant (So6b) is comparable to only one dish from Šiman near Gotovlje that is, unlike the ones from Rogoza, decorated with a smooth plastic rib. The context ascribed to this dish (SE 26) includes two additional comparable finds with Sv1b clearly corresponding with Oloris near Dolnji Lakoš and, consequently, dating to Br C/Br D. Only one of the dishes with differently formed rims, i.e. G565, has an unambiguous comparison. This was recognized among the assemblage of the earliest horizon of Gornja Radgona, which is dated to the Ha A.⁶³

⁴⁹ Dular et al. 2002, 152–153, fig. 8: S7, S8.

⁵⁰ Oman 1981, t. 7: 4, 11:1; Lamut 1988–1989, t. 6: 13; Strmčnik Gulič et al. 2000, t. 135: 2, 263: 2; Tomažič 2000, t. 4: 6; Velušček 2002, t. 34: 3.

⁵¹ Vinski-Gasparini 1973, 157, t. 105: 8.

⁵² Patek 1968, 102–103, T. 6: 34.

⁵³ Oman 1981, t. 3: 1, 5: 3.

⁵⁴ Šavel 1994, pril. 48: 13, 50: 3; Strmčnik Gulič et al. 2000, t. 17: 2, 130: 1; 2006, t. 6: 7; Lamut 2001, t. 3: 5; Mele 2003, t. 2: 10.

⁵⁵ Kaerner 1989, T. 50: 1.

⁵⁶ Lochner 1986a, T. 5: 6; 1991, t. 12: 10. Both dishes also have handles, which perhaps occur at the presented specimens, but they are very fragmented.

⁵⁷ This variant also includes objects G189, G199, G233, G234, G577, G605, G872 (Črešnar 2011).

⁵⁸ This variant perhaps also includes objects t. 8: 7, G66, G237, G277, G372, G456, G457, G602, G881, G979 (Črešnar 2011).

⁵⁹ This variant also includes objects G92, G433, G452, G455, G748 (Črešnar 2011).

⁶⁰ This variant perhaps also includes objects G428 and G508 (Črešnar 2011).

⁶¹ Kovač 2004, t. 5: 3; Žižek 2005, t. 6: 2; Strmčnik Gulič et al. 2007, t. 20: 8.

⁶² Lochner 1991a, T. 10: 16, 14: 11.

⁶³ Šavel 1994, pril. 48: 14; Tomažič 2000, t. 33: 4.

Tall dishes (Sv) – *fig. 7*

Type Sv1 (fig. 7)

Dishes with rounded or conical body with a carination at the transition to a curved, everted neck and a rim, which is leaning outward. We distinguish two variants, based on morphology.

The first variant (Sv1a) comprises dishes with low, slightly everted or semi-everted rims (*pls. 14: 13; 18: 2; fig. 7: G1061*).⁶⁴ Bases are preserved on two dishes; both are flat, one has a sharp (G1061) and the other one a saddle-shaped transition to the body.

The second variant (Sv1b) comprises dishes with high, slightly to strongly everted rims (*pls. 2: 8; 8: 3; 18: 3; fig. 7: G1226, G1247*), two of which are decorated at the body-to-neck transition. One dish is decorated with horizontal channelled decoration, whilst the other is decorated with horizontal punctate decoration.

Analogies to the first variant (Sv1a) are known from Oloris, Rabelčja vas, Šiman near Gotovlje and Podsmreka, which are all dated to the late Middle Bronze Age and the Initial Urnfield period. Analogous pottery, decorated with ornamented ribs, was also discovered at Žlebič near Ribnica in Dolenjska, which is, if we consider the rest of the finds from the site, most probably contemporaneous with the above sites.⁶⁵ Furthermore, some interesting comparisons come from the site of Batković at Bijeljina on the far East of Bosnia. This variant of dishes occurs in graves accompanied with club-headed pins and poppy-headed pins, which can be dated mainly to the Initial and Early Urnfield periods (Br D, Ha A).⁶⁶ This date could be further confirmed by an analogous dish from the Pobrežje settlement, the chronology of which has not yet been studied in detail. However, considering some of the early finds from the cemetery, it could date to Ha A.⁶⁷

The earliest comparisons to the second variant (Sv1b), that are similarly decorated as *fig. 7: 1226*, are cups from the eponymous hoard of ceramic vessels found at Maisbirbaum in Lower Austria. The hoard dates to the late Middle Bronze Age, i.e. Br C2.⁶⁸ A similarly formed and decorated vessel

with somewhat sharper neck-to-body transition originates from Kiringrad in the Kupa (Kolpa) river valley in Croatia, where it is dated to the Late Bronze Age.⁶⁹ Further comparisons show a short time span of this variant; they were discovered at Rabelčja vas, Oloris and Šiman near Gotovlje. In addition, Patek suggests that such vessels only date to the Br D in the Danubian area.⁷⁰

Decoration with horizontal impressions of a sharp tool can be traced in settlements at Slivnica, Pobrežje and Orehova vas and among assorted material from the Ljubljana urnfield, where it is present much later, but its accurate date remains unknown. The same type of decoration is also used in vertical impressions (*fig. 4: 83*); comparisons are known from Maisbirbaum as well as Pobrežje.⁷¹

Type Sv2 (fig. 7)

A dish with a rounded body with a sharp carination at the transition to a short, vertical neck with a smooth exterior and with internal carination, which continues to a short, strongly everted rim (*fig. 7: G350*).

It is comparable to a dish from grave 113 from Dobova, however, its dating cannot be precise, being based on one find alone.⁷²

Type Sv3 (fig. 7)

Dishes with accentuated lower bodies. We distinguish five variants according to the form of necks and differences in body-to-neck transitions.⁷³

The first variant (Sv3a) comprises dishes with smooth transition to a high conical neck and with a short, semi-everted, curved rim (*pl. 8: 14; fig. 7: G441*).⁷⁴ The largest among them has the maximum girth ornamented with bands of oblique channelled decoration.

The second variant (Sv3b) comprises dishes with slightly carinated transition to conical or slightly curved necks (*pls. 3: 10; 12: 3,4; 16: 10; fig. 7: G633*).⁷⁵ The base is preserved on one specimen. It is curved with a rounded transition to the body, over the neck to an everted, curved rim. The

⁶⁴ This variant also includes objects G48, G190, G194, G623 (Črešnar 2011).

⁶⁵ Puš 1988–1989, t. 9: 1; Strmčnik Gulič 1988–1989, 2: 6; Tomažič 2000, t. 49: 4; Dular et al. 2002, 153–156, fig. 9: Sk 2; Murgelj 2008, t. 43: 2.

⁶⁶ Teržan 1995, 324–327, Abb. 3; Vinski-Gasparini 1973, t. 28: 24; 52: 39.

⁶⁷ Pahič 1972, 15, t. 8: 18; Strmčnik Gulič et al. 2006, t. 7: 3.

⁶⁸ Neugebauer 1994, T. 89, 90. The similarity of the vessel's body is unquestionable, but the fragmentation makes us speculate about possible handles.

⁶⁹ Balen-Letunič 1987, t. 2: 6.

⁷⁰ Strmčnik Gulič 1988–1989, t. 2: 5, 4: 14; Tomažič 2000, t. 29: 7; Dular et al. 2002, 154–156, fig. 9: Sk 1.

⁷¹ Stare, F. 1954, t. 59: 5; Neugebauer 1994, T. 90: 7; Strmčnik Gulič et al. 2000, t. 99: 3,8; 2006, t. 19: 234; 2007, t. 19: 14; Velušček 2002, t. 7: 7.

⁷² Stare, F. 1975, t. 18: 11.

⁷³ The following objects can be ascribed to one of these variants: G183, G343, G484, G485 and G689 (Črešnar 2011).

⁷⁴ This variant also includes objects G299, G811 (Črešnar 2011).

⁷⁵ This variant also includes objects G89, G90, G609, G631, G635, G689, G984, G1206, G1245 (Črešnar 2011).

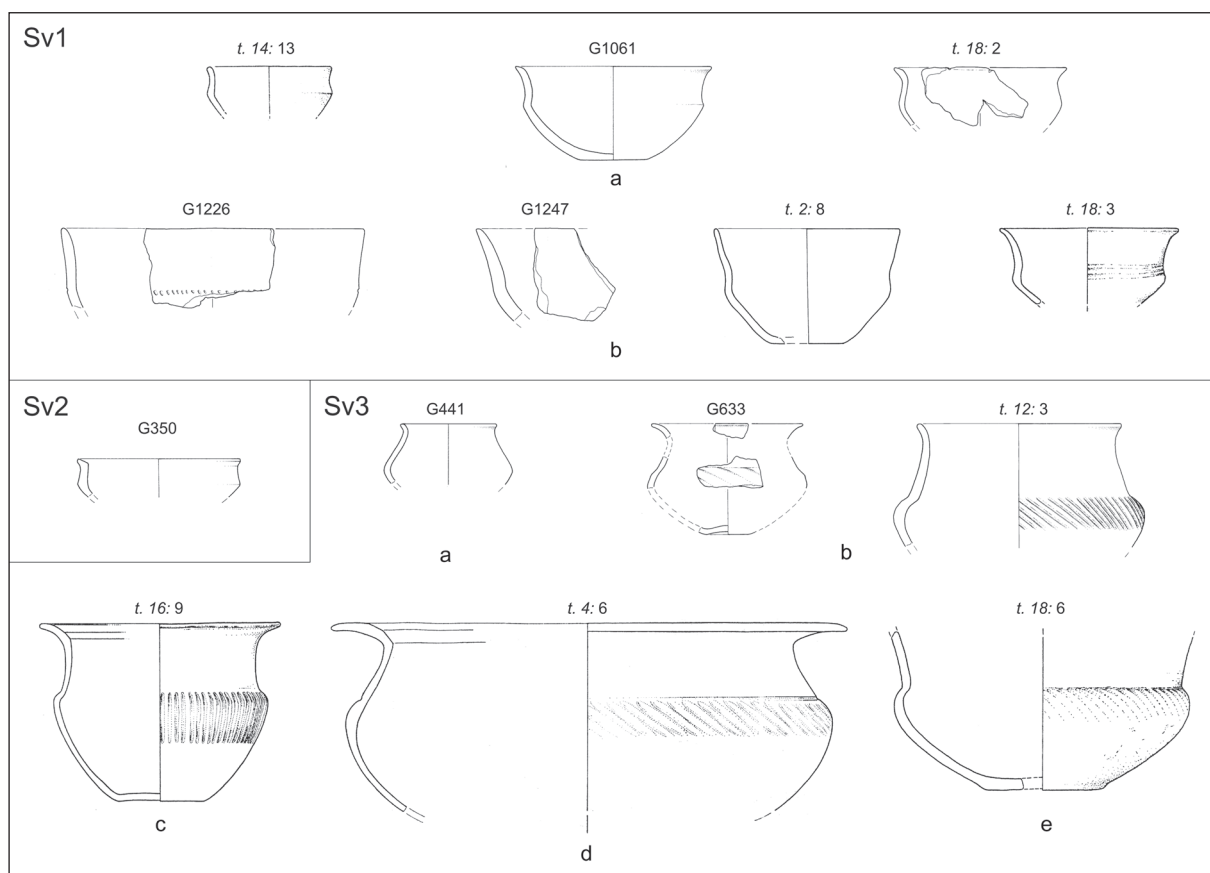


Fig. 7: Typological table of tall dishes (Sv). Scale = 1:5.

Sl. 7: Tipološka delitev visokih skled (Sv). M. = 1:5.

majority of vessels are decorated (channelled decoration, grooves, incisions, punctate decoration).⁷⁶

The third variant (Sv3c) comprises a dish with slightly curved base with rounded transition to a globular lower body. The transition between a low shoulder and a high curved neck is slightly carinated. The rim is high, strongly everted, curved and internally faceted (*pl. 16: 9*).

A representative of the fourth variant (Sv3d) is a large dish with a slight carination at the body-to-conical neck transition, which continues to a high, strongly everted, internally faceted, curved rim (*pl. 4: 6*). The shoulder is decorated with oblique grooves.

The fifth variant (Sv3e) represents a dish with strongly carinated transition to a funnel-shaped neck (*pl. 18: 6*). The shoulder is decorated with oblique channelled decoration.

The chronological position of the first variant (Sv3a) can be indicated based on comparisons from the settlement at Žlebič, where the majority of material correlates with Oloris and Rabelčja vas. Besides that, there are also similarities with finds

from the Late Urnfield period settlement at Pobrežje and the Kalsdorf at Graz cemetery, where this form dates to the second phase of the site or to Ruše II according to Pare.⁷⁷ We can ease this discrepancy if we do not forget that such cups are foreign among material from Oloris and Rabelčja vas, that Žlebič also yielded dishes with inverted rims, which are not known at Oloris and only two specimens were found at Rabelčja vas. Furthermore Puš also emphasised the fact that only minor archaeological investigations were performed at Žlebič and it is therefore possible that it was inhabited during the Early and perhaps even in the Late Urnfield period.⁷⁸ Dishes of the variant Sv3b slightly differentiate from one another, but are discussed as a single group as poor preservation makes more accurate classification impossible. The earliest parallels can be found in the second Ha A phase at Brinjeva gora, where it

⁷⁷ Puš 1988–1989, t. 4: 4; Tiefengraber 2005, 127–130, T. 16: 2; Strmčnik Gulič et al. 2006, t. 16: 174.

⁷⁸ Puš 1988–1989, t. 3: 2,7; Strmčnik Gulič 1988–1989, t. 4: 16, 5: 26.

⁷⁶ This variant perhaps also includes object G630 (Črešnar 2011).

carries a characteristic decoration of bands of oblique channelled decoration on the shoulder over the entire Ha B period. Further analogies are seen among the pottery from Orehova vas and Hajndl, where they are placed parallel to settlement horizon III of Poštela or to the finishing stages of the Late Hallstatt period.⁷⁹ However, they are mainly dated by vertical channelled decoration and not according to typological features. An analogous dish with oblique channelled decoration, similar to some dishes from Rogoza, was discovered in grave 13 of the Ruše II urnfield, where it was dated to the Ha B2. This variant is also present among pottery without reliable grave groups from Pobrežje. Dishes from Dobova, which are equivalent to the ones from Rogoza and have shoulders ornamented with oblique channelled decoration, are also contemporaneous. A much later Early Iron Age dish was yielded from trench 77 at Poštela.⁸⁰ As one can notice, the mentioned decoration that occurs on such vessels has a long time span. It perhaps originates from the Baierdorf-Velatices Group, from the Initial/Early Urnfield period transition, when analogous decoration appears on a wider area; the closest comparisons can be found in western Hungary and in Croatia between the Sava and the Drava.⁸¹ Another decoration, i.e. bands of oblique grooves surrounding vessel's shoulder (*pl.* 3: 10), offers best comparisons at the Ruše I urnfield. The decoration can be dated on a basis of a jug from grave 137, which, because of a dish with an inverted rim, is decorated with horizontal facets and saddle-shaped spiral anklerings, dated to Ha B3 according to Müller-Karpe.⁸² The decorations of grooves, arranged in bands of bunches of oblique lines, running in opposite directions, or vertical lines, were rarely documented (e.g. *pl.* 16: 9,10) and represent a seldomly occurring decoration in general. The first type of decoration was discovered in the third phase of Brinjeva gora, dated to the Ha B, and both types were found at Slivnica and Pobrežje, where preliminary publications date them to the Late Urnfield period. Metzner-Nebelsick also identifies them as characteristic for the Urnfield period.⁸³ Another decoration that is

found on this type of dishes is that of horizontal facets on the shoulders (*fig.* 4: 42). They date to Initial and Early Urnfield periods as recognised by E. Patek, based on Pannonian examples and do not later occur in such form. Vessels with this type of decoration also occur during the period of the Velatices-Očkov horizon in western Slovakia.⁸⁴ This chronology is furthermore confirmed with finds from the upland settlement at Kalnik near Križevci (NE Croatia), which are dated from Br D/Ha A to the end of the Ha A, and with a fragment from grave 5 of the Zagreb-Vrapče cemetery.⁸⁵ In addition, we also trace punctate decoration in the form of dots, arranged in a horizontal line, which can be combined with horizontal incisions (*fig.* 4: 74). The latter occurs as early as the oldest Ha A phase of Brinjeva gora and in the early phase of the accompanying urnfield, where they occur in combination with hatched triangles and only much later, in Ha B, in combination with horizontal elements. This type of decoration is also seen in settlements at Pobrežje and Slivnica where they have more of a Late Urnfield period character.⁸⁶ Variant Sv3c has an analogy in grave 125 in the Budapest-Békásmegyér cemetery, which also yielded a knife with a good comparison at Dobova. They date to the phase Klentnice II according to Říhovský, which corresponds to the Ha B1/Ha B2 transition. Their decoration on shoulders is not identical, as the vessel from Rogoza shows vertical channelled decoration, which otherwise frequently occurs on finds from the mentioned cemetery. However, it originates from earlier periods as it is present, in the Oberravelsbach in Lower Austria pottery hoard, which dates to the Ha A/Ha B transition.⁸⁷ A similar vessel is also known from an upland settlement of Kalnik near Križevci (NE Croatia), which was populated from the Br D/Ha A1 transition to the end of Ha A2.⁸⁸ A fragmented dish of variant Sv3c that is decorated with characteristic oblique channelled decoration has parallels in dishes that were discovered at the Horn cemetery in Lower Austria.

⁷⁹ Oman 1981, t. 7: 9; Magdič 2006, 103–104; t. 58: 6; Strmčnik Gulič et al. 2007, t. 22: 1.

⁸⁰ Pahič 1957, t. 5: 2; 1972, t. 32: 7; Stare, F. 1975, e.g.: t. 32: 2; Teržan 1990, 32–34, t. 14: 29; Črešnar 2006, 145.

⁸¹ Horváth 1994, T. 14: 1,2; Vinski Gasparini 1973, 70–71.

⁸² Müller-Karpe 1959, T. 113: F.

⁸³ Oman 1981, t. 27: 8, 17; Strmčnik Gulič et al. 2000, t. 148: 6, 266: 2; 2006, t. 13: 162, 20: 2; Metzner-Nebelsick 2002, 160–166, Abb. 64: 9–10.

⁸⁴ Paulík 1962, Abb. 14: 10–12; Patek 1968, 96–97, 102, 107–108, T. 6: 12, 7: 24, 25.

⁸⁵ Vrdoljak 1994, t. 31: 7, 8.

⁸⁶ Oman 1981, 144–147, t. 27: 12, 34: 3, 45: 12; Pahič, V. 1988–1989, t. 1: 7; Strmčnik Gulič et al. 2000, t. 367: 1, 8; Velušček 2002, t. 2: 6.

⁸⁷ Stare, F. 1975, t. 24: 13; Lochner 1986b, T. 1: 8, 11–12, 3: 6, 7; Kalicz-Schreiber 1991a, Abb. 15: 4, 19: 8; Říhovský 1972, 61, T. 21: 236.

⁸⁸ Majnarić-Pandžić 1992; Vrdoljak 1994, 29, 38–39, t. 31: 5.

They are characteristic for the developed Baierdorf-Lednice period, i.e. Ha A1. An analogous example was discovered at Mala Pupelica near Bjelovar, which – based on this fragment – is dated to the contemporaneous second phase of the Urnfield period in north-eastern Croatia.⁸⁹ Patek ascribed a similar date to a dish with a funnel neck and channelled decoration on shoulder, which supposedly only occurs in Ha A in Pannonia. However, a recent find from the Budapest-Békásmegye cemetery extended its chronology to early Ha B. The same is also valid for a dish of variant Sv3d decorated with facets on the interior of the rim, with its shoulder decorated with oblique channelled decoration, which are, again, both characteristics of dishes dating to the Ha A.⁹⁰ Similar dishes are very rare in eastern Slovenia. Among them, a dish from grave 164 at Pobrežje offers the most parallels to the studied dish. A vessel from Zgornja Hajdina can perhaps also be described as similar.⁹¹

Dishes with inverted rims (Sz) – fig. 8

Type Sz1 (fig. 8)

Two hemispherical dishes with a slightly inverted to inverted, internally thickened rim (*pl. 17: 7*).⁹²

The best comparison can be found at Oloris, and therefore we suggest dating to the late Middle Bronze Age and the Initial Urnfield period also for the Rogoza specimens.⁹³

Type Sz2 (fig. 8)

Hemispherical dishes. We distinguish three variants, based on morphology.

The first variant (Sz2a) comprises dishes with a slightly inverted rim, that can be rounded (*pls. 7: 4; 9: 12; fig. 8: G716, G1207*) or narrowed (*pl. 3: 7*).⁹⁴ Two of the dishes are decorated, one with oblique channelled decoration and the other one with an incised zigzag line.

The second variant (Sz2b) comprises two large dishes with inverted to strongly inverted, rounded rims (*fig. 8: G1312*). The studied dish is in a good state of preservation with a saddle-shaped base-to-body transition.

The third variant (Sz2c) is represented by a miniature dish with flat base with rounded transition to the body and with an inverted, narrowed rim (*fig. 8: G174*).

It is difficult to find parallels to dishes of variant Sz2a because of their bad state of preservation. It is probably a type of dishes that were found at the Pobrežje cemetery in vast amounts and are often decorated with incised zigzag decoration and – despite being more frequent in the later horizon – occur in both horizons of the site.⁹⁵ Parallels can also be found in grave 8/1993 of the Ruše II urnfield, which is one of the latest graves of the necropolis, and in grave 5 from Ormož, where two such dishes occur. Several more analogous dishes occur at the appurtenant cemetery, which is dated to late Ha B.⁹⁶ The same type of dish also occurs in the initial phase of development in the Burgstall settlement at Kleinklein, which is dated to the Late Urnfield period by Smolnik. There, two of the dishes show decoration analogous to fragment G716.⁹⁷ Variant Sz2b also demonstrates many analogies. The earliest, not completely rounded dishes occur in the second Ha A layer at Brinjeva gora. All other analogies from Pobrežje and Ormož are later. They were yielded from the first and the second horizon of the settlement at the latter, i.e. in Ha B and its transition to the Early Iron Age. These dishes were also found at the Ormož cemetery, where the best comparison comes from the richest female grave 7, which also contained a range of bronze, iron, glass and gold jewellery pieces, and is dated to the threshold of the early Hallstatt period.⁹⁸

Type Sz3 (fig. 8)

Conical or rounded dishes with a smooth transition to inverted, curved rims. We distinguish three variants, based on morphology.

The first variant (Sz3a) comprises two deep dishes with conical bodies and slightly inverted, rounded rims (*pl. 14: 3*).⁹⁹

The second variant (Sz3b) comprises a vast majority of conical and rounded dishes with smooth transitions to inverted, curved rims. This was done for two reasons. The first reason is the almost impossible classification of this type of dishes, as the rim curvature does not seem to

⁸⁹ Majnarić-Pandžić 1989, 22–24, fig. 4: 2; Lochner 1994, 198–199, Abb. 106.

⁹⁰ Patek 1968, 100–101, t. 6: 18, 20–22; Kalicz-Schreiber 1991b, Abb. 23: 1.

⁹¹ Müller-Karpe 1959, T. 116: 41; Strmčnik Gulič 1980, sl. 4: 3; Pahič 1991, t. 8: 1.

⁹² This variant also includes object G1201 (Črešnar 2011).

⁹³ Dular et al. 2002, fig. 7: S1.

⁹⁴ This variant also includes objects G530, G785, G884, G932, G1295, G1297 (Črešnar 2011).

⁹⁵ Pahič 1972, t. 4: 9, 5: 3, 8: 3.

⁹⁶ Tomanič-Jevremov 1988–1989, t. 11: 2, 3; Črešnar 2006, 146, t. 2: B2.

⁹⁷ Smolnik 1994, T. 89: 10, 11.

⁹⁸ Tomanič-Jevremov 1988–1989, t. 14: 2; Lamut 1988–1989, t. 8: 3; 2001, t. 9: 5; Strmčnik Gulič et al. 2006, t. 5: 73.

⁹⁹ This variant also includes object G1132 (Črešnar 2011).

follow any rules. Moreover, it is often hard to evaluate the height of these vessels only from fragments. We therefore think that this kind of classification would be misleading. Furthermore, the only possible datable element, i.e. base-to-body transition, is usually not preserved.¹⁰⁰ The second reason for combining these forms of dishes is that the majority of them are contemporary. They can be undecorated (*pls.* 7: 15; 8: 13; 14: 4,12; 15: 4; 16: 3; *fig.* 8: G449) or, even more often, tied to characteristic, sometimes chronologically sensitive decoration. The vast majority is decorated with oblique channelled decoration (*pls.* 2: 3; 8: 6; 9: 24; 10: 1; 15: 6,12,13; 16: 2,6; 18: 4,7,8; *fig.* 8: G284,G451), decoration with horizontal facets is also present (*pls.* 2: 4; 8: 10; 9: 1; 16: 8; *fig.* 8: G903), while vertical and horizontal channelled decoration, oblique grooves and extrusions are exceptionally rare (*fig.* 8: G1165). Lugs are common.¹⁰¹

The third variant (Sz3c) comprises dishes with inverted thickened rims. All but one are decorated: with oblique channelled decoration (*pls.* 7: 16; 9: 6; *fig.* 8: G1330), fingertip impressions (*pl.* 9: 18) or with shallow grooves.¹⁰²

The earliest parallel to the first variant (Sz3a) is relatively early. It originates from Rabelčja vas. However, its date should perhaps be reconsidered as it does not come from a closed unit, and all other comparable finds are later.¹⁰³ This variant can also be found at Dolge njive near Šikole, dated to the Early Urnfield period, and at Pobrežje, Gornja Radgona and Ormož, which all date to the Late Urnfield period.¹⁰⁴

Also variant Sz3b, the deepest of these dishes, finds its earliest comparison at Rabelčja vas, which is, again, not from a closed unit. Other comparable finds are later.¹⁰⁵ The majority of other forms, shown in figures, appear in the first (form as in *pl.* 18: 4) or in the second (form as *pl.* 16: 6) Ha A phase at Brinjeva gora, in the partly contemporaneous pottery repertoire of the first horizon at Gornja Radgona

and at Dolge njive near Šikole.¹⁰⁶ They are more frequent in the Ha B, when they are present on almost all settlements and cemeteries over a wide area. Their use continues also in the Early Iron Age, as seen in rare finds from the Poštela complex.¹⁰⁷

Dishes of variant Sz3c, also the less thickened ones, firstly appear in the second layer of Brinjeva gora; a somewhat later specimen is also known from Gornja Radgona. It also has parallels with settlements at Slivnica as well as Ormož, where it originates from a layer dating to the Urnfield period/Early Iron Age transition.¹⁰⁸ Strongly thickened dishes are somewhat later, first appearing in the early Ha B in the first horizon at Ormož, in the second layer of the Gornja Radgona settlement and in the contemporary grave 15b at Pobrežje. They become more frequent in the Ormož II period, i.e. at the transition to the Early Iron Age. Trench 64 from Poštela indicates that the use of this form continues, as it was found with material characteristic for the third settlement period.¹⁰⁹

The most characteristic decoration, seen as a rule on rims of dishes with inverted rims of the type studied, is oblique channelled decoration, the origin of which was discussed above in the study of tall dishes of variant Sv3. However, dishes with inverted rims containing such decoration are even more frequent, which gives us an opportunity to generate a simplified development of this form. Bevelled wide channels occur on dishes with everted and inverted rims, as is shown by the rare examples in the first Ha A phase at Brinjeva gora, (e.g. *pl.* 16: 2). Their number increases in the second Ha A layer and their appearance is more varied. Apart from the already known variants, which are more frequent now, we recognize several other more upright and narrower ones (e.g. *pl.* 18: 4). Further developments in Ha B layers show a tendency towards upright, narrow and dense channels, which become more and more frequent. Their development ends with thickened inverted rims of dishes that show nearly vertical, extraordinarily narrow and dense

¹⁰⁰ Črešnar 2006, 125,126.

¹⁰¹ This variant also includes the unornamented objects G54, G76, G120, G121, G291, G464, G556, G619, G682, G733, G762, G818, G930, G1122, G1303, G1329, G1332, G1333, those ornamented with oblique channelled decoration G33, G111, G235, G240, G282, G438, G503, G504, G560, G562, G584, G692, G738, G747, G772, G773, G879, G899, G922, G975, G1059, G1068, G1141, G1156, G1157, G1306, those with horizontal facets G901, G1077, G1120, G1133, G1199 and other ornaments G29, G30, G280, G492, G504, G1165 (Črešnar 2011).

¹⁰² This variant also includes objects G1302, G1315 (Črešnar 2011).

¹⁰³ Lamut 1988–1989, t. 8: 4; Strmčnik Gulič 1988–1989, t. 5: 27; Velušček 2002, t. 7: 6.

¹⁰⁴ Šavel 1994, pril. 49: 6; Lamut 2001, t. 7: 7; Žižek 2005, t. 20: 1; Strmčnik Gulič et al. 2006, t. 2: 25.

¹⁰⁵ Strmčnik Gulič 1988–1989, t. 4: 16.

¹⁰⁶ Oman 1981, t. 5: 2, 3: 17,20, 4: 8, 10: 11, 12: 6; Šavel 1994, pril. 48: 4, 49: 2; Žižek 2005, t. 10: 2.

¹⁰⁷ For example: Lamut 1988–1989, t. 6: 14, 7: 12; 2001, t. 7: 10; Teržan 1990, t. 9: 18, 17: 20, 56: 5; Strmčnik Gulič et al. 2000, t. 115: 1; 2006, t. 7: 1; Velušček 2002, t. 15: 6, 47: 9; Mele 2003, pril. 1: 1a,4a,5a.

¹⁰⁸ Oman 1981, t. 16: 7; Lamut 1988–1989, t. 12: 14; Šavel 1994, 48: 18; Strmčnik Gulič et al. 2000, t. 268: 2.

¹⁰⁹ Pahič 1972, 3: 7; Lamut 1988–1989, t. 2: 6, 22: 3, 17, 23: 13; 2001, t. 21: 1; Teržan 1990, t. 9: 19; Šavel 1994, pril. 50: 14.

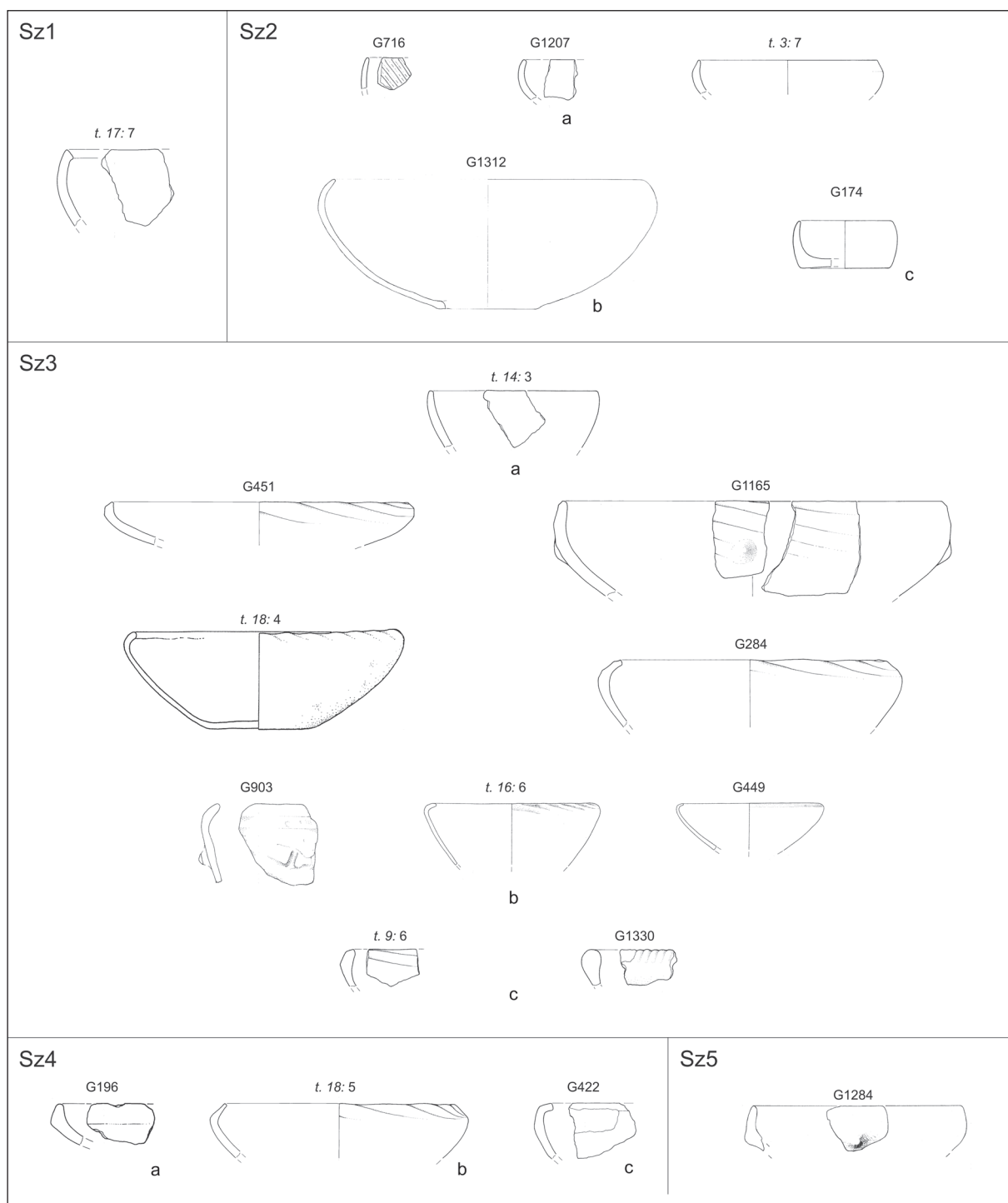


Fig. 8: Typological table of dishes with inverted rims (Sz). Scale = 1:5.

Sl. 8: Tipološka delitev zaprtih skled (Sz). M. = 1:5.

channelled decoration, which firstly appears in the first phase of the Ormož settlement, dated to early Ha B. Quantities increase in the subsequent, Early Iron Age phase. However, we must emphasize that in spite of these developments, the earlier forms still continue to occur occasionally and are also

present at Poštela.¹¹⁰ Oblique grooves present a similar decoration and are arranged in the same

¹¹⁰ Oman 1981, t. 3: 6,17,20; 7: 9,11, 8: 8, 11: 5, 14: 10, 31: 10–12, 39: 5–8; Teržan 1990, t. 36: 2. E. Patek also came to the same conclusion for the area of Pannonia (1968, 102, T. 6: 31).

way, which sometimes makes separation of the two decorations almost impossible. It is undoubtedly recognised in settlements at Pobrežje and Ormož, in the later one being dated to the Final Urnfield period/Early Iron Age transition. Contemporary use is also proven in northern Croatia, where it appears among material from the Treščerovac cemetery, dating to the fourth period of the Urnfield Culture according to Vinski-Gasparini.¹¹¹ Less numerous but chronologically important are also dishes with horizontally faceted rims. They appear at the Vörs-Battyáni disznólegelő cemetery near the Little Balaton Lake, together with elements that are also characteristic for the later period of the Balatinmagyaród-Hídvépuszta cemetery. This site is typical for the Baierdorf-Velatice (Ha A1) period.¹¹² This decoration simultaneously appears also in the area of the Čaka Culture in the Slovak Republic.¹¹³ Finds from the Drava region have been showing a different image so far. Horizontal facets initially appear at Brinjeva gora on dishes from the second layer, but they are more frequent in the later 4th phase. Their presence amongst material of the first horizon of the Ormož settlement is perhaps contemporary to the latter.¹¹⁴ They are also known from the settlements at Pobrežje and Orehova vas, however, they are rare and not precisely dated.¹¹⁵ A similar pattern can be seen in the mortuary data, where graves 86 and 137 from the Ruše II cemetery and grave 1 from Ormož seem to be most suitable for dating. The first grave is dated to Ha B2, on the basis of a harp fibula. The second grave contained saddle-shaped spiral anklerings and it is therefore dated to the closing phase of the cemetery or the Ha B3 period. The third grave is contemporary with the latter and is dated on the basis of a large spectacle fibula, a saddle-shaped anklering and a spiral bracelet.¹¹⁶ Grave 90 from Dobova contains perhaps the earliest dish with an inverted rim decorated in such manner in Slovenia. The grave is dated by a Velemszentvid type pin to the end of

the Ha A period and conditionally also to the early Ha B period.¹¹⁷ Finds from the settlement of Kalnik near Križevci in northern Croatia do not indicate a late adoption of this type of decoration in the area studied. Unlike the pottery from Rogoza, dishes with faceted rims are far more common than dishes with channelled decoration on the rims at Kalnik. However, a great number of vessels can be paralleled with examples from Rogoza. They date to the floruit of the Kalnik settlement, the Ha A period.¹¹⁸ Horizontal channelled decoration is even more exceptional and it appears only once. Its earliest comparisons are dated to the end of the Urnfield period when, presumably based on the material from the settlement at Ormož, it starts gradually to replace horizontal facets.¹¹⁹

Type Sz4 (fig. 8)

Conical or rounded dishes with carinated transitions to rims. We distinguish three variants, based on morphology.

The first variant (Sz4a) comprises dishes with a short, slightly inverted, rounded rim (*pls. 7: 5; 16: 2; fig. 8: G196*), obliquely cut on one dish (*pl. 9: 25*). Two of them are decorated with oblique channelled decoration (*pl. 9: 25; 16: 2*).¹²⁰

The second variant (Sz4b) comprises dishes with a high, inverted to strongly inverted rim. Two rims are ornamented with oblique channelled decoration (*pl. 18: 5*). The remaining examples are rounded (*pl. 16: 1,7*).¹²¹

The third variant (Sz4c) comprises two dishes with rounded bodies with short and extremely inverted rims (*pl. 9: 19; fig. 8: G422*).

Variant Sz4c shows the earliest analogies, which were recognized at Šiman near Gotovlje and date to the late Middle Bronze Age/Initial Urnfield period transition. An analogous dish was also found in the assemblage from the Pobrežje settlement. The latter contains analogies for the first two variants of this type of dishes.¹²² Several parallels are known for the second variant (Sz4b), the oldest ones originate from the Early Urnfield contexts of Brinjeva gora, Gornja Radgona and Dolge njive near Šikole.¹²³ Apart from the Pobrežje settlement,

¹¹¹ Vinski-Gasparini 1973, t. 101: 9; Lamut 1988–1989, t. 17: 23, 18: 3; Velušček 2002, t. 47: 1.

¹¹² Dular et al. 2002, 190–193, fig. 29–31; Horváth 1994, T. 29–32.

¹¹³ Paulík 1963, Obr. 10: 1, 29: 2, 30: 8; Patek 1968, 102, T. 6: 28,29.

¹¹⁴ Lamut 1988–1989, t. 5: 15; 2001, 3: 2; Oman 1981, t. 16: 3, 33: 6, 11.

¹¹⁵ Velušček 2002, t. 46: 1; Strmčnik Gulič et al. 2007, t. 19: 7,9.

¹¹⁶ Müller-Karpe 1959, T. 113: F3; Kaerner 1989, T. 96: 2; 111: 4; Tomanič-Jevremov 1988–1989, 290–291, t. 6, 7.

¹¹⁷ Stare, F. 1975, t. 16: 11–12; Říhový 1979, 103–104, t. 30: 558.

¹¹⁸ Vrdoljak 1994, t. 16:1–3, 17:2–3, 18: 3.

¹¹⁹ Lamut 2001, 215, t. 5: 6.

¹²⁰ This variant also includes object G210 (Črešnar 2011).

¹²¹ This variant also includes objects G454, G512 (Črešnar 2011).

¹²² Tomažič 2000, t. 12: 4; Velušček 2002, t. 45: 4; Strmčnik Gulič et al. 2006, t. 5: 73.

¹²³ Oman 1981, t. 11: 5; Šavel 1994, pril. 48: 15; Žižek 2005, t. 3: 1.

two similarly formed dishes are also ascribed to graves 7 and 52, dating to the early or late phase of the accompanying cemetery,¹²⁴ to Orehova vas and to both earlier horizons of the settlement at Ormož, where the later of the two already reaches the Early Iron Age.¹²⁵ An even later dish comes from a barrow from Velenik near Spodnja Polskava, which is, with accompanying material, securely dated to Horizon III of the Poštela settlement.¹²⁶

Type Sz5 (fig. 8)

A dish with a curved body with a high, slightly inverted, rounded rim (fig. 8: G1284). It is decorated with an extrusion.

The earliest comparison is a dish from the first layer of Brinjeva gora, which dates to the Early Urnfield period or Ha A. The second and the last comparison that considerably expands its chronology was found among the material from Horizon III at the Ormož settlement, which is characteristic for the developed Early Hallstatt period.¹²⁷ The hiatus in chronology, i.e. the beginning of the Early Iron Age, can be bridged by a decorated dish in grave 1/94 from Kalsdorf near Graz.¹²⁸

Bowls (Sk) – fig. 9.

Type Sk1 (fig. 9)

A rounded bowl with an everted rim with a strap handle attached underneath (pl. 15: 8). The body is decorated with an ornamented rib, running at the same height as the lower attachment spot of the handle.

The best comparison is found at Oloris near Dolnji Lakoš where Dular assigned such bowls to type S7. The same variant can also be seen at Rabelčja vas, where applied cordons that are either smooth or ornamented present the most common type of decoration.¹²⁹ Their dating to the end of the Middle Bronze Age and the beginning of the Urnfield period is therefore not controversial.

¹²⁴ Pahič 1972, t. 2: 8,9, 11: 16. Following the chronology of C. Pare (1998, Abb. 25: 27) the chronological position of the grave 7 could be even wider.

¹²⁵ Lamut 1988–1989, t. 9: 3; 2001, t. 5: 5; Strmčnik Gulič et al. 2007, t. 17: 6.

¹²⁶ Teržan 1990, 83, t. 71: 10.

¹²⁷ Oman 1981, t. 4: 11; Lamut 2001, t. 23: 7.

¹²⁸ Tiefengraber 2005, T. 19: 3.

¹²⁹ Dular et al. 2002, fig. 8: S7, 16: 1; Strmčnik Gulič 1988–1989, t. 4: 8.

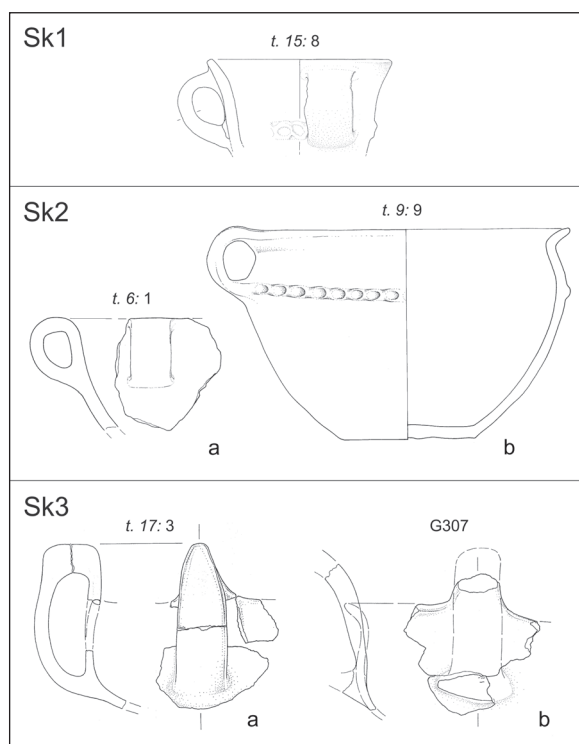


Fig. 9: Typological table of bowls (Sk). Scale = 1:5.
Sl. 9: Tipološka delitev skodel (Sk). M. = 1:5.

Type Sk2 (fig. 9)

Deep bowls with rounded bodies and a handle, attached to the same height as the rim. We distinguish two variants.

The first variant (Sk2a) comprises two bowls with upright rims and with the maximum width on the rim (pl. 6: 1).¹³⁰

The second variant (Sk2b) comprises a bowl with articulated shoulder and everted rim (pl. 9: 9). The preserved base is straight with a sharp transition to the body. The transition from the shoulder to the low curved neck that continues to the semi-everted, curved rim, is smooth. The maximum width of the dish is on its lip and the widest part of its body is decorated with an ornamented rib.

The first variant (Sk2a) has the best, fragmented, comparison at a settlement at Slivnica, which is unfortunately only preliminarily published. More distant comparisons come from a settlement at Kalnik near Križevci, dating from the Bd D/Ha A1 to the end of the Ha A2 period, and from a cemetery at Burgschleinitz in Lower Austria, dated to the Early/Late Urnfield period or Ha A2/Ha B1 period.¹³¹ The second variant (Sk2b) is comparable to a bowl from grave 32 in the Ruše II cemetery and from grave 31 from Pobrežje. The latter is more precisely dated as it is accompanied

¹³⁰ This variant also includes object G807 (Črešnar 2011).

¹³¹ Lochner 1994, Abb. 108: Grab 11; Vrdoljak 1994, t. 29: 1.

by bracelets, decorated with bunches of alternating incisions and a twisted neckring, which date the grave to the later period of the necropolis or to Ha B2 according to Müller-Karpe. A similar form with a handle attached lower on the body is found in a bowl from Ormož, dating to the second settlement horizon, i.e. Urnfield period/Early Iron Age transition.

Type Sk3 (fig. 9)

Deep bowls with rounded bodies and handles that are exceeding the rims. We distinguish two variants.

The first variant (Sk3a) comprises a shallow bowl with a slightly inverted rim. The middle part of the vessel is the point of maximum width of the vessel. The lower part of the rim exceeding knee-formed handle is attached to this spot (*pl. 17: 3*).

The second variant (Sk3b) represents a bowl with shoulder with smooth transition to a low, curved neck and a strongly everted curved rim. The lip is the point of maximum width of the bowl, which is exceeded by a strap handle (*fig. 9: G307*).

The first variant (Sk3a) has a morphological comparison, but without the characteristic knee-form handle, among finds without reliable grave groups from the Pobrežje cemetery. The knee-form handle is a chronologically sensitive element and is discussed in more detail elsewhere. It is mostly present over the entire Late Urnfield period.¹³² Parallels for the second variant (Sk3b) can only be found among undetermined finds from the Pobrežje cemetery, which can at least serve as an orientation for dating of the dish.¹³³

Cups (Skd) – fig. 10

Type Skd1 (fig. 10)

A rounded cup with an upright rim and the rim exceeding knee-formed handle. Its rim is the point of maximum width of the cup (*pl. 17: 14*).

If we firstly consider only the form of this vessel without the specific shape of its handle, we can trace many comparisons. One comes from the first settlement phase at Ormož and is dated to the early Ha B. A cup from Velika Gorica is contemporaneous, dated to Period IV of the Urnfield period in northern Croatia.¹³⁴ An analogous vessel

was furthermore discovered among finds with no reliable context at the Pobrežje cemetery, as the only grave good in grave 137 from Maribor and in grave 395 from Dobova, all of them probably dated to the Late Urnfield period. Grave 49 from the Ruše I cemetery could be most accurately dated, as it includes bracelets decorated with incisions that indicate dating to Ha B2 according to Müller-Karpe.¹³⁵ If we also consider handles, one of the cups with a handle with two horn-like projections from Pobrežje shows the most similarities. Velušček dates it to the Late Urnfield period. An example from Kiringrad near Donji Kirin in the Kupa valley in Croatia is similarly dated on the basis of analogies.¹³⁶

Type Skd2 (fig. 10)

A rounded cup with a semi-everted rim, which is also the point of maximum width of the vessel. The cup has a rim exceeding strap handle (*fig. 10: G231*).

We have found only one suitable comparison, which comes from grave 48 from the Budapest-Békásmegyér cemetery and dates to the older phase of the Ha B period.¹³⁷

Type Skd3 (fig. 10)

A cup with a globular lower body with smooth transition to the curved neck and slightly everted rim. The handle does not exceed the rim (*fig. 10: G639*).

A handle, finishing below the lip is characteristic for this type. Comparisons can be found at Oloris near Dolnji Lakoš as well as at Rabelčja vas. However, this type of handles is almost unknown from Late Urnfield sites, as the rim exceeding handles prevail.¹³⁸

Type Skd4 (fig. 10)

Cups with upswung handles. We distinguish four variants, based on morphology of their bodies.

The first variant (Skd4a) comprises two cups with low hemispherical lower bodies and with high funnel necks (*pl. 17: 5*).¹³⁹ Their bases are concave with rounded transition to bodies.

¹³² Pahič 1972, t. 35: 21; Velušček 1996, 63–64. See also: *Handles – Type R4*.

¹³³ Pahič 1957, t. 13: 1; 1972, t. 6: 6; 35: 13.

¹³⁴ Vinski-Gasparini 1973, 221, t. 105: 7; Lamut 1988–1989, t. 12: 3.

¹³⁵ Pahič 1972, t. 35: 16; Kaerner 1989, T. 48: 2; 85: 4; Pare 1998, Abb. 25: 21.

¹³⁶ Balen-Letunić 1987, 5, t. 2: 1; Pahič 1972, t. 13: 2; Stare, F. 1975, t. 56: 8,9; Lamut 1988–1989, t. 12: 3; Velušček 1996, 64.

¹³⁷ Kalicz-Schreiber 1991b, T. 15: 2.

¹³⁸ Dular et al. 2002, fig. 9: Sk 4; Strmčnik Gulič 1988–1989, t. 7: 14.

¹³⁹ This variant also includes object G1246 (Črešnar 2011).

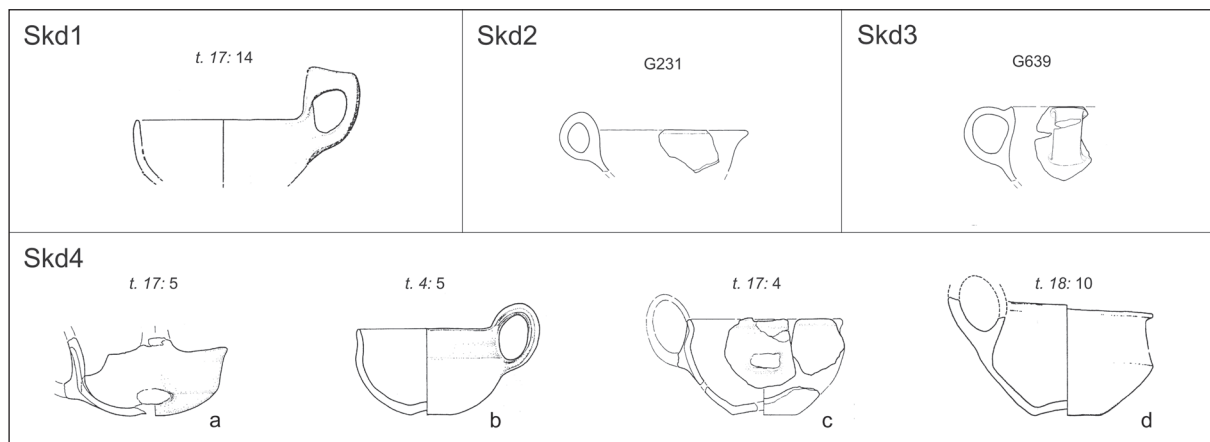


Fig. 10: Typological table of cups (Skd). Scale = 1:5.

Sl. 10: Tipološka delitev skodelic (Skd). M. = 1:5.

A cup of the second variant (Skd4b) has a hemispherical lower body and a low curved neck (*pl. 4: 5*). Its base is concave with rounded transition to the body.

Representative of the third variant (Skd4c) is a vessel with a concave base and a sharp transition to the body (*pl. 17: 4*).

The fourth variant (Skd4d) represents a biconically formed cup with a curved base with sharp transition to a slightly convex body. The transition between the body and the conical neck is strongly carinated. The rim is strongly everted (*pl. 18: 10*).

Several different analogies can be found for the cups of the first variant (Skd4a), the earliest of which dates to the late Middle Bronze Age (Br C2), or more precisely to the eponymous pottery hoard from Maisbirbaum. This cup does not have an upswing handle above the rim, which is reconstructed on the studied cup, but its form is almost identical. Apart from this example, cups decorated with lines of incisions or impressions executed with a sharp tool on the neck-to-body transition are interesting as these are identical to decoration seen on the dish Sv1b.¹⁴⁰ A fragment from Rabelčja vas can be considered as the most similar Slovenian example.¹⁴¹ Further examples, bearing broken off upswing handles similar to those on the studied cup, come from the Horn cemetery, dating to the Ha A1 period. A contemporary cup comes from grave 3 at Balatonmagyaród Hídvégpuszt, where it is dated to the later period of the site. A similar and contemporaneous cup with more accentuated carination at the body-to-neck transition and slightly more everted rim, was yielded from grave

13, and was found together with a dish Sz3b with oblique channelled decoration on the rim and a wide pot.¹⁴² Its form strongly resembles an amphora of variant A2a. Furthermore, curved rims with smooth transitions to upright, curved necks (U2i) could belong to such pots. Analogous cups (Skd4a) were also found in a (settlement) pit at the Beli Manastir-Ciglana site, where also a fragment of a vessel with obliquely faceted shoulder and a club-headed pin were discovered. The context dates to the earlier phase of the Zagreb group, which corresponds with the second phase of the Urnfield period hoards of northern Croatia, i.e. Ha A1.¹⁴³

The two hemispherical cups with short curved necks (Skd4b) have parallels in settlements at Slivnica and Ormož, where cups were found in the first phases of the sites and are dated to the early Ha B period. A contemporary cup is also known from Gornja Radgona, where it is dated to Horizon II. Another comparison comes from grave 11 at Pobrežje, which was, based on a tall biconical pot, functioning as an urn, dated to the late period of the cemetery according to Pahič, or to Ha B2 according to Müller-Karpe.¹⁴⁴ Perhaps the earliest example was found at the settlement of Kalnik near Križevci, dated to the second and the third period of the Urnfield Culture according to Vinski-Gasparini, where most of the bowls and small dishes still show sharp body-to-neck transition.¹⁴⁵

¹⁴² Horváth 1994, T. 13: 5, 14: 1,2,4.

¹⁴³ Vinski Gasparini 1973, 177, t. 22: 1-7; 1983, sl. 35: 12.

¹⁴⁴ Pahič 1972, t. 1: 15; Horval Šavel 1981, t. 1: 15; Strmčnik Gulič et al. 2000, t. 111: 5,6.

¹⁴⁵ Vrdoljak 1994, t. 27.

¹⁴⁰ Neugebauer 1994, 163, Abb. 89: 14,16, 90: 15.

¹⁴¹ Strmčnik Gulič 1988-1989, t. 6: 24.



Fig. 11: Determined type of tray. Scale = 1:5.

Sl. 11: Prepoznani tip pladnja. M. = 1:5.

The third variant (Skd4c) can be compared with a dish from the settlement at Gornja Radgona, which is dated to the earliest settlement phase or Ha A. Later morphologically similar vessels, most probably bowls, come from cemeteries. They were identified in graves 4 and 27 from Mladinska ulica in Maribor, where bowls/cups were found together with low oval handled pots with everted rims. The latter have analogies in graves 31 and 38 at Pobrežje, which are, based on bracelets decorated with bunches of oblique alternating lines, dated to Ha B2 according to Müller-Karpe. Two analogous bowls/cups were also discovered in grave 38 from the Ruše I cemetery and in grave 19 from the Ruše II cemetery, dated to Ha B2 according to Müller-Karpe.¹⁴⁶ At this stage, it is necessary to mention an example from grave 2 from the SAZU courtyard in Ljubljana, dated to the first phase of the cemetery. The grave also contains an onion-headed pin with a twisted neck, which has a parallel in a pin from grave 9 at Dobova, dated to Period II of the cemetery.¹⁴⁷

Cups of the fourth variant (Skd4d) have parallels at the Balatonmagyaród-Hidvégpuszt cemetery, in a period which based on the occurrence of new forms of vessels and an appearance of oblique channelled decoration, is dated to the Ha A1 period.¹⁴⁸

Tray – fig. 11

Only one tray was found at the studied site. It has a straight base with a sharp transition to a low, slightly convex body and a slightly inverted, rounded rim (fig. 11: G585).

¹⁴⁶ Pahič 1957, t. 9: 3; 1972, t. 6: 5–16, 9: 1–10; Müller-Karpe 1959, T. 109: H2; Horvat Šavel 1981, t. 6: 11; Kaerner 1989, T. 20: 3, 25: 1, 79: 3; Črešnar 2006, 145.

¹⁴⁷ Stare, F. 1954, t. 6: 1–9; 1975, t. 6: 1–3; Teržan 1995, 353–361.

¹⁴⁸ Horváth 1994, T. 13, 14; 1996, fig. 30: the lowest on the right.

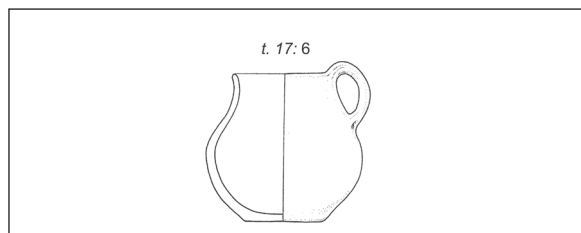


Fig. 12: Determined type of jugs. Scale = 1:5.

Sl. 12: Prepoznani tip vrča. M. = 1:5.

Jugs – fig. 12

Only one entirely preserved jug was discovered. It has a straight base with rounded transition to a spherical lower body with a smooth transition to a high, curved neck and a slightly everted, curved rim. The bottom part of the rim-exceeding handle is attached to the shoulder-to-neck transition (pl. 17: 6).¹⁴⁹

The jug could be compared to one of the Radvanje jugs without reliable grave groups. A jug from the Maribor cemetery and two pitchers from graves 29 and 8/1993 from the Ruše II cemetery, with the latter being one of the latest specimens of the necropolis, are also similar.¹⁵⁰

Amphorae (A) – fig. 13

Type A1 (fig. 13)

Amphorae with high conical necks. We distinguish two variants, based on morphology.

The first variant (A1a) comprises an amphora with rounded lower body and a slightly carinated shoulder-to-neck transition. The strongly everted, curved rim is internally faceted (pl. 12: 1). Shoulder-to-neck transition is decorated with shallow channelled decoration and two extrusions.

The second variant (A1b) represents a globular amphora with handles attached to its neck and with a smooth low body-to-neck transition (pl. 18: 9).

An amphora of the third variant (A1c) has a rounded biconical body with a slight carination at the shoulder-to-neck transition (pl. 12: 5).¹⁵¹

¹⁴⁹ This variant perhaps also includes objects G164, G103 (Črešnar 2011).

¹⁵⁰ Pahič 1957, t. 11: 4; Müller-Karpe 1959, T. 117: 17, 119: 21; Črešnar 2006, 146, t. 2: B3.

¹⁵¹ This variant perhaps also includes object t. 12: 6, which, on the other hand, could be a pot, known from other sites of the Ruše Urnfield group (Kaerner 1989, T. 67: 2).

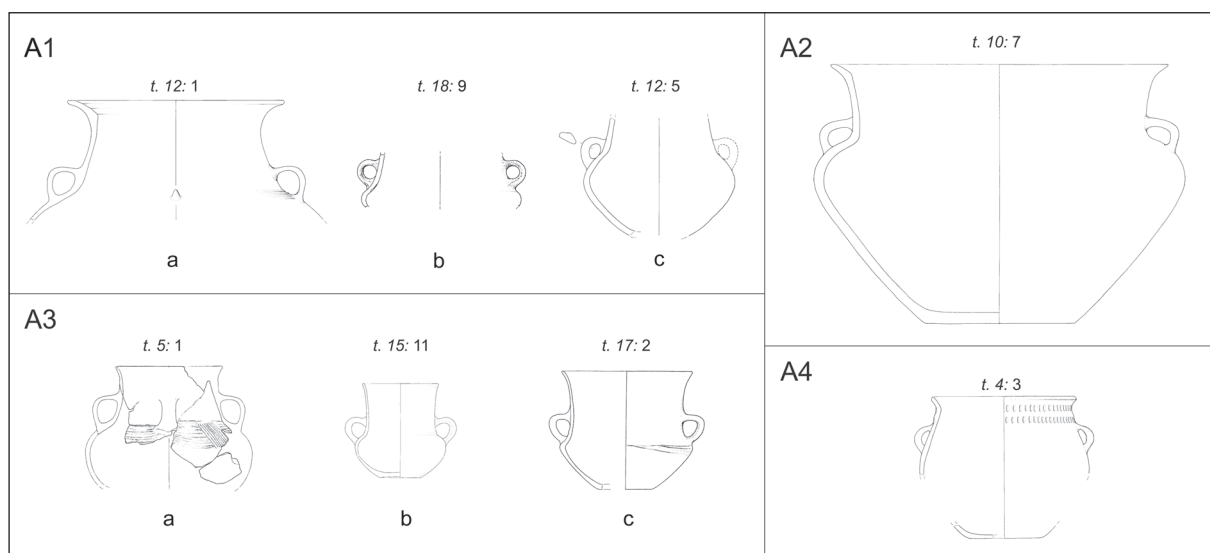


Fig. 13: Typological table of amphorae (A). Scale = 1:10.
Sl. 13: Tipološka delitev amfor (A). M. = 1:10.

The first variant (A1a), represented by only one specimen, can be paralleled with an amphora from grave 245 at Dobova, which also included a fragment of a knife with straight back and blade with extant transition to a tanged hilt. Its form dates to a broad period and it could date to either Early or Late Urnfield period.¹⁵² The decoration of both amphorae can also be compared; shoulder-to-neck transition of both vessels is emphasised with parallel lines. The handles are also interesting as they show knee-formed carination and resemble handles attached to amphorae of variants A2 and A3c, both dated to the Early Urnfield period. The latter is confirmed by the presence of an internally faceted rim. Amphorae of the second variant (A1b) have comparisons in the Late Urnfield period sites of the Drava region, where globular amphorae with low shoulders are the most common. They are known from Zgornja Hajdina, from graves 41 and 134 at Pobrežje, as well as from grave 272 at Dobova in the Sava valley.¹⁵³ The variant A1c amphora only has one morphological comparison with fragmentary pottery from Rabelčja vas. After a comparative hiatus, similarly formed pottery appears in graves 87 and 101 at Pobrežje, grave 2

in the Ruše II cemetery and grave 284 at Dobova, which is dated to the 4th phase of the site or Ha B2 according to Müller-Karpe.¹⁵⁴

Type A2 (fig. 13)

A globular amphora with a funnel neck. Its base is straight with a sharp transition to a high body. Carination is present on the shoulder-to-neck transition, which is followed by a high everted rim (*pl. 10: 7*).

The best parallels can be seen among amphorae with oblique channelled decoration, found together with the so-called “*Säulchenschüsseln*” vessels and other related vessels, which are characteristic for the Early Urnfield period, such as, for example, those present at the Horn cemetery in Lower Austria, which are dated to the developed Baierdorf-Lednice period or the Ha A1. This type was also compared with a dish of variant Sv3e and with handles with oblique channelled decoration (R2j). Above all the form of the handles with a characteristic carination can also be compared. Namely, analogous forms appear on amphorae of variants A1a and A3c.¹⁵⁵ Analogous vessels with identical handles can also be found among contemporary material of the Čaka Culture in Slovakia.¹⁵⁶ Similar vessels continue to appear in later periods. They are present in the

¹⁵² It is similar to the knives of the types Stillfried and Reipersdorf as defined by Říhový (1972, 55–58, 60–61, T. 18: 199, 19: 207, 21: 233) and later also from Jirán (2002, 59–60, T. 20: 215), who also discusses their broad definition.

¹⁵³ Müller-Karpe 1959, T. 117: 33; Stare, F. 1975, t. 39: 2; Kaerner 1989, T. 17: 1.

¹⁵⁴ Pahič 1957: t. 1: 3; 1972, t. 18: 9, 20: 14; Stare, F. 1975, t. 42: 10; Strmčnik Gulič 1988–1989, t. 6: 33.

¹⁵⁵ Lochner 1991a, T. 12: 2, 18: 2; 1994, 198–199, Abb. 106.

¹⁵⁶ Paulík 1962, Abb. 35: 1.

Zgornja Hajdina and Pobrežje cemeteries and have the typical smooth shoulder-to-neck transitions and richly incised or grooved decoration, characteristic of the Late Urnfield period.¹⁵⁷

Type A3 (fig. 13)

Amphorae with curved necks. We distinguish two variants, based on morphology.

The first variant (A3a) represents an amphora with rounded body with a slight carination on the transition from the shoulder to the high neck. Its rim is slightly everted (*pl. 5: 1*).

The second variant (A3b) comprises two globular amphorae with slightly concave bases with a sharp transition to the body, which, with a slight carination, continues to a very high neck. The rim is slightly everted. One of the amphorae is decorated with incisions (*pls. 4: 4; 15: 11*).

Representative of the third variant (A3c) is an amphora with biconical body. The transition between its straight base and body is rounded, whereas there is a slight carination at the transition to a very high curved neck. The rim is slightly everted. The shoulder-to-neck transition of the extant amphora is decorated with oblique channelled decoration (*pl. 17: 2*).

The best analogy in the Drava region for the amphora with a rounded body and curved neck (A3a) is found at Zgornja Hajdina.¹⁵⁸ An interesting and more than noteworthy connection can be made with some of the Pannonian single-handled vessels or jugs, decorated on occasion with similar decorations, which date to the Ha A and Ha B according to Patek. She also noted a great similarity between single- and double-handled vessels, i.e. jugs and amphorae. Furthermore, she labels variants A3b and A3c as early and characteristic for the Ha A period.¹⁵⁹ Variant A3c has analogies in two graves from Pobrežje, both of which date to the early period of the cemetery. There is a further analogy grave 35 from the cemetery below Brinjeva gora. This example is decorated with oblique channelled decoration, which is similar to the ornament on the amphora under consideration.¹⁶⁰ A somewhat different decoration of horizontal channelled decoration on a morphologically similar amphora with handles with triangular cross-section, comes from the Dobova cemetery.¹⁶¹ Similarly formed single-

handled vessels or jugs are also characteristic of the Burgschleinitz cemetery in Lower Austria, which dates to the Early/Late Urnfield period transition.¹⁶² We should also make mention of good analogies at Kalnik near Križevci, dated to the second and third period of the northern Croatian Urnfield Culture according to Vinski-Gasparini. Heavily fragmented vessels come from this site and, despite poor preservation, are all interpreted as single-handled.¹⁶³ Amphorae of variant A3b with parallels at Pobrežje, which do not have reliable grave groups, are perhaps contemporaneous, as well as a single-handled vessel or a jug from the Oberravelsbach pottery hoard (Niederösterreich / Lower Austria).¹⁶⁴ An interesting analogy to the decoration on the amphora in *pl. 4: 4* (variant A3b) comes from grave 256 at Dobova, where not only the decoration with zigzag lines is present, but also the previously mentioned motif of a "triangle with two pennants on the top".¹⁶⁵

Type A4 (fig. 13)

An amphora with rounded biconical body, rounded transition from a straight base upwards continuing to the neck and the semi-everted rim. Two parallel horizontal lines of fingertip impressions are seen just below the rim. (*pl. 4: 3*).

Comparisons in decoration are present in the Initial or Early Urnfield period when fingertip impressions as independent decorations on bodies occur at Oloris, Rabelčja vas, Slivnica and in the second Ha A phase at Brinjeva gora. Local morphological analogies are less reliable, because all comparable biconical amphorae from the Drava region are notably less upright. However, they can be ascribed to the same period, as they all date to the early Pobrežje horizon, i.e. to the beginning of the Late Urnfield period.¹⁶⁶ Vessels, comparable in form and handle position are also present to the east of the study area and are characteristic for the Ha B.¹⁶⁷ A surprisingly similar vessel, but with no handles, and an almost identical decoration to the Rogoza example, was discovered at the Gladbäck cemetery in North Rhine – Westphalia.

¹⁵⁷ Müller-Karpe 1959, T. 116: 41; Pahič 1991, t. 8: 1.

¹⁵⁸ Pahič 1957, t. 11: 1; 1972, t. 14: 10; 1991, 87; Müller-Karpe 1959, 121–122, T. 114: E2, 117: 30; Pare 1998, Abb. 25: 31.

¹⁵⁹ Patek 1968, 97–99, T. 5: 1–5,19.

¹⁶⁰ Pahič 1972, t. 12:1, 14: 15, Pahič, V. 1988–1989, 186, t. 10; Pittioni 1954, 409–444, t. 294, 296, 297.

¹⁶¹ Stare, F. 1975, t. 17: 6.

¹⁶² Lochner 1994, Abb. 112.

¹⁶³ Vrdoljak 1994, t. 25: 2, 30: 1,2.

¹⁶⁴ Pahič 1972, 33: 9; Lochner 1994, Abb. 108.

¹⁶⁵ Stare, F. 1975, t. 37: 3; Črešnar 2006, 141–142.

¹⁶⁶ Pahič 1972, t. 8: 5, t. 17: 1–2; Stare, F. 1975, t. 42: 10; Oman 1981, t. 11: 7; Strmčnik Gulič 1988–1989, t. 3: 3; Strmčnik Gulič et al. 2000, t. 111: 1; Dular et al. 2002, fig. 11: O16.

¹⁶⁷ Patek 1968, T. 8: 3.

Some of the material from the cemetery of over 200 burials can be directly related to the area of the southern German Urnfield Culture and was probably used in the Ha B.¹⁶⁸

Pots (L) – figs. 14, 15

Type L1 (fig. 14)

Cylindrical or slightly funnel-shaped pots with rims that are vertical or slightly leaning outwards. The majority of rims are rounded (*pls. 1: 3; 14: 18*), some are thickened (*fig. 14: G483, G934*) and one is obliquely cut (*pl. 9: 2*). While the latter is decorated with fingertip impressions and with an ornamented rib attached just below the rim, others carry impressions or attached ribs.¹⁶⁹

The relatively numerous pots have perhaps fewer analogies than we would expect, but they show an extremely long time span. They are present at Oloris, from the Br C/Br D onwards, as was also the case in Pannonia.¹⁷⁰ This is followed by examples from the second Ha A phase of Brinjeva gora, by finds from the Early Urnfield period settlement at Dolge njive near Šikole, and also by finds from the later period of the Brinjeva gora cemetery and at Hajndl near Ormož, where they date to the Urnfield period/Early Iron Age transition. This form was also found in trench 64 at Poštela, among material of Poštela horizon III.¹⁷¹ Pots with slightly everted rims occur among material from Šiman near Gotovlje, Slivnica, Pobrežje, with the latest example from Hajndl near Ormož.¹⁷² The internally cut rim is also interesting (*pl. 9: 2*). It has comparisons at the Early Urnfield period site of Dolge njive near Šikole, where such a pot is decorated with a smooth plastic rib, and in the second horizon of the settlement at Ormož, where it is dated to the Urnfield/Hallstatt period transition. A pot with a similarly formed rim was also discovered in grave 138–139 at Dobova.¹⁷³ A somewhat more distant analogy, decorated with an

ornamented plastic rib, similar to a fragment from Rogoza, was found in the Ha B1/B2 settlement at Kalakača on the Danube.¹⁷⁴

Type L2 (fig. 14)

Oval pots with rims that are tilted inward. Rounded rims prevail (*pls. 7: 6; 9: 17, 21; fig. 14: G885*), but horizontal (*pl. 15: 1; fig. 14: G551*), obliquely cut (*fig. 14: G626*) and thickened rims also occur. One is decorated with curved channelled decoration (*pl. 7: 6*), two with extrusions, one with smooth cordons and one has lugs attached below the rim.¹⁷⁵

L2 pots like L1 pots show a long period of use. The earliest comparisons from Oloris, i.e. from Br C/Br D are followed by widely contemporaneous finds from Slivnica, Pobrežje, the first horizon at Ormož and from nearby Hajndl. The latest parallels were, again, discovered at Poštela, in trench 77, dated to settlement horizon III. Finds from Burgstall at Kleinklein are also similar and they are present from the first to the last horizon of the site.¹⁷⁶ The smallest among them with lugs attached below its rim can be paralleled with a smaller pot from the Early Iron Age grave 27 from Nova Tabla near Murska Sobota.¹⁷⁷ A pot with an internally cut rim has only one parallel, in the first Ha A phase at Brinjeva gora. This is, of course, not enough for determination of its date. It is however interesting that variant L1 pots with similarly formed rims also appear as late as in Ha A.¹⁷⁸ A triangle decoration, formed of smooth applied cordons, is also interesting as it can be traced in analogous form on pots from Oloris and also on pots from the Late Urnfield period cemetery at Pobrežje.¹⁷⁹

Type L3 (fig. 14)

Two most probably bucket-like or ovally formed pots with low shoulders and vertical rims (*pl. 7: 7*).¹⁸⁰

The oldest comparison is seen with a strongly fragmented pot from Šiman near Gotovlje, ascribed to mixed layer and dated according to the

¹⁶⁸ Wand-Seyer 1985, 20–22; t. 1: 3.

¹⁶⁹ This variant also includes objects with rounded rims G321, G674, G721, G828, G989, G1235, G1241 and with thickened rims G40, G131, G1286 (Črešnar 2011).

¹⁷⁰ Dular et al. 2002, t. 15: 7; Patek 1968, 111–112, T. 8: 11.

¹⁷¹ Oman 1981, t. 17: 5; Teržan 1990, t. 9: 1; Mele 2003, pril. 4: 2b; Žižek 2005, t. 16: 1.

¹⁷² Tomažič 2000, t. 34: 4; Strmčnik Gulič et al. 2000, t. 83: 4; 2006, t. 12: 143; Mele 2003, pril. 4: 2c.

¹⁷³ Stare, F. 1975, t. 22: 3; Lamut 2001, t. 13: 3; Žižek 2005, t. 17: 3.

¹⁷⁴ Medović 1988, sl. 45: 15.

¹⁷⁵ This variant also includes objects G203, G539, G1088, G1140, G1129, G1169, G1185, G1310 (Črešnar 2011).

¹⁷⁶ Lamut 1988–1989, t. 5: 6; Smolnik 1994, T. 5: 9, 28: 12; Strmčnik Gulič et al. 2000, t. 140: 1; 2006, t. 7: 4; Dular et al. 2002, t. 37: 1, 39: 5; Mele 2003, pril. 4: 3a.

¹⁷⁷ Guštin, Tiefengraber 2001, sl. 4: 5.

¹⁷⁸ Oman 1981, t. 3: 2.

¹⁷⁹ Pahič 1972, t. 2: 3; Dular et al. 2002, t. 60: 1, 62: 10, fig. 11: O6.

¹⁸⁰ This variant also includes object G533 (Črešnar 2011).

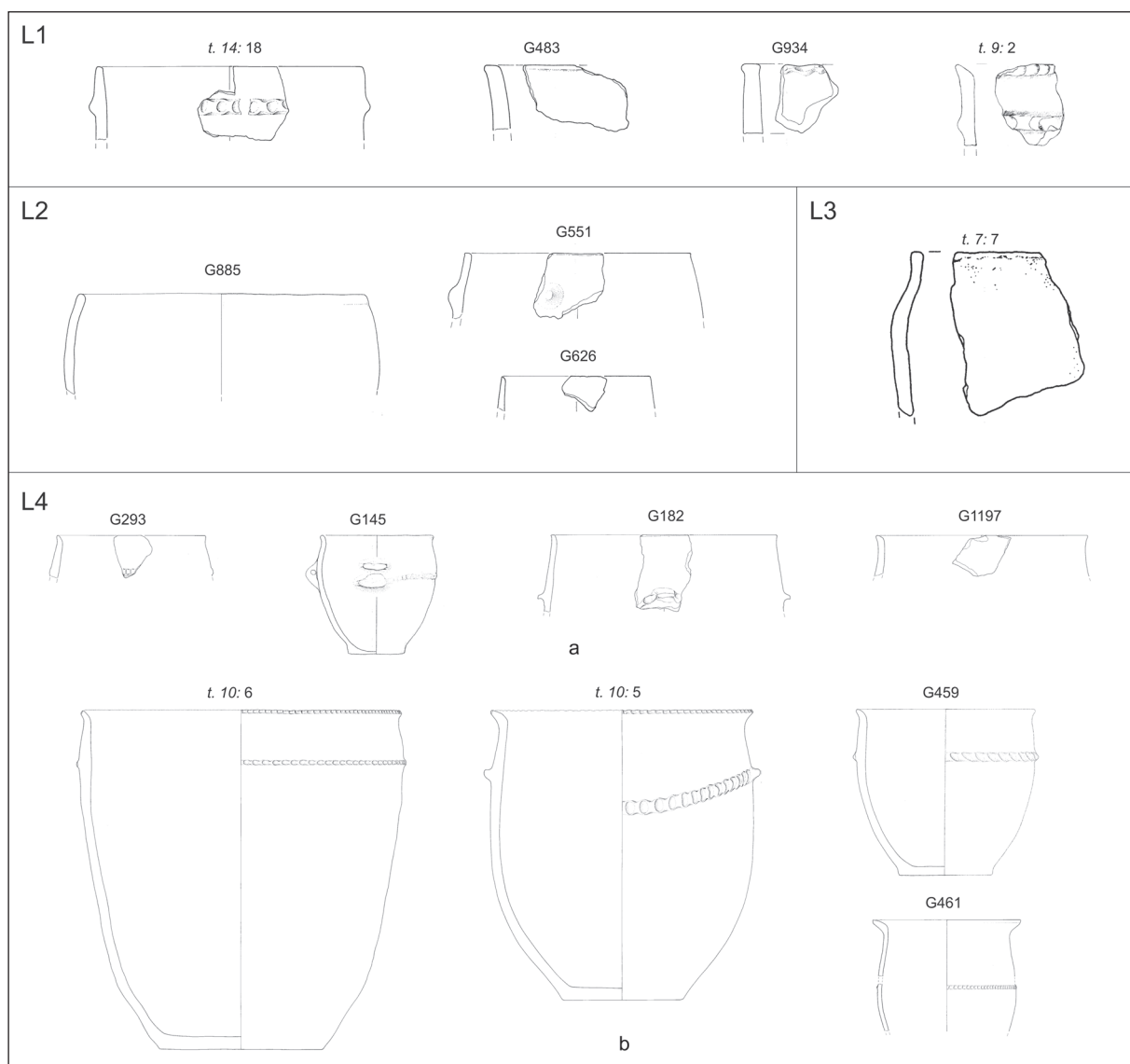


Fig. 14: Typological table of pots, part 1 (L1-4). Scale L4 = 1:10, other 1:5.
 Sl. 14: Tipološka delitev loncev, 1. del (L1-4). M. L4 = 1:10, drugo 1:5.

central corpus of the settlement, the Br C/Br D.¹⁸¹ A comparable pot, discovered at the mining area at Schwaz in the Austrian Tyrol, comes from the Urnfield period.¹⁸² An even later comparison was recognized at the upland settlement at Kapfensteiner Kogel in Austrian Styria, dated to the Urnfield period/Early Iron Age transition. Last but not least, an analogous pot was also found in the Early Iron Age barrow 2 at Rogoza.¹⁸³

Type L4 (fig. 14)

Oval pots with slightly to strongly everted, mostly curved rims. We distinguish two variants, based on morphology.¹⁸⁴

The first variant (L4a) comprises pots with slightly everted to semi-everted rims, that can be rounded (*pls.* 7: 13; 14: 10; 16: 4; *fig.* 14: G145, G293), horizontally (*fig.* 14: G182) or internally cut (*fig.* 14: G1197). When the base is preserved, the transition to the body is saddle-shaped. They are often decorated with ornamented rib below rims or with fingertip impressions (*pl.* 7: 13). Lugs also appear below rims (*pl.* 14: 10). Their sizes vary visibly.¹⁸⁵

¹⁸¹ Tomažič 2000, t. 19: 4.

¹⁸² Rieser, Schratenthaler 1998-1999, 143-144, Abb. 28: 7-8.

¹⁸³ Penz 2001, T. 5: 7, 11; Črešnar 2011, G1262.

¹⁸⁴ This variant also includes objects G309, G563, G789, G928, G1014, G1016, G1020, G1021 (Črešnar 2011).

¹⁸⁵ This variant also includes objects with rounded rims G535, G1108, G1163 and other forms of rims G142, G232, G987, G1090, G1166, G1174 (Črešnar 2011).

The second variant (L4b) comprises pots with semi-everted to strongly everted rims. Rim-to-body transition can be thickened. Large pots with shorter rims prevail (*pls.* 1: 6; 2: 7; 4: 1; 10: 6; 11: 6), some of the larger examples also having higher, often differently formed rims (*pls.* 1: 2; 10: 5; 18: 1). Similar forms were also recognized on smaller pots (*pl.* 2: 6; *fig.* 14: G459, G461). Extant bases show saddle-shaped (*pl.* 10: 5,6) or rounded (*pl.* 1: 2) transitions to bodies. Rims are often decorated with fingertip impressions, horizontal (*pls.* 1: 2; 11: 6). A curved (*pls.* 1: 6; 10: 5) ornamented cordon can be attached below rims. Cordons sometimes include lugs (*pl.* 2: 7). Some pots are decorated with both types of decoration (*pls.* 10: 5,6; 18: 1).¹⁸⁶

The first variant (L4a) is unadorned or is decorated with a characteristic decoration of pots of this type, with ornamented cordons or with fingertip impressions on rims. It was recognized at Oloris, Rabelčja vas, where it is dated to the Br C/Br D transition. It belongs to the Ha A horizon at Gornja Radgona and was also found at the Late Urnfield period at Pobrežje, in the first settlement phase at Ormož and also at the nearby Hajndl, where it dates to as late as the Early Iron Age.¹⁸⁷

A somewhat different picture is displayed by variant L4b pots. The earliest were noted at Brinjeva gora, or more precisely in the earliest Ha A layer phase. Later, in the Ha B, they occur on almost all sites, both settlements and cemeteries. The former are Pobrežje, Gornja Radgona, Ormož and Hajndl, where these pots sometimes appear in the Early Iron Age. This is paralleled by finds from Poštela. They often function as urns on cemeteries. Such pot forms are most common at the Ruše I cemetery.¹⁸⁸ Most frequent decorations are fingertip impressions on rims and, even more common, ornamented applied cordons. Observation of stratigraphic layers at Brinjeva gora offers some chronological differentiation of the latter. Cordons with fingertip impressions occur in different forms in all stratigraphic layers, while cordons, decorated with tools in different variants, largely appear in Ha B layers. We can also notice that fingertip impressions on cordons more frequently occur in earlier layers and are, as a rule, absent from the

Late Urnfield cemeteries in the Drava region.¹⁸⁹ Such decoration is also known at the upland settlement of Špičak Gradina II in Croatian Zagorje. This is a single-phased settlement, comparable with the Ruše Urnfield group.¹⁹⁰ The difference in the dates of these forms at Gornja Radgona is also interesting. Šavel lists analogous decorations as characteristic during the II. and III. settlement horizons at this site.¹⁹¹

Type L5 (*fig.* 15)

Pots with wide rounded bodies with smooth or carinated transitions to low necks. Rims can strongly differentiate from one another. We recognise vertical (*fig.* 15: G1144), slightly everted (*fig.* 15: G646) and strongly everted rims (*pls.* 3: 1; 11: 4; *fig.* 15: G416).¹⁹² The type of pots occur in different sizes, let us emphasize only the smallest one (*fig.* 15: G497). Only one base with a saddle-shaped transition to the body is preserved, but the rim is missing. Three pots are decorated with ornamented cordons, which emphasise transition from shoulder to neck in one case. One pot is decorated with incisions and wheel-stamped impressions (*pl.* 9: 3).

A comparable pot with vertical rim, discovered in the mining area near Schwaz in the Austrian Tyrol¹⁹³ is dated to the Urnfield period. A later parallel dated to the Urnfield period/Early Iron Age transition appears at the Kapfensteiner Kogel upland settlement in Austrian Styria. The same site also produced parallels to pots of this variant, but with differently formed rims.¹⁹⁴

The best analogies for the forms with everted rims can be seen among the assemblages from cemeteries at Pobrežje, Spodnje Radvanje and Maribor.¹⁹⁵ Similar pots also occur in settlements at Pobrežje, Slivnica, Orehova vas and Brinjeva gora, where they are ascribed to different layers.¹⁹⁶

¹⁸⁶ This variant also includes objects with a shorter rim G360, G447, G477, G690, G852, longer rim G472 or smaller pots G143, G431 (Črešnar 2011).

¹⁸⁷ Strmčnik Gulič 1988–1989, t. 6: 20; Šavel 1994, pril. 48: 17; Lamut 2001, t. 3: 8; Dular et al. 2002, fig. 4: L2; Magdič 2006, t. 75: 4; Strmčnik Gulič et al. 2006, t. 9: 2.

¹⁸⁸ Müller-Karpe 1959, e.g. T. 113: H,K1; Oman 1981, t. 2: 1; Lamut 1988–1989, t. 3: 6; Teržan 1990, e.g. t. 50: 1,7; Šavel 1994, pril. 49: 1, 51: 12; Magdič 2006, 77: 3; Velušček 2002, t. 9: 5.

¹⁸⁹ Oman 1981, e.g. t. 2: 1,3, 7: 2, 28: 2,5,9, 50: 1–20. The exception may be the cordon (t. 1: 9), but the drawing in the publication is of poor quality and the assumption can therefore not be confirmed.

¹⁹⁰ Pavišić 1993, 175–177, t. 2: 1–6.

¹⁹¹ Šavel 1994, pril. 48–51.

¹⁹² This variant also includes a fragmented rim *t.* 16: 14, slightly everted rims G223, G846, G1162, G1164, G1173, strongly everted rims G515, G587, G1126, G1304 and a pot without an extant rim G589 (Črešnar 2011).

¹⁹³ Rieser, Schrattenthaler 1998–1999, 143–144, Abb. 28: 7–8.

¹⁹⁴ Penz 2001, T. 5: 6–7,15.

¹⁹⁵ Müller-Karpe 1959, T. 116: 43; 121: 8; Pahič 1972, t. 28: 1, Kaerner 1989, T. 49: 3.

¹⁹⁶ Oman 1981, t. 14: 1, 28: 5, 30: 13; Strmčnik Gulič et al. 2000, t. 143: 1; 2007, t. 20: 4; Velušček 2002, t. 5: 2.

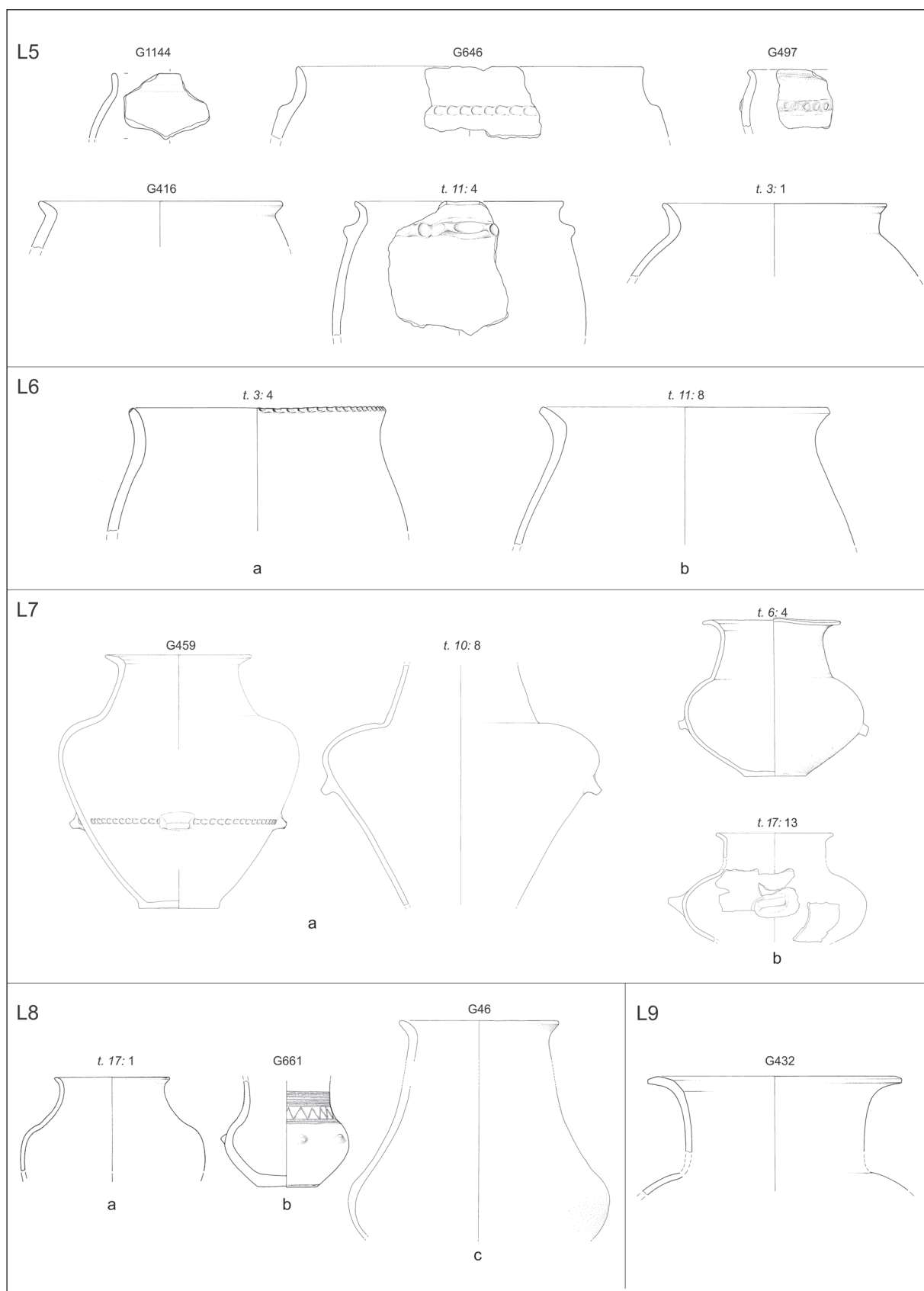


Fig. 15: Typological table of pots, part 2 (L5-9). Scale L7 = 1:10, other 1:5.
 Sl. 15: Tipološka delitev loncev, 2. del (L5-9). M. L7 = 1:10, drugo 1:5.

The specific morphology of internal areas of rims with facets, recognized on some pots, is present on somewhat rounder pots from graves 9, 12, 53 and 219 at Dobova. The rim of the first pot is reconstructed, and the grave is dated on the basis of an onion-headed pin with a twisted neck to the 2nd period of the site, the Ha A2. The second grave also included a fragment of a datable cup, which is, according to Dular, characteristic for the 3rd phase of the cemetery, the Ha B1.¹⁹⁷

The smallest pot has an interesting analogy at Dolge njive near Šikole, that is in the Early Urnfield period. All other analogies date to the Late Urnfield period. This is also valid for the pots from Ormož that date to the first horizon, the early Ha B, and from the settlement and the cemetery at Pobrežje.¹⁹⁸

Type L6 (fig. 15)

Pots with a rounded body that smoothly continues to curved neck and everted rim. We distinguish two variants.

The first variant (L6a) comprises pots with a curved neck, transitioning to a slightly everted, curved rim (*pl. 3: 4*) and is in two cases decorated with fingertip impressions.¹⁹⁹

The second variant (L6b) comprises pots with a curved neck that continues to a semi- everted to strongly everted, straight or curved rim. The majority of them are obliquely cut (*pl. 11: 5,7,8*), whereas one is rounded.²⁰⁰ One pot is decorated with an ornamented cordon that also includes a lug.

Variant L6a has a wide selection of comparisons, starting with Oloris and Rabelčja vas in the late Middle Bronze Age or the Initial Urnfield period. Pots from Slivnica and Pobrežje show that it is not a short-lived variant, as the latter most probably dates to the Late Urnfield period.²⁰¹ Variant L6b is short-term, represented in the first layer of Gornja Radgona, dated to Ha A, and in the first Ormož layer, dated to early Ha B. A similar example was found in grave 53 at Dobova that also contains a variant L5 pot.²⁰²

¹⁹⁷ Stare, F. 1975, t. 6: 3, 11–12, 12: 6, 30: 9; Dular 1978, t. 1; Teržan 1995, 338–339.

¹⁹⁸ Lamut 2001, t. 17: 8; Velušček 2002, t. 22: 2; Žižek 2005, t. 4: 2.

¹⁹⁹ This variant also includes objects G288, G362 and G731 (Črešnar 2011).

²⁰⁰ This variant also includes objects G1027, G1046 and G1042 (Črešnar 2011).

²⁰¹ Strmčnik Gulič 1988–1989, t. 5: 3; Strmčnik Gulič et al. 2000, t. 134: 2; Dular et al. 2002, fig. 4: L1; Velušček 2002, t. 7: 9.

²⁰² Stare, F. 1975, t. 12: 7; Lamut 1988–1989, t. 3: 5; Šavel 1994, pril. 48: 12.

Type L7 (fig. 15)

Pots with high conical necks that continue to a globular body. We distinguish two variants, based on morphology.²⁰³

The first variant (L7a) comprises large pots with the maximum width located high on the body. A 1:3 ratio of the height of body *versus* height of neck is important for their classification. An almost entirely preserved example has a slightly concave base with a saddle-shaped transition to the body. The lower body is slightly bulged in one case (*fig. 15: G495*) and concave (*pl. 10: 8*) in another. Its maximum diameter is on its upper part, where the shoulder continues to the neck with a carination that can be emphasised with channelled decoration. It is followed by a high, strongly everted, curved, internally faceted rim. Pots can be decorated with an ornamented cordon, sometimes with lugs, which can also occur independently. A few fragmented pots can perhaps also be included in this variant (e.g. *pl. 11: 9*).²⁰⁴

The second variant (L7b) comprises pots with the maximum width in the centre of the lower body with lugs often attached just below it. The transition from shoulder to neck is (slightly) carinated. The neck continues to a high, strongly everted, curved rim that can be internally faceted (*pls. 3: 2; 6: 4*). A reconstructed pot with an almost cylindrical neck can perhaps also be included in this variant (*pl. 17: 13*), but its preservation is exceptionally poor.

Variant L7a has analogies with a pot from Spodnje Hoče, which was dated to the Initial Urnfield period and is discussed later. Unfortunately, an unusual method of dating without comparisons has been repeatedly used.²⁰⁵ A further analogy comes from the Late Urnfield settlement on the Ptuj Castle hill, but the material from this site has not yet been studied in detail.²⁰⁶ A wider spectrum of analogous pottery was recognised at the Kalakača settlement on the right bank of the Danube, dated to the Bosut IIIa phase. This phase starts in Ha B1 and probably finishes with the end of Ha B2, according to central European chronology.²⁰⁷

Pots with lower bodies of variant L7b with characteristic lugs have analogies in all phases at Brinjeva gora, but their number greatly increases in the Late Urnfield layers.²⁰⁸ Further comparisons were found in grave 10 at Burgschleinitz in Lower

²⁰³ This variant also includes objects *t. 2: 2, 9: 8, G82, G169, G469, G793, G1078, G1119, G1257* and a pot deformed in secondary fire *t. 12: 2* (Črešnar 2011).

²⁰⁴ This variant also includes objects G614, G615 (Črešnar 2011).

²⁰⁵ Strmčnik Gulič 2004, 242; Kavur 2007, 59.

²⁰⁶ Korošec, J. 1951, sl. 8.

²⁰⁷ Medović 1988, sl. 308; Teržan 1990, 40. Similar, with some differences, are also some pots from Kalakača (for example: Medović, 1988, sl. 110: 1).

²⁰⁸ Oman 1981, t. 1: 15; 30: 1, 31: 9; 51: 1.

Austria. These are categorised as a local form and are dated to the Early/Late Urnfield period transition.²⁰⁹ Similar pots, but mostly without lugs, are discussed in the Patek analysis of the Pannonian material. Mention should also be made of a more recent find from the Budapest-Békásmegyer cemetery, dated to the Ha B1 phase of the Vál-Chotín group.²¹⁰ A similar pot without internally faceted rim was found in grave 277 at Ljubljana. This grave also included a chronologically important club-headed pin, characteristic mostly for the Initial and Early Urnfield periods, but sometimes also dated to the later phase or early Ha B period. An analogous pin also occurs in grave 36 at Pobrežje, one of the earliest graves in the cemetery.²¹¹

If the object in *pl. 17: 13* is a pot with a completely cylindrical neck, no analogies have been found in Slovenia. Such a pot is present in grave 4 at Drljanovec near Nova Rača, close to Bjelovar. This site includes material from the Virovitica as well as the Zagreb phases according to Vinski-Gasparini. Another similar pot was found in the Horn cemetery in Lower Austria, where it is dated to the developed Baierdorf-Lednice phase or Ha A1.²¹²

Type L8 (fig. 15)

Pots with curved necks. We distinguish three variants, based on morphology.

The first variant (L8a) comprises a smaller globular pot, with maximum diameter in the central part of the body. Shoulder to bevelled neck transition is slightly carinated. It finishes with an semi-everted, curved rim (*pl. 17: 1*).²¹³

The second variant (L8b) comprises a smaller globular pot with slightly concave base with rounded transition to the body, which smoothly continues to an upright neck. The shoulder is decorated with extrusions and the neck shows an incised ornament (*fig. 15: G661*).

The third variant (L8c) comprises a globular pot, the body of which continues to an extraordinarily high neck and a semi-everted, curved and rounded rim (*fig. 15: G46*).

The variant L8a pot has analogies in Sághegy in Vas county in Hungary, where it is dated to the end of the Ha A and to the beginning of the Ha B. This chronology is also probably valid for the analogy

from the settlement at Pobrežje.²¹⁴ The small variant L8b pot does not show any suitable analogies. An examination of the decoration, also related to decoration on a presumed fragment of amphora in *pl. 12: 6*, reveals analogies in the ornamental repertoire of the Ruše Urnfield group. The last did not yield any similarly formed small pots, mainly due to the occurrence of forms with globular bodies. However, some of the jugs are similar. These are also a characteristic element of the group, which is often decorated with comparable motifs.²¹⁵ Furthermore, a reliable chronological comparison of a pot with an extremely high neck of variant L8c was discovered among material from Dolge njive near Šikole. It is an important fact that the site itself is dated to a comparatively narrow period of time, the Early Urnfield period, whilst the pot itself was found in a pit along with a handle with oblique channelled decoration, which most likely represents a fragment of a "Säulchenschüssel" type vessel, typical for the Baierdorf-Lednice or Ha A1 period.²¹⁶ A somewhat later parallel originates from grave 2/96 from the cemetery at Kalsdorf near Graz in Austrian Styria, where it is dated to the Ha B1.²¹⁷

Type L9 (fig. 15)

Rounded pot with high, curved, funnel neck (*fig. 15: G432*). The rim is strongly everted and internally faceted.²¹⁸

An identical pot comes from Sarvaš near Osijek, where it represents the only extant find from a destroyed grave. It is dated to the second phase of the Urnfield Culture in northern Croatia or Ha A1.²¹⁹ Later comparisons originate from the Budapest-Békásmegyer cemetery, where identical or analogous forms of necks and rims are extremely frequent and mostly decorated with channelled decoration or facets. They are dated to the Ha B1–2. Similar pots with slightly more conical necks are characteristic for the wider area of Pannonia, recognized by E. Patek in late Ha A and early Ha B contexts.²²⁰

²¹⁴ Patek 1968, 36, 94–95, T. 11: 19, 12: 7; Velušček 2002, t. 12: 4.

²¹⁵ E.g. Kaerner 1989, T. 48: 3,74: 5, 140: 2; Pahič 1972, t. 8: 6.

²¹⁶ Lochner 1994, Abb. 106; Žižek 2005, t. 5: 2.

²¹⁷ Tiefengraber 2005, 127, T. 23: 5.

²¹⁸ This variant also includes object G417 (Črešnar 2011).

²¹⁹ Vinski-Gasparini 1973, 218, t. 25: 3.

²²⁰ Patek 1968, 94, T. 4: 2; Kalicz-Schreiber 1991a, Abb. 15: 4. Some similarity to other pots, this time with conical necks (Abb. 20: 2), and to some bowls (Abb. 19: 8, 23: 3) is also visible.

²⁰⁹ Lochner 1991b, 271, 299, T. 13: 1, 15: 1; 1994, Abb. 108: grob 10.

²¹⁰ Patek 1968, 90, T. 3: 7, 48: 24, 103:1; Kalicz-Schreiber 1991a, Abb. 22: 5; Pare 1998, 400–401.

²¹¹ Puš 1971, t. 7: 1–2; Pahič 1972, t. 8: 18; Říhovský 1979, 145–153; Teržan 1995, 330–339.

²¹² Majnarić-Pandžić 1989, t. 2: 3; Lochner 1991a, T. 24: 1.

²¹³ This variant also includes object G1221 (Črešnar 2011).

Portable oven lids (P) – fig. 16

Type P1 (fig. 16)

Hemispherical or rounded portable oven lids (fig. 16: G56, G202). Only one handle and one internally thickened base are preserved. Portable oven lids are decorated with ornamented cordons.²²¹

Type P2 (fig. 16)

Conical portable oven lids, without (fig. 16: G128) or with (pl. 15: 2) horn-like projections alongside strap handles.²²²

Strainers – fig. 17

Only fragments of strainers, which do not allow reconstruction of their form, are preserved (fig. 17: G225, G1131).²²³ One everted rim is preserved. This, along with other fragments, allows us to predict that strainers were rounded or of a conical dish-like form.

Parts of vessels

Rims (U) – figs. 18, 19

Type U1 (fig. 18)

Rims of smaller sized vessels that continue into differently formed and bent necks. Considering their morphology, they form four variants.

The first variant (U1a) comprises semi- everted to extremely everted rims, with smooth transition to curved or straight high funnel necks. They are rounded (fig. 18: G259), narrowed (fig. 18: G374) or horizontally cut on top (fig. 18: G1238).²²⁴

They could belong to dishes with everted rims, tall dishes, bowls or amphorae with funnel rims.

The second variant (U1b) comprises short, slightly to strongly everted, curved rims that smoothly or with a slight carination continue to conical or curved necks that are frequently badly preserved. Rims are rounded (fig. 18: G442), obliquely cut (fig. 18: G1305) or narrowed (fig. 18: G440, G859). Only one fragment is decorated with two horizontally incised lines and one is internally faceted.²²⁵

²²¹ This variant also includes objects G592, G651, G660 (Črešnar 2011).

²²² This variant also includes object G1288 and perhaps also rounded bases G80, G130, G213, G425, G511, G1121, G1232, G1253), vertically (G463, G1071) or horizontally cut bases (G211, G116, G436) (Črešnar 2011).

²²³ This variant also includes objects G874, G1138, G1196 (Črešnar 2011).

²²⁴ This variant also includes rounded rims G18, G23, G201, G629, narrowed rims G94, G323, G730, G936, G1100 or a horizontally cut rim G1320 (Črešnar 2011).

²²⁵ This variant also includes rounded rims G23, G257, G278, G625, G628, G712, G868, G1041, G1080 and narrowed rims G272, G606 (Črešnar 2011).

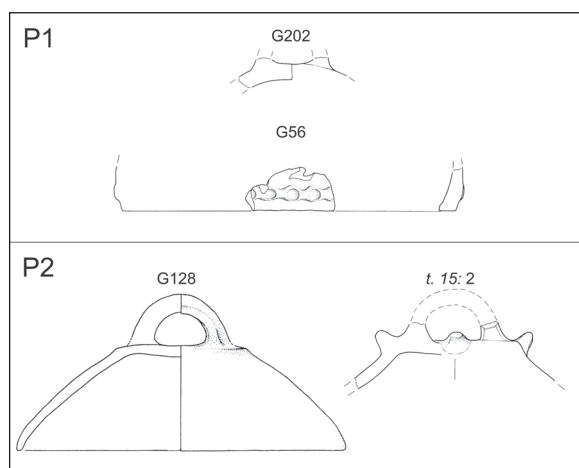


Fig. 16: Typological table of portable oven lids (P). Scale = 1:5.
Sl. 16: Tipološka delitev pekev (P). M. = 1:5.



Fig. 17: Determined type of strainers. Scale = 1:5.
Sl. 17: Prepoznani tip cedil. M. = 1:5.

They could belong to tall dishes, pitchers, amphorae and perhaps to smaller pots.

The third variant (U1c) comprises strongly everted, straight rims that smoothly or with a slight carination continue into conical or curved necks. Two rims are rounded (fig. 18: G569), two internally thickened and rounded (fig. 18: G373) and two externally vertically cut (fig. 18: G479).²²⁶

They could belong to tall dishes, amphorae or smaller pots.

The fourth variant (U1d) comprises high, strongly everted, curved rims that smoothly continue into upright (fig. 18: G295) or bevelled (pl. 16: 15; fig. 18: G576) necks and are rounded (pl. 16: 15; fig. 18: G295) or narrowed. A lug is attached just below the rim in one case.²²⁷

They could belong to large tall dishes, amphorae or smaller pots.

Type U2 (fig. 19)

Short rims of larger vessels that continue to differently formed and bent necks. We distinguish eleven variants, based on morphology.

The first variant (U2a) comprises rims on high, slightly curved necks that are leaning inwards, are vertical or slightly everted. Three rims are rounded (pl. 5: 7), two are narrowed (fig. 19: G482) and one is horizontally cut (fig. 19: G394).²²⁸ One is externally decorated with a double ornamented cordon and one carries a groove on the neck-to-body transition.

²²⁶ This variant also includes rims G159, G458, G1043 (Črešnar 2011).

²²⁷ This variant also includes object G94 (Črešnar 2011).

²²⁸ This variant also includes rounded rims G835, G1322 and a narrowed rim G1239 (Črešnar 2011).

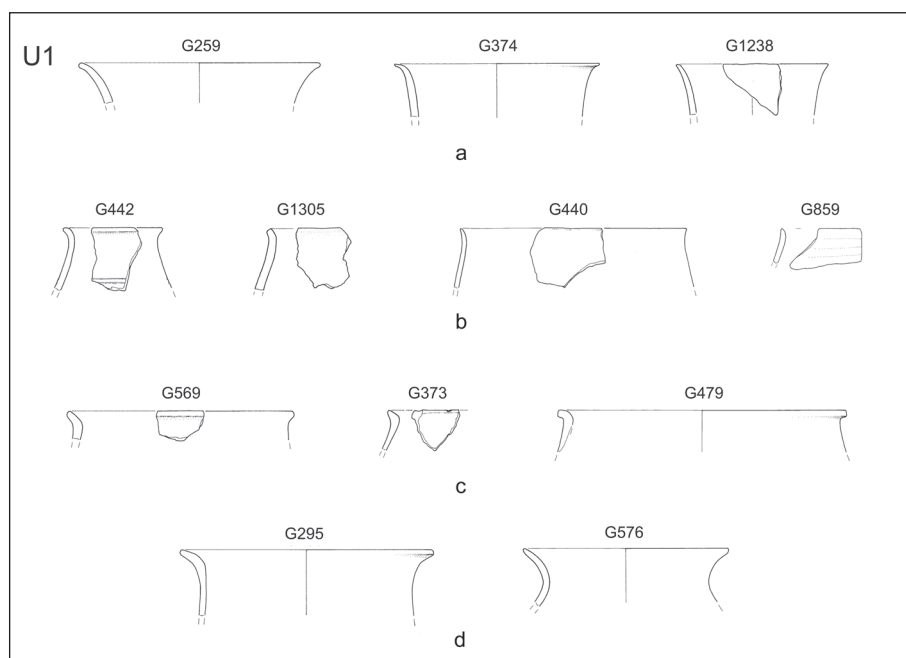


Fig. 18: Typological table of fragments of small rims (U1). Scale = 1:5.
Sl. 18: Tipološka delitev odlomkov manjših ustij (U1). M. = 1:5.

They could belong to pots, amphorae, large tall dishes and less probably to jugs.

The second variant (U2b) comprises semi- everted to strongly everted, curved rims with a smooth continuation to funnel and curved neck. The majority of lips are rounded; such fragments can be smaller (fig. 19: G724) or larger (fig. 19: G35). Two of the latter are decorated with an ornamented cordon below the rim. Rims can also be narrowed (fig. 19: G1321), obliquely (fig. 19: G729) or vertically cut (fig. 19: G260). One carries a carination on the internal side, where it is thickened, and one is decorated with fingertip impressions.²²⁹

The majority of them are probably pots, amphorae or larger dishes with everted rims.

The third variant (U2c) comprises short, slightly everted to semi- everted rounded rims with a smooth transition to bevelled, conical or curved necks (fig. 19: G468) or obliquely cut rims (pl. 7: 18; fig. 19: G850). Three rims are externally decorated with fingertip impressions, one is slightly curved and two have obliquely curved applied cordons attached below the rims.²³⁰

²²⁹ This variant also includes rounded rims of smaller G31, G32, G43, G400, G518, G618, G627, G790, G813, G916, G921, G1075, G1145, G1175, G1222, G1240, G1243, G1296, G1326 or larger dimensions G337, G518, G676, G679 and obliquely cut rims G506, G1135 (Črešnar 2011).

²³⁰ This variant also includes rounded rims G391, G650, G836, G841, G957, G1127 and obliquely cut rims G832, G1142 (Črešnar 2011).

They could belong to larger tall dishes, amphorae or pots.

The fourth variant (U2d) comprises short, strongly everted rims, that most often smoothly or with a slight carination continue into an upright, conical or curved neck. Only one rim has a strong carination at the rim-to-body transition (fig. 19: G135). Lips are rounded (pl. 1: 7; fig. 19: G87), horizontally cut (fig. 19: G847) or narrowed (pl. 7: 17; fig. 19: G1211).²³¹

They could most probably be attributed to pots.

The fifth variant (U2e) comprises semi- everted to strongly everted, curved rims that smoothly continue into upright or oblique, conical or curved necks and have rounded (fig. 19: G617, G1045), oblique (fig. 19: G285) or horizontally cut lips (fig. 19: G1307). Five rims are internally faceted, they can also be decorated with fingertip impressions.²³²

They could most probably be ascribed as parts of pots. One could even more specifically be ascribed to variant L4b or to an analogous variant and others to pots with high conical or curved necks. Some could also belong to tall dishes or amphorae.

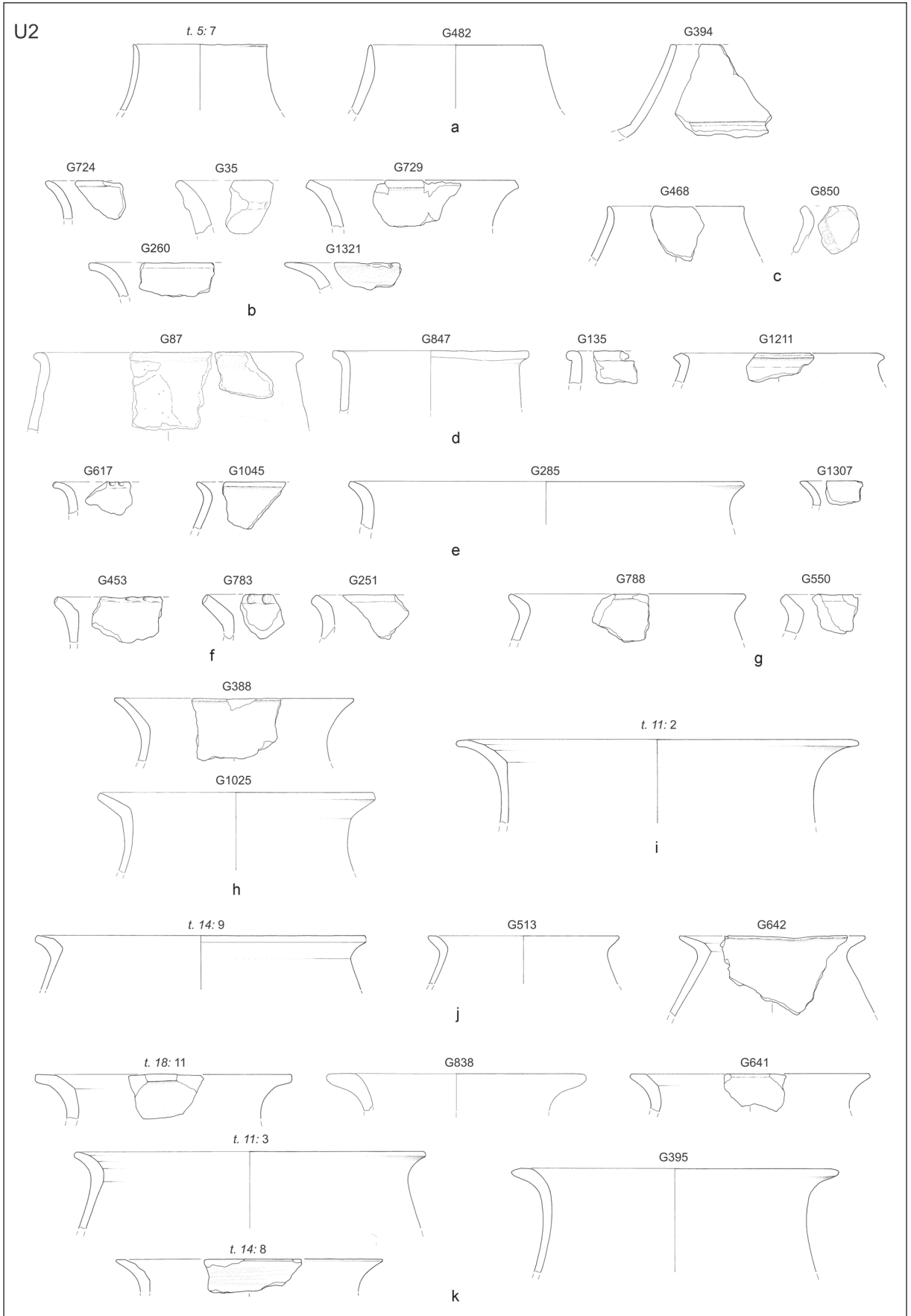
The sixth variant (U2f) comprises semi- everted to strongly everted, straight rims with smooth or slightly carinated transition to upright, conical or curved necks

²³¹ This variant also includes rounded rims G327, G480, G833, G1328 and narrowed rims G1294, G1299 (Črešnar 2011).

²³² This variant also includes rounded rims G191, G204, G226, G244, G318, G450, G574, G710, G891, G1029 and an obliquely cut rim G990 (Črešnar 2011).



Fig. 19: Typological table of fragments of larger rims (U2). Scale = 1:5.
Sl. 19: Tipološka delitev odlomkov večjih ustij (U2). M. = 1:5.



and have rounded (*fig. 19: G453, G783*) or obliquely cut lips (*fig. 19: G251*).²³³ Three of them carry carinations on the internal and at the same time thickened side, five are decorated with fingertip impressions, one has a horizontal channelled decoration, one vertical channelled decoration and one an ornamented applied cordon with an attached lug.

They could most probably be determined as parts of pots and some could even more specifically be ascribed to variant L4b or to an analogous variant.

The seventh variant (U2g) comprises semi- everted to strongly everted, straight rims, with smooth or slightly carinated transition to an oblique, conical or curved neck. Most of them are rounded (*pl. 6: 3; fig. 19: G788*) and some are obliquely cut (*fig. 19: G550*).²³⁴ Three of them carry a carination on the internal, thickened side. Five rims are decorated with fingertip impressions.

They could most probably be determined as parts of pots, and some could even more specifically be ascribed to variant L5 or to an analogous variant.

The eighth variant (U2h) comprises high, semi- everted to strongly everted, straight rims with smooth transitions to upright, conical or curved necks. The transition can be internally thickened or emphasised with a carination. Lips are rounded, horizontally (*fig. 19: G388*) or obliquely cut (*fig. 19: G1025*).²³⁵

They could be ascribed to pots or perhaps amphorae with high conical or curved necks.

The ninth variant (U2i) comprises a high, strongly everted, curved rim with a smooth transition to an upright, curved neck. The lip is rounded and internally faceted (*pl. 11: 2*).

The rim could be ascribed to a pot or an amphora with a cylindrical or slightly curved neck.

The tenth variant (U2j) comprises high, strongly everted, straight rims with a (slight) carination to bevelled, conical or curved necks. Their rims are thickened with rounded lips (*pls. 14: 9; 16: 13*) or narrowed (*fig. 19: G513, G642*).²³⁶ Most fragments are internally faceted.

They could most probably be determined as parts of pots or perhaps amphorae with high conical necks.

The eleventh variant (U2k) comprises high, strongly to extremely everted, curved rims with smooth or slightly carinated transition to conical or curved necks. Most of the lips are rounded (*pls. 1: 1; 3: 8; 9: 4,22; 11: 1,3; fig. 19: G838*), three are narrowed (*pl. 14: 8; fig. 19: G395, G641*) and one is vertically cut (*pl. 18: 11*). Rims are often internally thickened and decorated with facets (*pls. 1: 1; 11: 3; 16: 15; 18: 11*)²³⁷ or channelled decoration (*pl. 14: 8*). Two of them are decorated with fingertip impressions.

²³³ This variant also includes rounded rims G270, G384, G594, G616, G644, G664, G887 (Črešnar 2011).

²³⁴ This variant also includes rounded rims G197, G777, G810, G831, G855, G893 and obliquely cut rims G383, G660, G691, G919 (Črešnar 2011).

²³⁵ This variant also includes rounded rims G310, G393, G1228, G1256, G1311, a horizontally cut rim G387 and an obliquely cut rim G1198 (Črešnar 2011).

²³⁶ This variant also includes the rounded rim G739 and the narrowed rim G359 (Črešnar 2011).

²³⁷ This variant also includes rounded rims G11, G168, G381, G702, G750, G792, G870, G925, G929, G988 (Črešnar 2011).

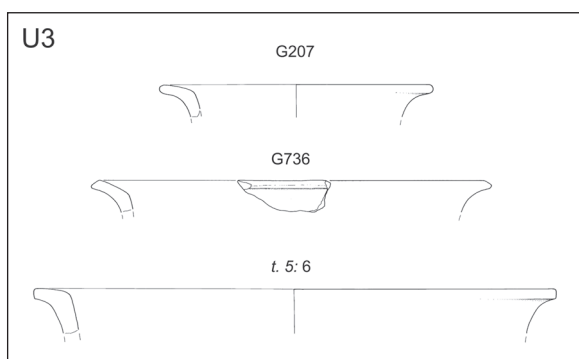


Fig. 20: Typological table of fragments of larger rims (U3). Scale = 1:5.

Sl. 20: Tipološka delitev odlomkov večjih ustij (U3). M. = 1:5.

They could most probably be determined as parts of pots or perhaps amphorae with high conical necks.

Type U3 (fig. 20)

Everted rims with a continuation of the vessel leaning inwards. They are high, strongly everted, rounded rims with smooth or slightly carinated transition to the body (*pl. 15: 5; fig. 20: G207*). Two of them are additionally externally obliquely (*fig. 20: G736*) and two vertically cut (*pl. 5: 6*).²³⁸ One of them is decorated with fingertip impressions and three are internally faceted.

They could belong to either larger dishes with everted rims, to pots or amphorae with curved or funnel necks.

The rims have many comparisons at Slovene sites and neighbouring areas. Among the Slovene ones, let us again emphasise Oloris, which yielded some faceted rims, and Brinjeva gora. The latter shows rims with internal channelled decoration, which are characteristic only for the first two phases (Ha A), while faceted rims occur also in phase 3, which is the earliest dated to Ha B. Despite this, Pahič studied them as the characteristic Ha A element. The same is true for Velušček's study of such material from Kostel.²³⁹ Variants U2e, U2g and several forms of internally faceted rims show comparisons with the Urnfield period sites from northern Croatia. The most suitable material for comparison among them originates from the settlements of Gačište – Lanica near Virovitica, dated to Br D/Ha A1 transition, Novigrad na Savi, dated from Br D to Ha B with the most intense

²³⁸ This variant also includes rounded rims G7, G263, G406, G423, G426, G514, G564, G1220, the obliquely cut rim G878 and a vertically cut rim G909 (Črešnar 2011).

²³⁹ Oman 1981, e.g. t. 2: 2, 4: 2, 7: 15, 9: 9, 22:5, 23: 4; Pahič 1981, 84; Velušček 1996, 65; Dular et al. 2002, fig. 6: L13.

settlement during Ha A, and Kalnik near Križevci, with a settlement span from Br D to the end of Ha A.²⁴⁰ Parallels can also be found in north-western Bosnia, where faceting is most common in the 3rd phase of the settlement at Zecova near Prijedor, dated to the Middle Bronze Age and mostly to the Urnfield period. Further parallels are also found in the earlier phase at Kekića glavica near Krupa in Bosnia, dated to the end of the Late Bronze Age.²⁴¹ They appear in this period and later at Kalakača next to the Danube.²⁴² Parallels can also be traced in contemporaneous horizons in Austria, Hungary and Slovakia, where they are known in the Baierdorf, Horn, Mende and Očkov cemeteries and are dated to the Br D and Ha A.²⁴³

Individual credible analogies can also be found for some other variants. Some of the variant U2a rims strongly resemble the rims of dishes and jugs in the Ruše I, Maribor and Pobrežje cemeteries.²⁴⁴ Rim U2k can be related to at least two vessels from the settlement of Kalnik near Križevci, which dates them to the Initial and Early Urnfield period.²⁴⁵ Some variant U3 rims resemble fragments of S5 dishes from Oloris and Rabelčja vas. This would date them to the late Middle Bronze Age and the Initial Urnfield period.²⁴⁶

Handles (R) – fig. 21

This study includes both fragmented handles, or handles still attached to ambiguous pottery fragments, and handles on better preserved vessels. This increases the possibility for determination of the type of vessel they belong to, and sometimes makes dating easier.

Type R1 (fig. 21)

Circular-oval handles with a much smaller opening as seen on R2, which is not suitable for holding in the hand. One handle is attached to the maximum width of an oval pot of variant L4a. The attachment point of three handles

is unknown (*pl.* 7: 19), but we presume a similar location to that seen on the mentioned fragment.²⁴⁷

Type R2 (fig. 21)

Oval handles with some examples showing a knee-formed carination, which form twelve variants according to their attachment point and outlines of their cross-sections.

The first variant (R2a) comprises upswing handles with rounded cross-sections (*pl.* 4: 5; *fig.* 21: G1246), derived from cups.

The second variant (R2b) comprises an upswing handle with an angular cross-section (*fig.* 21: G231), derived from a cup.

The third variant (R2c) comprises handles with rounded cross-sections, attached to rims (*pls.* 6: 1; 9: 9), derived from bowls.²⁴⁸

The fourth variant (R2d) comprises handles with rounded cross-sections. These are attached to the necks of bowls (*pl.* 15: 8), between the shoulders and necks of amphorae (*pls.* 12: 1; 18: 9; *fig.* 21: G776), to bodies, or have no determinable attachment spots (*fig.* 21: G505). One of the latter belongs to a portable oven lid.²⁴⁹ One of the handles is strongly narrowed in its central part and is of a so-called hourglass form (*pl.* 12: 1).

The fifth variant (R2e) comprises handles with angular cross-sections that can show a knee-formed carination and are attached between necks and shoulders (*pls.* 5: 1; 10: 7) or oval with no determinable attachment point (*fig.* 21: G209). Both determinable handles belong to amphorae.

The sixth variant (R2f) comprises handles with an externally emphasised central ridge, i.e. they are externally triangularly formed. They are attached between necks and shoulders and are oval (*pls.* 12: 5; 15: 11) or can exhibit a knee-form carination (*pls.* 4: 4; 17: 2). Some of them have an indeterminable attachment point (*pl.* 9: 13).²⁵⁰ The majority of the determinable handles belong to amphorae. Particular emphasis is placed on a large handle with an externally exposed central ridge, which is attached to a portable oven lid (*fig.* 21: G128).

The seventh variant (R2g) comprises two handles with sharp triangular cross-sections (*fig.* 21: G229).²⁵¹ The large handle with a sharp triangular cross-section with two horn-like projections belongs to a portable oven lid (*fig.* 21: G1288).

The eighth variant (R2h) comprises externally concave handles with no determinable attachment points (*fig.* 21: G525).²⁵²

The ninth variant (R2i) comprises handles that are externally decorated with two or three vertical channels (*fig.*

²⁴⁰ Vrdoljak 1988, t. 26: 3, 29: 3, 31: 5; Pavišić 1992, t. 1, 2; Majnarić-Pandžić 1993, sl. 5, 9.

²⁴¹ Benac 1959, 43–44, t. 18: 5, 19: 3; Čović 1962, 49–50, 56.

²⁴² Medović 1988, sl. 308: 18–22.

²⁴³ Paulík 1962, Abb. 14: 1; Kemenczei 1975, Abb. 2: 1, 2, 4; Lochner 1986a, T. 3: 1; 1994, Abb. 106.

²⁴⁴ Kaerner 1989, T. 48: 5; 109: 1, 129: 1, 7; Pahič 1972, t. 34: 10.

²⁴⁵ Vrdoljak 1994, t. 10: 1, 14: 1.

²⁴⁶ Strmčnik Gulič 1988–1989, t. 4: 16, 5: 27; Dular et al. 2002, 150, fig. 7.

²⁴⁷ This variant also includes objects G72, G1279 and G145 (Črešnar 2011).

²⁴⁸ This variant also includes objects G639 and G807 (Črešnar 2011).

²⁴⁹ This variant also includes objects G81, G98, G108, G118, G158, G265, G370, G408, G924 and G1137 (Črešnar 2011).

²⁵⁰ This variant also includes object G1109 (Črešnar 2011).

²⁵¹ This variant also includes object G803 (Črešnar 2011).

²⁵² This variant also includes objects G745, G1186, G1188 and G1200 (Črešnar 2011).

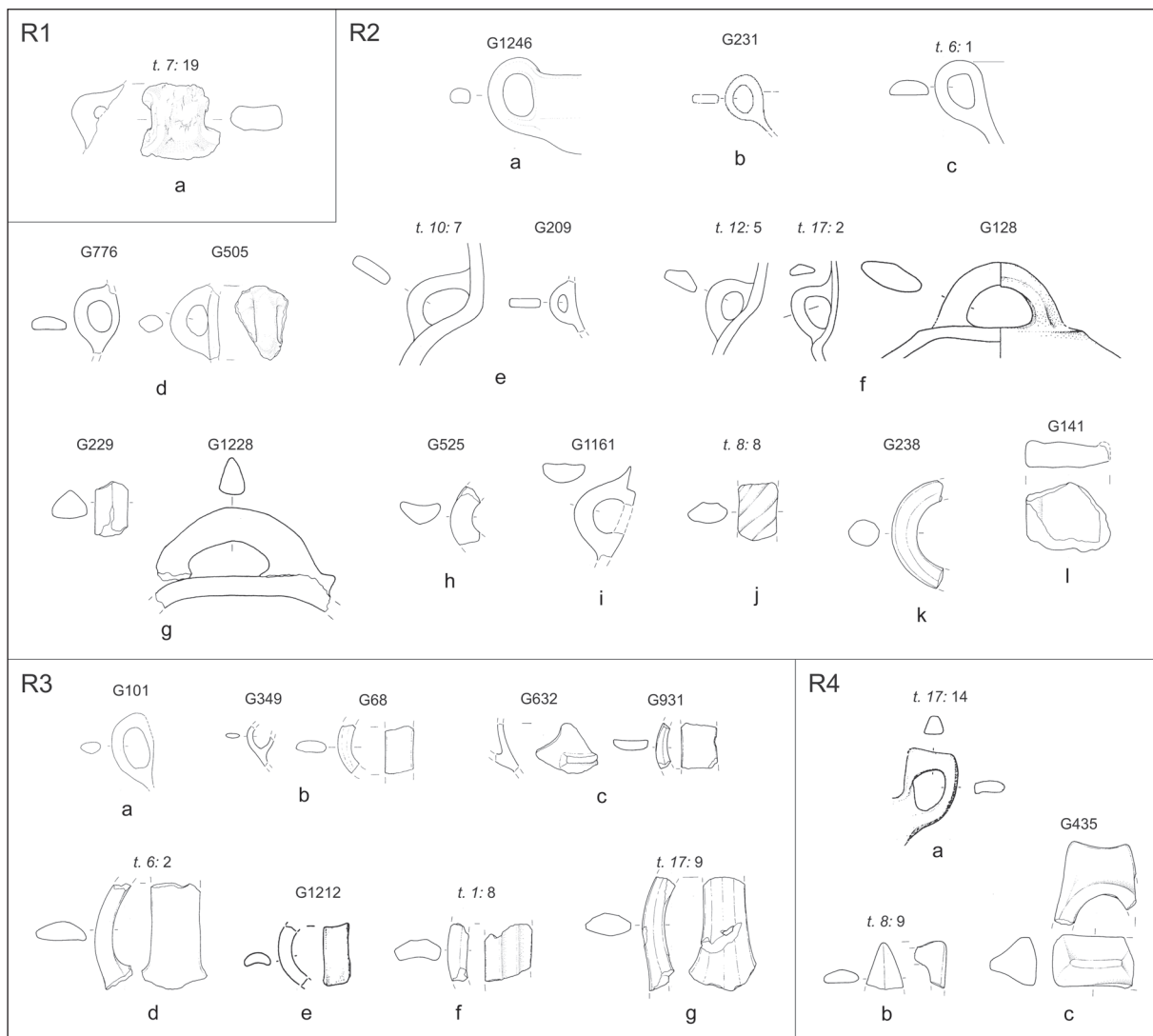


Fig. 21: Typological table of handles (R). Scale = 1:5.

Sl. 21: Tipološka delitev ročajev (R). M. = 1:5.

21: G1161).²⁵³ We were able to determine the attachment spot of only one handle that was connecting neck and shoulder, and it probably belongs to an amphora.

The tenth variant (R2j) comprises a handle that is covered with oblique channelled decoration (*pl.* 8: 8), and most probably belongs to a "Säulchenschüssel" type dish.

The eleventh variant (R2k) comprises a handle that is entirely vertically faceted (*fig.* 21: G238).

The twelfth variant (R2l) comprises a wide handle with low ribs on edges (*fig.* 21: G141) that could belong to a portable oven lid.

Type R3 (*fig.* 21)

These are mostly extended oval handles. We distinguish seven variants, based on their forms and cross-sections. Fragments comprising the first two variants are distributed

considering their appearance and/or their attachment point. Other variants comprise fragments of handles that have no determinable attachment point and that could not be included to any of the first two types. They are categorised based on their cross-sections.

The majority of these handles could be ascribed to bowls, cups or jugs.

The first variant (R3a) comprises rim exceeding handles with rounded cross-sections (*pl.* 17: 4,5,6; *fig.* 21: G101).²⁵⁴ They differentiate from one another according to their state of preservation, which makes determination of their cross-sections, sizes, attachment points, forms and types of vessels to which they belong, more complicated.

²⁵³ This variant also includes objects G96, G611, G1130 and G1287 (Črešnar 2011).

²⁵⁴ This variant also includes objects G103, G164, G307, G342, G588 and G613 (Črešnar 2011).

The second variant (R3b) comprises handles with rounded cross-sections (*fig. 21: G68, G349*).²⁵⁵ The ones with determinable attachment points were attached on inward leaning shoulders.

The third variant (R3c) comprises handles with angular or rounded rectangular cross-sections (*fig. 21: G632, G931*).²⁵⁶ The former is attached to an outward leaning body, most probably a bowl.

The fourth variant (R3d) comprises handles with externally convex cross-sections (*pl. 6: 2*).²⁵⁷

The fifth variant (R3e) comprises handles with externally concave cross-sections (*fig. 21: G1212*).²⁵⁸

The sixth variant (R3f) comprises handles that are externally decorated with two or three channels (*pl. 1: 5, 8*).²⁵⁹

The seventh variant (R3g) comprises two vertically faceted handles (*pl. 17: 9*), one only externally and the other one over the entire circumference.²⁶⁰

Let us emphasise handles of types R2 and R3 with triangular cross-sections or with an externally exposed ridge (R2f, R2g, R3d). S. Pahič already recognized an increased concentration of this type in layers under the floor of building D at Brinjeva gora. He dated this type to the Ha A. Good analogies can also be found in the area of the Baierdorf group and even among contemporaneous finds from the Bakony mountains.²⁶¹ A variant R2j handle can be correlated with an example from the settlement at Dolge njive near Šikole, which is dated to the Early Urnfield period. An analogous example was also discovered on the upland settlement at Kalnik near Križevci, where it is dated to the second and third phase of the Urnfield period in north-eastern Croatia. All these handles are probably parts of the “*Säulchenschüssel*” type vessels, which were found, for example, in the Horn cemetery in Lower Austria. These are characteristic for the developed Baierdorf-Lednice period or Ha A1.²⁶² They appear together with handles showing the knee-formed carination, recognized on many types

of the Rogoza amphorae or among handles.²⁶³ They have oval (R2e) or triangular cross-sections that were already studied, or externally emphasised ridges (R2f). The latter was also recognised among the earliest material from cemeteries at Brinjeva gora and Pobrežje.²⁶⁴ Amphorae, similar to those at Rogoza with identical handles, appear among the contemporary material of the Čaka Culture in Slovakia.²⁶⁵

Handles with external vertical channelled decoration (R2i, R3f) were used during a limited period. But they also show a certain duality. Handles, decorated in such way and with rectangular cross-sections are present during the Br C/Br D transition at Oloris. Convex handles, like the ones from Rogoza, also occur in the later phases at Brinjeva gora, which are dated to the Late Urnfield period, and appear on vessels from Ha B cemeteries.²⁶⁶ An externally vertically faceted handle (R3g) has an analogy in grave 1 in the Baierdorf cemetery in Lower Austria, which is accompanied by a handle with oblique channelled decoration (R2j) and a handle with triangular cross-section. Both are also known at Rogoza. They are dated to the Br D/Ha A transition.²⁶⁷ Additional types of chronologically narrowly determinable handles are those with a visibly concave exterior (R2h, R3e). These are completely absent from the sites of the Initial and Early Urnfield period, but they do appear in the Late Urnfield period, when they are common finds and are attached to the bowls, cups, jugs and amphorae discovered in cemeteries.²⁶⁸

Type R4 (fig. 21)

Knee-formed handles with a rounded lower part and upper part, which is knee-formed in the direction towards the body. They can be ascribed to bowls and cups. We distinguish three variants, based on morphology.

The first variant (R4a) comprises handles with a flat upper surface (*pls. 3: 9; 7: 11; 17: 3, 14*).²⁶⁹

The second variant (R4b) comprises two handles with a narrowed upper surface (*pls. 8: 9, 17: 10*).

The third variant (R4c) comprises a fragment of a handle with an external ridge that narrows upwards (*fig. 21: G435*).

²⁵⁵ This variant also includes objects G28, G486, G583, G591, G744, G824, G826, G898, G952, G1194, G1203 and G1214 (Črešnar 2011).

²⁵⁶ This variant also includes objects G156, G654, G701, G1107, G1139 and G1219 (Črešnar 2011).

²⁵⁷ This variant also includes objects G186 and G966 (Črešnar 2011).

²⁵⁸ This variant also includes objects G816 and G864 (Črešnar 2011).

²⁵⁹ This variant also includes objects G1073, G1317 and G1324 (Črešnar 2011).

²⁶⁰ This variant also includes object G74 (Črešnar 2011).

²⁶¹ Pahič 1981, 118, footnote 94, 95; Lochner 1986a, T. 2: 6; Kustár 2000, 25, t. 18: 11, 15, 19, 22.

²⁶² Lochner 1994, 198–199, Abb. 106; Vrdoljak 1994, t. 36: 4; Žižek 2005, t. VI: 1.

²⁶³ Lochner 1991a, T. 12: 2, 18: 2; 1994, 198–199, Abb. 106.

²⁶⁴ Pahič 1972, t. 14: 15; Pahič, V. 1988–1989, t. 1: 10.

²⁶⁵ Paulík 1962, Abb. 35: 1.

²⁶⁶ Pahič 1972, t. 30: 13; Oman 1981, t. 25: 4, 39: 9, 12, 48: 9–10; Kaerner 1989, T. 86: 2, 101: 4.

²⁶⁷ Lochner 1986a, T. 1: 3.

²⁶⁸ Kaerner 1989, e.g. T. 25: 1, 30: 2; 31: 5; 33: 3; 41: 1.

²⁶⁹ This variant also includes object G699 (Črešnar 2011).

Among the Rogoza examples we can recognize the types 3 and 4, which were determined by Velušček and dated to the Late Urnfield period. These two variants have been unknown in the Drava region until now.²⁷⁰ Similar, more recent finds were discovered in the Br D and Ha A1 Gačište – Lanica settlement near Virovitica, which dates their occurrence to a much earlier period.²⁷¹ Moreover, the form, presented here as variant R4c, has not been previously determined. It is only known from the settlement at Pobrežje, where it is similarly badly preserved and does not help with reconstruction of these variants of handles.²⁷²

Lugs (Dr) – fig. 22

Lugs were categorised into three types (Dr 1–3). Let us first mention the rare tunnel lugs (e.g. fig. 22: G1146).²⁷³ These are present in much larger quantities at Oloris and also at Brinjeva gora, the latest appearing from phase 3, i.e. the earliest phase dated to the Late Urnfield period. But they are nevertheless much more common in earlier phases. Parallels can be found in large quantities among the Virovitica culture material from Virovitica and Sirova Katalena. They are rare at Zagreb-Vrapče, which dates to the later Zagreb group. They are, moreover, completely absent from the Late Urnfield sites of northern Croatia and from those attributed to the Ruše group.²⁷⁴

The tongue-shaped lug is the most common type with a wide variety of forms, including the trapeze-shaped lugs with rounded cross-sections and concave sides (Dr2b – e.g. pl. 12: 7).²⁷⁵ Fragments with presumed attachment points were attached to the maximum diameter of globular or biconical vessels. They appear only at Oloris and Brinjeva gora, where they are present in the earliest and the latest three phases, which makes their accurate dating difficult.²⁷⁶

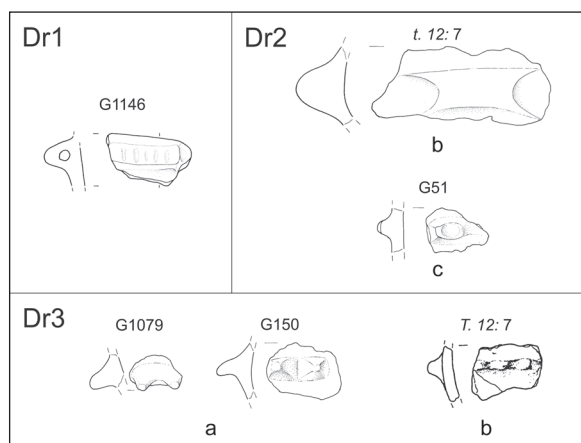


Fig. 22: Typological table of lugs (Dr), a selection. Scale = 1:5.
Sl. 22: Tipološka delitev držajev (Dr), izbor. M. = 1:5.

Lugs with rounded cross-sections and a gouge in the middle are also peculiar (Dr2c – fig. 22: G51).²⁷⁷ These are extremely interesting because of their long-term use. They appear in the Early Bronze Age and Early Iron Age periods at Slivnica and Pivola in the immediate vicinity of Rogoza. The means of production permit the identification of the Early Bronze Age examples, but the lack of difference in production technology among later specimens means that the Late Urnfield period and the Early Iron Age materials are often similar.²⁷⁸

Lugs formed from two or three horn-like projections also occur (Dr3a, b – pl. 7: 9; 12: 7; fig. 22: G150, G1079).²⁷⁹ The former have parallels in the cemeteries at Dobova, Ruše, Zgornja Hajdina and Ljubljana – Dvorišče SAZU (the SAZU courtyard in Ljubljana).²⁸⁰ Both variants also have parallels among spatially and chronologically precisely indefinable material from Poštela and on a pot from grave 6 in the Lepa ravna cemetery.²⁸¹

Bases (D) – fig. 23

Let us emphasize only those forms of bases that are connected to certain forms of vessels or are chronologically important because of other features.

²⁷⁰ Velušček 1996, 63–64, Abb. 3.

²⁷¹ Pavišić 1992, t. 6: 1.

²⁷² Velušček 2002, t. 22: 8.

²⁷³ This variant also includes objects G1242, G1289 and G1291 (Črešnar 2011).

²⁷⁴ Vinski Gasparini 1973, t. 7: 2,6, 8: 1, 11: 1–3,5,11, 14: 1, 23: 6; Oman 1981, t. 3: 11, 9: 5, 29: 17; Pahič 1981, 118; Dular et al. 2002, fig. 10: R3.

²⁷⁵ This variant also includes objects G14, G16, G34, G219, G312, G709, G820 and G1036 (Črešnar 2011).

²⁷⁶ Dular et al. 2002, fig. 10: R3, D4; Oman 1981, t. 6: 12, 29: 5, 57: 12,15.

²⁷⁷ This variant also includes objects G248, G883, G970 and G1209 (Črešnar 2011).

²⁷⁸ Teržan 1990, t. 34: 12; Lamut 2000, t. 230: 6, 235: 9.

²⁷⁹ This variant also includes objects G842, G946, G1086 and G1116 (Črešnar 2011).

²⁸⁰ Puš 1971, t. 51: 1; 1982, t. 57: 7, 59: 1; Stare, F. 1975, t. 36: 7, 44: 1,13, 46: 1, 53: 2; Kaerner 1989, t. 11: 4, 92: 4.

²⁸¹ Teržan 1990, t. 31: 21–23, 34: 9–13, 57: 5.

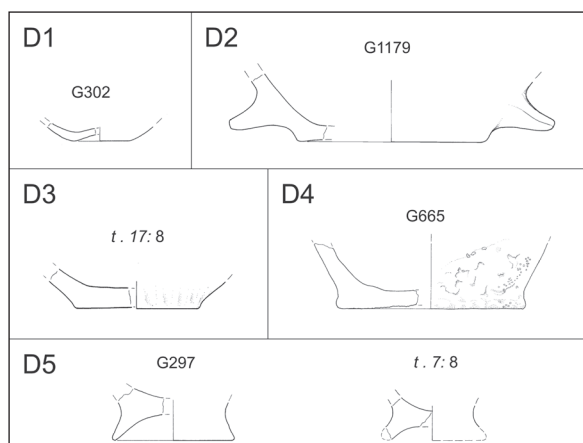


Fig. 23: Typological table of fragmented bases (D), a selection. Scale = 1:5.

Sl. 23: Dna. Tipološka delitev odlomkov (D), izbor. M. = 1:5.

Smaller concave bases with rounded transition to bevelled, rounded bodies are sometimes internally thickened or narrowed (D1 – e.g. fig. 23: G302).²⁸² Fragments of this type show parallels as early as among vessels dated to Ha A, as are, for example, the Skd4a and Skd4d cups. Their quantity increases among the material from cemeteries of the Ha B Ruše Urnfield group, where they occur on dishes, cups and small amphorae. Moreover, they are completely absent from the settlement at Brinjeva gora, which could perhaps be linked to the state of the publishing of the excavated material.²⁸³

Among bases with rounded, rarely sharp transition to bodies (D2) let us emphasise a fragment that includes a tongue-shaped lug (fig. 23: G1179). Analogies are known among broadly dated finds from Poštela and from the settlement on the Kapfsteiner Kogel in the south-eastern part of Austrian Styria, where it is dated to the Ha B/Ha C transition.²⁸⁴

Bases with saddle-shaped transitions to bodies (D3) that may be decorated with a horizontal line of fingertip impressions (pl. 17: 8)²⁸⁵ are known from Oloris and Rabelčja vas. No other comparisons have been found and we can therefore date

²⁸² This variant also includes objects G854, G889, G1148 (Črešnar 2011).

²⁸³ E.g. Müller-Karpe 1959, T. 108: A,P1, 109: A4,F1; Pahič 1972, t. 8: 2, 12: 6; 25: 2,4,8.

²⁸⁴ Pahič 1985, t. 6: 11; Teržan 1990, t. 34: 17–21; Penz 2001, T. 7: 13.

²⁸⁵ This variant also includes objects G184, G334, G460, G509 and G1000 (Črešnar 2011).

them to the late Middle Bronze Age and Initial Urnfield period.²⁸⁶

Bases with conically or roundly expanded base surface (D 4 – e.g. fig. 23: G665)²⁸⁷ are here never present on better-preserved vessels. Parallels occur at Oloris and at Rabelčja vas in large quantities. They are not so common in later periods, but pots from the Pobrežje cemetery prove the longevity of this type.²⁸⁸

Ring feet or low-footed bases were also discovered (D5). Some of them have many comparisons (pl. 7: 8; fig. 23: G297).²⁸⁹ They occur at Šiman near Gotovlje, Oloris and Rabelčja vas. Other, geographically closer and chronologically later sites did not yield any comparisons.²⁹⁰ Sites of the Virovitica group in north-eastern Croatia are particularly helpful in establishing accurate dating. This type of base could belong to characteristic footed cups, the latest of which occur at the finishing stages of the mentioned group, at the time of enforcement of the “Baierdorf” elements in the Br D/Ha A1 transition.²⁹¹

Decorated fragments of pottery

We have already discussed the technological side of decoration as well as decoration that is present on typologically determinable types of vessels, which are therefore chronologically determinable. Here, we will introduce undeterminable decorated fragments and present their comparisons.²⁹²

Despite its rare occurrence, incised decoration has a broad motif span from the simplest, with one horizontal line, to more complicated, where incisions are sometimes accompanied by prints of dots, made with unidentified tools, and the so-called wheel-stamped impressions. Such and

²⁸⁶ Strmčnik Gulič 1988–1989, e.g. t. 3: 19; Dular et al. 2002, t. 20: 8–10, 54: 1–3.

²⁸⁷ This variant also includes objects G19, G100, G192, G262, G658, G666, G853, G914, G997, G1318 and G1327 (Črešnar 2011).

²⁸⁸ Pahič 1972, t. 24: 10, 26: 11, 35: 4; Dular et al. 2002, t. 38: 2, 44: 1–3, 54: 1–2, fig. 16: 11, 18: 4.

²⁸⁹ This variant also includes objects G106, G177, G415, G867 and G1124 (Črešnar 2011).

²⁹⁰ Strmčnik Gulič 1988–1989, t. 6: 28; Dular et al. 2002, t. 8: 6–7, 9: 8, 20: 11,13; 27: 13–15, 31: 8, 19; Tomažič 2000, pril. 6: dna I, II, III.

²⁹¹ Vinski Gasparini 1973, t. 8: 5, 9: 6; Pavišić 1992, t. 5: 7.

²⁹² In our opinion, division of ornaments into narrow variants would not bring any results here due to fragmentation of the material.

similar assemblies, many of them being unique, are characteristic for cemeteries of the Ruše Urnfield group, which doubtlessly proves they were flourishing in the Late Urnfield period.²⁹³ The beginnings of their more numerous occurrence can be traced to the Early/Late Urnfield period transition, as seen in the finds from a pottery hoard at Oberravelsbach in Lower Austria.²⁹⁴

The technology of wheel-stamped impressions was used for making two similar motifs (*fig. 4: 79,80*). The first, most probably with a zigzag line below horizontal lines, has parallels over the entire Ha B period. It was found in grave 35 from Pobrežje, which is dated to the Ha B1 on the basis of a spectacle fibula with a coiled figure-eight loop, in grave 78 in the Ruše I cemetery, where a bracelet, decorated with bunches of alternating oblique lines, dates it to Ha B2, in grave 6 from Ormož, where a biconical pot with such decoration is accompanied by a double-handled jug, dated to the end of the Urnfield period.²⁹⁵ The second motif with bands of swagging below horizontal lines shows – apart from loosely dated analogies from the Pobrežje settlement and the Mladinska ulica cemetery at Maribor – parallels in phase II at Ormož, i.e. the Ha B/Ha C transition and in the broadly contemporary grave 5 at Lepa ravnica below Poštela.²⁹⁶

The majority of decorations with impressed dots or tiny circles were made with a selection of accessories that did not produce accurate shapes. They were used over the entire Late Urnfield period. Here, we have to emphasise larger accurate shapes of filled and empty tiny circles, which are rarer and were perhaps made with special tools or stamps. Analogies for the former (*pl. 9: 14*) can be seen in the Ha B layers of Brinjeva gora and in grave 31 from Pobrežje, which definitely dates to the later Ha B2 period of the cemetery. The latter form of decoration (*pl. 17: 11*) forms parts of motifs at cemeteries at Hajdina, Maribor and Ruše, in the latest Ha B phase of Brinjeva gora and in the early Ha B at Ormož. Both ornaments occur at Poštela, where firedogs also carry such decoration.²⁹⁷

Rounded and conical extrusions (*fig. 4: 45–47*) individually appear at Rogoza. Parallels are known from Oloris, dated to the late Middle Bronze Age and the Initial Urnfield period, from several layers at Brinjeva gora, from the settlement at Orehova vas and from the settlements and cemetery at Pobrežje.²⁹⁸ Sets of extrusions appear in the final stages of the Urnfield period, but they do not replace individual extrusions. Both types of decoration occur simultaneously at Poštela.²⁹⁹ It appears that angular or pyramidal extrusions are somewhat later; the earliest comparison appears in the highest layer of Brinjeva gora, where sets of extrusions are also present. They occur in much greater quantities in the Early Iron Age contexts at Poštela.³⁰⁰ Some of the extrusions were dated to the Early Iron Age based on the technology of making and typological connections. However, a fragment in *pl. 14: 6*, with an extrusion, surrounded by wide channelled decoration, carries a different date. It does not have any parallels among the Middle Bronze Ages finds, when extrusions that are more convex are common. Comparison with Brinjeva gora is more probable, where a slightly convex extrusion encircled with a wide channel is present in the earliest Ha A phase and forms of extrusions alter during the Late Urnfield layers.³⁰¹ A site at Podoli near Brno offers even better comparisons that are dated to the Late Urnfield period.³⁰²

Horizontal smooth applied cordons (*fig. 4: 51*) that rarely occur at Rogoza have parallels in contexts throughout the Urnfield period and remain in use during the Early Iron Age.³⁰³ Curved lines are somewhat different (*fig. 4: 52*) as they occur only in the second horizon of the settlement at Ormož, which is dated to the Urnfield period/Early Iron Age transition, and among the material with no reliable context from the Ljubljana cemetery.³⁰⁴

In conclusion, mention must be made of a fragment *fig. 4: 54* that differs from others in decoration as well as in production technology.

²⁹³ We should mention Müller-Karpe 1959, T. 116: 41, 117: 38; Pahič 1972, t. 6: 1; Kaerner 1989, T. 2: 2, 19: 3, 42: 3 as the most similar specimens.

²⁹⁴ E.g. Pahič 1957; 1972; 1981, t. pril. 3; Oman 1981; Lochner 1986b, T. 1: 1–4, 2: 2,8; Črešnar 2006, 132–142.

²⁹⁵ Pahič 1972, t. 8: 5; Tomanič-Jevremov 1988–1989, t. 12: 3.

²⁹⁶ Kaerner 1989, T. 62: 4; Teržan 1990, t. 56: 6; Lamut 2001, t. 21: 6; Velušček 2002, t. 2: 5, 41: 3.

²⁹⁷ Kaerner 1989, T. 14: 4, 52: 3, 87: 2; Lamut 2001, t. 3: 3; Oman 1981, t. 27: 13, 49: 25; Teržan 1990, t. 6: 21, 7: 1–4, 7, 12: 4.

²⁹⁸ Pahič 1972, t. 9: 9, 14: 7; Oman 1981, t. 9: 13, 43: 19, 49: 16; Dular et al. 2002, fig. 11: 10; Strmčnik Gulič et al. 2006, t. 6: 1; 2007, t. 17: 12.

²⁹⁹ Lamut 1988–1989, t. 18: 15; Lubšina Tušek 1989, t. 12: 1; Teržan 1990, t. 4: 6, 6: 8.

³⁰⁰ Oman 1981, t. 43: 17,19; Teržan 1990, t. 8: 22, 15: 29.

³⁰¹ Oman 1981, t. 3: 3, 25: 16, 27: 5; 35: 20.

³⁰² Říhový 1982a, e.g. T. 22: 4,22.

³⁰³ Pahič 1972, t. 12: 8; Teržan 1990, t. 31: 26; Dular et al. 2002, t. 46: 19–22; Velušček 2002, t. 2: 4.

³⁰⁴ Puš 1982, t. 57: 3; Lamut 1988–1989, t. 17: 9.

The latter is similar to some fragments from the stratigraphical unit (SE) 008, but the style of decoration does not have regional comparisons. Some probable hints on its date can be found at Mistelbach (Niederösterreich / Lower Austria), where a similarly decorated jug was discovered and provided an analogy for another decorated fragment.³⁰⁵ According to the latter, we could date it to the Mistelbach-Regelsbrunn horizon of the Middle Bronze Age in the Eastern Alpine area, that is the Br B1 period.³⁰⁶

Other pottery objects and their use

Functional objects were placed into this group.

We categorised pyramidal loomweights (e.g. *pl. 13: 2–6*), spindle whorls (e.g. *pl. 14: 16*) and clay rings (e.g. *pl. 13: 1*), which were further divided into types and variants according to size and morphological features. An exceptionally rare find and consequently one that is not consequently precisely defined is a so-called weaving tablet, a triangular tablet with slightly curved sides and with rounded, perforated corners (*pl. 18: 14*).

These objects do not (yet) allow for more accurate typologically-chronological divisions. It is therefore most appropriate to compare the entire suite of these artefacts to an analogous set, discovered at Brinjeva gora. Despite the large number of differently formed objects, comparisons can be found for almost all of them.³⁰⁷

A probable weaving tablet deserves special attention.³⁰⁸ A similar object, in a poor state of preservation, was found at Hajndl near Ormož.³⁰⁹ It is probably a tablet that was used in the so-called tablet weaving (*Brettchenweberei*), where the weaver only needed a limited number of tablets and threads, depending on the desired width of the fabric (*fig. 24*). This weaving technique was perhaps already known during the Urnfield period in Europe, which – apart from Rogoza – is also confirmed by a find from the Ptuj Castle hill. The technique was widely used during the Early

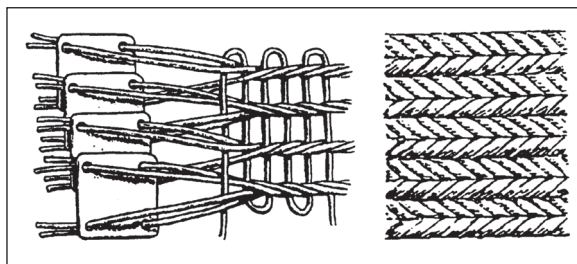


Fig. 24: Technique and the result of tablet-weaving (according to Kurzinsky 1996, Abb. 13, 14).

Sl. 24: Tehnika in rezultat ploščičnega tkanja (po Kurzinsky 1996, sl. 13, 14).

Iron Age, as is also confirmed by Poštela.³¹⁰ This weaving technique is a simple alternative to vertical looms, borne out by the presence of pyramidal weights, but it is only suitable for the weaving of narrower products.

METAL FINDS

The settlement did not yield many bronze finds; fragments of three pins, a fibula, fragments of two circlets/bracelets and one fragmented perforated tablet were found. Moreover, a copper plano-convex ingot and four amorphous lumps of copper were discovered, which are, along with four fragments of slag, important for identification of metallurgical activities in the settlement. ICP-AES analysis of their chemical composition that was performed on five of the listed objects (*fig. 25*) and is incorporated into their study, is also significant.³¹¹

Bronze finds

A cigar-headed pin (*pl. 9: 20*) with incised decoration in the form of false twisting is best preserved among the bronze objects. It was found in a posthole (SE 226), which also contained six fragments of prehistoric pottery.

³⁰⁵ That is the object G1110 (Črešnar 2011).

³⁰⁶ Benkovsky-Pivovarova 1976, t. 3: 5; Neugebauer 1994, 145–152, t. 79: 5; 80: 16.

³⁰⁷ Oman 1981, t. 30: 5–12, 14, 31: 1–7, 32: 16–17, 42: 16–18, 53: 11, 15–17, 54: 8–11; Pahič 1985, t. 11: 17.

³⁰⁸ Some doubt accompanies the interpretation as Slovenian ethnology does not know of examples made of burned clay, only wood.

³⁰⁹ Magdič 2006, t. 41: 13.

³¹⁰ Korošec, J. 1951, 328; Račič 1951, 147–148, sl. 10; Teržan 1990, t. 24: 1; Barber 1990, 118–122; Kurzinsky 1996, 15–16.

³¹¹ Analyses were made in 2008 in the Analytical laboratory at the Institute of metals and technology (*Analizni laboratorij na Inštitutu za kovinske materiale in tehnologijo*) in Ljubljana under supervision of A. Kocijan, in the framework of the research programme of the National Museum of Slovenia, led by N. Trampuž Orel, whom I also thank for helping with the interpretation of the results.

Pl. nr. / t. št.	Object / predmet	Element (wt%)													Sum / vsota	As+Ni+Sb+Co
		Cu	Sn	Pb	As	Ni	Sb	Co	Bi	Ag	Fe	Mn	Zn			
18: 13	axe / sekira (?)	90.66	0.00	0.03	2.24	0.21	6.67	0.00	0.02	0.18	0.01	0.00	0.00	100.02	9.15	
15: 9	drop with slag / kapljica z žilindro	95.07	0.27	0.04	2.74	0.09	0.18	0.07	0.00	0.03	0.08	0.00	0.00	98.57	3.12	
6: 5	plano-convex ingot / pogača	96.18	0.03	0.01	0.82	1.11	0.59	0.04	0.00	0.08	0.42	0.00	0.01	99.29	2.56	
9: 10	circlet / obroček	80.90	16.50	0.15	0.51	0.31	0.41	0.03	0.01	0.38	0.18	0.00	0.02	99.40	1.41	
14: 2	drop (bigger) / kapljica (večja)	90.66	0.30	0.13	0.93	1.24	4.25	0.05	0.04	0.60	0.02	0.00	0.00	98.22	6.60	

Fig. 25: Rogoza. Results of the ICP-AES analysis of the metal objects.

Sl. 25: Rezultati analize ICP-AES na kovinskih najdbah iz Rogoze.

A similar dresspin, decorated with alternating false twisting, comes from grave 30 at Brinjeva gora V. Pahič dated this grave to the early phase of the cemetery, to the HA A2/Ha B1 transition, based on a wide spectrum of finds, i.e. a vase-headed pin, a Marco type fibula according to Carancini, a double-edged razor and a spectacle fibula with a figure-eight loop.³¹² An almost identical pin originates from a hoard that is dated to Ha B1 from Pffefingen in south-western Germany. An even closer analogy was found in grave 164 at Dobova, dated to the second period of the cemetery according to Dular, i.e. to the Early/Late Urnfield period transition. Another pin of the same type was discovered at this cemetery, however, it carries different decoration.³¹³ A similar form and decoration is also present on a pin from a site at Marefy in Moravia, which is decorated with false twisting, interrupted with two bands of so-called spruce twigs.³¹⁴ Furthermore, such pins are known from the settlement at Velemszentvid in western Hungary and a hoard from the same site. Exact dating of the hoard is not determined as it shows a long time span; the latest finds date to the beginning of the Late Urnfield period. An examination of the area to the north-east of the studied site shows one example at Graz, further examples in Moravia and one example in Slovakia.³¹⁵

³¹² Carancini 1975, 37; Pahič, V. 1988–1989, 184–186, t. 1: 1–4, 6–7; Črešnar 2006, 142–143, sl. 34.

³¹³ Müller-Karpe 1959, 176–178, T. 164: 1; Stare, F. 1975, t. 9: 1, 23: 6. Dular (1978, t. 1) ascribed the pin to pins with the onion head and a broadened neck. No reasons for this interpretation were given.

³¹⁴ Říhovský 1979, T. 47: 1153.

³¹⁵ Říhovský 1979, 95–100, 150–152, T. 27: 492, 47: 1153–1156. At Velemszentvid Říhovský (1983, 35) only two pins were ascribed to this type (nr. 346, 347), but there

The studied dresspin type is categorised as a variant of club-headed pins according to Říhovský, which also includes pins with wide brimmed heads and conical-headed pins. While the later date to the Baierdorf-Velatic phase, with sporadic later specimens, cigar-headed pins are later, dated to the Domamyslice phase in Moravia, which corresponds with the Late Urnfield period. One definite example of a cigar-headed pin was discovered in a settlement at Lovčičky in Moravia. It has identical decoration to that on the example from Rogoza. It was identified by Říhovský as a stipe-headed pin (*Kolbenkopfnadel*); another analogous pin from the same site was published later. Both are attributed to settlement contexts, which are dated to the Early Urnfield period.³¹⁶

Vasič studied similar dresspins, found over a wider area of the central Balkans, together with typical club-headed pins, and dated them mostly to the Early Urnfield period, with a later example from Doroslova in north-western Vojvodina.³¹⁷

The studied pins occur in the Early and Late Urnfield periods; the best comparisons are early. It is interesting that Slovene examples, which were documented in graves, originate from the earliest phases of the relevant cemeteries, from the Ha A/

could be several more (e.g. 285, 302, 308, 338, 340, 341). Novotna (1980, 144ss) published only one such pin, but she ascribed it to the ones with twisted necks. Furthermore, the ornament is incised and the lines are horizontal (nr. 963 – Velký Grob).

³¹⁶ Říhovský 1979, 151–155; 1982b, Abb. 4: 6; 1983, 36,44, T. 36: 4; Novotna 1980, 144ss.

³¹⁷ Vasič (2003, 82ff) did not differ these pins from the others of the club-headed type, but there are some which could probably be excluded (nr. 536 – Adaševci, 545,548 – both Batajnica, 558 – Dobanovci, 561,562 – Doroslovo, 586 – Jagodina, 589 – Klenje, 596 – Male Livadice).

Ha B transition and are not present in later periods. Based on the above, this type of dresspin probably dates to the Early Urnfield period, even though it is possible that some examples are later.

In addition, two damaged pin heads are preserved. The first pin, found in the alluvium layer SE 006, could be a **pin with a typical biconical head** or, less probably, a **pin with a rounded biconical head**, which is decorated with open upright concentric triangles (*pl. 15: 14*). Its form is similar to the former type, as the concave lower part is not present anymore at the latter. However, the decoration is analogous to the second type, which is often decorated in a similar way. By contrast, this ornament does not occur on the first type, where decoration is mostly restricted to horizontal lines. Dating of pins with typical biconical heads, as defined for a wide area of the Eastern Alps by Říhový, has not yet been precisely determined as this type occurs during the entire Urnfield period, while the ones with rounded biconical heads mainly occur in Ha B.³¹⁸ The closest good comparisons to pins with biconical heads originate from northern Croatia, where they are characteristic for the first horizon of the Urnfield period after Vinski-Gasparini. A find from Laslov at Osijek dates to this period, while the head of a pin from a hoard found at Brodski Varoš near Slavonski Brod originates from the second horizon. They thus date to the Initial and Early Urnfield periods.³¹⁹

The second pin head, found in the top fill of a palaeochannel beside the settlement, is badly damaged, but most probably belongs to a type of **onion-headed pins** (*pl. 17: 16*). According to Říhový, several variants of onion-headed pins, with no chronological classification, occur in the eastern Alpine area. They are largely dated to the Late Urnfield period and are distributed from eastern France to western Hungary.³²⁰ It is necessary to mention a nearby comparison of an early example of a pin with twisted neck found in grave 2 in the SAZU courtyard cemetery in Ljubljana. This dates to phase Ia of this cemetery. These pins, as already shown by Teržan, can furthermore be paralleled with finds from the island of Krk, where they occur together with large bow fibulae with two knobs, and consequently with the



Fig. 26: Rogoza. Ring with the marked spot of the cut edge.
Sl. 26: Rogoza. Obroček z označenim mestom razkosavanja.

Adriatic-Mediterranean world of the late 11th and 10th century BC.³²¹

It is also possible that this is a pin with a thickened neck. An early example of them comes from the Peklenica hoard, dating to the first phase of the Urnfield period in northern Croatia. Another example originates from a cemetery at Zagreb-Horvati, which dates to the third phase according to the same chronology. The studied type of dresspin is a characteristic element of this phase.³²² A pin from grave 334a at Dobova, dated to the second phase of the site, is contemporary to the latter.³²³ In addition, Říhový came to a similar conclusion in observing the entire eastern Alpine world, as the studied pins most often occur from the Br C/Br D transition to the Ha A period.³²⁴

Two fragments of **smooth bronze bracelets or rings** (*pls. 9: 10; 18: 12*)³²⁵ with oval cross-sections can be conditionally ascribed to ring jewellery. However, analysis of the metal indicates that one of them probably had a greater function as being used solely as body decoration (*fig. 26*).

Analogous bracelets occur in graves of the Ruše Urnfield group, but the lenticular cross-section is much more frequent than the oval. The former can be recognised at unadorned bracelets, while bracelets that are mostly decorated with a motif of alternating bunches of incisions, and dated to Ha B2 according to Müller-Karpe, mostly have a circular cross-section, especially on the Ruše I

³²¹ Stare, F. 1954, t. 6: 1–9; 1975, t. 6: 1–3; Batovič 1983, t. 45: 5–7; Teržan 1995, 353–361.

³²² Vinski Gasparini 1973, t. 20: 5, 93: 14, 16.

³²³ Stare, F. 1975, t. 48: 12.

³²⁴ Říhový 1979, 74–95. Best comparisons can be seen at the types Deinsdorf (e.g. 398, 404, 407) and Graz (e.g. 459).

³²⁵ One comes from a sealed context (*t. 9: 10*), whereas the other comes from the arable land (*t. 18: 12*).

³¹⁸ Říhový 1979, 120–121, T. 34–36; 1983, 22, T. 7–8.

³¹⁹ Vinski Gasparini 1973, sl. 1: 10, t. 52: 35.

³²⁰ Říhový 1979, 182–188, T. 56.

urnfield and less at Pobrežje.³²⁶ Identical cross-sections can be seen on a fragment with no recorded findspot and a neck-ring from grave 26 of the Ruše I urnfield, which has a tiny diameter – and we can therefore presume that this is a child grave – and a bracelet with open ends from an unknown grave at Pobrežje.³²⁷ Another bracelet with similar cross-section originates from a hoard found at Kamena Gorica near Varaždin that is dated to the final stages of the Urnfield period in Northern Croatia.³²⁸

Additional and probably key data on one of the fragments (*pl.* 9: 10) were obtained by the ICP-AES analysis that revealed the chemical composition of the object. The high tin content (16.5%) stands out and indicates that this is a ring, used for making bronze out of copper.

An additional clue, benefiting this hypothesis, is the detection that one side of the ring is completely flat, which indicates that it was cut (*fig.* 26).

At least two hypotheses exist on how tin was added to relatively accessible copper in the process of the production of bronzes. The first hypothesis assumes that metal tin was added in the form of ingots, which were mainly discovered in South-western England and the Western Mediterranean, and the second one suggests that bronze objects with increased content of tin were added to copper. This possibility could apply to larger parts of central Europe and Slovenia, as no tin ingots have been found and low amounts of tin are usually present in objects (5.68%). The part of tin in these objects should exceed 10%. Several examples of such exceptional objects were found in Slovenia. They are not present among Br D material, but they do occur in hoards, dating to the Ha A (Debeli vrh, Hercegovščak, Hočko Pohorje and Pekel) and Ha B periods (Kanalski vrh), where they occur either as phalerae or as circlets or pendants.³²⁹ The best typological parallels for the Rogoza ring are an example from Hercegovščak, which contains 90% of tin, and rings/bracelets from Kanalski Vrh with some 70% of them containing over 10% of tin. Impurities are also important for dating. In the Rogoza ring, the total value of arsenic (As), nickel (Ni), antimony (Sb) and cobalt (Co) is not

more than 2%, with a relationship As>Sb>Ni. Analogous features are also characteristic for one of the Rogoza copper “droplets” (*pl.* 15: 9), which shows, due to the larger amount of arsenic, a higher total sum of impurities. According to previous analyses, such copper characteristics in Slovenia can mostly be connected to metallurgy in Ha A period, even though such metal remained in use until the early Ha B.³³⁰

Copper finds

A completely extant copper **plano-convex ingot** (*pl.* 6: 5; *fig.* 27), discovered in a pit (SE 370) next to the palaeochannel together with a larger pot with a conical neck, is the most outstanding metal find.

Its form and size could categorise it as an Uzsa-bánya I type, as determined by Czajlik in western Hungary. This type is dated to the beginning of the Late Urnfield period, even though earlier examples are known.³³¹ The best Slovene parallels can be found in the Dragomelj I settlement hoard, which contained 38 more or less completely preserved plano-convex ingots. Their sizes and forms strongly differentiate from one another. The size and weight of the studied ingot are analogous to the largest Dragomelj examples; in contrast, its high bell-formed cross-section is characteristic only for medium-sized Dragomelj ingots. The hoard contained an even larger amount of biconical ingots, which are also known from Kanalski Vrh and are characteristic for the area from central and northern Italy to central Slovenia during the Ha A2/Ha B1.³³²

The chemical composition of the Rogoza ingot gives much information (*fig.* 25). Considering the low content of tin (0.02–0.03%), this is a metallic copper that was created while smelting copper

³²⁶ Müller-Karpe 1959, 124, T. 108–115; Pahič 1972.

³²⁷ Müller-Karpe 1959, T. 109: A3; Kaerner 1989, T. 125: 10; Pahič 1972, t. 38: 11.

³²⁸ Vinski Gasparini 1973, t. 126: 9.

³²⁹ Trampuž Orel et al. 1996, 187.

³³⁰ Trampuž Orel, Drglin 2005, 47–49. The comparison with the Ha B hoards is slightly problematic because the majority of the analysed finds originate from the hoards of Veliki Otok, Kanalski vrh I and II. Moreover, there is only one hoard, which could be partly ascribed to this period in eastern Slovenia, but is not yet included in the overall statistics (Jereb 2009; Trampuž Orel, Urankar 2009).

³³¹ Czajlik 1996. With its diameter of 19.6cm it falls on the verge between the medium sized (15–20cm; type Uzsa-bánya I) and large (20–30 cm; type Újfalu) plano-convex ingots.

³³² Trampuž Orel, Heath 2001, 158–159; Turk 1997; Turk 2000, 14–38, 141–151.

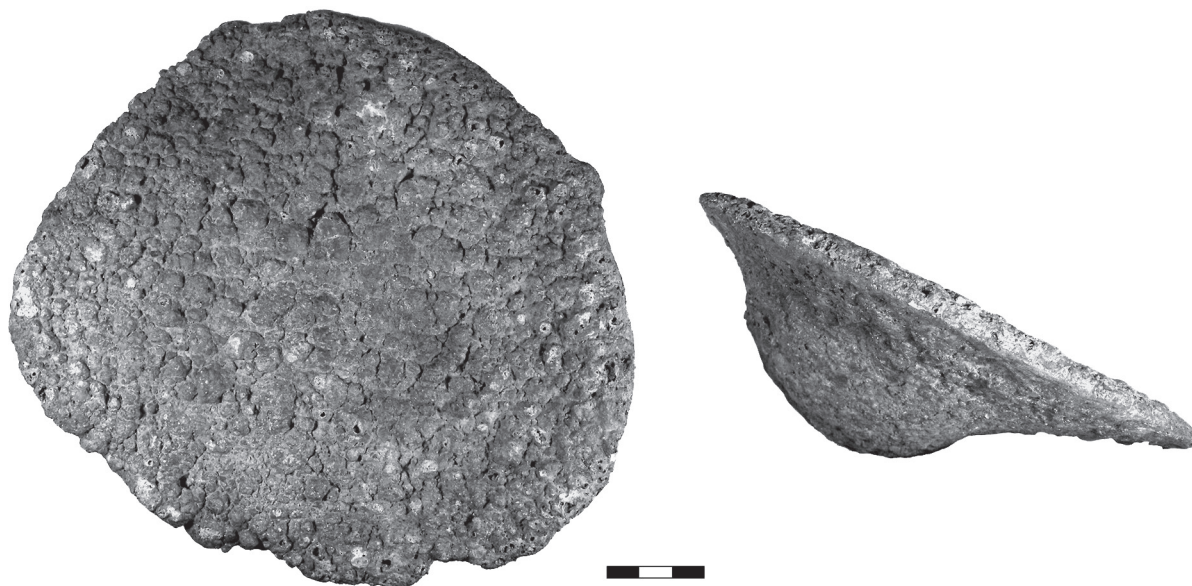


Fig. 27: Rogoza. Plano-convex ingot.
Sl. 27: Rogoza. Planokonveksna pogača.

ore in a kiln, and it carries the shape of a pit into which the metal ran. Thicker ingots, like the one from Rogoza, could only be created with the developed type of kiln that included a grid for suppressing slag.³³³

The sum value of relevant impurities (2.5%) is on average somewhat higher than the most frequent value in ingots in Ha A hoards (0.5–1.0%), which, according to comparisons, allows us to place them among Ha A as well as Ha B objects.³³⁴ Its exact determination remains unknown even on observation of relationship of the impurities, Ni>As>Sb (3rd composition group), which is very rare in Slovenia during both mentioned periods. Analyses from Switzerland determine objects with such composition as Middle Bronze Age and Initial and Early Urnfield period specimens (Br D, Ha A1), while they are very rare in the Late Urnfield period. Similar composition of copper with high values of nickel and lower values of arsenic and antimony could perhaps be seen at unpublished analyses of three part-finished products from the already mentioned Dragomelj hoard.³³⁵ These are a fragmented ingot and two plano-convex ingots that are, observing their form, very similar to

the Rogoza ingot, but smaller and consequently lighter. The value of nickel is perceptibly higher than the value of other impurities in all three specimens. The similarity to the above-mentioned finds, with the help of extensive studies conducted by N. Trampuž Orel, enables us hypothetically to search for the source of ore in the wider area of Mitterberg. These are, namely, the closest sources of copper ore with dominant nickel to Slovenia, which have evidence of mining throughout the entire Bronze Age.³³⁶

The amount of lead (Pb) with 0.01% value indicates that it is natural to the metal.³³⁷

Amorphous pieces of copper (*pls. 14: 1,2; 15: 9; 18: 13*) from different stratigraphic units from the ploughsoil down to the lower archaeological layers. Two of them (*pls. 14: 1; 15: 9*) carry impressions and remains of the surface, on which they fell in liquid or melted condition. One even has some slag preserved on it. These objects can be determined as droplets of copper, which were lost during metallurgical processes. Interpretation

³³³ Czajlik 1996, 166. As mentioned by Turk (2000, 141–142) the ingots could also be obtained by recycling.

³³⁴ Trampuž Orel, Drglin 2005, 48, fig. 6.

³³⁵ These are objects PL 3, PL 9 and PN 28 according to Turk 2000, sl. 17:1, 5; 22: 25.

³³⁶ Trampuž et al. 1996, 202, fig. 11 (introduces also a database for Switzerland – according to Rychner, Kläntsch 1995); Trampuž Orel, Heath 2001, 158,161, fig. 6a. I also thank N. Trampuž Orel from the National Museum of Slovenia for sharing the analyses results (PL 3 = As – 0.41%, Ni – 3.49%, Sb – 0.21%; PL 9 = As 0.71, Ni – 1.96%, Sb – 0.12%; PN 28 = As – 0.89%, Ni 3.87%, Sb 0.28%).

³³⁷ Trampuž Orel et al. 1996, 192.

of the last piece (*pl. 18: 13*), which is, with its c. 41g, quite heavy, is somewhat more complicated. Its form resembles a fragment of an axe blade or an ingot/fragment of an edge of a copper ingot that is “worn out” to an extent that sharp edges, which occur at cutting, are no longer visible.³³⁸

Three of the amorphous pieces were analysed. Their chemical compositions strongly differentiate (*fig. 25*).³³⁹ The above-mentioned droplet with slag attached to it (*pl. 15: 9*) contains a certain relationship between impurities that parallels it to Ha A copper. The other two finds are completely different. The somewhat larger droplet of copper (*pl. 14: 2*) shows a total of 6.5% of impurities with the relationship of significant elements being Sb>Ni>As. Meanwhile, the third object (*pl. 18: 13*), shows a total of 9.1% of impurities with the relationship being Sb>As>Ni. This is a so-called copper with antimony as the dominant element, which is characteristic for the Ha B, which is furthermore confirmed by the high value of impurities (*fig. 25*).³⁴⁰

The chemical analyses discussed above indicate that, although rare, these finds offer a varied picture of metallurgy at Rogoza.

Tin (Sn) is present in only two of all analysed objects. Four objects are made of copper, containing up to 0.3% of tin, which is characteristic for ingots dating to the Ha A and Ha B,³⁴¹ while the circlet is bronze, with 16.5% of tin. As mentioned above, this is probably a functional object, used in alloying copper to bronze.

Lead (Pb) content amounts from 0.01% (copper ingot) to 0.13% or 0.15% (circlet and droplet with slag) are within the ranges which are normal to be naturally present in ore.

The sum value of impurities of arsenic, nickel and antimony is from 1.41% to 9.15%, which indicates two groups, the first one between 1.41% and 3.12%, and the second one from 6.60% to 9.15%. Moreover, the first group with a value around 2% is mostly characteristic for objects from the Ha A, while higher values occur in the Ha B (*fig. 28*).

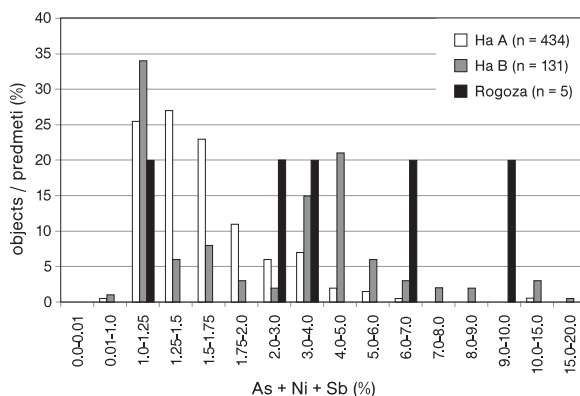


Fig. 28: Frequency of the sums of impurities of arsenic (As), nickel (Ni), antimony (Sb) in the analysed objects from the hoards dated to Ha A and Ha B from Slovenia, and their comparison with those from Rogoza (according to Trampuž Orel, Urankar 2009, sl. 91, 93).

Sl. 28: Pogostost seštevka nečistoč arzena, niklja, antimona v analiziranih predmetih iz depojev obdobja Ha A in Ha B v Sloveniji. Primerjava z rezultati analiz predmetov iz Rogoze (prirejeno po Trampuž Orel, Urankar 2009, sl. 1, 3).

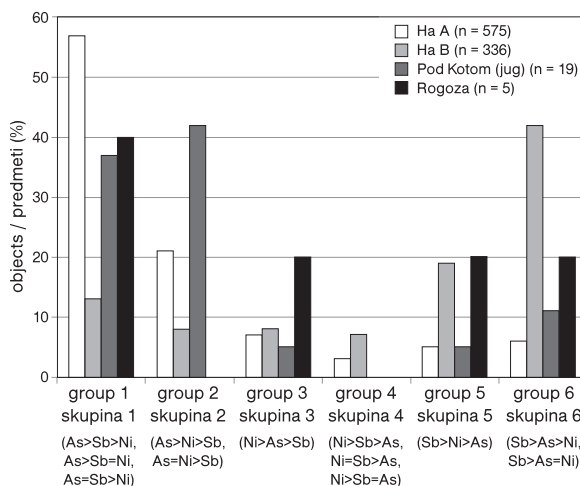


Fig. 29: Frequency of composition groups of impurities of arsenic (As), nickel (Ni), antimony (Sb) in the analysed objects from the hoards dated to Ha A and Ha B from Slovenia, and their comparison with those from Rogoza (according to Trampuž Orel, Urankar 2009, sl. 92).

Sl. 29: Pogostost kompozicijskih skupin nečistoč arzena, antimona in niklja v predmetih iz depojev obdobja Ha A in Ha B v Sloveniji. Primerjava z rezultati analiz predmetov z najdišč Pod Kotom – jug in Rogoze (prirejeno po Trampuž Orel, Urankar 2009, sl. 2).

On consideration of the relationships between the impurities studied, the artefacts can be categorised into four different composition groups (*fig. 29*). Group 1 comprises a type of copper with dominant arsenic, characteristic for objects dating to the Ha A in Slovenia and the Eastern Alps. It

³³⁸ A similar observation is reported by P. Turk (2000, 20–21) in the connection with some objects from the upper layers of the hoard Dragomelj I.

³³⁹ The object *t. 14: 1* was not suitable for analysis due to its fragility.

³⁴⁰ Trampuž Orel, Drglin 2005, 47–49.

³⁴¹ Trampuž Orel et al. 1996, 183.

is connected with a sulphide ore, i.e. chalcopyrite, but the content of iron in the droplets is so low that it cannot be derived from the primary process of metal extraction from ore. In such cases the iron content is much higher, and a similarly low content could only be achieved in the next stages of the metallurgical process.³⁴² In addition, the already mentioned group 3 with dominant nickel is documented, as well as groups 5 and 6 with dominant antimony. The latter two, in Slovenia and wider Eastern Alpine area, were used mainly in the Ha B1, when the Fahlerz type ore and other complex ores were once again used for copper production.³⁴³

In addition, four pieces of slag were discovered at the site (*fig. 30*). These – together with the already mentioned semi products, the ingot and the ring, and raw material in the form of copper droplets, which were accidentally lost – are unambiguous indicators that the inhabitants of the Rogoza settlement were engaged in metallurgical activities; however, the area of these activities has yet to be determined.³⁴⁴ All finds that were presumably accidentally lost/deposited in random places, i.e. amorphous pieces of copper and slag, were discovered outside of the central part of the settlement. All three pieces, discovered further south, along with a bronze pin-head (*pl. 17: 16*), were discovered in the palaeochannel, which means that this material was not found in its original position. In addition, the northernmost pieces of slag, discovered in the ploughsoil, are not of any significance in this context (*fig. 30*).

However, two droplets of metal (*pl. 14: 1,2*), found in adjacent quadrants play an important role. These are still partly disturbed layers, but the number of later finds is small and the significance

³⁴² Trampuž Orel et al. 1996; Klemenc et al. 1999, 146–148.

³⁴³ Trampuž Orel, Heath 2001, 160–161; Trampuž Orel, Drglin 2005, 49–50.

³⁴⁴ If only processes of alloying and moulding had been taking place in the settlement, there is little possibility to find and correctly interpret a hearth/kiln used for that purpose, since the process is not as demanding as the primary extraction of metal from the ore (Fasnacht, Trachsel 2001). But if the slag really derives from the primary process i.e. the extraction from the ore, as mentioned by E. Pernicka (Institut für Ur- und Frühgeschichte und Archäologie des Mittelalters of the Eberhard Karl University in Tübingen), we could expect some more evidence.



Fig. 30: Rogoza. Fragments of slag found in the ploughsoil. Sl. 30: Rogoza. Koščka žlindre, odkrita v orni plasti.

of copper finds is therefore larger. Towards the North and South, buildings 28, 30 and 31 were recognised, two of them containing nearby hearths. These buildings form, together with some others, the less densely occupied fringe of the settlement where the majority of hearths were discovered.³⁴⁵ More dangerous activities, connected with the intense use of fire, such as metallurgy, representing a potential danger, were perhaps accommodated outside the central living areas of the settlement, in a possible “crafts” area.³⁴⁶

Findspots of a copper ingot and a bronze ring, discovered in pits, are important as well. They were accompanied by pottery and charred cereal grains, with determinable horsebean (*Vicia faba* var. *minor*) and perhaps barley (*Hordeum*).

If, to conclude, we chronologically determine the entire corpus of metal finds, we find that both types of researches are bringing rather similar results that can easily be connected with results of the typologically-chronological analysis of the pottery. Typological analysis places the metal artefacts to the Early and beginning of the Late Urnfield period, whilst chemical analysis provides comparable dates. Namely, a comparison with the majority of artefacts with statistical data from

³⁴⁵ The site revealed eight hearths, all of which but one (no. 2) were located outside the centre of the settlement, but since a lot of the original surface has been destroyed, information is probably fragmentary.

³⁴⁶ The Slovenian missionary I. Knoblehar who was living in Sudan at the middle of the 19th century revealed many details about the metallurgy of the Nilotic peoples in his records. Metallurgists (i.e. ironworkers) were of the wealthiest social strata, but had to live outside the village and were disrespected as they did not possess cattle (Freljh 2005, 48,56).

analyses of a variety of examples discovered in Slovenia can easily be linked to artefacts dating to Ha A, but with only two artefacts that most probably belong to the Ha B.

LITHIC MATERIAL

Only 43 stone artefacts were discovered, which is a small number considering the size of the settlement and durability of the material. Despite the limited size of the assemblage, a relatively large range of types is present.³⁴⁷

Querns were the most numerous (21 pieces or 48%), followed by a perceptibly smaller number of fine pounders (4 pieces or 9%) and tools on blades (4 pieces or 9%), while other types of artefacts are represented by two example (crushers, smoothers, whetstones, flakes, axes, coarse pounders) or one of each (shafthole blank, waste flake).

It is impossible to date individual tools precisely as many of them occur in the period from the Neolithic to the Urnfield period or Early Iron Age. Despite this, we will make an attempt to introduce nearby comparisons and comparisons that could be broadly contemporaneous. The value of stone finds increases with observation of the technology of their making and their usability.

Two types of axes occur. A polished flat high trapezoidal axe, which is strongly narrowed towards the cutting part/blade, represents the first type (*pl. 5: 3; fig. 31: 1*). It is made of serpentine and its form is, similar to many other polished tools, characteristic for a longer period of prehistory. Similar and perhaps contemporary artefacts were found in settlements at Pobrežje, Zavrč and at Ormož.³⁴⁸ There is even more evidence to confirm their use as late as the Early Iron Age. They are, for example, present in some Hallstatt period graves.³⁴⁹

A shafthole axe (*pl. 15: 10; fig. 31: 2*) has a high rounded-rectangular cross-section and is strongly narrowed towards the blade. It is partly broken off at the poll, just behind the shafthole. This artefact is also made of serpentine, with its form being the

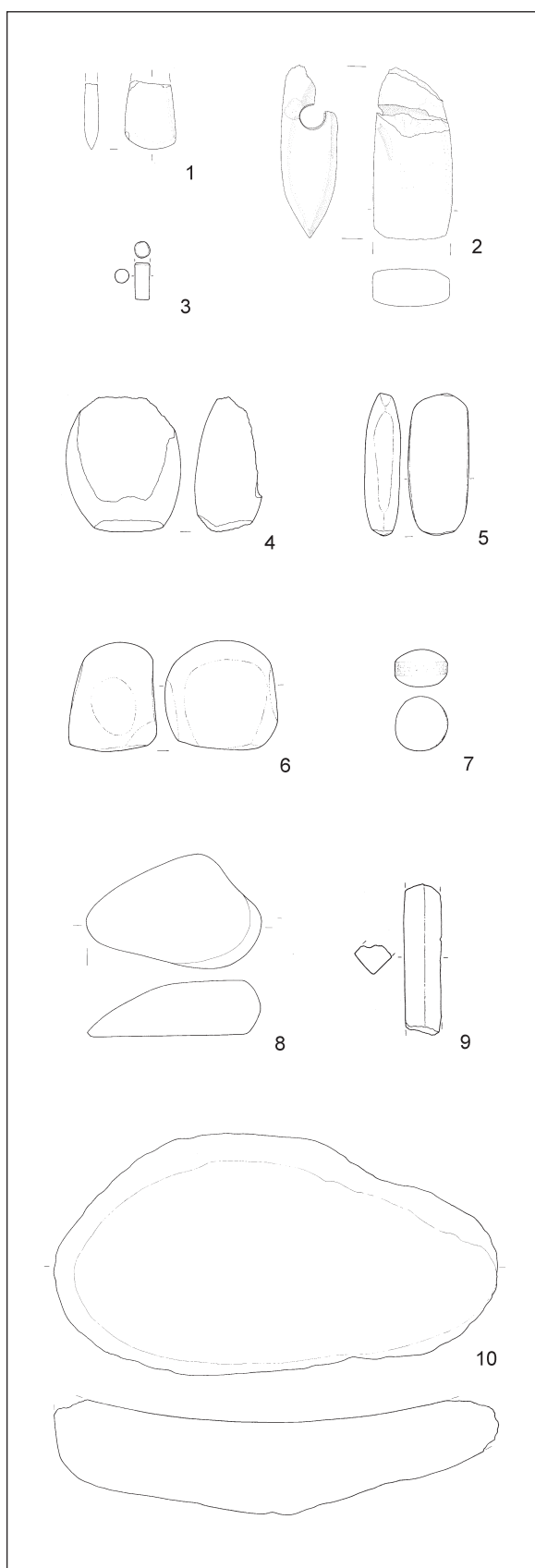


Fig. 31: Rogoza. Typology of stone tools. Scale = 1:5.
Sl. 31: Rogoza. Tipologija kamnitega orodja. M. = 1:5.

³⁴⁷ It has to be emphasized here that all the stone material is likely to be of a local provenience (Črešnar 2011).

³⁴⁸ Velušček 2002, 42: 4; Lamut 2007, 25–27, sl. 2: 6. For this information, my acknowledgements go to M. Lubšina-Tušek and A. Magdič.

³⁴⁹ Teržan 1990, t. 60: 15; Stare, V. 1973, t. 49: 10; Tecco Hvala et al. 2004, t. 31: A1, A2.

most widespread type of stone axes in north-eastern Slovenia, i.e. smaller perforated shafthole axes that most commonly occur during the late Neolithic and Eneolithic. The closest parallels can be found in stray finds of axes from Razvanje, Maribor and Zimica near Duplek.³⁵⁰

An interesting find of great expressional importance, that cannot be ascribed to tools, but is connected with their manufacture, is a slightly conical serpentine shafthole blank (*fig. 31: 3*). Its surface is covered with circular cuts that occurred on perforation by a stone tool, which is a direct evidence and mirrors technological processes that were used in the manufacturing of such tools. They used the drilling technique to make an eye for mounting of the haft. This was done with a hollow wooden or tubular bone drill, used together with quartz sand and water; this technique was experimentally tested.³⁵¹ Its dimensions (H.: 27mm, diam.: 11mm) indicate that it was created by the perforation of a smaller axe or a thinner mattock.³⁵²

Several related finds are known from the immediate environs. For example, a conical shafthole blank, dating to the Eneolithic was discovered at Spodnje Hoče. A somewhat larger example is known from the Late Urnfield period cemetery at Mladinska ulica in Maribor; a fragment of a shafthole blank from the Pobrežje settlement could also be contemporary.³⁵³ Examples from the Ormož settlement are dated to the Urnfield period and the Early Iron Age, which chronologically ends their occurrence.³⁵⁴

Pounders, crusher and smoothers (*pl. 13: 9,10; fig. 31: 4–7*) are stone tools made of different rocks (quartz sandstone, vein quartz, serpentine, tuff-pyroclastic rock) used for crushing, grinding or smoothing. They slightly differ from one another according to their form, type of wear and perhaps their usage.

The clearest and strongest wear damage can be seen on wide coarse pounders made of river cobbles with one or two badly damaged faces (*fig. 31:*

4).³⁵⁵ They differ from flat fine pounders made on partly transformed oval river cobbles, with one or two sides only slightly damaged or worn (*pl. 13: 9,10; fig. 31: 5*).³⁵⁶ For the third type of tools, let us emphasise differently formed crushers with a similar fine wear. The first one is a wide square crusher on a rectangular stone with battered edges (*fig. 31: 6*) and the second is a small flattened round crusher showing worn bands along the largest diameter (*fig. 31: 7*). Stones with completely smooth working surfaces were categorised as smoothers. The base of the first is completely straight and smooth, while the upper side has remained in its unshaped natural form (*pl. 5: 2; fig. 31: 8*); the second exhibits three sides that are completely smooth and straight with a parallel longer side and the shorter side being vertical to them.³⁵⁷

Pounders, crushers and smoothers can be studied together or separately from querns, their usability is actually nearly unlimited. Unworked river cobbles were, according to signs of use on the extant transverse sides, used for breaking or crushing temper, which was added to the clay during pottery production, for roughing out of stone tools or even in metallurgical processes.³⁵⁸ Partly transformed flat river cobbles of oblong oval or circular-oval form are worn on one or both transverse sides. Their wear is more refined, which indicates that they were used in breaking or crushing of softer or more fragile material. We could presume that both groups of stone tools had some kind of handle, which is indicated by their form and places where the greatest damage was done; they were perhaps used as a type of axe or hammer, as known from some archaeological experiments.³⁵⁹ Similarly formed tools with similar signs of use were also discovered in nearby settlements at Orehova vas, Pobrežje, Ptujski grad, Rabelčja vas and at Ormož. They are present in the first and second phase of the latter settlement and are dated to the Late Urnfield period and the beginning of the Early Iron Age.³⁶⁰ A rectangular stone with rounded

³⁵⁰ Holsten, Martens 1991; Lubšina-Tušek 1993, 47; t. 16: 12, 23: 11, 24: 5,8; Greif 1997, 45–48; Zurbruchen 2002, Abb. 1, 2; Mele 2007, 17–18, sl. 6, G18.

³⁵¹ Greif 1997, 45–48; Mele 2007.

³⁵² The form of the increment indicates that it was drilled from one side, which resulted in a conical eye (Lubšina-Tušek 1993, 47).

³⁵³ Lubšina-Tušek 1993, t. 24: 15; 23: 6; Velušček 2002, t. 42: 5.

³⁵⁴ Lamut 2007, 29–30, sl. 1.

³⁵⁵ This variant also includes object G290 (Črešnar 2011).

³⁵⁶ This variant also includes objects G289, G1056 and G1057 (Črešnar 2011).

³⁵⁷ This is the object G823 (Črešnar 2011).

³⁵⁸ Rieser, Schrattenthaler 1998–1999, Abb. 14: 1.

³⁵⁹ Rieser, Schrattenthaler 1998–1999, 165, 173–175.

³⁶⁰ Lamut 1988–1989, t. 6: 9, G14: 12; Lubšina-Tušek 1993, t. 16: 15, G17: 14–16; Velušček 2002, t. 1: 4, 3: 4; Tomanič-Jevremov et al. 2006, nr. 57–62, Strmčnik-Gulič 2007, t. 21: 3–5.

edges, five battered sides and very slight damage can be doubtlessly described as a crusher. This is probably a stone that was used for further crushing of materials with smaller granulation, perhaps even grain. In addition, a round stone, showing chafed bands along the largest diameter was used for the same purpose. Both were, contrary to all other stone tools, definitely used with one hand. The latter has an interesting analogy at a mining area at Gallzein in Tyrol, where it was used for the fine crushing of copper ore. The site is dated to the Late Bronze Age and additionally presents comparisons for fine pounders, which were also used in preparation of ore.³⁶¹ As noted above the two stone tools, categorised as smoothers, have some surfaces completely smooth. Their use is perhaps connected to the final grinding of grain to make flour, for the tanning of skins etc.

Querns are flat stones with different thickness and a varied geological composition (mostly gneiss, mica schist and granodiorite), transformed or worn at least on one side, which can be explained as a consequence of repeated usage (*pls.* 5: 4,5; 7: 12; 10: 2; 13: 7,8; *fig.* 31: 10).³⁶² They are most often interpreted as artefacts, used for grinding grain into groats and flour. It is worth considering the fact that Rogoza and also Ormož yielded an appreciably larger number of querns than the number of fine polished stones, crushers or smoothers, that could also be used for the same purpose. Some pounders show considerable signs of wear and we therefore have to perhaps assume that they were used in other processes, such as crushing of stone that was perhaps added to pottery fabrics. They were also used as static grindstones; polished stone tools were made on them with the help of quartz sand and water.³⁶³ Their use in metallurgical processes has been completely overlooked so far. They could serve as simple anvils, on which red-hot metal was treated with pounders; this process was still used among several Nilotic groups in the 19th century (*fig.* 32).³⁶⁴

³⁶¹ Rieser, Schrattenthaler 1998–1999, 145–146, 170–173, Abb. 24: 5,7.

³⁶² This type also includes objects G335, G365, G367, G363, G366, G368, G378, G409, G418, G419, G493, G669, G789, G797, G799, G965, G1056, G1094, G1213 (Črešnar 2011).

³⁶³ Eibner 1992, *fig.* 4–5; Korošec 1951, G158–160; Lamut 2007, 27–28; Murgelj 2008, 13–14.

³⁶⁴ The use documented in the 19th century should have its roots in the ancient Egyptian civilisation. In the process of production of a great variety of iron artefacts

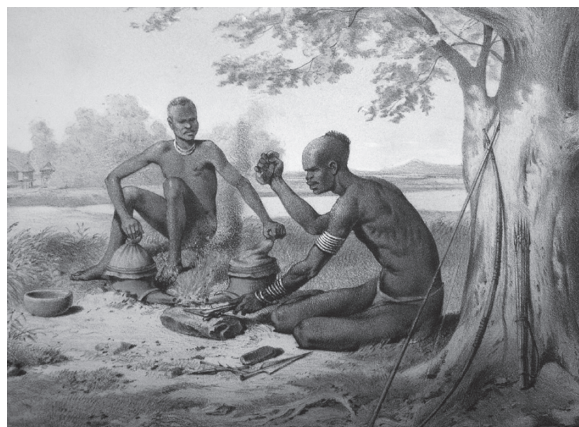


Fig. 32: Use of stone tools in the metallurgical process. The Nilotic people of Bari, South Sudan, around 1860 (Frelih 2005, *sl.* 3; drawing: W. Harnier).

Sl. 32: Uporaba kamna v metalurškem procesu. Nilotsko ljudstvo Bari, južni Sudan, okoli leta 1860 (Frelih 2005, *sl.* 3; risba: W. Harnier).

In addition, two whetstones were discovered among stone material (*pl.* 2: 9; *fig.* 31: 9).³⁶⁵ The material chosen to make the one presented here, i.e. fine-grained sandstone, already partly determines the purpose of these tools. Both discovered whetstones are oblong, have a square or rectangular cross-section and show signs of wear. Similar whetstones were discovered in settlements at Oloris near Dolnji Lakoš, Ormož, Rifnik and at Poštela, where perforated variants, perhaps more suitable for transport, are frequent. These became more significant in the Late Urnfield period and Early Iron Age, when they also occur as grave goods.³⁶⁶ Identical whetstones were still used as late as the Late La Tène period and they have actually been used to this day.³⁶⁷

Two flakes and three blades were also discovered; we will discuss only two of the latter here (*fig.* 33: 1–2).³⁶⁸ At least one longitudinal edge was retouched on both artefacts. It is also important that it is possible macroscopically to note that the working edges of both blades are polished. Comparisons of this type of surface change show

no metal accessories were used, but a stone anvil, wooden tongs and a stone pounder (Frelih 2005, 48,55–56, *sl.* 3,5).

³⁶⁵ This type also includes object G314 (Črešnar 2011).

³⁶⁶ Pahič 1972, t. 5: 9; Pirkmajer 1983, t. 1: 2, 7: 4–6; Lamut 1988–1989, t. 21: 7, 27: 5; 28: 5; Teržan 1990, t. 45: 5,6,7; Dular et al. 2002, t. 65: 14.

³⁶⁷ Jansova 1986, t. 3: 23, 84: 6; 1988, t. 148: 76, 186: 23.

³⁶⁸ This type also includes objects G42, G61, G218 and G271 (Črešnar 2011).

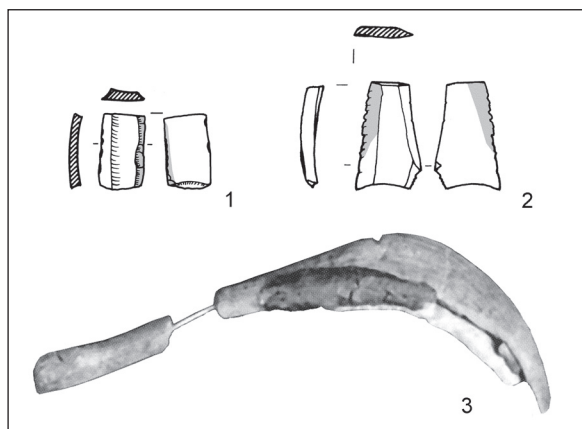


Fig. 33: Rogoza. Blades with marked macroscopically visible polishing (1, 2; M. = 1:2) and a proposed use in a wooden shaft (3) from Fiavé (Leonardi 2004, sl. 7: 2).

Sl. 33: Rogoza. Klini z vrisanimi makroskopsko vidnimi zagladitvami (1, 2; M. = 1:2) in predlagan način uporabe v lesenem držaju (3) s kolišča Fiavé (Leonardi 2004, sl. 7: 2).

that blades were used for cutting cereal stalks or other fibres of vegetal origin.³⁶⁹ Polishing is only present on one edge of both blades, which indicates that these are probably part of composite sickles. Similar examples are known from several sites dating from the Neolithic onwards.³⁷⁰ A curved wooden handle was used as a base of such tool, which was longitudinally gouged in the area that was used as a cutting edge. Blades were then fitted into the gouges and sometimes additionally strengthened with resin (fig. 33: 3). The blades discussed here do not show abrasions on dorsal parts, which sometimes occur on tools that were fitted onto wooden parts, but as was proved by experiments, the tool does not show any abrasions when the fitting is done properly.³⁷¹

Different tool use is not only indicated by wear on individual types, which served as a guideline for the categorisation of different pounders, crushers and smoothers, but also by damage. Two broken axes and one of two coarse pounders on the one hand and all the other fully extant fine pounders, crushers and smoothers on the other, show that they were used for different purposes. There is

³⁶⁹ This kind of use causes high friction and high temperatures, which result in the creation of a silicate layer on the surface of the tool. This alters the reflection characteristics of the stone, which can be observed with the naked eye (Petru 1997, 79–83).

³⁷⁰ Leonardi 2004, fig. 7: 1–3.

³⁷¹ Petru 1997, 81.

no weight difference between the related groups of coarse and fine pounders. This is not corresponding with the results of analyses of material from Ptujski Grad, where heavier pounders were showing more damaged and were perhaps used for a longer time.³⁷² Moreover, it is necessary to mention an exceptional amount of broken querns at this point. Only one was fully extant and one was in a fairly good state of preservation. It may be posited that, as already suggested, they were used in a variety of tasks, perhaps even forging.

INTERPRETATION OF SETTLEMENT STRUCTURES

As the description of the underlying geology has already mentioned, the central area with its gravel subsoil offered good conditions for occupation and it was utilised again and again. Here the best preserved remains, which date to the Urnfield period, are thoroughly studied (inserts 2, 3).³⁷³

The most common elements of the archaeological record are postholes that are dug into the ground, which often indicate the outline of the buildings, are described in more detail in the attached *Catalogue of farmsteads and buildings*. Other negative features, layers and finds are related to them. An attempt to explain these elements follows.

The southernmost structures connected with the settlement were recorded beside a palaeochannel, which in this part traverses the site in an easterly direction (inserts 2, 3). The remains of a hearth have been found there, along with numerous shallow pits of irregular shape. Only one (SE 514) contains chronologically sensitive pottery fragments. Two of them belong to oval pots (pl. 1: 2,3), while the third (pl. 1: 1) shows an internally faceted rim, which is characteristic mainly for the Ha A.

Buildings 1, 2 and 3, the remains of which are located slightly towards the north, surrounding a specific area with their layout and orientation (inserts 2, 3). We assume that these buildings belonged to a certain community that we categorized as **farmstead (1)**.³⁷⁴ The central place yielded one

³⁷² Tomanič-Jevremov et al. 2006, 187–188.

³⁷³ Dating of the buildings is based on typological study of the finds from the postholes, from other pits in their vicinity and from the (cultural) layers in and around them.

³⁷⁴ As defined by B.K. Roberts (1996, 15–16).

larger oblong pit and some postholes, which form rows, running in different directions. We have not managed to find a suitable explanation for these. It is also interesting that pottery finds, located in a layer above the subsoil in the area of the houses, were mostly present outside the buildings. Two finds are suitable for more accurate definition (*pl. 1: 7,8*), a strongly everted rim of type U2d and a handle with vertical channelled decoration, according to which we presume an occupation in the time span from the Br D/Ha A transition to the beginning of the late Ha B.³⁷⁵

Two pottery finds (*pl. 1: 4,5*) are suitable for the chronological designation of building 1; these are body of a vessel, decorated with incisions and a concave handle, decorated with vertical channelled decoration, which is characteristic mainly for the Ha B. The radiocarbon date of pit SE 1120, with two postholes situated next to it and belonging to this building, shows a different picture. Analysis of charcoal dates it to 1698–1602 cal BC ($2\sigma - 68.7\%$) or 1691–1610 cal BC ($1\sigma - 64.9\%$).³⁷⁶ Dating of this building is therefore controversial, as the ceramic material and radiocarbon date show a completely different chronological position. There is a problem in the fact that the entire site completely lacks archaeological material, which would incontrovertibly prove the existence of a settlement on this area at the end of the Early Bronze Age. In contrast, among 20 C14 dates, there are another two that are almost identical. One originates from one of the earliest alluvia southward from the settlement (SE 008) and the other from a posthole SE 1413 next to building 20/21.³⁷⁷ The former is a layer with partly mixed archaeological material and the latter is also ambiguous. Posthole SE 900 was positioned next to it and contained a fragment of a bronze ring, which can be dated on the basis of its form and chemical analysis to the Ha A and early Ha B. There is no doubt about the importance of three contemporary dates, but the correct interpretation remains unknown. Namely, charcoal can be created in a range of different circumstances, and settlement activities are not the only source. A lack of datable archaeological

material from the later phase of the Early Bronze Age makes us suspect that this area represented the economic hinterland of a nearby settlement. Charcoal could be a result of slash-and-burn agriculture, which created new agricultural areas, but natural fires are also possible.³⁷⁸

Buildings 2 and 3 are somewhat larger than building 1 and show an indistinct outline with some exceptionally shallow postholes.³⁷⁹ Additional rows of postholes are present at both and can be interpreted as extensions or fences. Building 3 only produced one fragment; a sherd of an oval pot decorated with an ornamented cordon (*pl. 1: 6*), which is chronologically insensitive.

Building 4 (*inserts 2, 3*) was located next to a stream channel, east of farmstead 1. It was represented by a large pit (SE 658b) with a posthole. Apart from large amount of pottery material, a whetstone, calcited animal bones and large amounts of burnt clay daub were found in the pit. It is assumed that the building was reconstructed to some extent. The inventory includes larger and smaller oval storage pots (*pl. 2: 6,7 - L4b*), a pot with a conical neck (*pl. 2: 2 - L7b*) and a series of dishes with everted (*pl. 2: 5,8 - Sv1b*) and inverted rims (*pl. 2: 3,4 - Sz3b*). Although the oldest find (*pl. 2: 8*) shows analogies only in the late Middle Bronze Age and Initial Urnfield period, the majority of the other finds date to the Ha A, which is further confirmed by their decoration. A fragment with incised decoration (*pl. 2: 1*) is one of the later ones with parallels in the Late Urnfield contexts. The building therefore most probably dates to the Ha A and to Ha A/Ha B transition. Finds (storage pots, dishes, a grindstone and animal bones) indicate that it could be a storage pit.

A smaller number of postholes and a larger number of deeper irregular pits were discovered slightly further north, close to a palaeochannel. A small amount of pottery was found in the postholes and in the layers above the structures. There are two finds that are worth mentioning; a dish of type So5a (*pl. 2: 10*) from pit SE 1126, used from the Initial to the Late Urnfield period, and a dish of type So5b, discovered in pit SE 1040 (*pl. 2: 11*), with parallels from the Ha A and early

³⁷⁵ There was also a base decorated with fingertip impressions dated to the Br D/Ha A period (Črešnar 2011, G334).

³⁷⁶ KIA37299.

³⁷⁷ KIA37289 [1779–1632 ($2\sigma - 84.9\%$) and 1760–1685 ($1\sigma - 66.3\%$)], KIA37310 [1748–1608 ($2\sigma - 94.4\%$) and 1692–1630 ($1\sigma - 58.7\%$)].

³⁷⁸ An obviously too early date also came from pit SE 376, ascribed to building 13, which was dated to 31320 ± 240/–230 BP.

³⁷⁹ Ploughing also partly damaged the geological subsoil, which was only covered by ploughsoil in some areas.

Ha B. Mention should also be made of a larger concentration of finds, located slightly to the west, found in a layer that lay above the lowest layers with finds, as well as the palaeochannel (SE 610). In addition to large amounts of pottery, dating to the Ha A and early Ha B, several stone tools were also found; these were mostly querns (*pls.* 3: 1–10; 4: 1–7; 5: 1–5). There were also millet (*Panicum*), barley (*Hordeum*) and horsebean (*Vicia faba* var. *minor*). These are unfortunately redeposited layers, located next to and above the palaeochannel, but it is possible that grinding and perhaps also other economic activities took place nearby.

Building 5 (*inserts* 2, 3) was identified with some reservation, as several postholes and some larger pits were recorded next to it. The building can be spatially connected with four artefacts; two of them are chronologically important. A strongly everted rim of type U3 (*pl.* 5: 6) has analogies in the late Middle Bronze Age and Initial Urnfield period, while a slightly everted rim of type U2a (*pl.* 5: 7) mainly occurs during the Late Urnfield period. The building is possibly part of **farmstead 2**, which is located slightly to the north and is composed of **buildings 9 to 14**.

The southernmost building is a smaller **building 9** with six postholes, which can be compared with the similar **building 14** with four postholes. Buildings of such dimensions have often been interpreted as granaries, but this cannot be proved here due lack of finds. **Building 10** was erected on three rows of postholes, with the central row located not in the centre, but crossing it at one third of the width. The western row of postholes located in a ditch is interesting, as imprints of piles, used to make the core of the wall construction, were still visible. A similar construction has been found in the later settlement at Hajndl near Ormož and on some Hungarian settlements; however, entire buildings were built in such manner there.³⁸⁰ The remains of the identically oriented **building 11** lay only c. 1.5m northwards, while the western side of a yard was closed with a complex of **buildings 12/13** (*fig.* 34: 1), which cannot be precisely distinguished from one another. Several differently shaped pits are spatially connected to the above buildings, but some of them date to the Early Bronze Age.

There are very few finds that could be connected to these buildings as only ploughsoil was found above the natural subsoil. Some finds (*pl.* 6: 1–3)

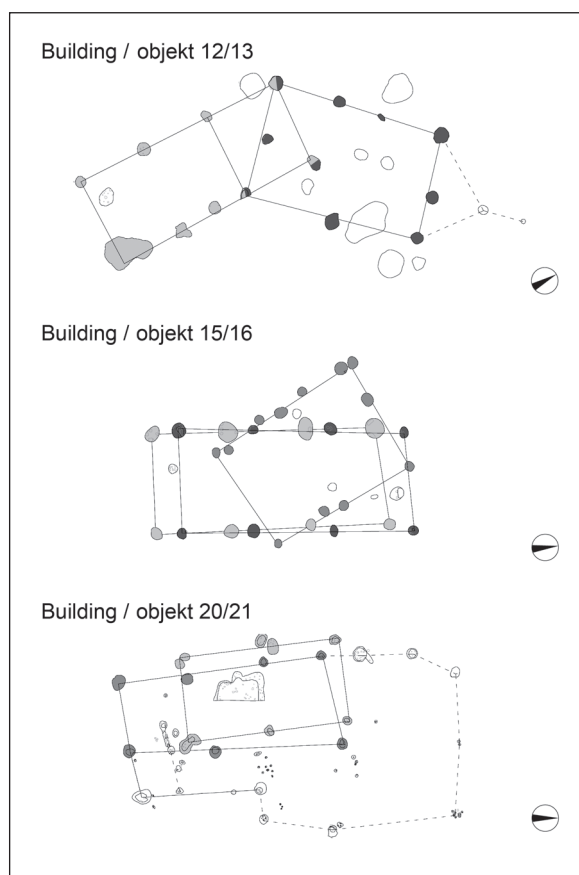


Fig. 34: Rogoza. Buildings 12/13, 15/16 and 20/21, which presumably comprise multiple phases.

Sl. 34: Rogoza. Objekti 12/13, 15/16 in 20/21 z domnevno večfazno poselitvijo.

came from postholes, but only one of them can be connected to the ground plan of the determined building. It dates to the Early and Late Urnfield period. This dating is confirmed by a radiocarbon date from a charcoal sample from posthole SE 727, which dates to 1134–1010 cal BC (2σ – 78.4%) or 1032–1030 cal BC (1σ – 66.9%).³⁸¹

The northernmost building, located directly next to the palaeochannel, is the slightly trapezoidal **building 6** (*inserts* 2, 3) surrounding pit SE 370, where one of the most important finds of this site was found. A complete pot (*pl.* 6: 4 – L7b), accompanied by an extant plano-convex copper ingot (*pl.* 6: 5), was found there. On consideration of the parallels, they can be dated to the Early/Late Urnfield period transition, which was also confirmed by the analysis of the chemical composition of the ingot. The pit also contained the burnt remains of wood

³⁸⁰ Csányi, Tárnoki 1994, *fig.* 114–116; Mele 2005.

³⁸¹ KIA37295.

and a cereal grain. A similar assembly comes from posthole SE 900, allegedly part of building 20/21 (*fig. 34: 3*). A horsebean (*Vicia faba* var. *minor*) and a single grain, perhaps of barley (*Hordeum*), were discovered in it, along with fragments of uncharacteristic pottery and a fragment of a bronze ring or a bracelet (*pl. 9: 10*). The latter attracts attention because of its high, 16.5%, tin content, which places it among part-finished products that are used in the metallurgical process as a source of tin. Wood charcoal from pit SE 370 also permitted radiocarbon analysis, which dated the pit to 1211–994 cal BC (2σ – 95.4%) or 1124–1022 cal BC (1σ – 68.4%).³⁸² Moreover, charcoal from a posthole SE 1101 that is a component part of building 6, was also analysed and it showed a similar date (1212–1008 cal BC [2σ – 93.5%] or 1131–1041 cal BC [1σ – 56.7%]).³⁸³

Buildings 7, 8 (*inserts 2, 3*) were located to the west of farmstead 3. Some pottery that is related to buildings 7 and 8 was discovered in a layer above the subsoil, which mainly occurs outside the ground plans of buildings next to farmstead 3. The southern, **building 7**, is probably connected to the gravel layer discovered next to it (SE 336). A larger amount of precisely dated mostly pottery finds is most probably connected to it as well. However, this is a partly disturbed layer, located only 0.20–0.25m below the surface of the ploughsoil and it consequently also contained modern pottery. There is a wide range of prehistoric finds. Fragments, ascribed to the Early Iron Age, were found together with dominant Urnfield period finds. Various dishes with everted and inverted rims occur and some pots were also found. The dishes belong to four variants (*pls. 7: 1* – So1a; *7: 2,3* – So1d; *7: 4* – Sz2a; *7: 5* – Sz4a). Their dates range from the Ha A to the Ha B. The variant L3 pot (*pl. 7: 7*) is already known in the Initial Urnfield period; a fragment of a footed vessel in *pl. 7: 8* (D5b) could also belong to this period. It is therefore assumed that the building was mostly used during the Ha A. Mention should also be made of the only bone tool, found at Rogoza, a bone point, which also belongs to the assemblage in this layer (*pl. 7: 10*).

Building 8 (*inserts 2, 3*) is positioned slightly towards the north. Its outline is indicated by two rows of five postholes each, with four pairs visible.

However, a question arises about the number of buildings and the method of construction, because of the number of postholes and their position. It is possible that these are two buildings and the second one was slightly displaced. However, another possibility is that the postholes belong to a single building, constructed with pairs of postholes, as a similar method of construction was used at the eastern wall of building 11. It would be appropriate to discuss methods of construction here, but the absence of the remains of burnt clay daub does not provide any answers. Walls were perhaps formed of vertical stakes, interwoven with withys. A less likely type of construction is one with two vertical stakes and beams in between, as this type of construction has so far, only been seen in the construction of fences. Such a building would resemble a log cabin, with vertical stakes supporting it. The building was surrounded by some larger pits. The only datable find, possibly connected to the building, is a knee-shaped handle from posthole SE 346 (*pl. 7: 11*), which is located in the same row as the northern wall of the building, and perhaps belongs to an extension. Vessels with such handles most often occur at the beginning of the Late Urnfield period.

The density of archaeological structures strongly decreases to the north of the above buildings. We can assume that this was a **central place of the settlement**, perhaps “a meeting place or market” with parallels in somewhat older settlements, such as Sodolek near Sv. Jurij ob Ščavnici and Pince (Pod Grunti) near Lendava.³⁸⁴ Only a few larger pits with some smaller postholes next to them were discovered on this area. The latter form some rows. No other discernible outlines were discovered. Larger oblong pits, located between farmsteads 2 and 3, bound the central place on the eastern side. One of the pits (SE 731) contained some charcoal, which allowed a radiocarbon analysis, dating the pit to 1300–1125 cal BC (2σ – 95.4%) or 1263–1192 cal BC (1σ – 53.3%).³⁸⁵

Farmstead 3 probably consists of **buildings 15 to 18** and **hearth 2** (*inserts 2, 3*). **Building 15/16** (*fig. 34: 2*) revealed at least two phases of construction that cannot be accurately chrono-

³⁸² KIA37291.

³⁸³ KIA37298.

³⁸⁴ Kavur 2007, fig. 2. The plan of Pince (Pod Grunti) was presented on 17th March 2008 in the Mestni muzej Ljubljana (Ljubljana City Museum) by B. Kerma.

³⁸⁵ KIA37296.

logically determined, but their orientations differ. Moreover, the first phase, running more towards a N-S direction, perhaps “conceals” two additional (sub)phases of construction. Namely, this is either a building, constructed of two rows containing four pairs of postholes, or there were two buildings, with the second one shifted by half a metre in an almost parallel direction. A fragmented quern, used as packing in one of the postholes (SE 842), can perhaps serve as an indicator of the relative sequence of construction of one of the buildings (*pl.* 7: 12). Considering that damaged material was used in construction, we could assume that the building was constructed when the settlement had already been in existence for some time. This perhaps indicates that the building with a medium axis running in a SE-NW direction, is earlier. This building also shows additional postholes, which probably indicate that it had been subject to repair.

Building 17 was located only four metres to the east. The building and its dimensions differ from the others and it represents one of the narrower buildings in the settlement ($4.3 \times 2.0\text{m}$). Its plan is similar to **building 26** ($5.4 \times 1.8\text{m}$). The solid construction of shorter sides, which is seen in a great number of postholes and looser construction of longer sides, particularly the western side, with a single or no postholes, is characteristic for both. Such a construction could be morphologically compared with cattle pens, seen on some of the Slovene mountain pastures (*fig.* 35).³⁸⁶ A pit with a considerable quantity of charcoal and burnt clay, interpreted as **hearth 2**, was discovered to the east of this area. This interesting group of buildings comprises also a smaller **building 18** with four postholes, the plan of which strongly resembles buildings 9 and 14 to the south. The lack of finds does not permit an accurate date for this farmstead; it only yielded finds from disturbed layers (*pl.* 7: 13–19). Their range lies within the “classical Rogoza” range, as a fragment of a pot in *pl.* 7: 14 dates to the late Middle Bronze Age and Initial Urnfield period, whilst the fragment of a thickened dish rim in *pl.* 7: 16 (Sz3c) dates to the Late Urnfield period. The rest of the finds also fall within this date range.

The largest complex of buildings, **farmstead 4**, was located to the north of the central part of the settlement and comprised **buildings 19** to **26** (*inserts* 2, 3).



Fig. 35: Meadow at Velo polje. Cattle pen (Cevc 1984, 118).
Sl. 35: Planina Velo polje. Pokrita živalska staja (Cevc 1984, 118).

The central part of the farmstead consisted of buildings 20, 21, 23 and 24, which were arranged around a central space or courtyard. Buildings 19, 22, 25 and 26 were adjacent to them on the eastern side and formed an arc. These buildings may also have formed part of the farmstead.

The southernmost building of this group was **building 19**, where only a decorated vessel body sherd was discovered (*pl.* 8: 1). Its form can be traced mostly in Late Urnfield contexts.³⁸⁷ A row of postholes was running towards the South to **building 22** (*inserts* 2, 3). This building may also be associated with two gravel layers and perhaps with some of the pits adjacent to it. The most interesting of these features is the oblong oval pit. An identical pit was discovered just three metres to the south, adjacent to **building 19**. Mention should also be made of the discovery of a quernstone (*pl.* 8: 4) to the south of **building 22**. There was a gravel layer ($1.5 \times 1.4\text{m}$) only a few metres towards the east of the buildings. The chronological determination of the structures under consideration is not easy. The finds in layers above the natural subsoil in adjacent quadrants date either to the Early Bronze Age, or to the late Middle Bronze Age, Initial and Early Urnfield periods (*pl.* 8: 3) or Early and Late

³⁸⁶ Cevc 1984, 118.

³⁸⁷ Stare, F. 1954, t. 59: 5; Strmčnik-Gulič et al. 2000, t. 99: 3,8; 2007, t. 19: 14; Velušček 2002, t. 7: 7.

Urnfield periods (*pl.* 8: 2). There are even some Early Iron Age fragments present.

The arc continues with **building 25** only three metres to the north, (*inserts* 2, 3). A stone quern was discovered here, as was the case in **building 22** (*pl.* 8: 5). An Early Iron Age bronze boat fibula was found in the layers above the remains of the building, and fragments of dishes, dated to the period from the Initial Urnfield period onwards, were discovered nearby (*pl.* 8: 6,7). A fragment, dated to the Early Bronze Age, a handle with oblique channelled decoration from an Ha A vessel (*pl.* 8: 8 – R2j) and a knee-shaped cup handle, characteristic for the early Ha B (*pl.* 8: 9 – R3b), were discovered to the east of this building. Despite the earlier and later finds, the overwhelming majority of the finds suggest an Urnfield period date for this building.

The above mentioned **building 26** was discovered a few metres to the north, (*inserts* 2, 3). As with **building 17**, it morphologically resembles a covered cattle pen. A few pottery artefacts, found lying on the natural subsoil, are connected with the building. They include a dish with an inverted faceted rim (*pl.* 8: 10 – Sz3b). It was found “in front of” the building and is characteristic mainly for the Ha A. Other finds, such as a fragment with ornamented cordons (*pl.* 8: 11,12), do not contradict this date.

With regard to the central buildings of the farmstead, mention must first be made of **buildings 20** and **21** (*inserts* 2, 3; *fig.* 34c), which were recognized among the large number of postholes. Larger and smaller postholes on the southern and eastern part bounded the first building. The plan resembled an open animal stable. An area southwards from the building was perhaps covered with a projecting roof, which is indicated by large postholes. Several smaller postholes may form a wall towards the interior of the building. Numerous small postholes were discovered also at the area of a presumed stable; their purpose is unknown. The second **building (21)** is somewhat shifted to the north. Its outline is most probably formed by six postholes with an additional three postholes, which were added during later repairs. A large irregular-shaped pit, located within both building plans, may be associated with one of the buildings.

The area to the west of this building revealed a longer sequence of postholes, which encircled an irregularly shaped area of c. 80m². Apart from a large and a small pit, no other structures were

discovered in the interior. This area was probably an open enclosure.

Buildings 23 and **24** were discovered still further to the north, (*inserts* 2, 3). The latter contained a large pit SE 933 with rich finds and two postholes. An extensive rubble layer was located a few metres to the west.

What may be proposed for this complex or farmstead, containing buildings and other structures that form a central yard with a larger number of pits of unknown function (*inserts* 2, 3)? The majority of material is later, although some Early Bronze Age pottery was discovered in closed contexts, as well as in partially disturbed layers. A fragment of a dish with a faceted rim was found in pit SE 963 in the yard area (*pl.* 9: 1 – Sz3b). Its form and especially decoration place it to the Early Urnfield period. It is also worth mentioning the finds from pit SE 947 (*pl.* 8: 13,14,15). These date to the Early or the beginning of the Late Urnfield period. The widest selection of finds is probably found in a storage pit in **building 24** (SE 933). This assemblage includes an internally faceted everted vessel rim (*pl.* 9: 4), largely mostly diagnostic for the Ha A, and other finds that occur throughout the Urnfield period (*pls.* 9: 5 – So5a; 9: 2 – L1). Mention should also be made of a bowl Sk2b (*pl.* 9: 9), a dish with an inverted rim with thickened lip Sz3c (*pl.* 9: 6) and some decorated pottery body sherds (*pl.* 9: 3,7,8). These largely have parallels in the Late Urnfield period. This pit also contained charcoal for radiocarbon analysis, which dates it to 1134–1004 cal BC (2σ – 81.1%) or 1126–1038 cal BC (1σ – 65.6%).³⁸⁸ The above mentioned pit SE 900 was also discovered close to **buildings 20** and **21**. It contained a bronze ring with high content of tin (*pl.* 9: 10), which is dated, on the grounds of its shape and the results of chemical analysis, to the Ha A or early Ha B.

Radiocarbon analysis of charcoal from one of the postholes surrounding building 20, 21 (SE 1413), adds some confusion to the attempt to date this building complex. This posthole did not contain any finds and was dated to 1748–1608 cal BC (2σ – 94.4%) or 1692–1630 cal BC (1σ – 58.7%). As the association of this pit with the building is doubtful, and the nature of the dates in this period is questionable, the Urnfield period date of this building is preferred.

³⁸⁸ KIA37310.

One of the pits in this part of the settlement is later, dating to the Early Iron Age.

Finds from the lowest layers above the natural subsoil date to the Early Bronze Age, Early Iron Age, as well as the La Tène and Roman periods, but, as elsewhere across the site, fragments of Urnfield period pottery predominate. Some of them are characteristic for the entire Urnfield period, such as deep dishes with everted rims So1d (*pl. 9: 11*), and others are more specific. A handle with an external central ridge (*pl. 9: 13*) occurs mainly on Ha A pottery, while decorations on pottery body sherds in *pl. 9: 14,15* and a fragment of a dish in *pl. 9: 1* (Sz2a) mostly date to the Late Urnfield period.

Building 27, discovered slightly to the north (*inserts 2, 3*), was seen as a pit, bounded by twelve postholes, surrounding an area of 1.8 × 1.4m. It is similar to part of **building 33** and hearth 7 (*insert 2*), which are among the northernmost buildings of the settlement. Finds, discovered in **building 33**, i.e. dishes, a storage pot and a portable oven lid (*pl. 15: 1,2,3*), indicate that this could be a place, connected with the storage or preparation of food.

The three-aisled **building 28** (*inserts 2, 3*), the only one of this type found at Rogoza, with a **hearth (4)** discovered close by, is located on an area where denser occupation starts and spreads towards the north. The only convincingly datable find, directly connected with the building, is a dish with an inverted thickened rim Sz3c (*pl. 9: 18*), which was discovered in one of the postholes. Comparisons come also from Early Urnfield contexts, but are more common in Late Urnfield contexts. Some finds from the layer above the natural subsoil can also be ascribed to the building. The most significant are a vessel foot (*pl. 9: 16*), resembling forms from the late Middle Bronze Age and the Initial Urnfield period, and a variant L2 pot (*pl. 9: 17*), present from the Urnfield period to the Early Iron Age. Radiocarbon analyses of charcoal are also important for dating of the building. The corner posthole SE 1338 in the far south of the building was dated to 1220–1041 cal BC ($2\sigma - 87.8\%$) or 1209–1111 cal BC ($1\sigma - 57.4\%$). A different date was given by the radiocarbon analysis of a sample from posthole SE 1329, located outside of the perimeter of the building, but in line with the eastern wall of the building. This posthole has the same diameter and depth as the postholes ascribed to this wall. The posthole was dated to 2065–1958

cal BC ($2\sigma - 57.2\%$) or 2127–2089 cal BC ($1\sigma - 30.1\%$), which approximately corresponds with the second Early Bronze Age date obtained from the site.³⁸⁹ The building most probably dates to the Ha A and early Ha B, due to the numerous later finds, which correlate with the time span of the settlement.

The second building in this part of the settlement is **building 29** (*inserts 2, 3*) that is chronologically determined by an inverted rim of a variant Sz4c dish (*pl. 9: 19*), which can be, according to oblique channelled decoration, already present in Ha A or later. This building is important as an area with postholes that do not form coherent plans starts just to the north and east of it. Many of them seem to form rows, so these could be remains of destroyed buildings, or more probably the remains of a **larger** or a few **smaller enclosures**, used for cattle, which were also traced close to some other buildings. The postholes here are smaller and shallower than those associated with buildings 29 and 30, which were located in the immediate vicinity. An additional problem is presented by the large concentration of postholes in the central part of the presumed enclosure. We came across Early Bronze Age fragments, mostly located in the southern part of this area, but none of them originating from a closed context. The other finds from the enclosure are later. A fragmentary cigar-headed pin (*pl. 9: 20*) was discovered together with some pottery fragments in posthole SE 226. It can be dated to the Early and the beginning of the Late Urnfield period. The pottery, found in the “cultural layers” is represented by a L2 pot fragment (*pl. 9: 21*) dating to the Urnfield period, a fragment of an internally faceted everted rim (*pl. 9: 22*) that is characteristic mostly for Ha A and fragments of dishes with everted and inverted rims with a characteristic decoration (*pls. 9: 23 – So5b; 9: 24 – Sz3b; 9: 25 – Sz4a*), which are dated to Ha A and early Ha B. The same is also true for the fragment of a vessel body in *pl. 9: 26*, decorated with incisions, which is particularly common in the Late Urnfield period.

Buildings 30 and 31 (*inserts 2, 3*) were identified on the eastern edge of the enclosed area.

³⁸⁹ KIA37306. The second date comes from the pit SE 964 (2044–1903 cal BC ($2\sigma - 86.8\%$) or 2030–1950 cal BC ($1\sigma - 68.3\%$)), which also yields material of the Early Bronze Age Kisapostag Culture.

The first was perhaps physically connected to the enclosure, as its postholes were discovered in the immediate vicinity of the enclosure. There was a second building only two metres towards the north-east, which was the only L-shaped building in the settlement. Very few finds can be connected to these buildings, the most important being a fragmented quern (*pl. 10: 2*), which was used as packing in one of the postholes. We can assume that the buildings were not constructed in the early phase of the settlement but were later, as damaged functional artefacts were recycled during their construction. The only find, connected with both buildings, is a fragment of a dish with an inverted rim of variant Sz3b (*pl. 10: 1*), dated to the Ha A and Ha B.

Three larger oval pits that are probably associated with the above buildings were discovered a little further to the east. The presence of charcoal and burnt clay in one of the pits was interpreted as **hearth 5** (SE 1512). It contained only one spindle whorl (*pl. 10: 3*) with a worn out base and apex. The other two pits are also unusual. The first (SE 1501) contained several fragments of the lower part of one pot (*pl. 10: 4*) and the second (SE 1503) yielded some fragments of quarry stones, one complete and one fragmented quern, a fine pounder, pyramidal loomweights, a clay cooking ring, a large number of partly burnt pottery fragments and a large quantity of burnt soil or clay daub (*pls. 12: 2,9,10; 13: 1–10*). Moreover, the diversity of pottery forms is surprising. Characteristic Ha A pottery forms are most common, including the amphorae in *pl. 12: 1 (A1a)*, *pl. 10: 7 (A2a)* and a large number of diverse faceted everted rims of larger vessels (*pl. 11: 2,3,4*). However, material, more characteristic for Late Urnfield contexts is also present, including tall dishes of variant Sv3b (*pl. 12: 3,4*), but it occurs in much smaller amounts. Fragments of large vessels prevail, whilst dishes with inverted rims and other smaller vessels are completely absent. A radiocarbon date of 1128–975 cal BC (2 σ – 94.4%) or 1058–1009 cal BC (1 σ – 44.4%),³⁹⁰ derived from a sample of charcoal from hearth SE 1512, correlates with the pottery assemblage but the question of whether this date can be extended to the wider context of buildings 30 and 31, remains unanswered.

Two amorphous pieces or droplets of copper that were probably lost during metallurgical activi-

ties were discovered to the south of the revised complex (*pl. 14: 1,2*). We cannot accurately date them based on the finds surrounding them; the analysis of chemical composition of the larger piece most probably dates it to Ha B. These are the only pieces found in the lower layers that indicate metallurgical activity, so they are even more important. Perhaps we can connect them with buildings 30 and 31, located slightly northwards from the droplet findspot, and hearth 5 that is situated next to them. The same could be claimed for building 28 with hearth 4, located to the south of the droplet findspot. A hearth was of course compulsory in metallurgical activities, which perhaps took place here. Archaeological experiments showed that the processes of alloying copper to bronze and manufacturing bronze objects do not leave much evidence which could be interpreted as metallurgical furnaces or hearths.³⁹¹

Hearth 6 (*inserts 2, 3*) is located on the northern edge of the enclosed area with no buildings. This was perhaps “closing” the northern access to the enclosure that was surrounded with buildings from three sides, and could be used to distract potential stock raiders.

Not many negative archaeological structures are present to the north. The area was evidently bounded and oriented by a **path, paved with pebbles** (SE 547) that ran in a SW-NE direction across the entire site (*inserts 2, 3*). In its southern part, two concentrations of larger quarry stones were found, which were on-field interpreted as stands. It is interesting that a row of postholes ran along southern side of the path, which was ending precisely at the above mentioned stone structures. The dating of the path was based on pottery finds, the majority of them being characteristic for the Ha A and Ha B (e.g. *pl. 14: 3 – Sz3a; pl. 14: 4 – Sz3b; pl. 14: 5 – So5b*; decorated fragment *pl. 14: 6*); one find was obviously earlier, Early Bronze Age in date, and one was later, dating to the Early Iron Age.³⁹² Several comparisons for this path were recently discovered. A perceptibly wider path from nearby Pobrežje is dated to the Late Urnfield period, the same date was also ascribed to a path found at Dolge njive near Bela Cerkev in Dolenjska. Preliminary reports interpret both paths as routes leading to cemeteries, suggesting use

³⁹⁰ KIA37305.

³⁹¹ Fasnacht, Trachsel 2001.

³⁹² Črešnar 2011, G1097, G1094.

in ritual practices.³⁹³ A path with similar dimensions was recently discovered on a Late Hallstatt site at Grofove njive near Drnovo. Both paths from Dolenjska are accompanied by an interesting wider context. Grofove njive, a farmstead or a farm with a cemetery and a path leading close to or through it, is located very close to the Urnfield period settlement of Velike njive near Velika vas. A characteristic Dolenjska barrow with several inhumation graves was surrounded by an interrupted ditch, such as was the case at Rogoza. The site of Dolge Njive also revealed platforms next to a watercourse, which are similar to the one discovered close to former northern watercourse at Rogoza.³⁹⁴

Another parallel row of the postholes can be seen still further to the south of the path,; however, this is not easy to discern and explain. Its dating to Ha A is indirect, since the datable fragments of pottery, such as a faceted everted rim with channelled decoration and a body of a vessel with oblique channelled decoration (*pl. 14: 7–9*), come from a pit among the postholes.

Another interesting group of structures was documented to the north of the path, denoted **building 32**. Its outline is undetermined, as seven postholes can be connected to a straight row, but only four belong to a presumed smaller building. A larger pit SE 554 was discovered next to this group of postholes. It contained larger amounts of pottery, from storage pots and dishes to spindle whorls and pyramidal loomweights (*pl. 14: 11,14,15,16*). Determinable finds consisted of a variant L4a pot (*pl. 14: 10*), characteristic for the entire Urnfield period, a variant Sv1a dish (*pl. 14: 13*), most frequent in the Br D and Ha A, a variant Sz3b dish with an inverted rim (*pl. 14: 12*), dated to the Ha A and Ha B. We also have a radiocarbon date from a charcoal sample from this pit (SE 554), which dates it to 1263–1112 cal BC ($2\sigma - 91.6\%$) or 1212–1127 cal BC ($1\sigma - 64.9\%$).³⁹⁵

An unusual structure was recognised only five metres away. This is a pit (SE 577) with an additionally deepened part containing four postholes. The function of this pit remains unknown. On the

basis of a variant So13c dish and a variant L1a pot (*pl. 14: 17,18*), it can be dated to the Early or Late Urnfield period.

The northernmost building, the bipartite **building 33**, is probably contemporary. One part is represented by a pit surrounded by eight postholes, whilst the second consists of four postholes. Associated finds include a chronologically determinable variant So1d dish and a variant L2 pot (*pl. 15: 1,3*) with examples dating to the Early and Late Urnfield contexts.

Two additional hearths were recognized as independent structures. **Hearth 7** is surrounded by an arc of five postholes on its southern side. No datable material was discovered, as was also the case with **hearth 8**.³⁹⁶

A row of four pits were discovered next to an Early Bronze Age pit. The second from the north-east (SE 1546) yielded a complete extant dish with an inverted rim (*pl. 15: 4*), dated to the Ha A and Ha B. The row of pits continued to a shallow pit, filled with larger quarry stones, some 20m towards the southwest. It is important to emphasise that the direction of this row of pits almost completely follows the direction of the paved path, which was discussed above.

The remaining more extensive structures that were discovered on the site are four barrows of Early Iron Age date.

The above mentioned small pebbles platform with no datable finds was discovered on the edge of the northern palaeochannel. The only morphological comparison is a platform, located next to a palaeochannel at Dolge njive near Bela Cerkev, which produced some charcoal, pottery and burnt fragments of human bones. It is therefore assumed that it was used in ritual practices.³⁹⁷

The hydrology of the area, illustrated in alluvium layers to the South of the settlement terrace, is crucial to the understanding of life in the settlement.³⁹⁸

The lowest alluvium that also contained archaeological finds (SE 008) was discovered to the south of the gravel terrace. A fragment of possibly

³⁹³ Mason 2004; Strmčnik Gulič et al. 2006, 25; Strmčnik Gulič, Kajzer Cafnik 2006.

³⁹⁴ Mason 2004, with later pers. com.; Pavlovič 2007, 17, pril. 4, 20, 21.

³⁹⁵ KIA 37293.

³⁹⁶ As these hearths cannot be dated, we cannot exclude that they may perhaps form a part of the burial complex, which doubtless surrounded the mounds.

³⁹⁷ Mason 2004, with later pers. com.

³⁹⁸ Drawings of 21 profiles are published in the original publication (Črešnar 2011).

Late Neolithic pottery,³⁹⁹ a damaged serpentine shafthole axe (*pl. 15: 10*) and an amorphous copper droplet (*pl. 15: 9*) were amongst the finds in this layer. Some of the other pottery finds from this layer (*pl. 15: 8 – Sk1; pl. 15: 5,7*) have parallels at Oloris and Rabelčja vas, and the rest of them are typologically undeterminable and extremely hard. This is therefore not chronologically homogeneous material, but it represents a *terminus post quem* for creation of the layer. It was probably created over a short period of time, as is borne out by its gravel and sand composition. Charcoal, found in the layer was radiocarbon dated to 1779–1632 cal BC ($2\sigma - 84.7\%$) or 1760–1685 cal BC ($1\sigma - 66.3\%$), which is probably only an orientation date.⁴⁰⁰ Layers above the discussed layer (SE 005, SE 006, SE 006a) were fine sediments containing varied material, which indicates a calmer water regime. The earliest fragments from these layers, according to characteristic fabric and decoration, may date to the Early Bronze Age. Fragments of dishes with inverted rims, decorated with oblique channelled decoration (*pl. 15: 6,12,13*) that do not occur in this area before the Ha A, are also present, as well as a variant A3b amphora (*pl. 15: 11*), which is contemporaneous to the above mentioned dishes. One of the layers (SE 006) also contained a decorated biconical pinhead (*pl. 15: 14*) dated to the Early or the beginning of the Late Urnfield period. Charcoal, found in one of these layers (SE 006) was radiocarbon dated to 1125–971 cal BC ($2\sigma - 88.7\%$) or 1059–997 cal BC ($1\sigma - 50.5\%$).⁴⁰¹ The earliest alluvial layers (SE 208, SE 212) are important for the chronological determination of the Holocene geological processes in the area. They were deposited after the breakthrough of the previously mentioned layers of sandy loam (SE 005, SE 006), when the bed of a palaeochannel was created. Different forms of dishes with inverted rims (*pl. 16: 1,2,3*) were discovered. Two of them carried oblique channelled decoration. Also a specific form of an ornamented cordon was present (*pl. 16: 5*), as well as incised

decoration of hatched triangles (*pl. 16: 4*). All the mentioned finds have parallels from the Ha A onwards, although the main period for some of them would be in the early Ha B. Radiocarbon analysis of charcoal dates this layer to 1132 and 998 cal BC ($2\sigma - 88.7\%$), or 1116 and 1037 cal BC ($1\sigma - 63.5\%$).⁴⁰²

On consideration of the typology of the material and all the above mentioned radiocarbon dates, it can be seen that this area was quite active during the period under discussion. After the lowest gravel and sand layer was deposited, the area was covered with water for some time, which deposited only little sediments. After that, several different sediments were deposited in a short period of time, which indicates a change in the course of the stream in the upper part of the palaeochannel. The question of how such a large amount of archaeological material was deposited in the layers mentioned remains unanswered. The large amounts of pottery fragments and burnt clay daub in layer SE 006 are important, as they could indicate a flood in the settlement area and consequently, partial removal of material from the southern part of the settlement.

Similar events can also be seen from the later stratigraphic record. Only the lowest rubble layer in the palaeochannel was without archaeological material. Finer layers followed and were rich in archaeological material, from pottery fragments to burnt clay daub. After the settlement was abandoned, the occupation layers eroded into the streambed and on to the area next to it that was perceptibly lower than the eastern part of the terrace. Several different fills were recognized in different areas of the palaeochannel. Nevertheless, we did manage to reliably reconstruct their corporate identity, which is most clearly illustrated by the situation in the central part of the palaeochannel.

The lowest fill, containing a considerable amount of finds, was discovered in the central as well as in the northern part of the palaeochannel, but the nature of the finds documentation only allowed for their categorisation in the first part. A footed base was discovered there, which perhaps dates to the end of the Middle Bronze age and the Initial Urnfield period (*pl. 16: 11 – D5b*). A dish with an inverted faceted rim (*pl. 16: 8*) and the dish with an everted rim in *pl. 16: 9* (Sv3c) are somewhat later, characteristic for the Ha A. A conical dish with inverted rim in *pl. 16: 6* (Sz3b) is charac-

³⁹⁹ The fragment of pottery is made of fine clay, fired in an oxidising environment and still has some clay slip left on the surface. Following the analogies it could be ascribed to the local variation of the Lengyel Culture of the Late Neolithic from the first half of the 5th millennium BC (Šavel 1994, 39–50; Tomaž 1997, 119, 129; Guštin 2005b, 14–17, fig. 2, 3; Tomaž 2005, 115–116, fig. 6; Tomaž, Velušček 2005, 88–89; Turk, Svetličič 2005, 68–73).

⁴⁰⁰ KIA37289.

⁴⁰¹ KIA37290.

⁴⁰² KIA37288.

teristic for the Ha A as well as the Ha B, while a fragment of the dish in *pl. 16: 7* (Sz4b) and the decorated fragment in *pl. 16: 10,12* probably date to the Late Urnfield period. The pottery assemblage from the layer above this one is similar. The earliest material with, for example, a variant Sz1 dish (*pl. 17: 7*) and a base decorated with fingertip impressions (*pl. 17: 8*), dates to the Oloris-Rabelčja vas horizon. The fragment of a faceted handle in *pl. 17: 9* (R3g), the cup in *pl. 17: 5* (Skd4a), the amphora in *pl. 17: 2* (A3c) and fragments of faceted everted rims (*pl. 16: 13,14,15*), can be dated to the Ha A. The cup in *pl. 17: 4* (Skd4c) and the rounded pot with a curved neck in *pl. 17: 1* (L8a) can be later. The rounded jug with a curved neck in *pl. 17: 6*, two knee-shaped handles (*pl. 17: 3,10*) and a spindlewhorl decorated with stamped hollow rings (*pl. 17: 11*) are of Ha B date. Most of the finds, such as dishes with inverted rims and large storage pots are chronologically imprecise, but definitely belong to the Ha A and Ha B repertoire. It must be noted that the finds from these two layers, positioned one above the other, do not differ chronologically, and fragments of the same object were found in both.⁴⁰³

A similar situation can be seen in the other parts of the palaeochannel. The already mentioned northern part of the streambed was documented in a different manner and most of the finds were studied as a whole, but a similar story unfolds. The earliest finds are the dishes with everted rims in *pl. 18: 3* (Sv1b) and in *pl. 18: 2* (Sv1a), with parallels mostly dating to the the Late Middle Bronze age and the Initial Urnfield period. The dish with an everted rim, decorated with oblique channelled decoration in *pl. 18: 6* (Sv3e), the cup with an upswung handle in *pl. 18: 10* (Skd4c) and the fragment of a faceted rim in *pl. 18: 11* (U2k) can be dated to the Br D/Ha A. The majority of other finds, such as large storage pots (e.g. *pl. 18: 1*), dishes with inverted rims that are decorated with oblique channelled decoration (e.g. *pl. 18: 4,7,8*) occur in the Ha A, as well as in the Ha B. More characteristic for the latter are a variant Sz4b dish with an inverted rim and a variant A1b amphora (*pl. 18: 5,9*).

The dating of the southernmost part, where the alluvial layers were already spreading over the floodplain, and where only the highest layer

contained a larger amount of finds, is based on a head of a bronze dresspin (*pl. 17: 16*), diagnostic for the Ha A and early Ha B, a variant L7b pot (*pl. 17: 13*), contemporary with the latter, and the cup with a knee-shaped upswung exceeding handle in *pl. 17: 14* (Skd1a), which are characteristic for the Ha B. Only a fragment of a footed base in *pl. 17: 15* (D5b) is earlier, dated to the late Middle Bronze Age and the Initial Urnfield period.

Observing the material from the layers studied above, one can notice that, despite some differences, there are no great chronological discrepancies and it is very probable that the palaeochannel was quickly filled. We can also assume that destruction of the settlement happened before the Early Iron Age barrows were erected in the northern part of the site, because no contemporary finds were recognised in the palaeochannel. However, they are otherwise known from some of the disturbed layers at Rogoza. The end of occupation at Rogoza can perhaps be connected to climatic change, which resulted in increased runoff in the streams from the Pohorje mountains, literally removing a great part of the settlement remains from the upper part of the terrace to the lower part of the terrace and into the palaeochannel.

The highest layer that can be connected with the palaeochannel, is layer SE 610, which was lay above it.⁴⁰⁴ This also contained archaeological material dating to a long time period, which proves that fluvial activity did not abate in later periods. The finds include material from the Early Bronze Age. Moreover, a dish with an internally thickened rim (*pl. 3: 6* – So2) that can be dated mainly to the Initial and Early Urnfield period was found. The Early Urnfield period is represented by a variant So1b dish with internally cut rim (*pl. 3: 5*) and fragments of internally faceted everted rims (e.g. *pl. 3: 8*). These are followed by a large variant Sv3d dish (*pl. 4: 6*) and a variant A3b amphora (*pl. 4: 4*), both present mostly in Ha A contexts, but also appearing later. The decorated dish with an everted rim in *pl. 3: 10* (Sv3b), the rounded amphora in *pl. 5: 1* (A3a) and the globular pot with a high conical neck in *pl. 3: 2* (L7b) are characteristic for the Ha A and Ha B periods. The cup with an upswung handle in *pl. 4: 5* (Skd4b) and the knee-shaped handle in *pl. 3: 9* (R4a)

⁴⁰³ These are matching fragments of a clay cooking ring (*t. 17: 12*), which were found in different layers at least 8m apart.

⁴⁰⁴ Problem with this layer is that conflicting data are coming from the documentation, which complicates the determination of its definite relative-chronological position in the stratigraphy.

are artefacts with mostly Late Urnfield parallels. The layer also contained a larger amount of charcoal, which was radiocarbon dated to 1213–1013 cal BC (2σ – 93.5%) or 1132–1049 cal BC (1σ – 52.6%).⁴⁰⁵ This date is even earlier than the dates that mark the creation of the palaeochannel and also pre-dates some of the settlement structures. Dates, derived from alluvial layers, which would help us to determine geological events chronologically, have to be used with caution; the last date is questionable and is not used in further analyses.

Final remarks on the appearance of the Bronze Age settlement at Rogoza

An examination of the Bronze Age material indicates that the somewhat raised ground that rises above the floodplain in the south to form the central part of the archaeological site at Rogoza was occupied at least twice. The following represents a summary of the results of the study of the Urnfield period material.

The plans of 33 buildings were determined amongst a range of postholes and pits that had other functions. It is assumed that the majority of buildings were built in the widespread technique with postholes and posts. Analyses indicate that 76% of the posts were oak (*Quercus*), which shows an intentional choice of high quality building materials. Stone packing served to additionally strengthen the posts in the postholes. Pieces of burnt clay daub and small postholes, found in rows between the main postholes, indicate that wall structures were formed of vertical stakes, interwoven with withys and covered with clay (wattle and daub) (*pl. 12: 9,10; fig. 36*).⁴⁰⁶ Building 4 only had one extant posthole, which is probably a sign of a simple conical roof, while buildings 27 and 33 were probably forms with a simple projecting roof above the pit and an eventual activity area next to it. More pits of unknown purposes were discovered in and next to the buildings.

The majority of buildings are bounded by two rows of three or four postholes. Buildings of different construction are rare. Two main size classes

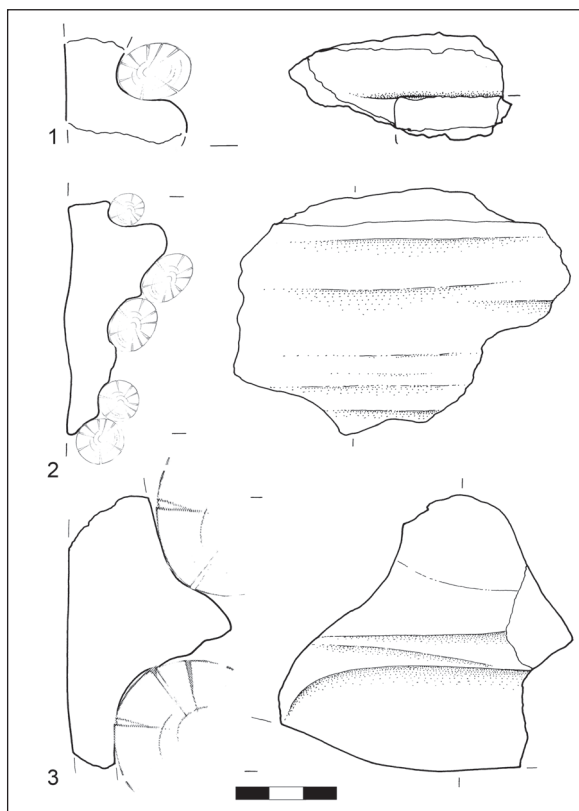


Fig. 36: Rogoza. Burnt clay daub with the imprint of the wattle of the wall construction.

Sl. 36: Rogoza. Prežgan stenski omet z odtisi konstrukcije stenskega jedra.

can be distinguished among rectangular buildings, the first one with dimensions of c. 5–6 × 3–4m (building 11) and the second one with buildings of c. 7–8 × 3–6m (building 15); the majority of the Rogoza buildings belong to the first size class. Some buildings do not belong to any of them. Buildings that are almost square and have sides shorter than 3m, such as buildings 9, 14 and 18, are often interpreted as granaries. Two narrower oblong buildings, buildings 17 and 26, were compared with buildings known in traditional architecture as cattle pens (*fig. 35*). Apart from these, the settlement also contained some smaller buildings, for example buildings 4, 27 and 33 that were perhaps used to protect different structures that were dug into the ground, such as storage pits and the activity areas associated with them. An interpretation of the larger dimensioned rectangular buildings is complicated. Five buildings of the smaller size class were connected with rubble layers, located either in them or in front of them (buildings 7, 8, 22, 24, 25), which can perhaps be connected with economic activities. Moreover, four of these

⁴⁰⁵ KIA37294.

⁴⁰⁶ The data derives from three fragments of burnt clay daub, which bear traces of the wattle walls. One of them shows also traces of two parallel beams, but this is insufficient for the presence of a “log cabin” type of building.

are not connected to the central part of any of the determined farmsteads. This is also true of the two isolated examples of the three buildings with hearths (28, 31). Droplets of copper were uncovered nearby (*pl. 14: 1,2*), which are understood as evidence for metallurgical craft activities, although a smithy was not located. Hearth 5 next to building 31 is interesting also because some pits are located around it. One of them (SE 1503) contained a large number of different forms of, mostly burnt, pottery. It is most probably a waste pit, but could also be a pottery workshop with a pit for pot wasters located next to a hearth. We have to mention that only hearth 2 was included in the area of farmsteads, which is at the same time the only hearth that was discovered in the central part of the settlement. Others are located either towards the southern or northern fringe of the settlement.⁴⁰⁷

It is important to emphasise that each farmstead includes at least one larger building that could possibly be determined as a dwelling house.

Buildings do not follow a common or dominant orientation within a settlement plan, as noticed at some settlements, such as Sodolek near Sv. Jurij ob Ščavnici and Dragomelj,⁴⁰⁸ but show a different plan. They are often built so as to surround a central place – a yard. The several buildings that were, considering their size and comparisons, used for different purposes, were sometimes located on a smaller area. A similar situation was recorded at Dragomelj, where farmsteads were located at some distance from one another.⁴⁰⁹ Curved rows of postholes can be often detected next to isolated buildings and farmstead buildings. They indicate the existence of enclosures. These enclosed areas, which belonged to individual buildings or farmsteads, were some of them probably intended for animals, of which only cattle and ovicaprids could be proved by bone finds.⁴¹⁰ The largest enclosure, located in the northern part of the settlement, could also be interpreted as a possible cattle pen.

Farmsteads, composed of several buildings and additional buildings that were isolated from the others, were arranged according to plan. The plan

(*inserts 2, 3*) shows that the settlement was of an oblong oval shape, bound by the palaeochannel, with a larger empty space located in the centre. Somewhat earlier settlements, such as Sodolek near Sv. Jurij ob Ščavnici and Pince (Pod Grunti) near Lendava, show a similar plan. The settlement at Lovčičky on Moravia, dating to the Urnfield period, is also of a similar form. It was not tightly bound to a palaeochannel and it was circular, but the centre did not contain any structures.⁴¹¹

Exact chronological definition is important in order to determine spatial dynamics. As indicated by comparisons of pottery material with contemporaneous material from sites in eastern Slovenia, from morphological and chemical analyses of metal objects and radiocarbon analyses, the site achieved its climax in the Early and during the transition to the Late Urnfield period. Seldom finds date to the “Oloris-Rabelčja vas horizon”, which corresponds to the late Middle Bronze Age and the Initial Urnfield period. It is interesting that these finds are only present in farmsteads/parts of the settlement that were most densely inhabited, arranged around a central place, while buildings and structures, located to the north of building 28 did not contain any material dating earlier than Ha A. We have to mention at this stage that extensively repaired buildings or several phases of some of the buildings were only present in the area that was densely settled. We can therefore presume that when the settlement was founded at the beginning of the Ha A, initial occupation began in the area, which remained the centre of the settlement in the later stages.

The northern settlement area, which, apart from a few buildings, also included a path, several hearths and a large enclosure, was probably occupied somewhat later, after the settlement was already in use for some time. The paved path, which dictated the orientation of nearby structures, and the construction of a larger enclosure or cattle pen, was a task which demanded the effort of the entire settlement and not only one farmstead. An activity that requires the participation of the whole community, with either religious or economic intentions, is urgent for the existence of such a community.⁴¹²

⁴⁰⁷ It is also possible that the smaller hearths, located in the settlement, did not survive the intensive agricultural use of the area.

⁴⁰⁸ Turk 2003, fig. 3; Kavur 2007, fig. 2.

⁴⁰⁹ Turk 2003, 111–112, fig. 3.

⁴¹⁰ My acknowledgements for the determination of the bones go to Dr. B. Toškan and J. Dirjec from Inštitut za arheologijo ZRC SAZU, Ljubljana.

⁴¹¹ Kavur 2007, fig. 2; Říhovsky 1982b, Abb. 16, 17 – the central building was later dated to the Neolithic period. The ground plan of Pince (Pod Grunti) was presented on 17th March 2008 in the City Museum of Ljubljana by B. Kerman.

⁴¹² Roberts 1996, 15–16.

ROGOZA DURING THE URNFIELD PERIOD

Chronological review

The comparative analyses of pottery and metallic finds allow us to compose a synopsis of essential data and, consequently, to make an attempt at placing the Urnfield period settlement at Rogoza into a spatial and chronological context.

The best and most frequent parallels for the pottery material can be found at partly contemporary sites in eastern Slovenia. However, only some of them have been studied in sufficient detail to be able to offer solid chronological support; comparisons are presented in the plates (*insert 4*).⁴¹³

The earliest finds that can be connected with establishment of the Urnfield settlement at Rogoza have their best parallels at sites of the "Oloris-Rabelčja vas horizon". They are rare and are absent from sites dating to Ha A/Ha B. Here, we wish to consider type So2 dishes with everted rims, especially the ones with T-sectioned rims, Sv1b tall dishes, Sk1a bowls, Skd3a cups, and bases of D5b footed bowls. While the majority of them do not have suitable analogies in neighbouring regions, the best parallels for dishes with T-sectioned rims and footed bowls come from sites of the Virovitica group on the lower reaches of the Drava, where the latter examples are characteristic until the end of the phase/group, i.e. the Br D/Ha A1 transition.⁴¹⁴ Pots and amphorae with strongly everted faceted rims occur almost contemporaneously. They are present in the Virovitica and Zagreb groups/phases (phases I and II according to Vinski-Gasparini) in northern Croatia, the Baierdorf-Velaticе and Čaka in eastern Austria and western Hungary, and in south-western Slovakia.⁴¹⁵ They are also characteristic for several phases of the Brinjeva

gora settlement, the artefacts of which have been used here as an orientation for dating regional, mostly Ha A, comparisons. Similarly to the above mentioned rims, also the majority of vessel forms from Rogoza occur in settlements from the late Middle Bronze Age and the Initial Urnfield period, and also in the Early or even Late Urnfield periods. Variant So2 dishes with rims that are thickened on one side, type So1d, So3 and So5a dishes with everted rims, Sv1a tall dishes and various pot types (L1, L2, L4a, L6a) confirm the above statement.

Vessel forms that do not have any connections with the "Oloris-Rabelčja vas horizon" are broadly contemporary or occur with a slight chronological shift. Their chronologies are based mostly on finds from early phases of Brinjeva gora, the first horizon of Gornja Radgona and securely dated contexts from Dolge njive near Šikole. We have to mention the occurrence of oval pots with strongly everted rims (L4b), several differently formed dishes with inverted rims (Sz3b) and tall dishes (Sv3b), which often carry oblique channelled decoration, and vessels with upswung handles (Skd4b-d).⁴¹⁶ These show parallels on contemporary settlements in the Drava region and Mura region, in the Ha A as well as early Ha B.

Forms of vessels that show connections only with one of the neighbouring settlements are most common at Pobrežje. Moreover, the number of elements, related to the distant site at Brinjeva gora, is astonishing. However, some rare parallels can be found on all of the compared settlements.

The most convincing comparisons from neighbouring countries are known from the Early Urnfield period. An amphora of type A2 shows similarities with vessels that carry oblique channelled decoration and are characteristic for the developed Baierdorf-Lednice phase or Ha A1 to be precise. Sv3d and Sv3e dishes and a handle (R2j) with oblique channelled decoration that could belong to a vessel of the "Säulchenschüssel" type date to the same period. An identical handle was also discovered at a settlement at Kalnik near Križevci in Croatian Zagorje, where it is dated to second and third horizons of the Urnfield Culture according to Vinski-Gasparini. Kalnik furthermore

⁴¹³ The material from Rogoza is compared with the following eastern Slovenian settlements: Oloris near Dolnji Lakoš, Rabelčja vas near Ptuj and Šiman near Gotovlje, dated to the Late Middle Bronze Age and the Initial Urnfield period, and Slivnica, Dolge njive near Šikole, Orehova vas, Pobrežje, Brinjeva gora, Gornja Radgona, Ormož and Hajndl near Ormož, dated to the Early and Late Urnfield period. Abb. 4 only presents vessels, which were, apart from Rogoza, found on at least two sites and are to an extent chronologically sorted. The foundations for the earlier material are finds from Oloris and Rabelčja vas, and for the later Brinjeva gora.

⁴¹⁴ Vinski Gasparini 1973, t. 8: 5, 9: 6; Pavišić 1991, t. 3: 4,6; 1992, t. 5: 7.

⁴¹⁵ Paulík 1962, Abb. 14: 1; Kemenczei 1975, Abb. 2: 1,2,4; Lochner 1986a, t. 3: 1; 1994, Abb. 106.

⁴¹⁶ Dishes with inverted rims Sz3b are known from Rabelčja vas in a somewhat deeper form (Strmčnik-Gulič 1988–1989, t. 4: 16,21, 15: 27). They do not derive from closed contexts, but are, on the other hand, not the only finds dated to the Ha A, which was already mentioned by Dular (Dular et al. 2002, 173–174).

correlates with Rogoza with horizontally faceted dishes with inverted rims.⁴¹⁷ These have parallels in western Hungary, in contexts that contain elements of the Baierdorf-Lednice repertoire or Ha A1, and in the contemporaneous Čaka Culture in Slovakia.⁴¹⁸ Somewhat later are variant A3a, A3b and A3c amphorae that represent the earliest vessels at cemeteries of the Late Urnfield period in Slovenia and on wider south-eastern Alpine and Pannonian areas; they are dated either to the Ha A or the Ha A/Ha B transition.⁴¹⁹ Type L7b, L8c and L9 pots are also chronologically and spatially similar.⁴²⁰

Also metal finds from Rogoza were attributed to the Ha A and the beginning of the Ha B. The greatest importance was ascribed to a plano-convex copper ingot that, as a semi-product, chronologically corresponds with finished products. The same date was shown by chemical analyses of samples of copper and bronze and their comparison with the composition of alloys that are characteristic for the Ha A, as well as the Ha B.

Comparisons, dating to Ha B, which presented novelties, were mostly found at a small area of the Ruše Urnfield group, which, as already noted by H. Müller-Karpe, shows a unique character with its geographical position that separates it from neighbouring groups.⁴²¹ Apart from its unique decorations, seen on different fragments of vessels, we also have to mention a jug, two amphorae of type A1b and A1c, type L5 pots of, Sz2a hemispherical dishes, types Skd1a, Skd2a and Skd4b cups, Sk2a and Sk3 bowls and, last but not least, knee-shaped handles (R4). These forms of vessels occur in large amounts but there are mostly individual examples that correspond with the early Ha B.

Finds date the foundation of the settlement at Rogoza to the Br D/Ha A transition and its abandonment to the Late Urnfield phase Ha B1.

⁴¹⁷ Lochner 1994, 198–199, Abb. 106; Vrdoljak 1994, t. 36: 4.

⁴¹⁸ Paulík 1963, Obr. 10: 1, 29: 2, 30: 8; Patek 1968, 102, T. 6: 28,29; Horváth 1994, T. 29–32; Dular et al. 2002, 190–193, fig. 29–31.

⁴¹⁹ Patek 1968, 97–99, T. 5: 1–5,19; Lochner 1994, Abb. 108, Abb 112.

⁴²⁰ Patek 1968, 90, t. 3: 7, 48: 24, 103:1; Kalicz-Schreiber 1991b, t. 22: 5; Lochner 1994, Abb. 108: grob 10; Pare 1998, 400–401; Tiefengraber 2005, 127, t. 23: 5.

⁴²¹ Müller-Karpe 1959, 115–116. His statements were recapitulated by E. Patek 1968, 51–52.

Atmospheric data from Reimer et al (2004);OxCal v3.10 Bronk Ramsey (2005); cub r:5 sd:12 prob usp[chron]

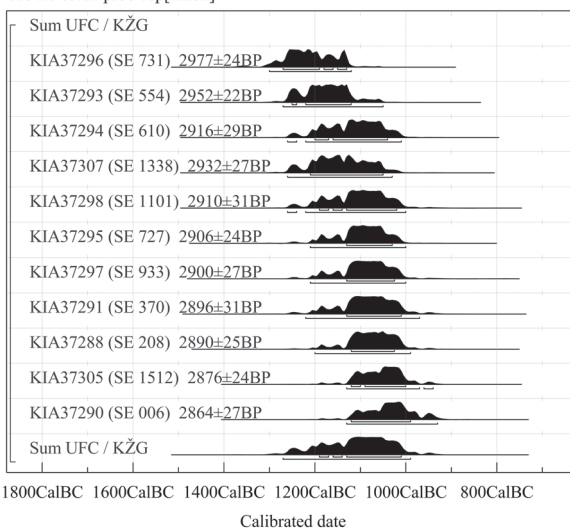


Fig. 37: Presentation of radiocarbon dates from Rogoza accompanied with the probability calculation of the settlement's lifespan (*Sum*) (OxCal v 3.10).

Sl. 37: Radiokarbonske datacije iz žarnogrobiščne naselbine v Rogozi z izračunom verjetnega časovnega razpona poselitve (*Sum*) (OxCal v 3.10).

This relative-chronological span correlates the settlement with recent absolute Central European dating in a period from c. 1200 to c. 950 BC.⁴²² The radiocarbon dates from Rogoza, 11 showing comparable results (*fig. 37*), confirm this time span and indicate that the settlement existed for a slightly shorter period. The earliest date from a closed context (SE 731) dates the settlement to 1300–1125 cal. BC (2σ – 95.4%) or 1263–1192 cal. BC (1σ – 53.3%), while the latest date (SE 1512) is 1128–975 cal BC (2σ – 94.4%) or 1058–1009 cal BC (1σ – 44.4%).⁴²³ The latter, as already indicated by the finds, probably shows that the settlement did not exist through the entire Ha B1 period, but that it was abandoned at the beginning of the 1st millennium BC. This would mean that the settlement at Rogoza existed for c. 200 years with eight to ten generations living in the settlement, which is furthermore confirmed by a synthesis of all the important dates (*fig. 37*).

⁴²² The absolute dates are summarized according to publications of Sperber 1987; 2003, footnote 19; Pare 1998, 294–299; Gleirscher 2006. Only definitions of Br C/Br D and Br D/Ha A1 transitions are somewhat uncertain and some changes can still be expected (Sperber 1987, Schopfer 1996, Mäder, Sormaz 2000).

⁴²³ KIA37296, KIA37305.

Settlement pattern

Now that it is known when the settlement at Rogoza was occupied, it is possible to raise the question of the occupation of its hinterland in the Dravsko-Ptujsko polje and the wider region of eastern Slovenia from the Savinjska dolina to Prekmurje.

A quick examination of the published settlements in eastern Slovenia shows that none is analogous to Rogoza. Occupation in the period from the Ha A to the early Ha B is documented only on the upland settlement at Brinjeva gora. Moreover, earlier elements, connected with the Oloris-Rabelčja vas horizon, are known from both sites. However, Rogoza was abandoned before Brinjeva gora.⁴²⁴ Also Orehova vas was perhaps contemporary, but an examination of the preliminary report shows that it lacks elements of the Initial Urnfield period.⁴²⁵ It is therefore necessary to observe occupation of the area during the late Middle Bronze Age and the Initial Urnfield period (Br C/Br D).⁴²⁶

The most comprehensively published settlements, Oloris at Dolnji Lakoš and Rabelčja vas, present two larger settlement cores, the first in southern Pomurje and the second near Ptuj (fig. 38). Oloris has a central geographical position in Pomurje. The settlement is located on a meander of a stream. Its formation is questionable as it is possible that it was created by settlers. The meander was furthermore strengthened with a wooden palisade. The recently discovered site at Pince (Pod Grunti) near Lendava lies to the south of this site and is furthermore interesting because of its semicircular shape, which is similar to that of Rogoza. It is located on somewhat raised ground next to a palaeochannel. This location offered

⁴²⁴ Dular et al. 2002, 177, fig. 22: 1–3.

⁴²⁵ Contemporary settlements can be also observed at Dragomelj and Podgorica, which are located in the flatland between Ljubljana and Domžale. Ceramic material has not been published, but we already mentioned plano-convex ingots from Dragomelj. Overlapping is also present at the radiocarbon dates, which range from 2990 +/- 40 BP to 2890 +/- 40 BC (Turk 2003). Those are, when using the same calibration programme as at the dates from Rogoza (OxCal 3.10), even more related. This is best seen at the latest date 2890 +/- 40 BC (1200–928 cal BC), which dates to 1220–970 cal BC (2σ – 92,6%) or 1130–1000 cal BC (1σ – 68,2%) according to the calibration we used and does not exceed the dates from Rogoza as such.

⁴²⁶ We are aware that there are some Oloris finds that could be dated to the Br B, but the majority are later (Dular et al. 2002, 170–174; Teržan 1995, 133; 324–327; 1999, 133).

a suitable settlement site in a marshy area. The majority of settlements in Pomurje exhibit similar locations.⁴²⁷ Only a settlement at Nova Tabla near Murska Sobota, lying towards the north-west, is different; it is located on flat ground according to the excavators. Mention should also be made of a settlement at Gosposko near Hotiza, which is thought to be a small *tell* type settlement; however, the settlement was almost entirely destroyed in the last century. Another recently discovered settlement is located to the west. This site is located at Sodolek near Sv. Jurij ob Ščavnici, in a valley surrounded by the Radgonske gorice in the east, the Slovenske gorice in the west and open towards Pomurje in the south-east. The settlement, investigated with modern methods, shows an outline that is analogous to Pince (Pod Grunti) and Rogoza, with a palaeochannel/ditch limiting its location. The Pesnica valley, where a settlement was discovered at Gomile near Lenart, is located towards the south, on the south-western side of the Slovenske gorice. A natural route across the valley leads to Ptuj, where the Rabelčja vas settlement was located at the foot of Mestni vrh. It was bounded by the Grajena stream in the west, with the settlement spreading towards the Drava in the South; the location of the Drava River channel during this period is unknown. A cemetery that probably accompanied the settlement, was found in its immediate vicinity at Potrčeva ulica. Two further settlements were discovered on the right bank of the Drava, at Ptuj (Selska cesta) and Štuki near Ptuj. A settlement at Njiverce, located some 800m from Štuki and with a preliminary date in the Initial Urnfield period, was perhaps also contemporary. The only site located on the northern edge of the vast lowland area of the Dravsko polje is Malečnik, on a high terrace at the foot of Meljski hrib on the left bank of the Drava. A settlement at Žutreki near Spodnja Gorica by Pragersko, located on the central part of the Dravsko - Ptujsko polje is perhaps also contemporary. Similar pottery finds were also discovered at Šiman near Gotovlje, which is located beyond Konjiška gora in the Savinja valley, and at Črnelica near Šentjur, in the Voglajna valley.

The listed sites indicate that during the Middle Bronze Age/Urnfield period transition the lowland parts were the most densely populated. Larger lowland areas or valleys allowed for a larger number

⁴²⁷ Šavel 1994, 53–54, 80.

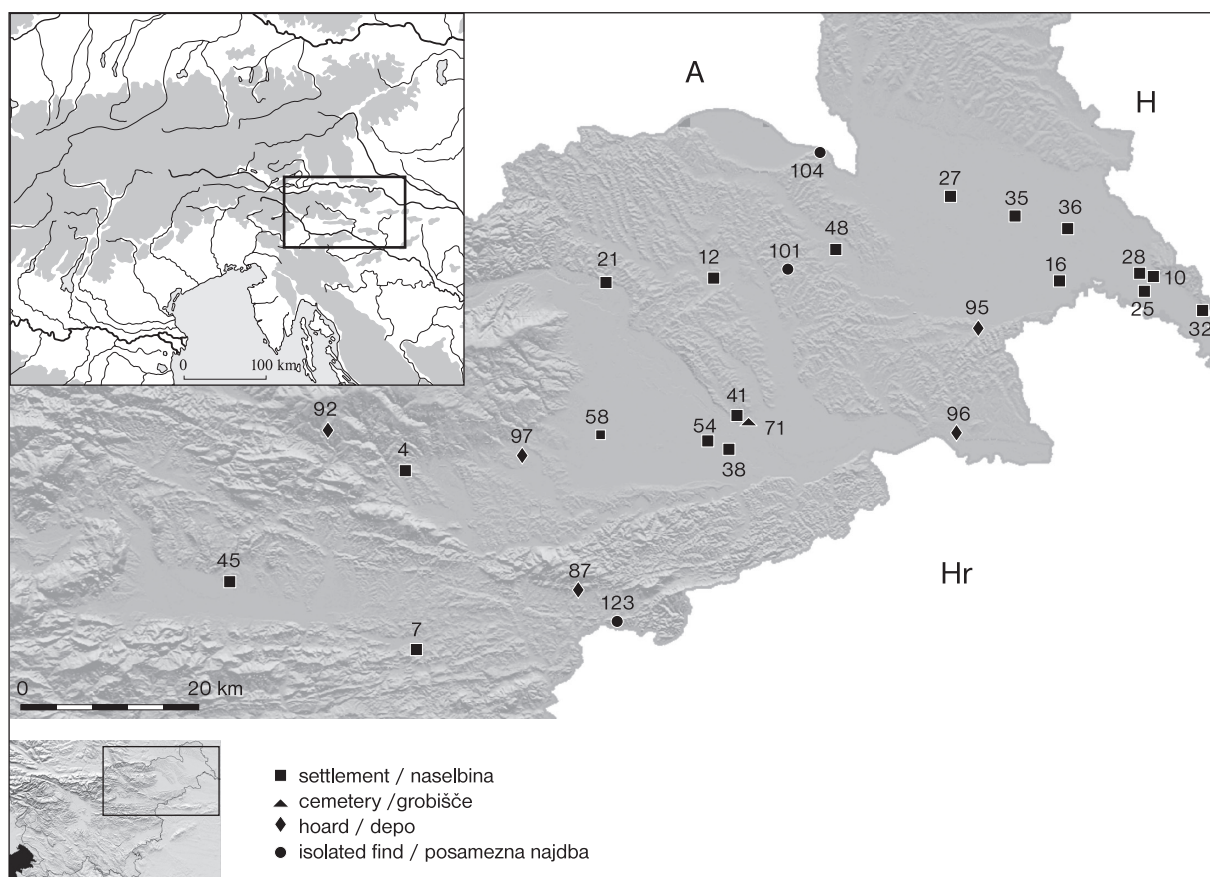


Fig. 38: Eastern Slovenia with the sites dated to the Br C/Br D period.

Sl. 38: Vzhodna Slovenija. Najdišča obdobja Bd C/Bd D.

List of Urnfield period sites in eastern Slovenia* (figs. 38–40)

Seznam poznobronastodobnih najdišč v vzhodni Sloveniji* (sl. 38–40)

1. SETTLEMENTS / NASELBINE		
1 Biserjane (Sv. Jurij / Videm ob Ščavnici)	19 Gradišče (Križevci pri Ljutomeru)	39 Ptujski grad (Ptuj)
2 Bistrica ob Dravi	20 Kujzjak (Sodinci)	40 Cerkevšče (Pušenci)
3 Blato (Slovenske Konjice)	21 Malečnik	41 Rabelčja vas
4 Brinjeva gora (Zreče)	22 Med cestami (Šikole)	42 Rifnik (Rifnik)
5 Cediljeki (Spodnja Gorica)	23 Meljski hrib	43 Rogoza
6 Cirkovce (Kidričevo)	24 Miklavški hrib/Miklavžev hrib	44 Ruše
7 Črnolica	25 Nedelica	45 Slivnica pri Mariboru
8 Dolge njive (Šikole)	26 Njiverce	46 Šiman (Gotovlje)
9 Draženci	27 Nova Tabla (Murska Sobota)	47 Šmatevž/Sv. Matevž
10 Gaborkert (Lendava)	28 Oloris (Dolnji Lakoš)	48 Sodolek (Sv. Jurij / Videm ob Ščavnici)
11 Gmajna (Spodnja Gorica)	29 Orehova vas	49 Orglarska delavnica (Spodnje Hoče)
12 Gomile (Lenart v Slovenskih goricah)	30 Ormož	50 Spodnja Hajdina (Ptuj)
13 Gorice (Turnišče)	31 Pigl (Javornik)	51 Spodnje Hoče
14 Gornja Radgona	32 Pod Grunti (Pinče)	52 Spodnje Radvanje
15 Gornje njive (Dolga vas)	33 Pobrežje (Maribor)	53 Strmec
16 Gosposko (Hotiza)	34 Pod Kotom – sever (Krog)	54 Štuki
17 Hajndl	35 Prapornice (Gančani)	55 Terme (Zreče)
18 Ivankovci (Lendava)	36 Pri Muri (Lendava)	56 Zavrč
	37 Potrčeva ulica (Ptuj)	57 Zbelovska gora
	38 Selska cesta (Ptuj)	58 Žutreki (Spodnja Gorica)

* The date of some sites listed is determined as *Bronze Age* which is visible from the fig. 39.

* Nekatera najdišča s seznama so opredeljena kot bronastodobna, kar je vidno na sl. 39.

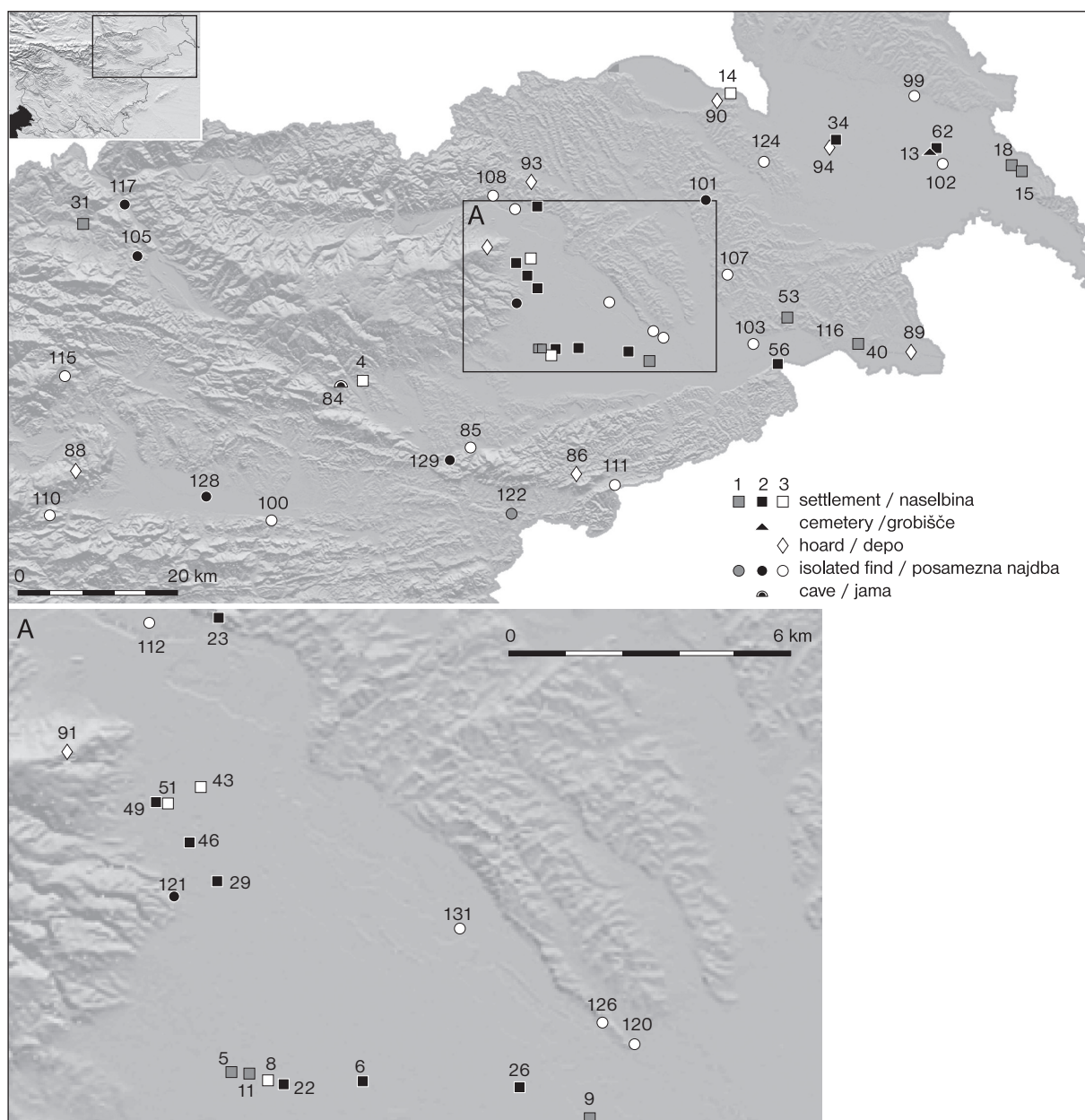


Fig. 39: Eastern Slovenia. Sites ascribed to broader time spans of the Bronze Age (1) and the Urnfield period (2) and those dated to the Ha A period (3).

Sl. 39: Vzhodna Slovenija. Najdišča širšega obdobja bronaste dobe (1) in kulture žarnih grobišč (2), ter najdišča kronološke stopnje Ha A (III).

2. CEMETERIES / GROBIŠČA

59 Benedikt v Slovenskih goricah
 60 Bezena
 61 Formin
 62 Gorice (Turnišče)
 63 Gračič
 64 Limbuš
 65 Mladinska ulica (Maribor)
 66 Partizanska ulica (Maribor)
 67 Miklavž na Dravskem polju
 68 Nova Tabla (Murska Sobota)

69 Ormož
 70 Pobrežje (Maribor)
 71 Potrčeva ulica (Ptuj)
 72 Ptujski grad (Ptuj)
 73 Rabelčja vas
 74 Rifnik (Rifnik)
 75 Ruše I (Ruše)
 76 Ruše II / Gasilski dom (Ruše)
 77 Rogaška cesta (Spodnja Hajdina)
 78 Spodnje Radvanje (Maribor)

79 Stari grad (Laško)
 80 Za Raščico (Krog)
 81 Zavrč
 82 Zgornja Hajdina
 83 Župečja vas

3. CAVE-SITE / JAMSKO NAJDIŠČE

84 Pavlakova jama (Nova Dobrava)

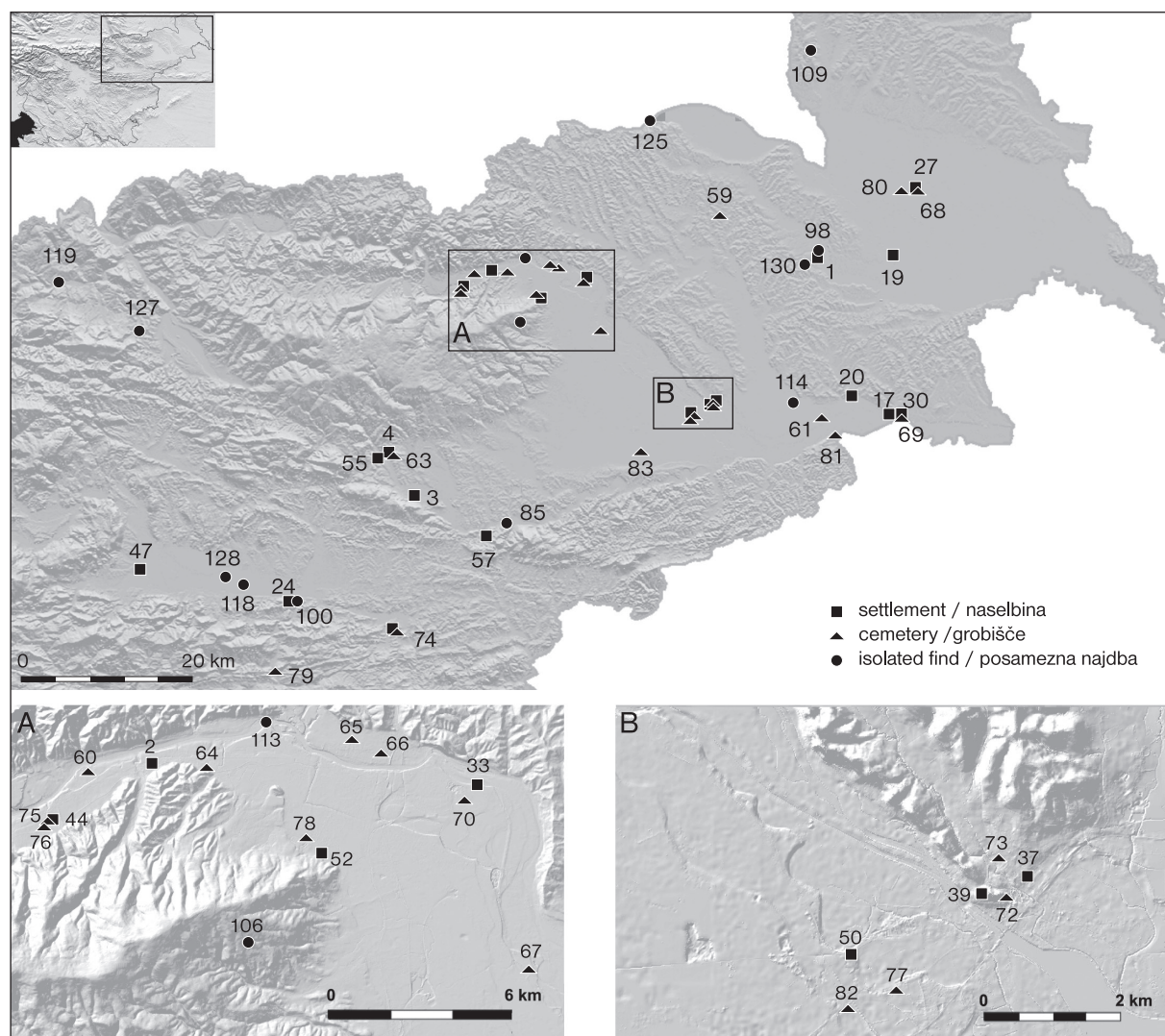


Fig. 40: Eastern Slovenia. Sites dated to the Ha B period.
Sl. 40: Vzhodna Slovenija. Najdišča obdobja Ha B.

4. HOARDS / DEPOJI

85 Bela (Poljčane)
86 Čermožiše
87 Cerovec pod Bočem
88 Čreta
89 Grabe
90 Hercegovščak
91 Špуре (Hočko Pohorje)
92 Hudinja
93 Pekel
94 Pod Kotom – jug (Krog)
95 Podgradje
96 Pušenci
97 Slovenska Bistrica

5. ISOLATED FINDS / POSAMEZNE NAJDBE

98 Biserjane (Videm ob Ščavnici / Sv. Jurij)
99 Šavlov potok (Bogojina)
100 Savinja (Celje)
101 Cerkvenjak
102 Gomilica (Turnišče)
103 Gorišnica
104 Gornja Radgona
105 Gradec (Stari trg)
106 Hočko Pohorje
107 Juršinci
108 Kamnica
109 Kuharjev breg (Pertoča)
110 Jakov Dol (Ločica pri Vranskem)
111 Macelj
112 Maribor – unknown site/neznano najdišče
113 Mariborski otok (Kamnica)
114 Moškanjci
115 Mozirska planina (Ljubno)
116 Ormož
117 Tovarna ivernih plošč (Otiški vrh)
118 Petrovče
119 Prevalje
120 Ptuj – unknown site/neznano najdišče
121 Radizel
122 Rogaška Slatina
123 Rogatec
124 Spodnji Kocjan
125 Trate na Muri (Sladki vrh)
126 Vičava
127 Vrhe
128 Žalec
129 Zbelovska gora
130 Ženik
131 Zlatoličje

of settlements in a comparatively small area, while smaller, perhaps more remote valleys, included only individual settlements. The only upland site recognised so far is Brinjeva gora, which is an exceptional site with continuous habitation from the Early Bronze Age onwards, which can perhaps be connected with utilization of the mineral wealth of southern Pohorje.⁴²⁸

While the above-mentioned sites, with the help of publications of Oloris and Rabelčja vas, are mostly precisely determined, many other sites are broadly dated to the Urnfield period and are therefore difficult to include in this study. These can be either isolated finds that do not allow accurate dating, or else sites, examined with modern excavation methods that have not been fully published yet and their preliminary reports are often insufficient.

Despite this, we made an attempt, based on previous publications, to recognise settlement patterns of the Early and Late Urnfield periods or Ha A and Ha B (fig. 38–40). In Pomurje, a settlement and a cemetery from Gorice near Turnišče date to this period, while all other settlements and cemeteries were discovered in the surroundings of Murska Sobota. Nova Tabla is a settlement dating to the Late Urnfield period and is perhaps accompanied by a grave, while another grave presents a largely destroyed cemetery at Za Raščico near Krog. Finds from an upland settlement on the Gornja Radgona Castle hill date the site to the Ha A and Ha B with continuation in the Ha C. In the Late Urnfield period, on the south-eastern hillsides of the Radgonske gorice prior to the Ščavnica valley, a settlement Križevci pri Ljutomeru was located on an allegedly artificially created knoll.⁴²⁹ A settlement at Biserjane near Sv. Jurij and two isolated finds of socketed axes indicate the Late Urnfield period occupation of the Ščavnica valley. Slovenske gorice remained unoccupied with the exception of a cemetery near Benedikt. The southern Drava region is now occupied. A settlement and a cemetery at Zavrč, with the latter doubtlessly dating to the Ha B, while the settlement may be, according to the excavators, somewhat older, are the most southwardly located sites. The most important site of this area is without any doubt the Late Urnfield period site at Ormož with its own protourban organisation, located on a high terrace of the Drava River. It is an enclosed

settlement with a regular system of streets, houses and yards; a part of the associated cemetery was discovered just outside the central settlement area. A contemporary settlement at Kujzjak near Sodinci has a similar location to Ormož and was also located on a terrace between the lowland and hills and was likewise surrounded with a ditch and a bank. Ptuj also settles an extraordinarily important position (fig. 40). An interesting change in the inhabitation of Rabelčja vas has been discussed several times, i.e. the north-western part of the settlement from the Br C/Br D and partly also Ha A was reused as a Late Urnfield cemetery, while the settlement moved closer to a former cemetery on modern Potrčeva ulica. A Late Urnfield period settlement is also indicated in layers from the Ptujski grad, with a possible associated cemetery discovered below it to the east. The right bank of the Drava was also occupied. This is the site of an interesting complex of a settlement at Spodnja Hajdina, which is possibly associated with two cemeteries. They are located some 800m away from the settlement, but are closer to each other.

Three settlements were discovered in the central part of the Dravsko-Ptujsko polje, but only the material from Dolge njive near Šikole, dated to the Ha A, was preliminarily studied. A location Cirkovce near Kidričevo, where an Urnfield period settlement with over 30 buildings was discovered, deserves special attention. The discovery of two possibly contemporary additional groups of structures with two and four buildings, lying 450m and 750m southward from the settlement, is also interesting. Such a distribution raises many new questions about the organization of the settlement and its surroundings. However, a key for further study is, again, an integrated publication of all mentioned sites.

The occupation of the northern part of the Dravsko polje intensifies during the Initial/Early Urnfield period transition (figs. 39–40). The material from Rogoza is the best example here and can be connected with finds from Slivnica, Orehova vas and Pobrežje. Finds from Spodnje Hoče are perhaps also contemporary. While Pobrežje is located on a high terrace of the Drava, other settlements from the foot of Pohorje are frequently positioned next to smaller streams, perhaps on somewhat raised ground as seen at Rogoza. A question about spatial organization must be raised here, as individual sites lie c. 3.5km from one another. Moreover, a settlement on Meljski Hrib most probably controlled a passage across the river, which runs below the hill, and is similar to the locations of the settle-

⁴²⁸ Teržan 1983.

⁴²⁹ We would furthermore need a geological evaluation of the site for such an interpretation.

ments at Gornja Radgona and Ptujski grad. This site with an exceptional strategic position has unfortunately not been examined and does not allow for further discussion.

It was as late as the Late Urnfield period when occupation expanded to a narrower part of the Drava valley all the way to Ruše (fig. 40). Settlements with associated cemeteries that were, similarly as at Ormož and Ptuj, located only some hundred metres away from the settlements, were discovered at Pobrežje, Ruše and perhaps also at Spodnje Radvanje. Other sites from a wider area around Maribor, apart from both Maribor cemeteries (Mladinska and Partizanska ulica) that could belong to a single settlement if we observe the site at Spodnja Hajdina, did not lie so close to one another. We could presume seven to eight settlement clusters within the study region.

Intensity of occupation strongly decreases towards the west of the study area. The known sites, i.e. Brinjeva gora, Zbelovska Gora, Rifnik, Miklavški hrib above Celje and Stari grad above Laško, are sites that are located on topographically distinct positions. However, lowland settlements also existed, as can be proved by settlements at Blato near Slovenske Konjice in the Dravinja valley and Šmatevž in the Savinja valley. The latter was located on somewhat raised ground, above a stream.

Eastern Slovenian hoards and isolated finds have to be observed as a separate perspective on settlement activities or activities in place. These have already been comprehensively studied and I will therefore not discuss their character or date. However, with observation of settlement patterns, the knowledge of which has recently increased drastically, the question of the inclusion of hoards in the cultural landscape can be raised.⁴³⁰

Finds from the Initial and Early Urnfield periods, or hoard horizons I and II according to Turk, can be divided into two groups (figs. 38, 39). The rare first group comprises finds that were discovered in lowland areas and close to settlements, such as a spear from Gomilica near Turnišče. The area near Ptuj is perhaps similar, as it has also produced isolated finds dating to the Br D/Ha A, but occupation of

the area remains doubtful during this period. Let us also mention two hoards. The first is from Pod Kotom, to the south at Krog near Murska Sobota that dates to the Ha A2/Ha B1 transition and was found some 3km away from a settlement at Nova Tabla near Murska Sobota. The second from Hercegovščak can be linked to a settlement at Gornja Radgona, which lies only 1.5km away. The position of the latter that was supposedly discovered on a ridge above a river valley is interesting, because analogous hoards have also been found elsewhere. The distribution of hoards partly follows river valleys and the fringes of the lowland areas at the foot of the hills. Finds near the Drava River are a good example, namely, in an area from Kamnica to Grabe we can list five isolated finds and two hoards, i.e. at Pušenci and Grabe. We also have to mention water finds in the Savinja River and probably also in the Bela stream, which were deposited into water irreversibly and indicate a different type of disposal. Upland finds or finds on somewhat remote areas will be discussed next. Some of them were deposited in distinct locations, which are raised above the lowland, such as a hoard on the Hočko Pohorje and at Čreta near Vransko. Others, mostly isolated finds, can be found in extremely remote places, such as the Mozirska planina. Isolated finds from the Late Urnfield period also show a variety of locations of disposal. As mentioned above, two socketed axes were found near a settlement at Biserjane, and water finds were discovered at Trate near the Mura and in the Bela Stream near Poljčane. Moreover, an upland find of a socketed axe was found on the Hočko Pohorje, but these types of finds are rare and therefore not easy to define.

However, it is interesting that areas of the northern and southern Dravsko - Ptujsko polje can, based on isolated finds and hoards, be placed in the wider cultural landscape as early as in the Initial or Early Urnfield period, while more intensive occupation, as noted above, occurred during the Late Urnfield period.

The relationship between settlements/settlement sites and hoard/isolated finds is exclusive to some degree during the Initial and Early Urnfield period, because finds only rarely occur in the immediate environs of settlements.⁴³¹ However, they also show some connection, as they limit the central areas of inhabitation, i.e. the lowlands, and separate them

⁴³⁰ Čerče, Turk 1996; Turk 1996; Šinkovec 1996. The awareness that the finds without a good documentation of their provenience are of less importance, and can be even misleading is present in this research, but, on the other hand, the distribution of the majority of them is quite uniform and offers some interesting conclusions.

⁴³¹ These are not hoards found in settlements, as the two from Dragomelj (Turk 2003), because they have to be considered as parts of settlements.

from the uplands. Finds that were deposited on mountain pastures, next to possible routes and passes, are doubtlessly a reflection of activities that were performed there.⁴³² Their meaning is perhaps analogous to the meaning of other deposits.

In spite of limited data from unpublished archaeological sites, eastern Slovenia demonstrates an interesting settlement dynamic. While the Middle Bronze Age/Urnfield period transition shows denser occupation in southern Pomurje, the situation changes during the Early and Late Urnfield period, when, apart from Prekmurje, the Drava region begins to show more activity. Ptuj and its immediate environs were occupied more or less throughout the Bronze Age, but the two wave expansion also reaches the narrow valley parts all the way to Ruše. Moreover, the narrow Drava valley from Fala onwards seems to have been unsuitable for settlement. Only isolated finds were found in the Mislinja valley, most probably from the south-east, as from Hudinja near Vitanje to the north-west of Brinjeva gora one only has to follow the Jesenica and Paka valleys that lead to its southern end.

Upland settlements became dominant in the Early and mostly in the Late Urnfield period. We can trace them from Gornja Radgona to Stari grad above Laško. They can be separated from contemporary agricultural settlements in lowland areas based on their strategic positions, from whence they control

⁴³² Šinkovec 1996, 156–163.

their wider surroundings. The relationship between different types of settlements has not yet been established. Namely, upland sites have not been studied in such detail as the lowland sites in recent years. Their location presents another difficulty, as they were repeatedly occupied and finds often originate from damaged and disturbed layers.

While observing the abandonment of the settlement at Rogoza, we noted that it could be connected with climate changes and with larger amounts of rainfall.⁴³³ It is also important that, after the examination of preliminary reports of excavations at Orehova vas and Slivnica, we noted the lack of finds that could be dated to the developed Ha B. Perhaps we may suppose that, at the transition to the 1st millennium, the lowland parts at the foot of eastern hillsides of Pohorje no longer offered suitable conditions for settlement; the hydrology had changed and the area was considered to be too dangerous for occupation in spite of the undulating relief.

Translation: Nives Kokeza and Philip Mason

⁴³³ The comparisons of phases of increased humidity differ quite considerably. This phase was observed at the transition from the Middle Bronze Age to the Urnfield period at Lake Balaton (Juhász et al. 2001, 36–37; 2007, 183–188), other analyses have shown the phase between 1400 to 800 BC in the south-eastern Alps, but the data often vary from one site to another (Drescher-Schneider, Wick 2001).

CATALOGUE OF FARMSTEADS AND BUILDINGS

Farmstead 1

Building 1 (7.5 × 2.5m; *pl. 1*: 4,5):

The outline is given by two rows of four postholes. There is a further posthole, which could derive from a later repair. There is a pit also associated with the house.

Building 2 (7.5 × 5.7m):

Its form is hard to distinguish. The dimensions lead one to expect ridge posts to carry the roof construction. There are also different rows of postholes associated with the building, which could be parts of extensions or fences.

Building 3 (8.7 × 5.7m; *pl. 1*: 6):

It has a slightly trapezoidal form, but its form is not perfectly clear. It may be linked to a large pit, positioned to the southeast and three postholes, possibly forming an extension.

Farmstead 2

Building 9 (2.9 × 2.7m):

This is a smaller building, defined by six postholes.

Building 10 (5.0 × 3.8m):

The rectangular building is formed by three parallel rows of postholes. The middle row is not central, but transverses the building at a third of its length. The western row is represented by postholes in a ditch, in which also clearly visible stakeholes of the poles building the wall construction were documented. The building may be associated with some pits to the west and postholes at its eastern side, which we can interpret as signs of later repair. In addition, there is also a curved row of postholes connected with the south-western corner of the building.

Building 11 (5.4 × 3.0m):

The rectangular building is formed by two parallel rows of postholes, where the eastern is represented by five pair of postholes, whereas the western is much less clear.

Building 12/13 (4.7 × 3m, 5.7 × 3.7m; G662):

These are two buildings that cannot be clearly separated. The southern one is represented by two rows of postholes, while the second one also incorporates a row of ridge postholes. We have to mention the north-eastern extension of this row, where small single and double postholes were found. This is an unusual form.

Building 14 (1.95 × 1.74m):

The rectangular building is formed by six postholes.

Building 5 (7.4 × 3.8m; G337–G340 – *pl.* 5: 6,7):

This rectangular building, formed by two parallel rows of three postholes, might also be included in this farmstead. Additional postholes from repairs can be observed in three of its corners. A ridge posthole was also found in the middle of the building. Some pits may also be connected with it. One is in the south-eastern corner of the building, the others are on its western side. A connection can be also presumed with the rows of postholes running in a SW-NE direction.

Farmstead 3

Building 15/16 (8.5 × 3.3 m, 5.1 × 3.6m; *pl.* 7: 12):

An extensive group of postholes reveals at least two buildings, which cannot be chronologically defined. The first group, oriented almost directly to the north, comprises one building formed by two rows with four pairs of postholes each, or distinguishes two building (sub)phases, where the second phase would only be moved by half a metre in the same direction. The second (or third) building has a different orientation. It has at least two additional postholes, which can be again interpreted as evidence of repairs.

Building 17 (4.3 × 2.0m):

This is a narrower object, where we can observe a different number of postholes on different sides. The side walls are interestingly stronger, i.e. more postholes, whilst the west side is supported by only one posthole. Hearth 2 was documented to the east of it.

Building 18 (2.8 × 2.6m):

This is a smaller building, comprising four postholes.

Farmstead 4

Building 19 (6.0 × 2.7m; *t.* 8: 1):

The form of this building is outlined by two rows of three postholes, around which there are other pits. There is a row of postholes leading from this building to the north, i.e. to building 22.

Building 20/21 (6.9 × 2.6 m, 5.3 × 2.8m; G732):

The outline of the first is formed by seven postholes. There are other postholes of different sizes located to the south and the east, which might mark a partly covered area around it. The second outline, originally formed by six postholes is shifted slightly to the north. There are three more postholes that bear witness to repairs. There is also a large pit, which can be ascribed to both houses, since it lies inside both their ground plans.

Building 22 (4.7 × 3.2m; G778–G785, G797 – *pl.* 8: 2–4):

This building is outlined by two rows of postholes, the northern row with three and the southern row with two postholes. There are also two layers of gravel, which can be probably connected to it.

Building 23 (5.6 × 2.8m):

Its ground plan is constructed by two rows of postholes. In the south-western corner there were again multiple postholes, very likely linked to repairs. There are two pits, which can be probably connected with this building, one including a posthole, lying in the direction of the wall of the building.

Building 24 (6.2 × 2.8m; G737–G752 – *pl.* 9: 2–9):

Its outline is formed by two rows of four postholes, which are once more accompanied by others, probably deriving from repairs. There is one more pit with two postholes within it in the south-western corner.

Building 25 (4.9 × 2.9m; G798, G800, G801, G808, G812 – *pl.* 8: 5–7):

Each of its longer walls was supported by three posts; some repairs followed and left signs in additional ones. A previously observed row of smaller postholes can be followed in a NE direction from the middle of the building.

Building 26 (5.4 × 1.8m; G893–G897 – *pl.* 8: 10–12):

Its shorter walls were supported by four and five posts, the south-eastern with two, whilst the north-western with only one. There are also a notable number of smaller postholes around it possibly forming a fence.

Other (independent) buildings

Building 4 (2.9 × 2.7m; G311–G329 – *pl.* 2: 1–9):

The object beside the palaeochannel is marked by a large pit with a posthole. The pit contained a large amount of pottery, a whetstone, burnt animal bones and burnt daub. The varied nature of the pottery assemblage suggests that it could be interpreted as a storage facility.

Building 6 (6.5 × 3.1m; *pl.* 6: 4,5):

There were also other postholes at the palaeochannel, forming a trapezoidal building, in which a pit (SE 370) was found. This contained what is probably the most important find of the settlement, the copper plano-convex ingot.

Building 7 (6.0 × 3.3m; G522–G548 – *pl.* 7: 1–10):

Its outline is formed by two lines of four postholes each. Its northern part contained an oval pit, some smaller ones, possibly impressions of sunken piles, and a gravel layer. A similar layer was also found in the southern part, but this contained many pottery fragments. There is also a row of postholes forming a curve on the northern exterior of the building, possibly forming a fence.

Building 8 (5.0 × 3.0m; *pl.* 7: 11):

Its outline is formed by two rows of five postholes each, but four of them are double. It also had a ridge post. There are also postholes at the northern side of it, possibly representing an extension.

Building 27 (1.8 × 1.4m):

This is a pit, which is surrounded by twelve smaller postholes.

Building 28 (7.3 × 5.2m; G867, G874–G876, G886 – *pl.* 9: 16–18):

Its ground plan is constructed of four rows of four postholes each, where the southernmost is slightly displaced. Hearth 4 is located at the north-eastern corner.

Building 29 (7.9 × 2.8m; *pl. 9*: 19):

The outline is formed by two rows by four postholes each. There is also a shallow oblong pit in the interior of the building.

Building 30 (7.9 × 2.9m; *pl. 10*: 1,2):

Its original form is represented by two rows of five postholes, whilst the additional postholes on the northern side represent repairs.

Building 31 (5.4 × 4.3m; *pl. 10*: 1):

Its "L" form is outlined by seven postholes. There are three large pits in its immediate vicinity, one of which is hearth 5.

Building 32 (2.5 × 2.3m; G1098–G1106 – *pl. 14*: 10–16):

This relates to the concentration of postholes on the north side of the path, which is hard to interpret. Its form is indefinite, but seven of the postholes form a row and four a square. There is also a large pit (SE 554), which contained a considerable amount of pottery, beside the latter.

Building 33 (5.1 × 4.7m, 2.7 × 2.1m; G1177, G1182, G1183 *pl. 15*: 1–3):

This is a building constructed by two parts, a square building formed by four postholes and a pit, around which there are eight smaller postholes. The finds of large storage jars and a portable oven lid suggest that it was used for storing and/or preparing food.

CATALOGUE

Plate 1

Each catalogue unit is composed in such a way that the number of the find, connecting its description with the main text, is followed by the number of the find in the primary publication in brackets.¹ Then follows a description with the basic information, such as granularity of fabric, forming technique, surface treatment, firing technique,² hardness, colour (*Fig. 3*)³ and ornamentation with the motif used. Data about the position of the find (stratigraphical unit – SE), its dimensions and weight conclude each description.

The current custodian of the finds archive is the Institute for Protection of the Cultural Heritage, Maribor Regional Office.

Abbreviations:

SE = SU (stratigraphical unit)

frg. = fragment(s)

dmn. = dimensions

th. = thickness

h. = height

2r = maximum diameter

2rR = diameter of the rim

2rB = diameter of the base

2rH = diameter of the hole (e.g. spindle whorls)

w. = weight

¹ Črešnar 2011.

² A significant number of pottery artefacts show a variety of different impacts (e.g. fire, humidity, post-deposition factors), which, to an extent, damaged or destroyed at least their exterior surface. These artefacts are described as *refired/ destroyed*.

³ Colours were defined using the *Munsell Soil Colour Charts* (Baltimore 1988). If the colours of the artefact's exterior and interior surface vary significantly, this is registered and divided by a slash (/). If the colours vary on one side, i.e. the surface is spotty, this was also registered, divided by a dash (-) and an explanation (- spotty).

1. (G147) Frg. of an ornamented rim; hand-thrown; granularity: rough; surface treatment: sponging; hardness: very hard; colour: yellowish brown; firing: reduction / oxidation; ornament: facets; motif: horizontal lines. Position: SE 514; dmn.: 13.0 × 6.5cm; th.: 1.3cm; 2rR: 40.4cm; w.: 165.6g.

2. (G146) Frg. of an ornamented jar; hand-thrown; granularity: rough; refired / destroyed; ornament: ornamented cordon; motif: horizontal line. Position: SE 514; 2rR: 63.0cm; 2rB: 33.3cm; h.: 48.0cm; th.: 1.0cm; w.: 991.9g.

3. (G148) Frg. of rim and ornamented body of a jar; hand-thrown; granularity: fine; surface treatment: sponging; hardness: soft; colour: yellowish brown; firing: oxidation; ornament: ornamented cordon; motif: horizontal line. Position: SE 514; 2rR: 18.4cm; h.: 8.1cm; th.: 0.7cm; w.: 154.8g.

4. (G330) Frg. of an ornamented body; hand-thrown; granularity: fine; refired / destroyed; ornament: incisions; motif: parallel lines. Position: SE 600; dmn.: 4.0 × 3.0cm; th.: 0.8cm; w.: 14.4g.

5. (G331) Frg. of an ornamented handle; hand-thrown; granularity: fine; surface treatment: perfunctory sponging; hardness: very hard; colour: reddish brown; firing: oxidation; ornament: channelled decoration; motif: vertical line. Position: SE 600; dmn.: 3.6 × 3.2cm; th.: 1.1cm; w.: 20.7g.

6. (G336) Frg. of rim and ornamented body of a jar; hand-thrown; granularity: small; surface treatment: smoothing; hardness: very hard; colour: yellowish red; firing: oxidation; ornament: ornamented cordon; motif: horizontal line. Position: SE 600; dmn.: 10.4 × 9.5cm; th.: 0.8cm; w.: 119.3g.

7. (G332) Frg. of rim and body; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish yellow / dark grey; firing: reduction / oxidation. Position: SE 600; dmn.: 5.5 × 2.5cm; th.: 1.0cm; 2rR: 22.6cm; w.: 20.6g.

8. (G333) Frg. of an ornamented handle; hand-thrown; granularity: rough; surface treatment: perfunctory sponging / smoothing hardness: very hard; colour: light brown; firing: reduction / oxidation; ornament: facets, channelled decoration; motif: vertical lines. Position: SE 600; dmn.: 4.0 × 3.2cm; th.: 1.1cm; w.: 16.4g.

Plate 2

1. (G311) Frg. of an ornamented body: hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: dark brown; firing: incomplete oxidation / reduction; ornament: incisions; motif: horizontal lines with a zigzag line in-between. Position: SE 658b; dmn.: 4.5 × 3.1cm; th.: 0.5cm; w.: 11.0g.

2. (G312) Frg. of a jar body with a lug; hand-thrown; granularity: rough; refired / destroyed. Position: SE 658b; dmn.: 9.5 × 5.0cm; th.: 1.0cm; w.: 113.5g.

3. (G317) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish brown; firing: incomplete oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 658b; dmn.: 10.4 × 3.0cm; th.: 0.5cm; 2rR: 16.8cm; w.: 25.2g.

4. (G328) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: dark brown; firing: reduction; ornament: facets; motif: horizontal line. Position: SE 658b; dmn.: 6.3 × 2.4cm; th.: 0.6cm; w.: 12.5g.

5. (G319) Frg. of rim and body of a dish; hand-thrown; granularity: rough; surface treatment: sponging; hardness: very hard; colour: light brown; firing: incomplete oxidation. Position: SE 658b; dmn.: 9.0 × 7.5cm; th.: 1.1cm; 2rR: 26.6cm; w.: 95.7g.

6. (G320) Frg. of rim and ornamented body of a jar with lugs; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: red; firing: incomplete oxidation; ornament: ornamented rim with lug; motif: horizontal line. Position: SE 658b; dmn.: 7.5 × 5.2cm; th.: 0.7cm; 2rR: 15.4cm; w.: 45.8g.

7. (G326) Frg. of rim and body of a jar with lugs; hand-thrown; granularity: rough; surface treatment: perfunctory sponging; hardness: very hard; colour: yellowish red-brown - spotty; firing: incomplete oxidation; ornament: ornamented rim with lug; motif: horizontal line. Position: SE 658b; 2rR: 43.2cm; th.: 1.1cm; w.: 535.7g.

8. (G329) Frg. of a cup; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: greyish brown; firing: reduction / oxidation. Position: SE 658b; dmn.: 7.1 × 6.8cm; th.: 0.5cm; 2rR: 9.2cm; 2rR: 3.4cm; h.: 6.2cm; w.: 28.0g.

9. (G314) Whetstone made of sandstone. Position: SE 658b; dmn.: 11.0 × 2.9cm; th.: 2.7cm; w.: 139.9g.

10. (G494) Frg. of rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: brown; firing: reduction / oxidation. Position: SE 1127; dmn.: 5.5 × 3.0cm; th.: 0.6cm; 2rR: 17.1cm; w.: 17.4g.

11. (G341) Frg. of rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish yellow / dark grey; firing: reduction / oxidation. Position: SE 1041; dmn.: 6.5 × 3.9cm; th.: 0.7cm; 2rR: 18.4cm; w.: 24.6g.

Plate 3

1. (G358) Frg. of rim and body of a jar; hand-thrown; refired / destroyed. Position: SE 610; dmn.: 17.5 × 6.8cm; th.: 0.5cm; 2rR: 18.8cm; w.: 95.9g.

2. (G361) Frg. of a jar with a lug; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish yellow; firing: reduction / oxidation. Position: SE 610; 2rR: 31.2cm; 2rB: 21.2cm; h.: 30.8cm; th.: 0.7cm; w.: 537.3g.

3. (G396) Frg. of an ornamented portable oven lid; hand-thrown; granularity: small; refired / destroyed; ornament: ornamented cordon; motif: horizontal line. Position: SE 610; dmn.: 14.7 × 9.0cm; th.: 0.9cm; w.: 138.6g.

4. (G377) Frg. of ornamented rim and body of a jar; hand-thrown; refired / destroyed; ornament: fingertip impressions; motif: horizontal line. Position: SE 610; 2rR: 21.2cm; th.: 1.0cm; w.: 600.2g.

5. (G224) Frg. of rim and body of a dish; hand-thrown; granularity: fine (mica); surface treatment: sponging; hardness: very hard; colour: yellowish brown; firing: oxidation. Position: SE 610; dmn.: 2.9 × 2.5cm; th.: 0.6cm; w.: 5.0g.

6. (G241) Frg. of rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: brown; firing: reduction / oxidation. Position: SE 610; dmn.: 5.6 × 4.2cm; th.: 0.8cm; w.: 33.0g.

7. (G376) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish brown; firing: incomplete oxidation; ornament: channelled decoration; motif: horizontal line. Position: SE 610; dmn.: 3.5 × 2.7cm; th.: 0.5cm; 2rR: 14.0cm; w.: 8.2g.

8. (G236) Frg. of ornamented rim and body; hand-thrown; granularity: small; surface treatment: sponging; hardness: very hard; colour: greyish brown; firing: reduction / oxidation; ornament: facets; motif: horizontal lines. Position: SE 610; dmn.: 3.6 × 3.2cm; th.: 0.7cm; w.: 16.0g.

9. (G390) Frg. of a knee-shaped handle; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: hard; colour: light grey; firing: oxidation. Position: SE 610; dmn.: 2.9 × 2.0cm; th.: 0.4cm; w.: 4.2g.

10. (G357) Frg. of an ornamented body of a dish; hand-thrown; granularity: fine (ceramics); surface treatment: sponging; hardness: hard; colour: light greyish brown; firing: oxidation; ornament: grooves; motif: horizontal band of oblique lines. Position: SE 610; dmn.: 3.7 × 3.1cm; th.: 0.4cm; w.: 8.4g.

Plate 4

1. (G403) Frg. of ornamented rim and ornamented body of a jar; hand-thrown; granularity: rough; surface treatment: perfunctory sponging; hardness: very hard; colour: brown / reddish yellow; firing: incomplete oxidation; ornament: fingertip impressions, ornamented cordon; motif: horizontal lines. Position: SE 610; dmn.: 8.6 × 7.8cm; th.: 1.3cm; 2rR: 32.4cm; w.: 116.9g.

2. (G405) Frg. of an ornamented body of a jar; hand-thrown; granularity: fine; refired / destroyed; ornament:

shallow grooves; motif: horizontal band of vertical and oblique lines. Position: SE 610; 2r: 24.4cm; th.: 0.7cm; w.: 462.4g.

3. (G408) Frg. of an ornamented amphora; hand-thrown; granularity: small; refired / destroyed; ornament: fingertip impressions; motif: horizontal lines. Position: SE 610; 2rR: 18.8cm; 2rB: 9.2cm; th.: 0.5cm; w.: 230.2g.

4. (G412) Frg. of an ornamented amphora; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: very hard; colour: light brown-grey - spotty; firing: uncontrolled; ornament: incisions; motif: horizontal straight line, two zigzag lines, triangle with two pennants on the top. Position: SE 610; 2r: 9.4cm; h.: 6.8cm; th.: 0.3cm; w.: 34.4g.

5. (G410) Frg. of a cup; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: extraordinarily hard; colour: grey; firing: incomplete oxidation. Position: SE 610; 2rR: 8.9cm; 2rB: 3.4cm; h.: 5.6cm; th.: 0.3cm; w.: 98.1g.

6. (G411) Frg. of an ornamented dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: greyish brown; firing: incomplete oxidation; ornament: facets, channelled decoration; motif: horizontal lines, horizontal band. Position: SE 610; 2rR: 29.2cm; h.: 12.8cm; th.: 0.5cm; w.: 727.6g.

7. (G404) Frg. of a spindle whorl; hand-thrown; granularity: small; surface treatment: sponging; hardness: hard; colour: yellowish brown; firing: oxidation. Position: SE 610; 2r: 3.5cm; 2rL: 0.6cm, h.: 2.3cm; w.: 10.8g.

Plate 5

1. (G413) Frg. of an ornamented amphora; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: light brown; firing: reduction / oxidation; ornament: grooves; motif: horizontal band of horizontal and vertical lines. Position: SE 610; 2r: 22.4cm; h.: 15.6cm; th.: 0.4cm; w.: 427.5g.

2. (G364) Smoother made of quartz pebble stone. Position: SE 610; dmn.: 12.7 × 8.7cm; th.: 3.9cm; w.: 550.0g.

3. (G380) Trapezoid formed axe made of serpentine. Position: SE 610; dmn.: 4.7 × 3.7cm; th.: 1.0cm; w.: 31.4g.

4. (G363) Frg. of quern made of amphibole. Position: SE 610; dmn.: 11.4 × 9.2cm; th.: 6.5cm; w.: 556.0g.

5. (G365) Frg. of quern made of gneiss. Position: SE 610; dmn.: 17.2 × 17.1cm; th.: 2.9cm; w.: 554.0g.

6. (G339) Frg. of rim and body of a dish; hand-thrown; granularity: small; surface treatment: smoothing; hardness: very hard; colour: reddish grey; firing: reduction / oxidation. Position: SE 600; dmn.: 8.1 × 4.0cm; th.: 0.8cm; 2rR: 32.2cm; w.: 44.7g.

7. (G340) Frg. of rim and body of a dish; hand-thrown; granularity: small; surface treatment: sponging; hardness: extraordinarily hard; colour: light brown / dark grey; firing: reduction / oxidation. Position: SE 1011; dmn.: 8.9 × 5.7cm; th.: 0.5cm; 2rR: 11.6cm; w.: 24.1g.

Plate 6

1. (G657) Frg. of a bowl; hand-thrown; granularity: rough; surface treatment: smoothing; hardness: extraordinarily

hard; colour: light brown; firing: reduction / oxidation. Position: SE 384; dmn.: 8.0 × 6.9cm; th.: 0.9cm; w.: 85.4g.

2. (G659) Frg. of a handle; hand-thrown; granularity: small; surface treatment: sponging; hardness: extraordinarily hard; colour: dark brown; firing: reduction. Position: SE 385; dmn.: 7.2 × 4.5cm; th.: 0.2cm; w.: 43.0g.

3. (G662) Frg. of rim and body of a jar; hand-thrown; granularity: rough; surface treatment: smoothing; hardness: extraordinarily hard; colour: red-brown - spotty; firing: oxidation. Position: SE 399; dmn.: 6.5 × 4.7cm; th.: 0.7cm; 2rR: 19.8cm; w.: 30.9g.

4. (G637) Ornamented pot with lugs; hand-thrown; granularity: small; surface treatment: sponging; hardness: very hard; colour: dark brown; firing: reduction; ornament: facets; motif: horizontal lines. Position: SE 370; 2rR: 23.9cm; 2rB: 10.8cm; h.: 27.5cm; th.: 1.7cm; 2rB: 13.0cm.

5. (G636) Cooper plano-convex ingot. Position: SE 370; dmn.: 19.5 × 17.9cm; th.: 6.1cm; w.: 3471.0g.

(ICP-AES analysis is published in the Fig. 26)

Plate 7

1. (G534) Frg. of rim and body of a dish; hand-thrown; granularity: small; surface treatment: sponging; hardness: extraordinarily hard; colour: dark brown; firing: incomplete oxidation / reduction. Position: SE 336; dmn.: 7.0 × 3.5cm; th.: 0.7cm; w.: 18.0g.

2. (G538) Frg. of rim and body of a dish; hand-thrown; granularity: small; surface treatment: smoothing; hardness: extraordinarily hard; colour: red; firing: reduction / oxidation. Position: SE 336; dmn.: 6.0 × 4.5cm; th.: 0.7cm; w.: 28.8g.

3. (G532) Frg. of rim and body of a dish; hand-thrown; granularity: small; surface treatment: smoothing; hardness: very hard; colour: brown; firing: reduction / oxidation. Position: SE 336; dmn.: 6.8 × 6.5cm; th.: 1.0cm; w.: 53.5g.

4. (G528) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: brown; firing: oxidation; ornament: channelled decoration; motif: valoviti liniji. Position: SE 336; dmn.: 6.0 × 4.2cm; th.: 0.6cm; w.: 21.4g.

5. (G526) Frg. of rim and body of a dish; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: extraordinarily hard; colour: light brown; firing: reduction / oxidation. Position: SE 336; dmn.: 9.0 × 8.0cm; th.: 0.7cm; 2rR: 20.4cm; w.: 75.0g.

6. (G537) Frg. of rim and ornamented body of a jar; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: very hard; colour: light grey / dark grey; firing: oxidation; ornament: channelled decoration; motif: curved lines. Position: SE 336; dmn.: 5.0 × 4.6cm; th.: 0.6cm; w.: 22.0g.

7. (G527) Frg. of rim and body of a jar; hand-thrown; granularity: small; surface treatment: smoothing; hardness: extraordinarily hard; colour: brown; firing: reduction / oxidation. Position: SE 336; dmn.: 7.2 × 5.4cm; th.: 0.6cm; w.: 36.8g.

8. (G548) Frg. of ringfoot and body; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: dark grey; firing: reduction. Position: SE 336; dmn.: 7.0 × 4.5cm; th.: 1.0cm; 2rB: 7.0cm; w.: 63.4g.

9. (G542) Frg. of body with a lug formed from three horn-like projections; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: yellowish brown; firing: reduction / oxidation. Position: SE 336; dmn.: 4.2 × 3.1cm; th.: 0.5cm; w.: 16.7g.

10. (G544) Bone point. Position: SE 336; dmn.: 5.4 × 1.5cm; th.: 0.3cm; w.: 3.1g.

11. (G549) Frg. of a knee-shaped handle; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: very hard; colour: light reddish brown; firing: oxidation. Position: SE 346; dmn.: 3.5 × 2.1cm; th.: 0.7cm; w.: 7.0g.

12. (G669) Frg. of a quern form gneiss. Position: SE 842; dmn.: 27.9 × 17.8cm; th.: 5.7cm; w.: 4613.8g.

13. (G684) Frg. of rim and ornamented body of a jar; hand-thrown; granularity: small; surface treatment: sponging; hardness: very hard; colour: greyish brown; firing: incomplete oxidation; ornament: ornamented cordon; motif: horizontal line. Position: SE 002; dmn.: 11.2 × 9.5cm; th.: 1.2cm; w.: 150.1g.

14. (G677) Frg. of rim and body of a jar; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: hard; colour: brown; firing: incomplete oxidation. Position: SE 001; dmn.: 7.5 × 5.2cm; th.: 1.0cm; w.: 50.7g.

15. (G678) Frg. of rim and body of a dish; hand-thrown; granularity: small; surface treatment: smoothing; hardness: hard; colour: reddish yellow; firing: incomplete oxidation. Position: SE 001; dmn.: 3.7 × 2.5cm; th.: 0.4cm; w.: 6.7g.

16. (G683) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: very hard; colour: grey - spotty; firing: uncontrolled; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 002; dmn.: 3.5 × 3.4cm; th.: 0.5cm; w.: 13.8g.

17. (G685) Frg. of rim and body; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: brown; firing: incomplete oxidation. Position: SE 002; dmn.: 4.0 × 2.3cm; th.: 0.7cm; w.: 13.3g.

18. (G686) Frg. of rim and body; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: brown; firing: incomplete oxidation. Position: SE 002; dmn.: 3.7 × 3.4cm; th.: 0.7cm; w.: 11.9g.

19. (G673) Handle; hand-thrown; granularity: rough; surface treatment: smoothing; hardness: extraordinarily hard; colour: red-brown - spotty; firing: incomplete oxidation. Position: SE 002 (?); dmn.: 5.3 × 5.1cm; th.: 1.3cm; w.: 41.2g.

Plate 8

1. (G671) Frg. of an ornamented body: hand-thrown; granularity: fine; surface treatment: smoothing; hardness: very hard; colour: reddish yellow; firing: reduction / oxidation; ornament: tool impressions; motif: horizontal band of oblique lines. Position: SE 1429; dmn.: 2.2 × 1.6cm; th.: 0.5cm; w.: 2.4g.

2. (G778) Frg. of rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish yellow; firing: reduction / oxidation. Position: SE 003a; dmn.: 4.7 × 4.5cm; th.: 0.7cm; w.: 21.0g.

3. (G780) Frg. of rim and body; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: grey; firing: oxidation. Position: SE 003a; dmn.: 6.2 × 4.8cm; th.: 0.5cm; 2rR: 14.8cm; w.: 24.1g.

4. (G797) Frg. of quern made of gneiss. Dmn.: 25.0 × 17.7cm; th.: 5.2cm; w.: 3013.0g.

5. (G798) Frg. of quern made of gneiss. Dmn.: 24.0 × 15.7cm; th.: 8.2cm; w.: 3890.3g.

6. (G800) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: yellowish brown; firing: reduction / oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 999=003a; dmn.: 3.4 × 1.3cm; th.: 0.6cm; w.: 4.7g.

7. (G801) Frg. of ornamented rim and body; hand-thrown; granularity: small; surface treatment: perfunctory sponging; hardness: hard; colour: grey-reddish yellow - spotty; firing: reduction / oxidation; ornament: fingertip impressions; motif: horizontal line. Position: SE 999=003a; dmn.: 3.5 × 2.0cm; th.: 0.6cm; w.: 6.2g.

8. (G808) Frg. of an ornamented handle; hand-thrown; granularity: very fine; surface treatment: smoothing; hardness: very hard; colour: light brown; firing: reduction / oxidation; ornament: channelled decoration; motif: vertical band of oblique lines. Position: SE 999=003a; dmn.: 4.0 × 2.3cm; th.: 1.0cm; w.: 18.3g.

9. (G812) Frg. of a knee-shaped handle; hand-thrown; granularity: fine; refired / destroyed. The object has strongly rounded edges. Position: SE 999=003a; dmn.: 3.4 × 2.6cm; th.: 0.7cm; w.: 10.5g.

10. (G897) Frg. of an ornamented dish; hand-thrown; granularity: very fine; surface treatment: burnishing; hardness: very hard; colour: brown; firing: incomplete oxidation / reduction; ornament: facets; motif: horizontal lines. 2rR: 22.1cm; 2rB: 8.7cm; h.: 6.4cm; th.: 0.5cm; w.: 79.0g.

11. (G894) Frg. of an ornamented body of a jar: hand-thrown; granularity: small; refired / destroyed; ornament: ornamented cordon; motif: horizontal line. Position: SE 003; dmn.: 4.2 × 3.0cm; th.: 0.9cm; w.: 13.4g.

12. (G895) Frg. of an ornamented body of a jar: hand-thrown; granularity: fine; surface treatment: smoothing; hardness: very hard; colour: reddish yellow; firing: incomplete oxidation; ornament: ornamented cordon; motif: horizontal line. Position: SE 003; dmn.: 3.7 × 3.0cm; th.: 0.9cm; w.: 13.0g.

13. (G756) Frg. of rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: greyish brown; firing: incomplete oxidation. Position: SE 947; dmn.: 11.2 × 8.0cm; th.: 0.5cm; 2rR: 28.8cm; w.: 61.9g.

14. (G755) Frg. of an ornamented body of a dish; hand-thrown; granularity: very fine; surface treatment: burnishing; hardness: extraordinarily hard; colour: brown / dark brown; firing: reduction; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 947; dmn.: 11.0 × 7.0cm; th.: 0.6cm; 2r: 23.1cm; w.: 65.5g.

15. (G754) Frg. of base and body of a jar; hand-thrown; granularity: rough; surface treatment: perfunctory sponging; hardness: hard; colour: reddish yellow / dark grey; firing: oxidation. Position: SE 947; 2rB: 11.1cm; h.: 11.5cm; th.: 1.0cm; w.: 454.5g.

Plate 9

1. (G758) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: hard; colour: grey-brown - spotty / grey; firing: reduction / oxidation; ornament: facets; motif: horizontal lines. Position: SE 963; dmn.: 6.0 × 5.7cm; th.: 0.6cm; w.: 31.5g.

2. (G746) Frg. of ornamented rim and ornamented body of a jar; hand-thrown; granularity: small; surface treatment: smoothing; hardness: very hard; colour: dark brown; firing: reduction; ornament: fingertip impressions, ornamented cordon; motif: horizontal lines. Position: SE 933; dmn.: 8.0 × 6.2cm; th.: 1.2cm; w.: 84.0g.

3. (G741) Frg. of rim and ornamented body of a jar; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: dark brown / dark grey; firing: reduction; ornament: incisions, wheel-stamped impressions; motif: band of horizontal lines with changing ornamentation technique. Position: SE 933; dmn.: 4.3 × 3.6cm; th.: 0.6cm; w.: 13.8g.

4. (G740) Frg. of an ornamented rim; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: dark brown; firing: incomplete oxidation / reduction; ornament: facets; motif: horizontal lines. Position: SE 933; dmn.: 4.5 × 4.2cm; th.: 0.9cm; w.: 16.4g.

5. (G751) Frg. of rim and body of a dish; hand-thrown; granularity: small; refired / destroyed.

Position: SE 933; dmn.: 4.4 × 4.1cm; th.: 0.7cm; w.: 16.1g.

6. (G742) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: very fine; surface treatment: smoothing, sponging; hardness: extraordinarily hard; colour: grey-brown - spotty; firing: oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 933; dmn.: 4.2 × 3.0cm; th.: 0.7cm; w.: 11.3g.

7. (G743) Frg. of an ornamented body; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: greyish brown; firing: reduction; ornament: ornamented cordon, incisions; motif: band of horizontal and oblique lines. Position: SE 933; dmn.: 3.6 × 3.1cm; th.: 0.8cm; w.: 10.5g.

8. (G737) Frg. of an ornamented body; hand-thrown; granularity: very fine; surface treatment: burnishing, sponging; hardness: very hard; colour: greyish brown; firing: reduction; ornament: incisions and impressions; motif: band of horizontal lines with a line of dots on both edges. Position: SE 933; dmn.: 3.3 × 2.6cm; th.: 0.3cm; w.: 3.3g.

9. (G749) Frg. of an ornamented bowl; hand-thrown; granularity: small; surface treatment: sponging; hardness: extraordinarily hard; colour: reddish brown; firing: oxidation; ornament: ornamented cordon; motif: horizontal line. 2rR: 20.0cm; 2rB: 9.0cm; h.: 14.2cm; th.: 0.7cm; w.: 321.6g.

10. (G732) Frg. of bronze bracelet or ring. Position: SE 900; dmn.: 4.4cm; th.: 0.9cm; w.: 16.7g. (ICP-AES analysis is published in the *Fig. 26*).

11. (G880) Frg. of rim and ornamented body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: yellowish brown; firing: oxidation; ornament: shallow channelled decoration; motif: curved lines. Position: SE 1303; dmn.: 4.3 × 2.9cm; th.: 0.8cm; w.: 24.2g.

12. (G866) Frg. of rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: grey-brown - spotty; firing: uncontrolled. Position: SE 1303; dmn.: 4.4 × 4.1cm; th.: 0.7cm; w.: 17.9g.

13. (G865) Frg. of a handle; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish yellow; firing: incomplete oxidation. Position: SE 1303; dmn.: 3.4 × 2.4cm; th.: 0.8cm; w.: 10.4g.

14. (G861) Frg. of an ornamented body; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: brown; firing: incomplete oxidation; ornament: shallow impressions of small rings. motif: horizontal line. Position: SE 1303; dmn.: 3.0 × 2.7cm; th.: 0.6cm; w.: 5.8g.

15. (G856) Frg. of an ornamented body; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish yellow; firing: incomplete oxidation; ornament: ornamented cordon; motif: horizontal line. Position: SE 1303; dmn.: 4.2 × 2.8cm; th.: 0.8cm; w.: 8.1g.

16. (G867) Frg. of a vessel-foot; hand-thrown; granularity: small; surface treatment: smoothing; hardness: hard; colour: reddish brown / black-brown - spotty; firing: uncontrolled. Position: SE 1303; 2rB: 4.1cm; th.: 3.1cm; w.: 1.5g.

17. (G876) Frg. of rim and body of a jar; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: hard; colour: yellowish brown; firing: incomplete oxidation. Position: SE 1303; dmn.: 35.3 × 4.4cm; th.: 0.5cm; w.: 18.6g.

18. (G886) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: extraordinarily hard; colour: greyish brown; firing: incomplete oxidation; ornament: fingertip impressions; motif: horizontal line. Position: SE 1324; dmn.: 3.1 × 2.3cm; th.: 0.7cm; w.: 8.7g.

19. (G902) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: greyish brown; firing: oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 003; dmn.: 3.4 × 2.3cm; th.: 0.6cm; w.: 6.6g.

20. (G1064) Frg. of a cigar-headed pin with incised decoration in a form of false twisting. Position: SE 226; dol.: 8.8cm (reconstructed); th.: 0.3cm; w.: 0.7g.

21. (G954) Frg. of rim and body of a jar; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: extraordinarily hard; colour: light grey / dark grey; firing: oxidation. Position: SE 003a; dmn.: 3.8 × 3.0cm; th.: 0.6cm; w.: 9.9g.

22. (G964) Frg. of an ornamented rim; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: greyish brown; firing: reduction / oxidation; ornament: facets; motif: horizontal lines. Position: SE 1237; dmn.: 3.9 × 3.0cm; th.: 1.0cm; w.: 16.6g.

23. (G939) Frg. of rim and body of a dish; hand-thrown; granularity: small; refired / destroyed; ornament: fingertip impressions; motif: horizontal line. The object has strongly rounded edges. Position: SE 1303; dmn.: 5.2 × 4.9cm; th.: 1.0cm; w.: 25.7g.

24. (G937) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: yellowish brown; firing: reduction / oxidation; ornament: channelled decoration;

motif: horizontal band of oblique lines. Position: SE 1303; dmn.: 2.7 × 2.5cm; th.: 0.7cm; w.: 6.4g.

25. (G956) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish yellow; firing: reduction / oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 003a; dmn.: 5.5 × 2.5cm; th.: 0.7cm; w.: 13.5g.

26. (G955) Frg. of an ornamented body: hand-thrown; granularity: small; surface treatment: smoothing; hardness: extraordinarily hard; colour: light greyish brown; firing: oxidation; ornament: incisions; motif: horizontal lines. Position: SE 003a; dmn.: 3.6 × 2.6cm; th.: 0.8cm; w.: 7.8g.

Plate 10

1. (G947) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: very hard; colour: reddish brown / grey; firing: oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 003a; dmn.: 2.7 × 2.6cm; th.: 0.6cm; w.: 7.2g.

2. (G965) Frg. of quern made of gneiss. Position: SE 1242; dmn.: 23.5 × 16.9cm; th.: 3.5cm; w.: 2199.3g.

3. (G1062) Spindle whorl; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: brown; firing: incomplete oxidation. It has the superior and the inferior surface grinded away. Position: SE 1512; 2r: 3.5cm; 2rL: 0.3cm, h.: 1.6cm; w.: 22.1g.

4. (G985) Base and the body of a jar; hand-thrown; granularity: small; surface treatment: smoothing; hardness: very hard; colour: reddish yellow; firing: oxidation. Position: SE 1501; 2rB: 11.1cm; h.: 14.9cm; th.: 0.9cm; w.: 882.4g.

5. (G1001) Frg. of an ornamented jar; hand-thrown; granularity: rough; surface treatment: sponging; hardness: hard; colour: grey-reddish yellow - spotty; firing: incomplete oxidation; ornament: fingertip impressions, ornamented cordon with lug; motif: horizontal lines, curved line. Position: SE 1504; 2rR: 37.5cm; 2rB: 17.0cm; h.: 41.0cm; th.: 1.3cm; w.: 7168g (reconstructed).

6. (G1002) Frg. of an ornamented jar; hand-thrown; granularity: rough; surface treatment: smoothing; hardness: hard; colour: reddish yellow / grey firing; uncontrolled; ornament: fingertip impressions, ornamented cordon; motif: horizontal lines. Position: SE 1504; 2rR: 45.5cm; 2rB: 23.0cm; h.: 48.5cm; th.: 1.4cm; w.: 8208g (reconstructed).

7. (G1003) Frg. of an amphora; hand-thrown; granularity: small; refired / destroyed.

Position: SE 1504; 2rR: 44.5cm; 2rB: 19.5cm; dmn.: 34.4cm; th.: 1.3cm; w.: 6830g (reconstructed).

8. (G1004) Frg. of a jar; hand-thrown; granularity: small; surface treatment: smoothing; hardness: hard; colour: reddish yellow / grey firing; oxidation; ornament: shallow channelled decoration; motif: band of horizontal lines. Position: SE 1504; 2r: 48.0cm; h.: 41.5cm, th.: 1.0cm; w.: 6964g (reconstructed).

Plate 11

1. (G1005) Frg. of rim and body; hand-thrown; granularity: small; surface treatment: smoothing; hardness: very hard; colour: light brown; firing: oxidation. Position: SE 1504; 2rR: 23.0cm; th.: 0.6cm; w.: 45.5g.

2. (G1007) Frg. of ornamented rim and body; hand-thrown; granularity: rough; surface treatment: smoothing; hardness: very hard; colour: light red; firing: oxidation. Position: SE 1504; dmn.: 18.0 × 8.0cm; th.: 0.8cm; 2rR: 36.0cm; w.: 172.8g.

3. (G1033) Frg. of rim and body of a jar; hand-thrown; granularity: small; surface treatment: smoothing; colour: reddish yellow; firing: incomplete oxidation. Position: SE 1504; 2rR: 31.0cm; h.: 7.0cm; th.: 0.7cm; w.: 230.2g.

4. (G1012) Frg. of rim and ornamented body of a jar; hand-thrown; granularity: small; surface treatment: smoothing; hardness: hard; colour: reddish yellow; firing: oxidation; ornament: ornamented cordon; motif: horizontal line. Position: SE 1504; dmn.: 6.7 × 4.8cm; th.: 1.0cm; 2rR: 22.7cm; w.: 36.3g.

5. (G1006) Frg. of rim and body of a jar; hand-thrown; granularity: small; refired / destroyed. Position: SE 1504; dmn.: 10.0 × 6.5cm; th.: 7.0cm; 2rR: 34.5cm; w.: 72.1g.

6. (G1026) Frg. of rim and ornamented body of a jar; hand-thrown; granularity: small; surface treatment: smoothing; hardness: very hard; colour: reddish yellow; firing: oxidation; ornament: ornamented cordon; motif: horizontal line. Position: SE 1504; 2rR: 38.0cm; h.: 14.0cm; th.: 0.9cm; w.: 1159.0g.

7. (G1030) Frg. of ornamented rim and body of a jar; hand-thrown; granularity: very fine; surface treatment: smoothing; hardness: very hard; colour: light brown; firing: incomplete oxidation. Position: SE 1504; 2rR: 21.5cm; h.: 8.2cm; th.: 0.7cm; w.: 425.0g.

8. (G1032) Frg. of rim and body of a jar; hand-thrown; granularity: fine; refired / destroyed. Position: SE 1504; dmn.: 19.0 × 10.0cm; th.: 0.7cm; 2rR: 25.0cm; w.: 233.5g.

9. (G1028) Frg. of rim and body of a jar; hand-thrown; granularity: small; surface treatment: smoothing; hardness: very hard; colour: reddish yellow; firing: oxidation; ornament: shallow channelled decoration; motif: horizontal line. Position: SE 1504; 2rR: 37.0cm; h.: 18.0cm; th.: 1.0cm; w.: 748.0g.

Plate 12

1. (G1037) Frg. of ornamented rim and ornamented body of an amphora; hand-thrown; granularity: rough; refired / destroyed; ornament: facets, incisions, boss; motif: band of horizontal lines. Position: SE 1504; 2rR: 28.5cm; h.: 15.5cm; th.: 0.8cm; w.: 641.0g.

2. (G1036) Deformed Frg. of rim and body of a jar with lugs; hand-thrown; refired / destroyed. Position: SE 1504; 2rR: c. 20.0cm; h.: c. 19cm; th.: 1.2cm; w.: 1701.0g.

3. (G1039) Frg. of rim and ornamented body of a dish; hand-thrown; granularity: fine; surface treatment: smoothing; colour: reddish yellow; firing: oxidation; ornament: grooves; motif: horizontal band of oblique lines. Position: SE 1504; 2rR: 13.5cm; h.: 8.5cm; th.: 0.7cm; w.: 72.4g.

4. (G1022) Frg. of an ornamented body of a dish; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: very hard; colour: reddish yellow-grey - spotty; firing: oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 1504; el.: 14.0 × 6.1cm; th.: 0.4cm; 2r: 15.8cm; w.: 36.5g.

5. (G1031) Frg. of amphora body; hand-thrown; granularity: fine; surface treatment: smoothing; refired / destroyed. Position: SE 1504; 2r: 18cm; h.: 16.0cm; th.: 0.9cm; w.: 295.0g.

6. (G1023) Frg. of an ornamented body; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: extraordinarily hard; colour: light brown; firing: reduction / oxidation; ornament: incisions; motif: band of horizontal lines and a zigzag line beneath them. Position: SE 1504; dmn.: 14.0 × 9.0cm; th.: 0.4cm; 2r: 22.2cm; w.: 67.9g.

7. (G1008) Frg. of body of a jar with lug; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: very hard; colour: reddish yellow; firing: incomplete oxidation. Position: SE 1504; dmn.: 11.0 × 4.5cm; th.: 2.5cm; w.: 116.7g.

8. (G1018) Frg. of rim and ornamented body of a dish; hand-thrown; granularity: fine; surface treatment: smoothing; colour: reddish yellow; firing: incomplete oxidation; ornament: oval impressions. Position: SE 1504; dmn.: 3.2 × 2.9cm; th.: 0.6cm; w.: 12.2g.

9. (G1049) Frg. of burnt wall roughcast with impressions of the wall construction; hand-thrown; granularity: small; refired / destroyed. Position: SE 1504; dmn.: 10.0 × 7.5cm; th.: 2.5cm; w.: 107.6g.

10. (G1058) Frg. of burnt wall roughcast with impressions of the wall construction; Position: SE 1504; dmn.: 13.4 × 8.2cm; th.: 1.5; 2.3; 4.6cm; w.: 177.5g.

Plate 13

1. (G1050) Clay ring; hand-thrown; granularity: rough; surface treatment: smoothing; hardness: hard; colour: reddish yellow; firing: incomplete oxidation. Position: SE 1504; 2r: 12.0cm; 2rL: 4.5cm, h.: 3.7cm; w.: 409.1g.

2. (G1047) Frg. of pyramidal loom weight; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: hard; colour: reddish yellow; firing: incomplete oxidation. Position: SE 1504; dmn.: 8.8 × 8.8cm; h.: 10.0cm; w.: 627.0g.

3. (G1048) Frg. of pyramidal loom weight; hand-thrown; granularity: fine; surface treatment: smoothing; colour: greyish brown; firing: incomplete oxidation. Position: SE 1504; dmn.: 8.0 × 7.5 × 2.4cm; w.: 219.6g.

4. (G1051) Frg. of pyramidal loom weight; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: hard; colour: reddish yellow; firing: incomplete oxidation. Position: SE 1504; dmn.: 8.0 × 4.2cm; h.: 10.4cm; w.: 428.5g.

5. (G1052) Frg. of pyramidal loom weight; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: hard; colour: greyish brown; firing: incomplete oxidation. Position: SE 1504; dmn.: 8.0 × 6.2cm; h.: c. 10.5cm; w.: 369.9g.

6. (G1053) Frg. of pyramidal loom weight; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: hard; colour: greyish brown; firing: incomplete oxidation. Position: SE 1504; dmn.: 9.0 × 8.5 × 8.0cm; w.: 299.0g.

7. (G1054) Quern made of gneiss. Position: SE 1504; dmn.: 31.8 × 17.4cm; th.: 6.6cm; w.: 5883.6g.

8. (G1055) Frg. of quern made of granodiorite. Position: SE 1504; dmn.: 13.6 × 8.2cm; th.: 4.5cm; w.: 966.5g.

9. (G1056) Fine pounder made of tuff-piroclastic pebble. Position: SE 1504; dmn.: 10.9 × 9.5cm; th.: 2.6cm; w.: 408.3g.

10. (G1057) Fine pounder made of serpentine pebble. Position: SE 1504; dmn.: 13.9 × 7.3cm; th.: 3.8cm; w.: 665.7g.

Plate 14

1. (G944a) Amorphous piece of cooper. Position: SE 003a; dmn.: 0.9 × 0.7cm; th.: 0.4cm; w.: 0.4g.

2. (G961a) Amorphous piece of cooper. Position: SE 1237; dmn.: 1.9 × 1.1cm; th.: 0.5cm; w.: 3.4g. (ICP-AES analysis is published in the *Fig. 26*).

3. (G1087) Frg. of rim and body of a dish; hand-thrown; granularity: small; surface treatment: smoothing; hardness: extraordinarily hard; colour: reddish grey / dark grey; firing: reduction / oxidation. Position: SE 547; dmn.: 4.7 × 4.0cm; th.: 0.5cm; 2rR: 12.6cm; w.: 15.9g.

4. (G1095) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: reddish brown; firing: reduction / oxidation; ornament: shallow channelled decoration; motif: horizontal band of oblique lines. Position: SE 547; dmn.: 9.0 × 3.3cm; th.: 0.5cm; w.: 28.0g.

5. (G1091) Frg. of a rim and body of a dish; hand-thrown; granularity: small; surface treatment: smoothing; hardness: extraordinarily hard; colour: grey-reddish yellow - spotty; firing: oxidation. Position: SE 547; dmn.: 4.5 × 3.6cm; th.: 0.5cm; w.: 8.7g.

6. (G1089) Frg. of an ornamented body; hand-thrown; granularity: very fine; surface treatment: smoothing; hardness: extraordinarily hard; colour: red / light brown; firing: reduction / oxidation; ornament: boss, channelled decoration; motif: circular line. Position: SE 547; dmn.: 4.2 × 3.0cm; th.: 0.6cm; w.: 10.5g.

7. (G1149) Frg. of an ornamented body; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: very hard; colour: reddish yellow; firing: oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 1606; dmn.: 6.0 × 5.0cm; th.: 0.5cm; w.: 17.5g.

8. (G1150) Frg. of an ornamented rim; hand-thrown; granularity: very fine; surface treatment: burnishing, sponging; hardness: very hard; colour: red-brown - spotty; firing: oxidation; ornament: channelled decoration; motif: horizontal lines. Position: SE 1606; dmn.: 8.4 × 4.0cm; th.: 0.9cm; w.: 35.5g.

9. (G1152) Frg. of ornamented rim and body of a jar; hand-thrown; granularity: fine; surface treatment: sponging; hardness: hard; colour: grey-reddish yellow - spotty; firing: oxidation; ornament: facets; motif: horizontal lines. Position: SE 1606; 2rR: 29.1cm; th.: 1.0cm; w.: 87.2g.

10. (G1101) Frg. of a jar with lug; hand-thrown; granularity: small; refired / destroyed. Position: SE 554; 2r: 19.6cm; h.: 8.6cm th.: 0.7cm; w.: 91.4g.

11. (G1098) Frg. of a dish; hand-thrown; granularity: rough; surface treatment: smoothing; hardness: very hard;

colour: red; firing: oxidation. Position: SE 550; 2rR: 20.8cm; 2rB: 13.2cm; h.: 7.6cm th.: 1.0cm; w.: 248.3g.

12. (G1103) Frg. of rim and body of a dish; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: extraordinarily hard; colour: dark brown; firing: reduction. Position: SE 554; 2r: 15.6cm; h.: 3.2cm; th.: 0.8cm; w.: 50.4g.

13. (G1104) Frg. of rim and body of a dish; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: very hard; colour: brown; firing: incomplete oxidation. Position: SE 554; dmn.: 3.4 × 3.2cm; th.: 0.3cm; 2rR: 7.6cm; w.: 4.0g.

14. (G1099) Frg. of rim and body of a dish; hand-thrown; granularity: small; surface treatment: sponging; hardness: very hard; colour: reddish brown; firing: incomplete oxidation. Position: SE 554; dmn.: 4.0 × 3.9cm; th.: 0.7cm; w.: 13.1g.

15. (G1106) Frg. pyramidal loom weight; hand-thrown; granularity: fine; refired / destroyed. The object has strongly rounded edges. Position: SE 554; dmn.: 4.9 × 4.8 × 3.2cm; w.: 80.6g.

16. (G1105) Spindle whorl; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: brown - spotty; firing: uncontrolled. Position: SE 554; 2r: 3.9cm; 2rL: 0.6cm, h.: 2.4cm; w.: 29.8g.

17. (G1170) Frg. of a dish; hand-thrown; granularity: fine; surface treatment: smoothing; hardness: very hard; colour: reddish yellow; firing: oxidation. Position: SE 577; 2rR: 29.6cm; 2rB: 13.2cm; h.: 14.2cm; th.: 1.2cm; w.: 460.7g.

18. (G1171) Frg. of rim and ornamented body of a jar; hand-thrown; granularity: small; surface treatment: smoothing; hardness: extraordinarily hard; colour: reddish yellow; firing: oxidation; ornament: ornamented cordon; motif: horizontal line. Position: SE 577; dmn.: 6.4 × 5.0cm; th.: 0.7cm; 2rR: 9.2cm; w.: 31.9g.

Plate 15

1. (G1183) Frg. of rim and body of a jar with lug; hand-thrown; granularity: small; surface treatment: sponging; hardness: very hard; colour: red-brown - spotty; firing: oxidation; ornament: boss Position: SE 585; dmn.: 9.6 × 8.2cm; th.: 0.6cm; 2rR: 18.2cm; w.: 76.2g.

2. (G1177) Frg. of a portable oven lid; hand-thrown; granularity: rough; surface treatment: sponging, smoothing; hardness: very hard; colour: reddish brown; firing: oxidation; ornament: horn-like projections. Position: SE 585; dmn.: 12.6 × 11.2cm; th.: 0.7cm; w.: 226.5g.

3. (G1182) Frg. of rim and body of a dish; hand-thrown; granularity: small; surface treatment: smoothing; hardness: extraordinarily hard; colour: reddish yellow; firing: oxidation. Position: SE 585; dmn.: 7.6 × 6.0cm; th.: 0.7cm; w.: 55.1g.

4. (G1250) Dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: red-brown - spotty; firing: oxidation. Position: SE 1546; 2rR: 17.3cm; 2rB: 7.4cm; th.: 0.6cm; w.: 575.8g.

5. (G138) Frg. of rim and body; hand-thrown; granularity: small; surface treatment: smoothing; hardness: extraordinarily hard; colour: dark grey; firing: reduction. Position: SE 008; dmn.: 4.0 × 3.2cm; th.: 0.5cm; w.: 10.8g.

6. (G154) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging;

ing; hardness: very hard; colour: reddish yellow; firing: reduction / oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 006; dmn.: 3.0 × 2.9cm; th.: 0.8cm; w.: 10.1g.

7. (G137) Frg. of an ornamented body; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: brown; firing: incomplete oxidation; ornament: boss Position: SE 008; dmn.: 5.0 × 3.0cm; th.: 0.5cm; w.: 9.6g.

8. (G132) Frg. of rim and ornamented body of a cup; hand-thrown; granularity: rough; surface treatment: smoothing; hardness: hard; colour: yellowish brown-grey - spotty; firing: reduction; ornament: ornamented cordon; motif: horizontal line. Position: SE 008; 2rR: 6.3cm, h.:cm; th.: 1.2cm.

9. (G133) Amorphous piece of cooper with residue of slag. Position: SE 008; dmn.: 1.4 × 1.1cm; th.: 0.9cm; w.: 6.6g.

10. (G129) Frg. hammer-axe made of serpentine. Position: SE 008; dmn.: 12.3 × 5.5cm; th.: 4.0cm.

(ICP-AES analysis is published in the Fig. 26).

11. (G86) Frg. amphora; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: hard; colour: light brown; firing: reduction / oxidation. Position: SE 006a; 2rR: 10.0cm; 2rB: 5.2cm; th.: 0.3cm; w.: 182.4g.

12. (G85) Frg. of an ornamented dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: black-brown - spotty; firing: oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 006a; el.: 8.4 × 8.1cm; th.: 0.5cm; w.: 85.2g.

13. (G67) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: hard; colour: reddish brown; firing: incomplete oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 005a; dmn.: 6.2 × 3.4cm; th.: 0.8cm; 2rR: 15.6cm; w.: 24.6g.

14. (G78) Frg. of a pin with biconical head ornamented with open upright concentric triangles. Position: SE 006; dmn.: 1.0cm; 2r: 1.1cm; w.: 1.3g.

Plate 16

1. (G105) Frg. of rim and body of a dish; hand-thrown; granularity: small; surface treatment: smoothing; hardness: hard; colour: reddish brown; firing: oxidation. Position: SE 208; dmn.: 5.1 × 3.2cm; th.: 0.6cm; 2rR: 24.2cm; w.: 15.4g.

2. (G110) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: small; surface treatment: sponging; hardness: very hard; colour: yellowish brown / greyish brown; firing: incomplete oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 208; dmn.: 4.7 × 4.2cm; th.: 0.4cm; 2rR: 22.2cm; w.: 17.1g.

3. (G113) Frg. of rim and body of a dish; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: hard; colour: reddish brown; firing: incomplete oxidation. Position: SE 208; dmn.: 13.0 × 2.4cm; th.: 0.4cm; 2rR: 17.8cm; w.: 25.7g.

4. (G107) Frg. of rim and ornamented body of a jar; hand-thrown; granularity: rough; refired / destroyed; orna-

ment: ornamented cordon; motif: horizontal line. Position: SE 208; dmn.: 6.6×2.9 cm; th.: 1.0cm; w.: 21.5g.

5. (G104) Frg. of an ornamented body; hand-thrown; granularity: small; surface treatment: sponging; hardness: hard; colour: brown; firing: incomplete oxidation; ornament: incisions; motif: horizontal lines, underneath oblique lines (hatched triangle). Position: SE 208; dmn.: 2.5×2.1 cm; th.: 0.6cm; w.: 6.3g.

6. (G303) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish brown; firing: incomplete oxidation / reduction; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 658a; 2rR: 24.8cm; h.: 10.0cm; th.: 0.5cm; w.: 124.6g.

7. (G304) Frg. of rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: yellowish red; firing: reduction / oxidation. Position: SE 658a; dmn.: 9.5×4.0 cm; th.: 0.6cm; 2rR: 20.2cm; w.: 26.9g.

8. (G296) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: small; surface treatment: sponging; hardness: very hard; colour: greyish brown; firing: oxidation / reduction; ornament: facets; motif: horizontal lines. Position: SE 658a; dmn.: 6.5×3.7 cm; th.: 0.7cm; w.: 21.9g.

9. (G306) Frg. of an ornamented jar; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: grey; firing: reduction; ornament: facets, grooves; motif: horizontal lines, horizontal band of vertical lines. Position: SE 658a; 2rR: 15.6cm; 2rB: 11.8cm; h.: 5.6cm; th.: 0.4cm; w.: 212.4g.

10. (G300) Frg. of an ornamented body of a dish; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: hard; colour: greyish brown; firing: reduction; ornament: grooves; motif: horizontal and oblique lines. Position: SE 658a; dmn.: 3.6×3.6 cm; th.: 0.5cm; w.: 6.9g.

11. (G297) Frg. of a footring; hand-thrown; granularity: small; surface treatment: sponging; hardness: extraordinarily hard; colour: yellowish brown / dark brown; refired / destroyed. Position: SE 658a; 2rB: 8.1cm; th.: 1.4cm; w.: 68.2g.

12. (G292) Frg. of rim and ornamented body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: greyish brown; firing: reduction; ornament: incisions; motif: horizontal zigzag lines. Position: SE 658a; dmn.: 3.0×1.3 cm; th.: 0.4cm; w.: 1.3g.

13. (G445) Frg. of ornamented rim and body; hand-thrown; granularity: small; surface treatment: sponging; hardness: very hard; colour: dark brown; firing: incomplete oxidation / reduction; ornament: facets; motif: horizontal lines. Position: SE 658; 2rR: 20.1cm; th.: 1.1cm; w.: 500.7g.

14. (G478) Frg. of ornamented rim and body; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: grey; firing: oxidation; ornament: facets; motif: horizontal lines. Position: SE 658; dmn.: 9.2×2.6 cm; th.: 0.7cm; 2rR: 18.4cm; w.: 29.2g.

15. (G274) Frg. of an ornamented rim; hand-thrown; granularity: fine; surface treatment: sponging; hardness: hard; colour: reddish brown; firing: incomplete oxidation; ornament: facets; motif: horizontal lines. Position: SE 658; dmn.: 2.6×2.5 cm; th.: 0.6cm; w.: 5.8g.

Plate 17

1. (G466) Frg. of a jar; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: light brown / grey; firing: incomplete oxidation. Position: SE 658; 2rR: 9.6cm; h.: 7.9cm; th.: 0.5cm; w.: 62.6g.

2. (G430) Frg. of an ornamented amphora; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish brown / black; firing: incomplete oxidation; okras: kanelure motif: horizontal band of oblique lines. Position: SE 658; 2rR: 17.2cm; 2rB: 6.8cm; h.: 15.2cm; th.: 0.4cm; w.: 366.2g.

3. (G465) Frg. of a bowl with knee-shaped handle; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: brown; firing: incomplete oxidation. Position: SE 658; dmn.: 10.8×8.1 cm; th.: 0.5cm; w.: 98.1g.

4. (G287) Frg. of a cup; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: brown; firing: incomplete oxidation. Position: SE 658; 2rR: 10.4cm; 2rB: 4.6cm; h.: 6.4cm; th.: 0.4cm; w.: 68.6g.

5. (G269) Frg. of a cup; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: grey; firing: incomplete oxidation. Position: SE 658; 2rR: 10.0cm; 2rB: 2.8cm; h.: 4.4cm; th.: 0.4cm; w.: 2.4g.

6. (G446) Frg. of a jug; hand-thrown; granularity: small; surface treatment: smoothing; hardness: hard; colour: reddish yellow-grey - spotty; firing: oxidation. Position: SE 658; 2rR: 6.6cm; 2rB: 5.3cm; h.: 9.6cm; th.: 0.4cm; w.: 258.9g (reconstructed).

7. (G279) Frg. of rim and body of a dish; hand-thrown; granularity: fine (mica); surface treatment: sponging; hardness: extraordinarily hard; colour: dark grey; firing: reduction. Position: SE 658; dmn.: 6.2×4.4 cm; th.: 0.7cm; w.: 28.1g.

8. (G462) Frg. of an ornamented base and body; hand-thrown; granularity: rough; surface treatment: smoothing; colour: reddish yellow / grey; firing: incomplete oxidation; ornament: fingertip impressions; motif: horizontal line right above the base. Position: SE 658; dmn.: 7.5×6.2 cm; th.: 1.3cm; 2rB: 8.2cm; w.: 67.5g.

9. (G264) Frg. of an ornamented handle; hand-thrown; granularity: small; surface treatment: sponging; hardness: extraordinarily hard; colour: dark brown; firing: incomplete oxidation / reduction; ornament: facets; motif: vertical lines. Position: SE 658; dmn.: 8.2×3.7 cm; th.: 1.5cm; w.: 52.6g.

10. (G488) Frg. of a knee-shaped handle; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: light red; firing: oxidation. Position: SE 658; dmn.: 3.0×2.4 cm; th.: 1.0cm; w.: 8.0g.

11. (G275) Frg. of an ornamented spindle whorl; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: greyish brown; firing: incomplete oxidation; ornament: impressions in form of rings; motif: circular line. Position: SE 658; 2r: 3.6cm; 2rL: 0.5cm, h.: 2.5cm; w.: 24.1g.

12. (G268/G305) Frg. of a clay ring; hand-thrown; granularity: small; surface treatment: sponging; hardness: very hard; colour: grey-brown / red-brown - spotty; firing: oxidation. Position: SE 658/658a; 2r: 13.6cm; 2rL: 5.6cm, h.: 4.5cm; w.: 212.4g.

13. (G178) Frg. of a jar with lugs; hand-thrown; granularity: fine; surface treatment: sponging; hardness: hard; colour: reddish brown / dark grey; firing: reduction / oxidation. Position: SE 530; 2rR: 20.0cm; ohr. h.: 19.2cm; th.: 0.7cm; w.: 355.6g.

14. (G179) Frg. of a cup with a knee-shaped handle; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish brown; firing: incomplete oxidation. Position: SE 530; dmn.: 8.0 × 5.6cm; th.: 0.5cm; 2rR: 11.2cm; w.: 48.4g.

15. (G177) Frg. of a footring; hand-thrown; granularity: rough; surface treatment: perfunctory sponging; hardness: very hard; colour: reddish brown; firing: reduction / oxidation. Position: SE 530; 2rB: 6.2cm; th.: 1.0cm; w.: 70.5g.

16. (G166) Frg. of a bronze irregular formed onion-head of a pin. Position: SE 530; 2r: 0.9cm; h.: 1.2cm w.: 0.9g.

Plate 18

1. (G603) Frg. of ornamented rim and ornamented body of a jar; hand-thrown; granularity: rough; surface treatment: smoothing; hardness: very hard; colour: red-brown - spotty / light brown; firing: uncontrolled; ornament: fingertip impressions, ornamented cordon; motif: horizontal lines. Position: SE 369; 2rR: 28.2cm; h.: 14.6cm; th.: 0.7cm; w.: 116.0g.

2. (G622) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: dark brown; firing: oxidation / reduction; ornament: facets; motif: horizontal lines. Position: SE 369b; 2rR: 11.2cm; th.: 0.3cm; w.: 12.7g.

3. (G572) Frg. of an ornamented dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish brown; firing: incomplete oxidation; ornament: grooves; motif: band of horizontal lines. Position: SE 369; dmn.: 7.8 × 5.1cm; th.: 0.4cm; w.: 26.0 g

4. (G571) Frg. of an ornamented dish; hand-thrown; granularity: very fine; surface treatment: sponging; hardness: very hard; colour: brown - spotty; firing: oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 369; 2rR: 20.6cm; 2rB: 8.4cm; h.: 7.7cm; th.: 0.5cm; w.: 227.5g.

5. (G575) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: hard; colour: grey-reddish yellow - spotty; firing: incomplete oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Dmn.: 13.7 × 14.4cm; th.: 0.5cm; 2rR: 18.2cm; w.: 37.8g.

6. (G582) Frg. of an ornamented dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: reddish brown; firing: oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 369; 2rB: 7.8cm; th.: 0.7cm; w.: 252.0g.

7. (G595) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: reddish brown; firing: oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 369; dmn.: 5.0 × 2.4cm; th.: 0.5cm; w.: 9.8g.

8. (G561) Frg. of ornamented rim and body of a dish; hand-thrown; granularity: fine; surface treatment: sponging; hardness: extraordinarily hard; colour: reddish brown; firing: incomplete oxidation; ornament: channelled decoration; motif: horizontal band of oblique lines. Position: SE 369; dmn.: 5.2 × 3.1cm; th.: 0.5cm; w.: 13.7g.

9. (G610) Frg. body of an amphora; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: brown / black; firing: incomplete oxidation. Position: SE 369; dmn.: 9.5 × 7.2cm; th.: 0.4cm; 2r: 21.2cm; w.: 66.9g.

10. (G604) Frg. of a cup; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: brown; firing: incomplete oxidation. Position: SE 369; 2rR: 9.2cm; 2rB: 4.4cm; h.: 7.4cm; th.: 0.5cm; w.: 173.5g.

11. (G599) Frg. of an ornamented rim; hand-thrown; granularity: fine; surface treatment: sponging; hardness: very hard; colour: red-brown - spotty; firing: reduction / oxidation; ornament: facets; motif: horizontal lines. Position: SE 369; dmn.: 6.5 × 5.0cm; th.: 1.0cm; w.: 51.1g.

12. (G694) Frg. of bronze bracelet or ring. Position: SE 002; dmn.: 3.7cm; th.: 0.5cm; w.: 6.0g.

13. (G124) Amorphous piece of cooper. Position: SE 001; dmn.: 3.9 × 2.7cm; th.: 0.9cm; w.: 40.8g. (ICP-AES analysis is published in the Fig. 26).

14. (G152) Frg. of a triangular perforated ceramic artefact (weaving tablet); hand-thrown; granularity: small; surface treatment: sponging; hardness: extraordinarily hard; colour: greyish brown; firing: oxidation. Position: SE 002; dmn.: 5.2 × 4.5cm; th.: 0.9cm; w.: 25.0g.

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Nova spoznanja o pozni bronasti dobi vzhodne Slovenije na primeru naselja Rogoza pri Mariboru

Povzetek

Arheološko najdišče Rogoza je bilo odkrito v sklopu gradnje slovenskega avtocestnega križa v letih 1998 in 1999, območje izkopa pa je obsegalo približno 600 × 50 m (sl. 1, 2). Prve prijateljivejše ostanke na tem mestu lahko datiramo v zgodnjo bronasto dobo ter jih pripišemo kulturi Kisapostag. Poznobronastodobni poselitvi je sledila sprememba namembnosti prostora, katere priča so štiri gomile iz starejše železne dobe. Dokazi o kasnejših aktivnostih so bolj razpršeni, saj ne pripadajo zaključnim arheološkim kontekstom, datiramo pa jih lahko v mlajšo železno dobo ter antično in poznoantično obdobje.¹

Prodnata terasa, ki se je dvigala nad vodotokom in močvirnato ravnico, je bila najintenzivneje poseljena v pozni bronasti dobi, ostanke takratnega dogajanja pa obravnava ta prispevek.

Primerjalni analizi keramičnih in kovinskih najdb nam dopuščata, da iz kopice pridobljenih podatkov izluščimo bistvene in s tem poznobronastodobno naselbino Rogoza postavimo v prostorski in časovni kontekst.

Najboljše in najštevilčnejše paralele je keramičnemu gradivu moč poiskati na vsaj delno sočasnih najdiščih vzhodne Slovenije, od katerih pa so le nekatera raziskana do te mere, da ponujajo trdno kronološko oporo (*pril.* 4, sl. 6–23).²

Najstarejšim najdbam, ki jih povezujemo z začetkom poselitve žarnogrobiščne naselbine v Rogozi, najdemo najboljše primerjave v najdiščih "horizonta Oloris - Rabelčja

vas", a so redke, ki jih v najdiščih Ha A/Ha B ne srečujemo več. Naj na tem mestu torej izpostavimo odprte skode So2, predvsem tiste s T-oblikovanim ustjem, visoke skode Sv1b, skodele Sk1a, skodelice Skd3a in dna skodel na nogah D5b. Medtem ko večini ustreznih analogij v sosednjih pokrajinah nismo zasledili, pa imajo skodele s T-oblikovanim ustjem in skodele na nogah najboljše primerjave na najdiščih virovitiške skupine v spodnjem toku Drave, kjer so slednje značilne do konca omenjene skupine oz. prehoda iz Bd D v Ha A1.³ Približno sočasno se začnejo pojavljati tudi posode, lonci in amfore z močno izvihanimi fasetiranimi ustji. Zasledimo jih v skupinah oz. stopnjah Virovitica in Zagreb (stopnji I in II po Vinski-Gasparini) na severnem Hrvaškem, Baierdorf-Velatice in Čaka v vzhodni Avstriji in na zahodnem Madžarskem ter jugozahodnem Slovaškem.⁴ Takšne so značilne tudi za vrsto plasti naselbine na Brinjevi gori, katerih gradivo uporabljamo kot orientacijo za datacijo regionalnih primerjav predvsem iz časa Ha A. Podobno kot omenjena ustja, je tudi velika večina rogoških posod, ki jih po eni strani zasledimo v naseljih iz pozne srednje bronaste dobe in zgodnje kulture žarnih grobišč, kasneje prisotna v tudi kontekstih starejše, nekatere pa celo mlajše žarnogrobiščne kulture. Takšno sliko nam posredujejo skodele z enostransko odebeljenimi ustji, ki smo jih opredelili kot varianto So2, odprte skodele tipov So1d, So3 in So5a, visoke skodele Sv1a ter različni lonci (L1, L2, L4a, L6a).

Sočasno ali z manjšim časovnim zamikom pa se pojavijo tudi oblike posod, ki nimajo povezav s "horizontom Oloris-Rabelčja vas". Njihove datacije naslanjamo predvsem na najdbe iz spodnjih plasti na Brinjevi gori, prvega horizonta Gornje Radgone in dobro datiranih kontekstov z Dolgih njiv pri Šikolah. Potrebno je omeniti pojav ovalnih loncev z močnejše izvihanim ustjem (L4b), pestro paleto različno oblikovanih, pogosto s poševnimi kanelurami okrašenih zaprtih (Sz3b) in visokih (Sv3b) skled ter posod s presegajočimi ročaji (Skd4b–d).⁵ Tem je najti primerjave v sočasnih naselbinah Podravja in Pomurja, tako v Ha A kot zgodnjem Ha B.

Oblike posod, ki jih Rogoza deli le s po eno od sosednjih naselbin, so najštevilčnejše na Pobrežju. Presenetljivo je tudi število sorodnih elementov s precej oddaljeno Brinjevo goro, kakšno takšnih izstopajočih povezav pa lahko zasledimo prav na vsaki izmed primerjanih naselbin vzhodne Slovenije.

Za čas starejše žarnogrobiščne kulture pa lahko navedemo tudi najbolj nedvomne primerjave iz sosednjih dežel. Amfori tipa A2 so sorodne posode, okrašene s poševnimi kanelurami, značilne za starejše žarnogrobiščno obdobje,

¹ Prispevek (zaključen 2009) je del doktorske disertacije z naslovom *Rogoza pri Mariboru in njeno mesto v bronasti in starejši železni dobi Podravja*, ki sem jo na Oddelku za arheologijo na Filozofski fakulteti Univerze v Ljubljani izdelal pod mentorstvom prof. Bibe Teržan. Ob tej priložnosti se ji za vso podporo in nasvete najlepše zahvaljujem. Prav tako pa gre zahvala tudi Miri Strmčnik Gulič, vodji izkopavanj na arheološkem najdišču Rogoza, ki mi je gradivo prepustila v obdelavo in objavo (Črešnar 2009).

² Vzhodnoslovenske naselbine, s katerimi primerjamo gradivo iz Rogoze, so Oloris pri Dolnjem Lakošu, Rabelčja vas pri Ptujju in Šiman pri Gotovljah, ki jih avtorji datirajo v čas pozne srednje bronaste dobe in zgodnjega žarnogrobiščnega obdobja, ter Slivnica, Dolge njive pri Šikolah, Orehova vas, Pobrežje, Brinjeva gora, Gornja Radgona, Ormož in Hajndl pri Ormožu za čas delno starejše, predvsem pa mlajše kulture žarnih grobišč, ki se ponekod že preveša v starejšo železno dobo. V *prilogi 4* so predstavljene le posode, ki so bile ob Rogozi odkrite še vsaj na dveh najdiščih. Z leve strani je najprej predstavljena lončenina, ki jo lahko zasledimo le v pozni srednji bronasti dobi in v zgodnjem žarnogrobiščem obdobju, nato pa tista, ki se v omenjenem horizontu že pojavi, a ima pogosto tudi kasnejše primerjave. Poseben poudarek je na najdbah iz Olorisa pri Dolnjem Lakošu. Sledijo najdbe z najzgodnejšimi primerjavami v starejši ter na skrajni desni tudi mlajši žarnogrobiščni kulturi. Zaporedje najdb je predvsem navezano na njihovo prisotnost v plasteh brinjegorske naselbine.

³ Vinski Gasparini 1973, t. 8: 5, 9: 6; Pavišić 1991, t. 3: 4,6; 1992, t. 5: 7.

⁴ Paulik 1962, sl. 14: 1; Kemenczei 1975, sl. 2: 1,2,4; Lochner 1986a, t. 3: 1; 1994, sl. 106.

⁵ Zaprte skodele variante Sz3b se v nekoliko globlji izvedbi pojavijo tudi Rabelčji vasi (Strmčnik Gulič 1989, t. 4: 16,21; 15: 27). A nobena izmed njih ne prihaja iz zaključenega konteksta, prav tako pa to niso edine najdbe, ki jih je moč časovno datirati v Ha A, na kar je opozoril tudi Dular (Dular et al. 2002, 173–174).

natančneje za razvito stopnjo Baierdorf-Lednice oz. Ha A1. Njej ob bok lahko postavimo tudi skledi Sv3d in Sv3e ter poševno kaneliran ročaj (R2j), ki bi lahko pripadal posodi tipa "Säulchenschüssel". Enak ročaj je bil odkrit tudi na naselbini Kalnik pri Križevcih v hrvaškem Zagorju, kjer ga uvrščajo v drugi in tretji horizont žarnogrobiščne kulture po Vinski-Gasparini. Kalnik povezujejo z Rogozo tudi vodoravno fasetirane zaprte sklede.⁶ Tudi te imajo vzporednice na zahodnem Madžarskem, v kontekstih, kjer se pojavljajo elementi baierdorfsko-velatiškega reperoarja oz. Ha A1, ter v sočasni Čaka kulturi na Slovaškem.⁷ Nekoliko mlajše so amfore variant A3a, A3b in A3c, ki sodijo med najstarejše posode na grobiščih mlajše žarnogrobiščne kulture tako v Sloveniji kot širšem jugovzhodnoalpskem in panonskem prostoru, datirane pa so bodisi v Ha A bodisi na prehod Ha A/Ha B.⁸ Enako časovno in prostorsko so opredeljeni tudi lonci tipov L7b, L8c in L9.⁹

Prav tako smo v čas Ha A in začetka Ha B uvrstili kovinsko gradivo z Rogoze. Največji pomen smo pripisali planokonveksni bakreni pogači, ki pa kot polizdelek očitno časovno sovпада s končnimi izdelki. To so pokazale tudi kemijske analize bakrenih in bronastih vzorcev ter njihova primerjava s sestavo zlitin, značilnih tako za Ha A kot Ha B.

Primerjave iz časa Ha B, ki dejansko predstavljajo novosti, smo našli predvsem na ozko regionalnem območju ruške žarnogrobiščne skupine, za katero je že H. Müller-Karpe ugotovil, da ima z geografsko lego pogojen samosvoj karakter, ki jo ločuje od drugih sosednjih skupin.¹⁰ Ob njej lastnih okrasih, ki smo jih ugotovili na različnih odlomkih posod, je potrebno omeniti predvsem vrč, amfori variant A1b in A1c, lonce tipa L5, polkroglaste sklede Sz2a, skodelice tipov Skd1a, Skd2a in Skd4a ter skodele Sk2a in Sk3 ter nenazadnje tudi kolenčaste ročaje (R4). Število različnih oblik teh posod je sicer veliko, a gre v večji meri le za posamezne primerke, ki ne izstopajo iz okvira zgodnjega Ha B.

Najdbe nam torej narekujejo, da ustanovitev rogoške naselbine datiramo v čas prehoda Bd D/Ha A, njeno opustitev pa v mlajšežarnogrobiščno stopnjo Ha B1. Takšen relativnokronološki razpon pa glede na trenutne absolutne datacije v srednji Evropi pomeni trajanje poselitve od pribl. 1200 do pribl. 950 pr. n. š.¹¹ Podobne rezultate nam

prinašajo tudi radiokarbonske datacije oglja z Rogoze, od katerih jih 11 sodi v ta časovni razpon (sl. 37), vendar kaže, da je bilo trajanje poselitve še nekoliko krajše. Najstarejši datum iz zaključenega konteksta (SE 731) tako začrtuje zgornjo mejo 1300–1125 cal. BC (2σ – 95,4 %) oz. 1263–1192 cal. BC (1σ – 53,3 %), najmlajši (SE 1511) pa spodnjo 1128–975 cal BC (2σ – 94,4 %) oz. 1058–1009 cal BC (1σ – 44,4 %).¹² To pa, kot narekujejo že najdbe, verjetno pomeni, da poselitev ni trajala skozi celotno stopnjo Ha B1, temveč da je bila naselbina opuščena nekje na prelomu v 1. tisočletje pr. n. š. To bi pomenilo, da je naselbina v Rogozi živela približno dvesto let, na kar kaže tudi sinteza vseh relevantnih datumov (sl. 37), v njej pa bi se lahko zvrstilo osem do deset generacij.

Med kopico jam za sohe in jam drugih namembnosti smo izluščili tlorise 33 stavbnih objektov. Predvidevamo lahko, da je bila večina stavb grajena na splošno razširjen način z vkopanimi sohami, ki so bile po analizah lesnih ostankov kar v 76 % narejene iz hrasta (*Quercus*), kar govori o namerni izbiri kakovostnega gradbenega materiala. Za dodatno utrjevanje v jamah za sohe so služile kamnite zagozde. Po kosih prežganega stenskega ometa in odtisih zabitih kolov v vrstah jam za sohe, ki so se ohranili na najdišču, lahko sklepamo, da je jedro sten oblikoval preplet iz vejevja z vertikalnim vpetjem, ki je bil nato zamazan z glino (t. 12: 9,10; sl. 36).¹³ Videz stavbnega objekta 4 z le eno jamo za soho napeljuje k domnevi, da gre za enostavno stožčasto streho ali streho na škarje, medtem ko lahko pri objektih 27 in 33 predvidevamo le neke vrste nadstrešek nad jamo in morebitnim delovni prostorom ob njej. V stavbah in ob njih so bile praviloma odkrite tudi druge jame neznanih namembnosti.

Večino objektov označujeta dve vrsti s po tremi oz. štirimi jamami za sohe, medtem ko so drugače zasnovani objekti izjeme. Med pravokotnimi objekti sta zastopana dva glavna velikostna razreda, prvi z objekti dimenzij pribl. 5–6 × 3–4 m (npr. stavbni objekt 11) in drugi z objekti velikosti pribl. 7–8 × 3–6 m (npr. stavbni objekt 15), pri čemer večina rogoških stavb sodi v prvega. Ugotovili smo tudi nekaj izstopajočih objektov. Tisti, skoraj kvadratne oblike in s stranicami manjšimi od treh metrov (objekti

⁶ Lochner 1994, 198–199, sl. 106; Vrdoljak 1994, t. 36: 4.

⁷ Paulik 1963, sl. 10: 1, 29: 2, 30: 8; Patek 1968, 102, t. 6: 28,29; Horváth 1994, t. 29–32; Dular et al. 2002, 190–193, t. 29–31.

⁸ Patek 1968, 97–99, t. 5: 1–5,19; Lochner 1994, sl. 108, sl. 112.

⁹ Patek 1968, 90, t. 3: 7, 48: 24, 103:1; Kalicz-Schreiber 1991b, t. 22: 5; Lochner 1994, sl. 108: grob 10; Pare 1998, 400–401; Tiefengraber 2005, 127, t. 23: 5.

¹⁰ Müller-Karpe 1959, 115–116. Njegove ugotovitve pa povzema tudi E. Patek 1968, 51–52.

¹¹ Absolutne datacije so povzete po objavah Sperber 1987; 2003, op. 19; Pare 1998, 294–299; Gleirscher 2006. Nekoliko slabše sta absolutno časovno datirana prehoda Bd C/Bd D in Bd D/Ha A1, pri katerih je glede na razhajanja med njihovimi datacijami (Sperber 1987; Schopper 1996; Mäder, Sormaz 2000) mogoče pričakovati še določene spremembe.

¹² KIA37296, KIA37305. Od slednjega je skorajda zanemarljivo mlajši datum KIA37290, ki pa izvira iz napolavinske plasti SE 006.

¹³ Med arheološkim gradivom so bili odkriti trije odlomki prežganega stenskega ometa, na katerih so vidni odtisi stenskega jedra. Medtem ko dva kažeta na debelino vej med 1 in 3 cm, kar po gostoti sledov pri enem izmed njihju sodeč ustreza odtisu prepleta, pa tretji kos kaže na prisotnost večjih lesenih elementov. Še posebej je zanimiv, ker daje vtis, da gre za dve večji bruni eno ob drugem, kar lahko primerjamo s kosi stenskega ometa na poznobronastodobni Brinjevi gori ter na starejšeželeznodobnem Kučarju pri Podzemlju, kjer hiše tudi zaradi drugih okoliščin interpretiramo kot t. i. brunarice. Kljub temu pa je verjetnost za stavbe v takšni obliki v Rogozi majhna in moramo računati, da gre za stavbne elemente, ki pa jih bomo brez prepotrebni eksperimentalnih izkušenj zelo težko prepoznali.

9, 14 in 18), so pogosto označeni kot kašče. Dva ožja podolgovata objekta, katerih zahodna stranica kaže večjo odprtost (objekta 17 in 26) smo poskušali primerjati z objekti, znanimi v tradicionalnem stavbarstvu, kjer so tako grajene pokrite staje (sl. 35). Ob tem je bilo v naselju tudi nekaj različno oblikovanih manjših stavb, kot na primer 4, 27 in 33, ki so bile morda namenjene zaščiti različnih vkopanih struktur, kot so shrambne jame in delovni prostori ob njih. Težja pa je razlaga pravokotnih stavb večjih dimenzij. V razmislek je lahko, da je bilo kar pet izmed manjših objektov povezanih z gruščnatimi plastmi bodisi v njih bodisi pred njimi (stavbni objekti 7, 8, 22, 24, 25), kar lahko morda povežemo z gospodarskimi dejavnostmi, ob tem pa štirje od teh niso vključeni v osrednji del katerega izmed opredeljenih gospodarstev. Prav tako stojita samostojno dve od treh stavb (28, 31), ob katerih so ognjišča. Blizu sta bili odkriti tudi kapljici bakra (t. 14: 1,2), ki ju razumemo kot dokaza za metalurško-obrtno dejavnosti, čeprav delavnice za predelavo oz. obdelavo kovin nismo mogli locirati. Ognjišče 5 ob objektu 31 je zanimivo tudi zaradi jam okoli njega, od katerih ena (SE 1503) vsebuje veliko število različnih oblik posod, ki so v dobršni meri prežgane. Najverjetneje gre za odpadno jamo, ob tem pa se zastavlja vprašanje, če lahko kontekst razlagamo kot lončarsko delavnico, ki je ob peči imela tudi jamo, kamor so odlagali neposrečene izdelke. Ob tem je pomenljivo, da je bilo v sklop gospodarstev vključeno le ognjišče 2, ki je obenem tudi edino ognjišče, ki je bilo odkrito v osrednjem delu naselbine, vsa druga pa so odmaknjena bodisi v južno bodisi v severno obrobje.¹⁴

Pomenljivo pa je, da vsako izmed gospodarstev vključuje najmanj eno večjo stavbo, ki bi jo lahko opredelili kot bivalni objekt.

Razvrstitev objektov v prostoru pa ne sledi skupni oz. prevladujoči orientaciji, kot to opazimo pri nekaterih drugih naselbinah, na primer v Sodoleku pri Sv. Juriju ob Ščavnici in Dragomlju,¹⁵ temveč je logika njihove postavitve drugačna. Pogosto so namreč postavljeni tako, da je med več objekti nastal nek osrednji dvoriščni prostor. Lahko pa je na manjšem prostoru združenih več objektov, za katere lahko glede na velikost in primerjave predpostavljamo različno namembnost. Podobno so opazili tudi na najdišču Dragomelj, kjer pa so bila gospodarstva razporejena nekoliko bolj vsaksebi.¹⁶ Ob samostojnih hišah kot ob hišah, vključenih v gospodarstva, pogosto zasledimo osločene linije jam za sohe oz. kole, ki napeljujejo na misel o obstoju ograd. Te so bodisi omejevale prostore pripadajoče posameznim stavbam oz. gospodarstvom, nekatere pa so bile namenjene za živino, med katero so z kostnimi ostanki dokazani govedo in drobnica.¹⁷ Zadrževanju živine pa bi nemara lahko služila največja izmed staj, ki je ležala v severnem delu naselbine.

Gospodarstva z večjim številom stavbnih objektov pa tudi druge hiše, ki so stale posamezno, so bile v Rogozi razporejene po sistemu naselbine. Ta je imela, kot lahko razberemo iz tlorisa (pril. 2, 3), na vodotok vezano podolgovato ovalno obliko, v njeni sredini pa se je raztezal večji prazen prostor. Podobno obliko z osrednjim prostorom so imela tudi domnevno nekoliko starejša naselja kot so Sodolek pri Sv. Juriju ob Ščavnici in Pince (Pod Grunti) pri Lendavi. Sorodno zasnovo razkriva tudi naselje iz časa kulture žarnih grobišč Lovčičky na Moravskem. Slednje, ki ni v takšni meri vezano na vodotok, je oblikovano krožno, osrednji del pa je ponovno prazen.¹⁸

Ob poskusu določanja prostorske dinamike je pomembna predvsem natančnejša časovna opredelitev. Kot je moč razbrati iz primerjav keramičnega gradiva z bolj ali manj sočasnih vzhodnoslovenskih najdišč, pa tudi iz oblikovnih in kemičnih analiz kovinskih predmetov ter nenazadnje radiokarbonskih analiz, je najdišče doseglo vrhunec poselitve predvsem v času starejše in prehoda v mlajšo kulturo žarnih grobišč. Zelo maloštevilne najdbe lahko sledimo še v čas horizonta Oloris - Rabelčja vas, ki je datiran v čas pozne srednje in zgodnje pozne bronaste dobe. Ob tem pa je zanimivo, da so te najdbe osredotočene le na gospodarstva oz. del naselja z najbolj gosto postavitvijo stavb, ki so razporejene okoli osrednjega prostora, medtem ko objekti in strukture severneje od objekta 28 niso vsebovali gradiva, ki bi se pojavljalo pred stopnjo Ha A. Ob tem velja dodati, da le v delu najgostejše poselitve zasledimo stavbe, pri katerih lahko predvidevamo obsežnejša popravila oz. celo več faz poselitve na istem mestu. Torej lahko predvidevamo, da je bil ob ustanovitvi naselbine, v začetku Ha A, najprej poseljen prostor, ki je tudi kasneje obdržal osrednje mesto v naselbini.

Poselitve severnega območja, ki ob nekaj stavbah vključuje tudi pot, več ognjišč in veliko stajo, je verjetno sledila nekoliko kasneje, ko je naselbina že nekaj časa živila. Tlakovanje poti, ki je vplivala na usmeritev struktur ob njej, in izgradnja večje staje oz. staj za morebitno skupno živino, je delo, ki je vključevalo trud celotne skupnosti naselbine in ne le enega gospodarstva. Takšna skupna dejavnost bodisi v religiozne bodisi v gospodarsko preskrbovalne namene pa je za življenje in obstoj v takšnih skupnostih nujna.¹⁹

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¹⁴ Ob tem se moramo zavedati, da to najverjetneje niso bila vsa ognjišča, ki so bila v naselju v uporabi. Manjša in nevkopana se zaradi uničenja plasti niso ohranila.

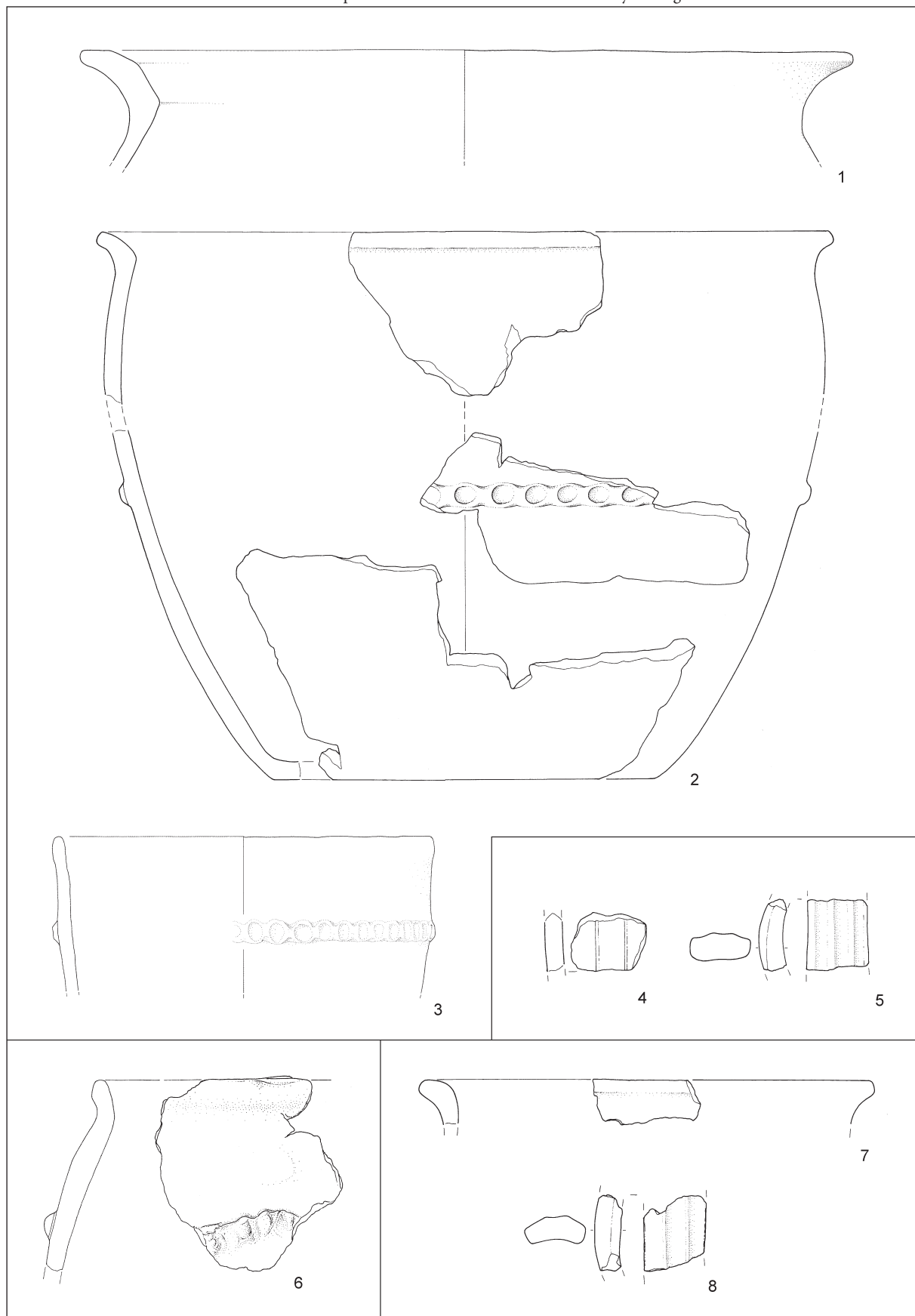
¹⁵ Turk 2003, sl. 3; Kavur 2007, sl. 2.

¹⁶ Turk 2003, 111–112, sl. 3.

¹⁷ Za opravljene analize se najlepše zahvaljujem Borutu Toškani in Janezu Dirjecu z Inštituta za arheologijo ZRC SAZU v Ljubljani.

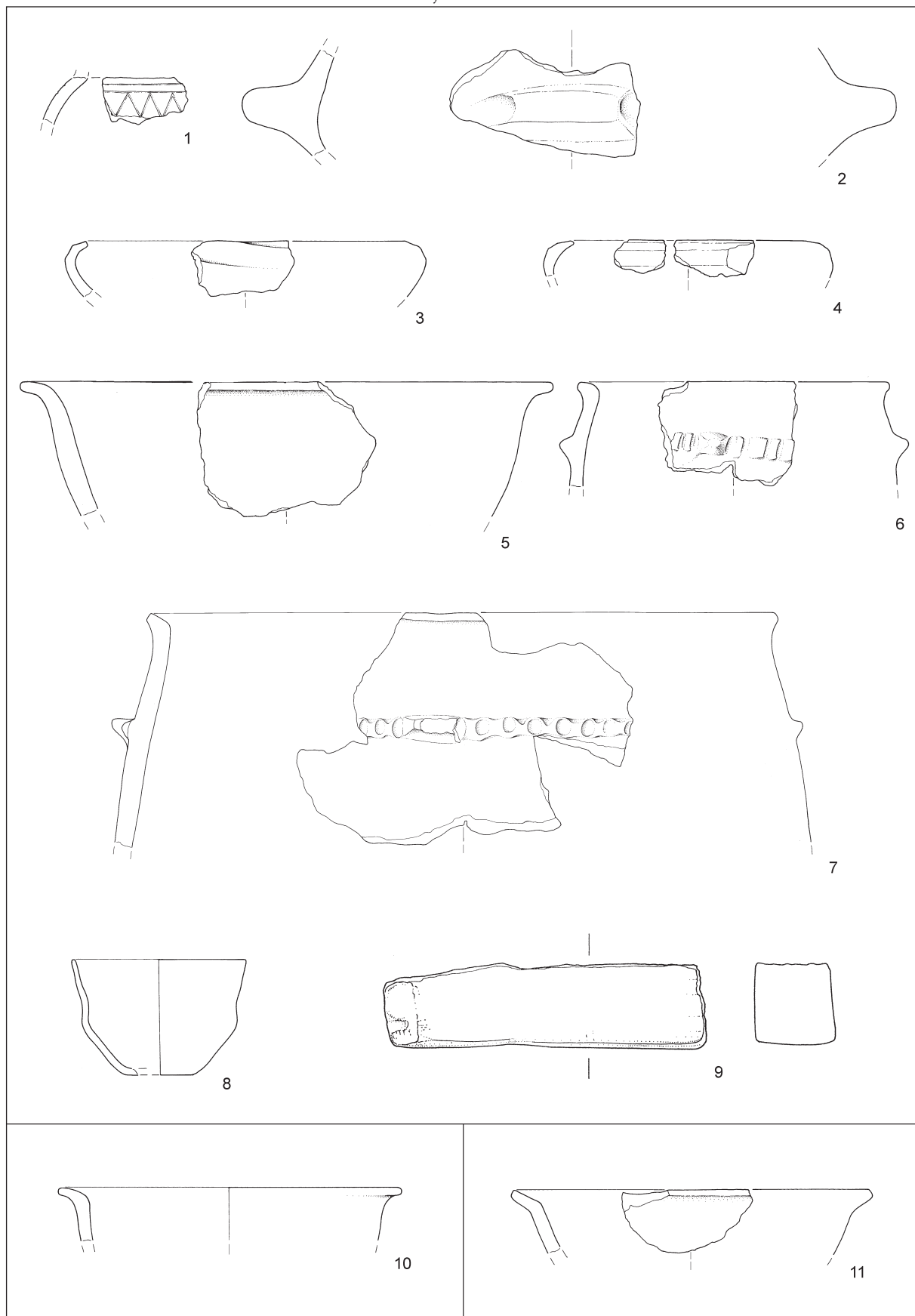
¹⁸ Kavur 2007, sl. 2; Říhový 1982b, sl. 16, 17. Načrt najdišča Pince (Pod Grunti) pri Lendavi je B. Kerman predstavil v Mestnem muzeju v Ljubljani (17. marca 2008) na arheološkem srečanju, kjer so bili predstavljeni rezultati arheoloških raziskav v letu 2007, dodatne informacije pa mi je posredoval S. Sankovič. Hiša, ki je bila v naselju Lovčičky postavljena v osrednjem prostoru, naj bi bila neolitska.

¹⁹ Roberts 1996, 15–16.

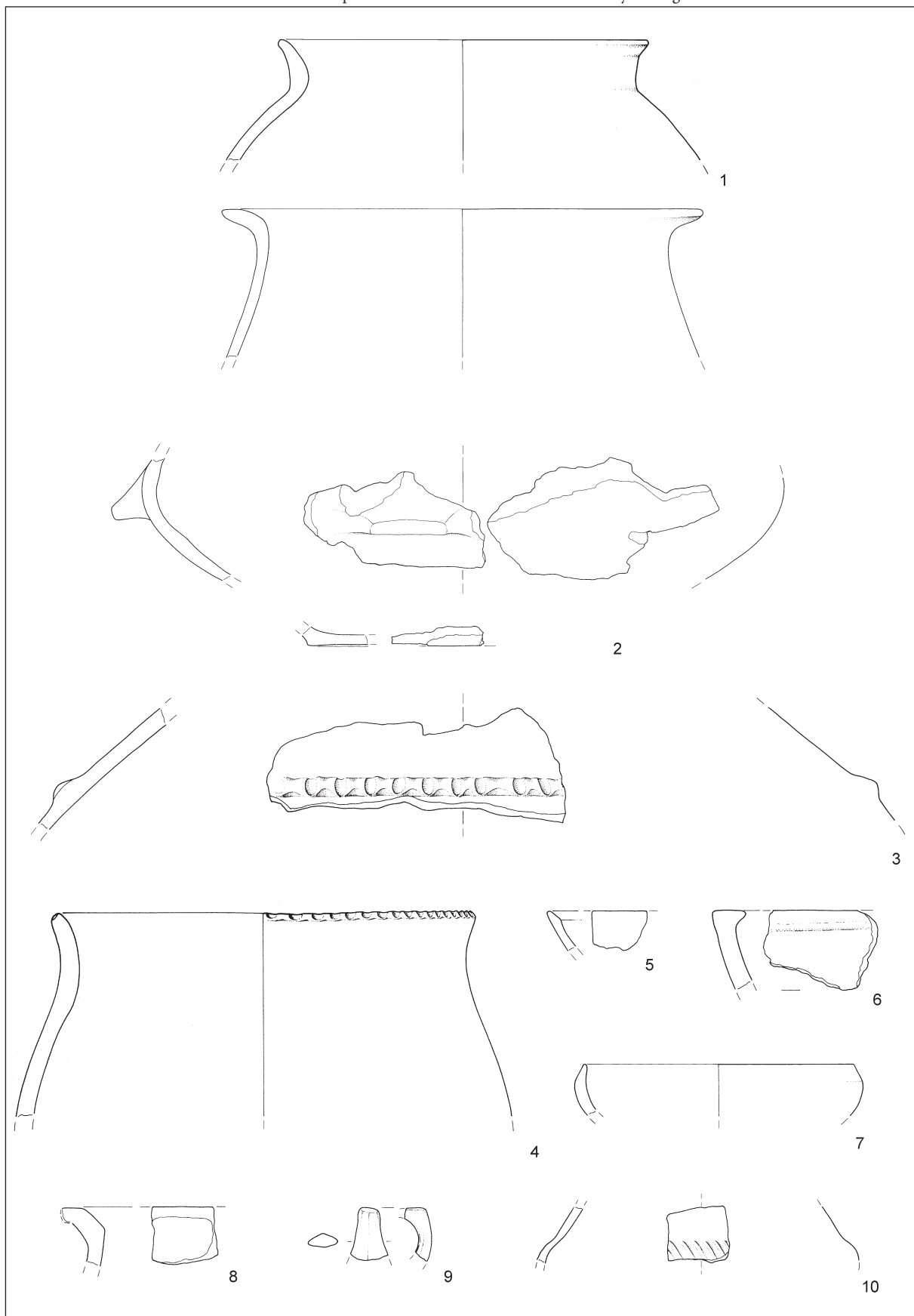


Pl. 1: Rogoza. (1–3) pits from the southern part of the settlement, SE 514; (4–5) building 1; (6) building 3; (7–8) farmstead 1. All pottery. Scale = 1:3.

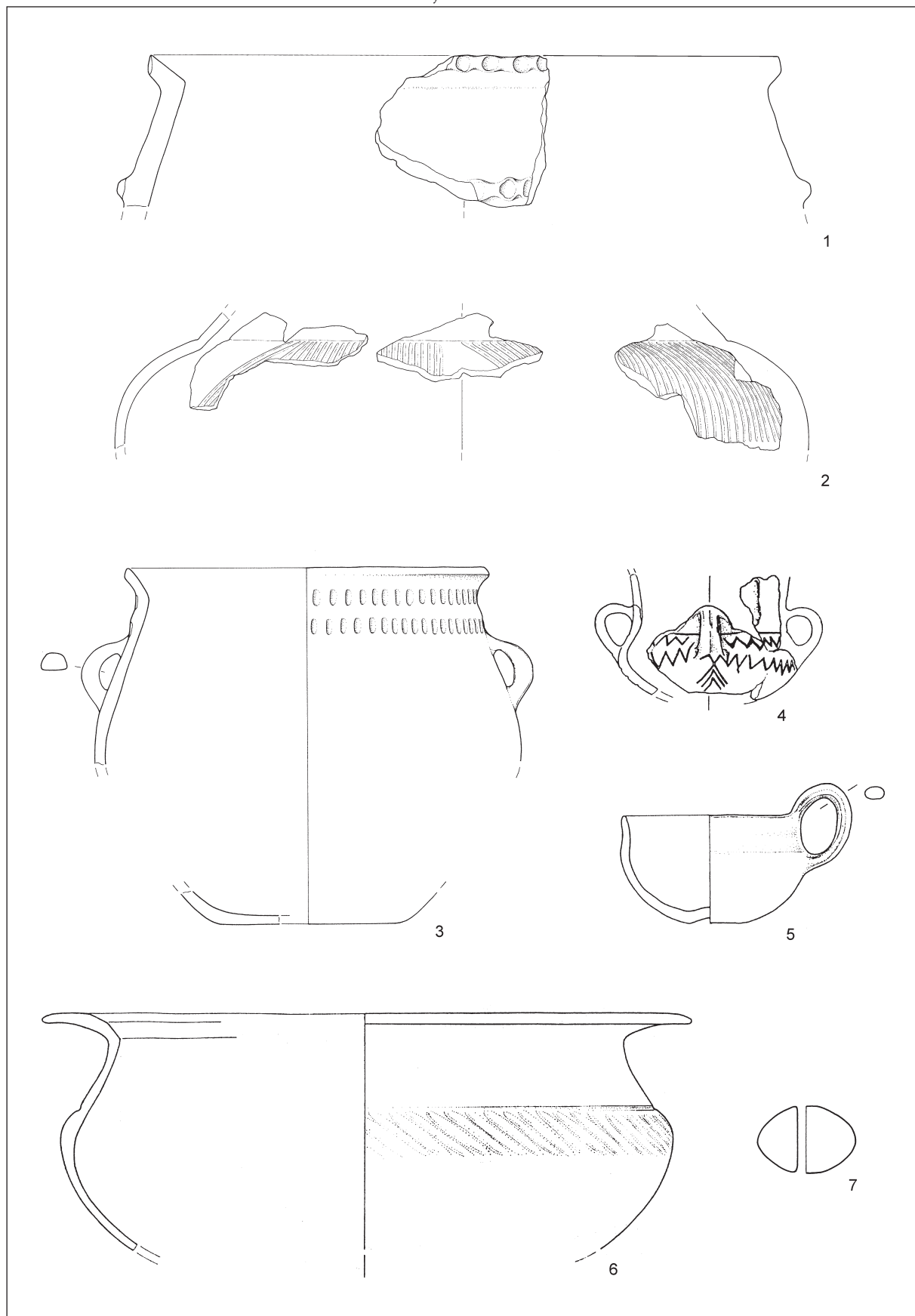
T. 1: Rogoza. (1–3) jame južnega dela naselja, SE 514; (4–5) objekt 1; (6) objekt 3; (7–8) gospodarstvo 1. Vse keramika. M. = 1:3.



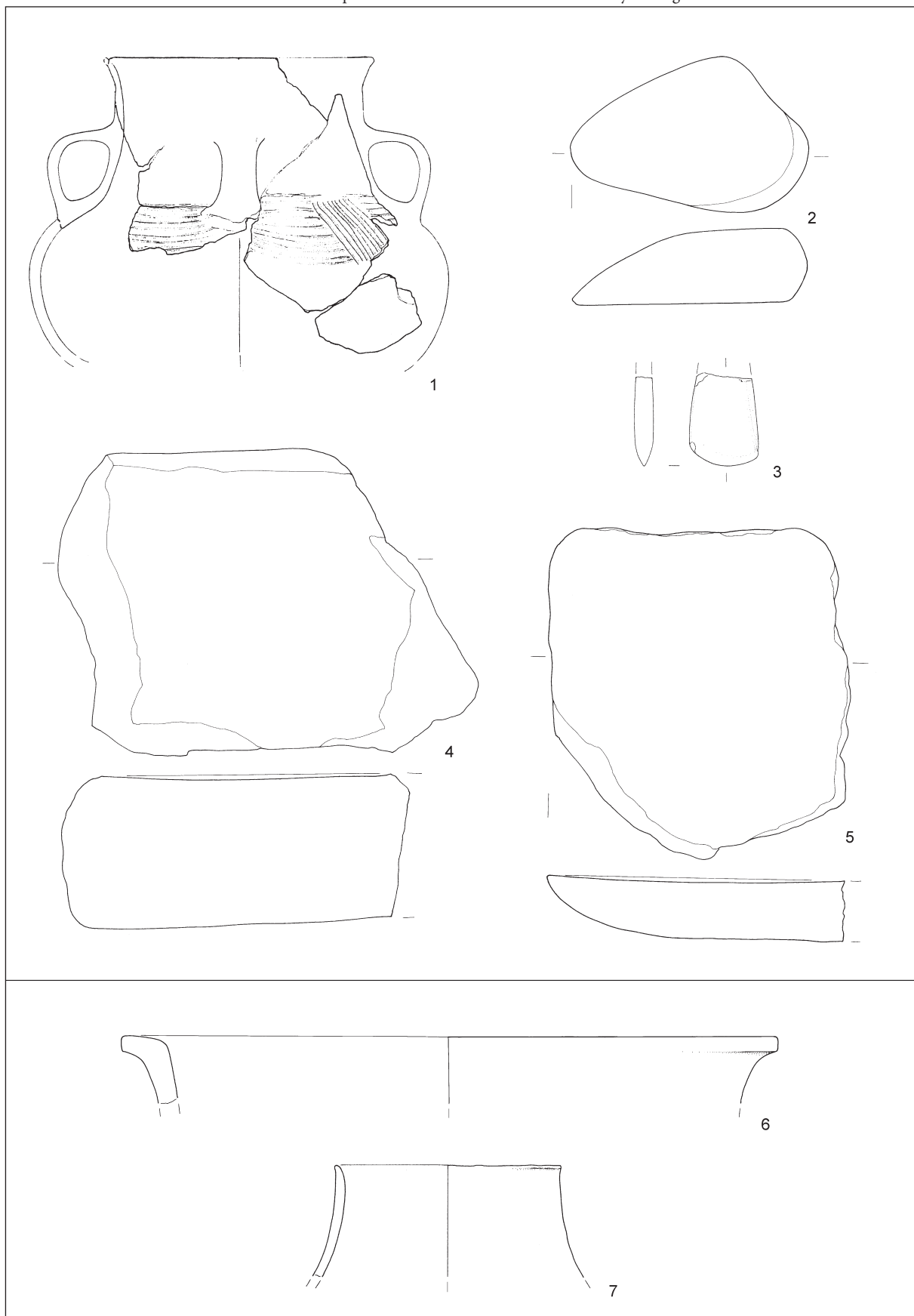
Pl. 2: Rogoza. (1-9) building 4; (10) pit SE 1126; (11) SE 1040. 9 stone; other pottery. Scale 9 = 1:2; 1-6,8,10,11 = 1:3; 7 = 1:4.
 T. 2: Rogoza. (1-9) objekt 4; (10) jama SE 1126; (11) SE 1040. 9 kamen; drugo keramika. M. 9 = 1:2; 1-6,8,10,11 = 1:3; 7 = 1:4.



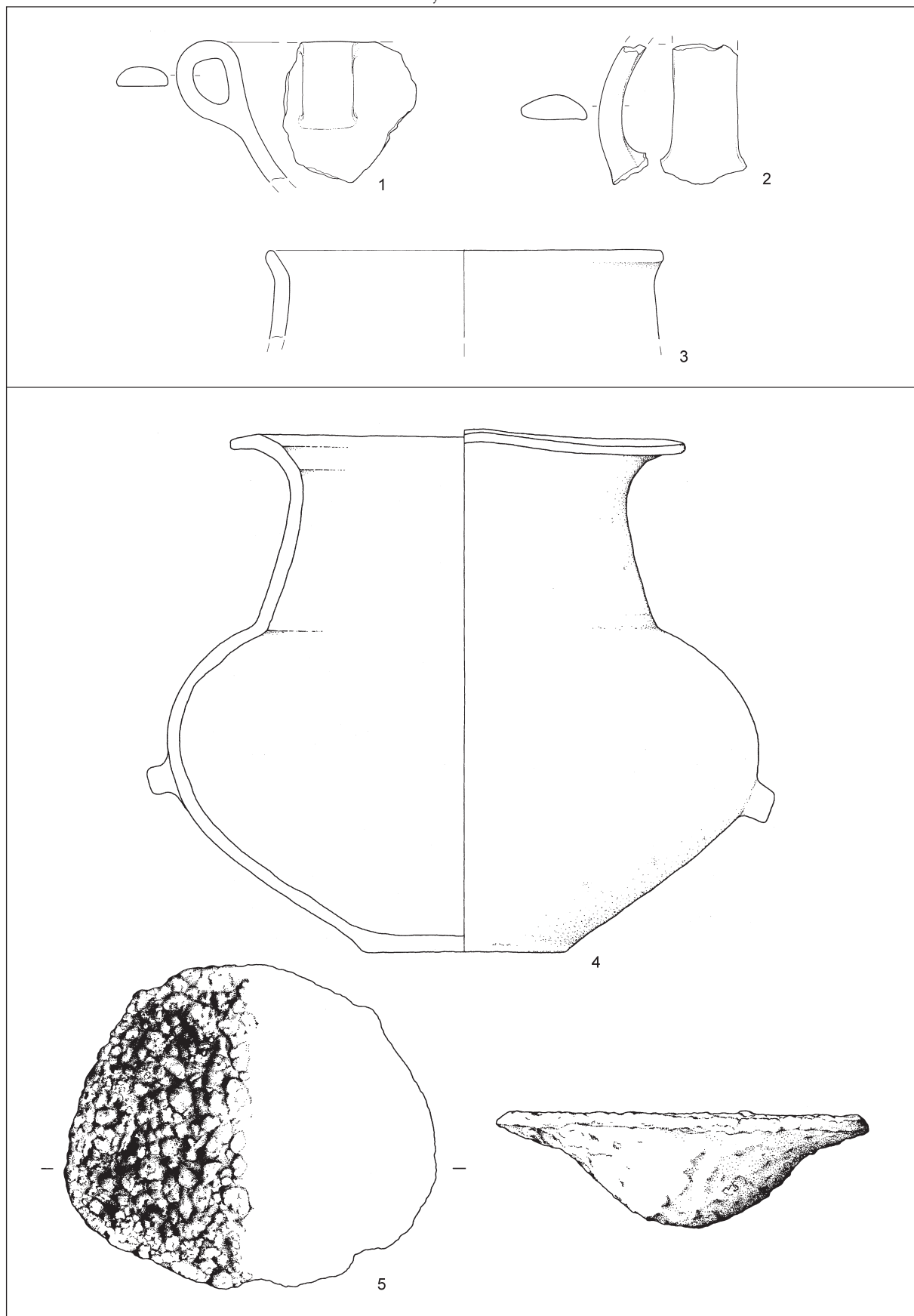
Pl. 3: Rogoza. Alluvium overlaying the palaeochannel, SE 610. All pottery. Scale 1,3-6 = 1:3; 2 = 1:4.
 T. 3: Rogoza. Naplavinska plast nad strugo vodotoka, SE 610. Vse keramika. M. 1,3-6 = 1:3; 2 = 1:4.



Pl. 4: Rogoza. Alluvium overlaying the palaeochannel, SE 610. All pottery. Scale 1,3-7 = 1:3; 2 = 1:4.
 T. 4: Rogoza. Naplavinska plast nad strugo vodotoka, SE 610. Vse keramika. M. 1,3-7 = 1:3; 2 = 1:4.

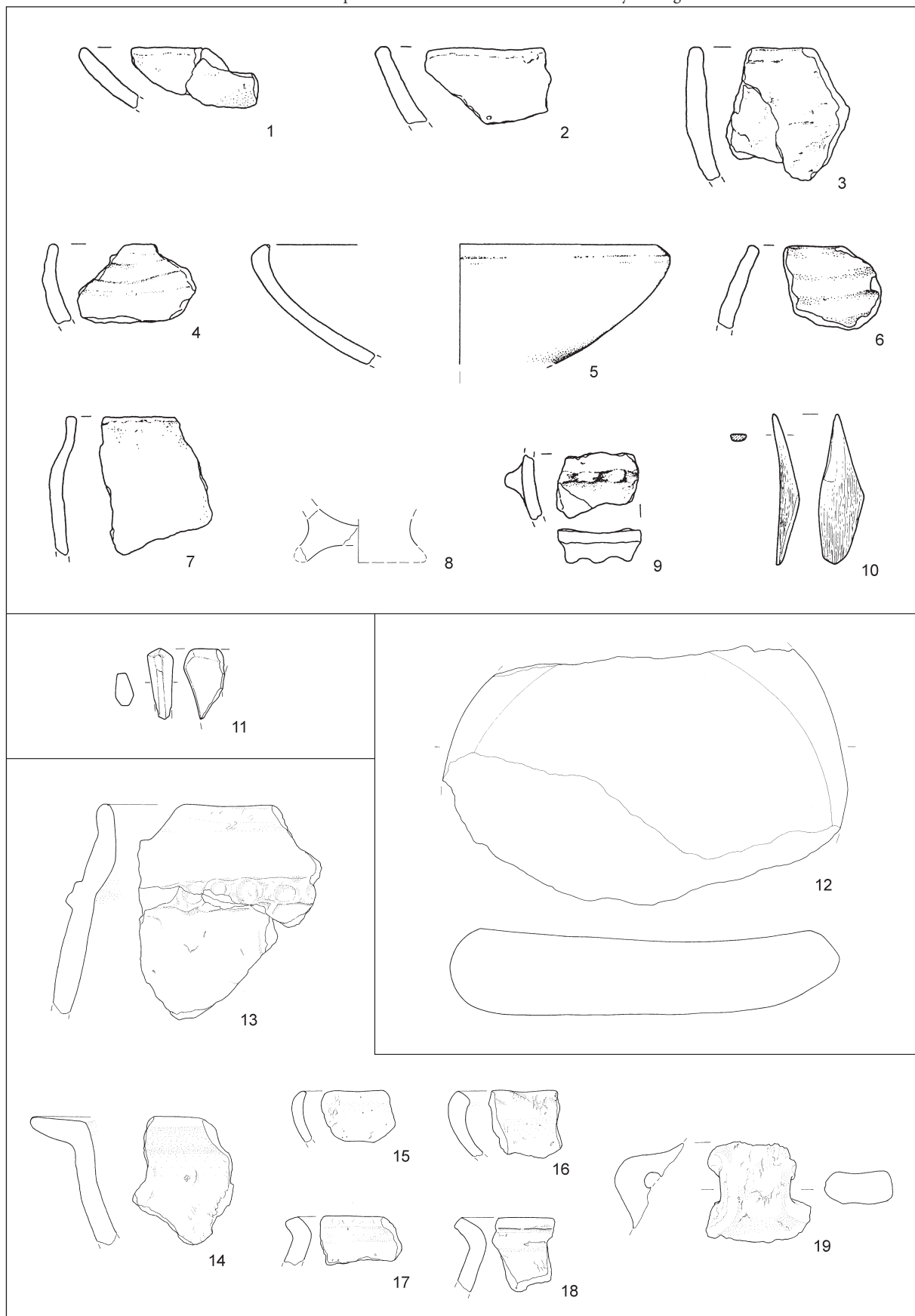


Pl. 5: Rogoza. (1–5) alluvium overlaying the palaeochannel, SE 610; (6, 7) Building 5. 2–5: stone; other pottery. Scale = 1:3.
 T. 5: Rogoza. (1–5) naplavinska plast nad strugo vodotoka, SE 610; (6, 7) objekt 5. 2–5 kamen; drugo keramika. M. = 1:3.



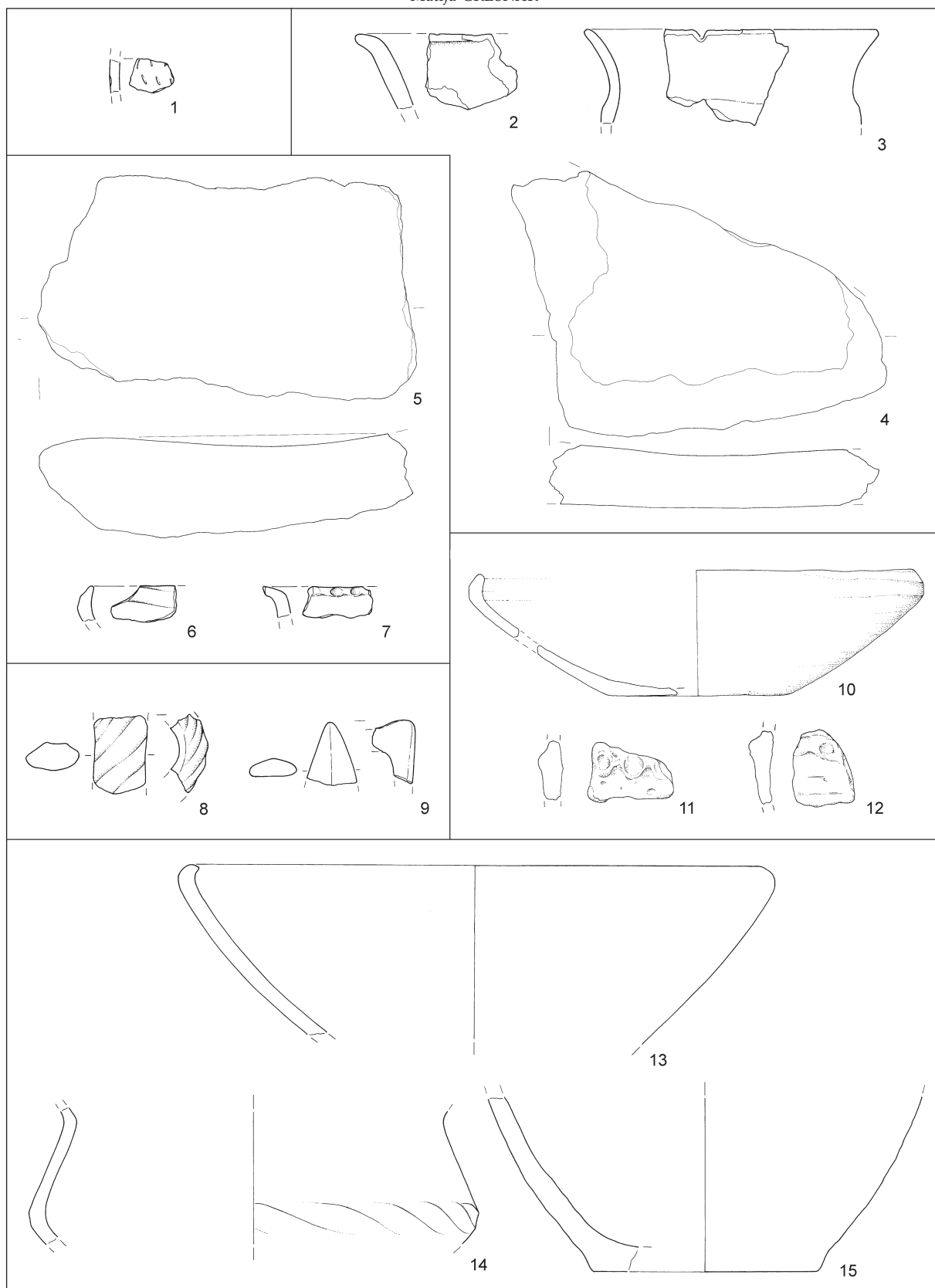
Pl. 6: Rogoza. (1-3) farmstead 2; (4-5) building 6, SE 370. 5 metal; other pottery. Scale = 1:3.

T. 6: Rogoza. (1-3) gospodarstvo 2; (4-5) objekt 6, SE 370. 5 kovina; drugo keramika. M. = 1:3.



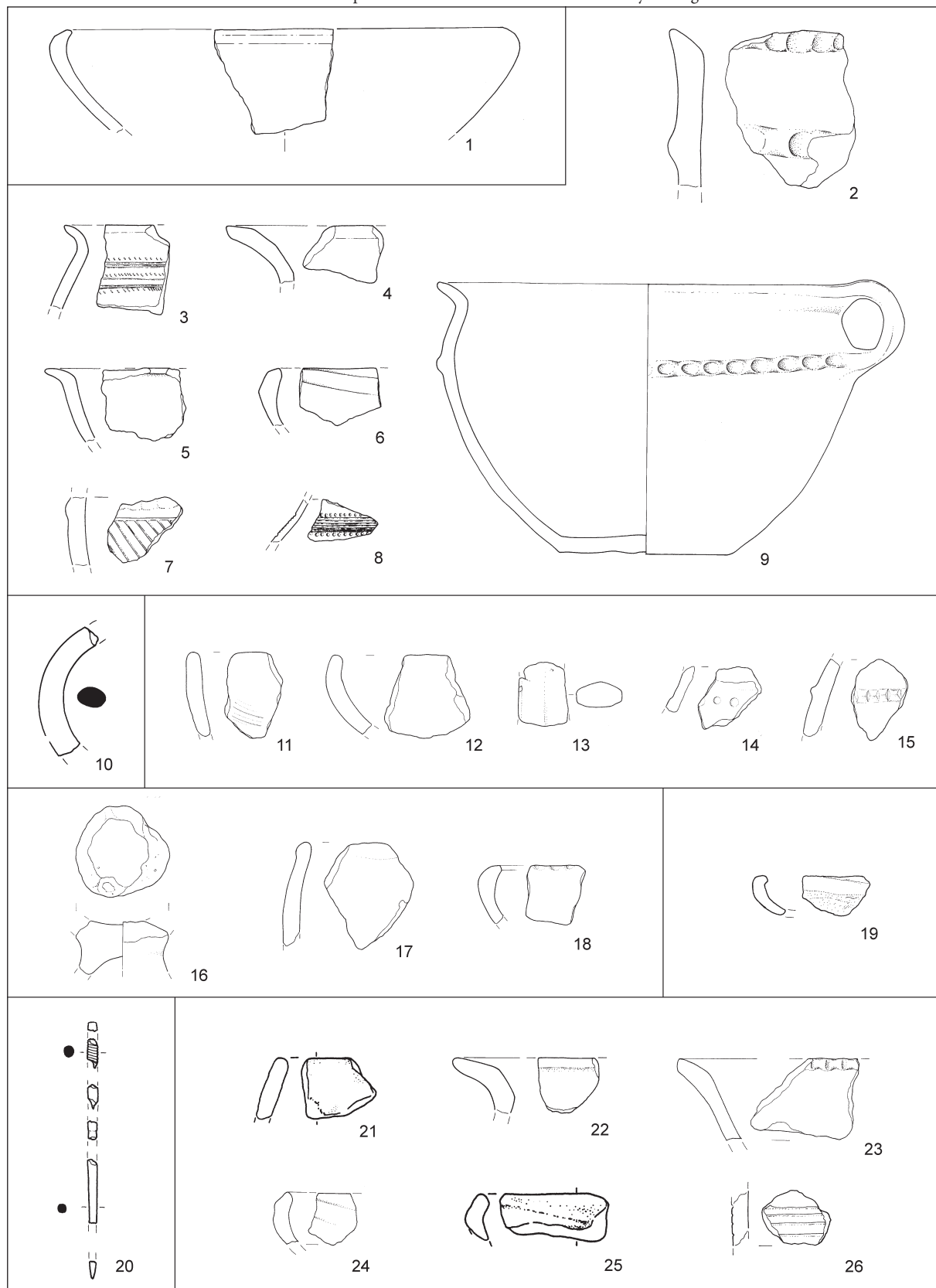
Pl. 7: Rogoza. (1-10) building 7, SE 336; (11) building 8, SE 346; (12) building 15-16; (13-19) farmstead 3. 10 bone; 12 stone; other pottery. Scale 10 = 1:2; 1-9,11,13-19 = 1:3; 12 = 1:4.

T. 7: Rogoza. (1-10) objekt 7, SE 336; (11) objekt 8, SE 346; (12) objekt 15-16; (13-19) gospodarstvo 3. 10 kost; 12 kamen; drugo keramika. M. 10 = 1:2; 1-9,11,13-19: = 1:3; 12 = 1:4.



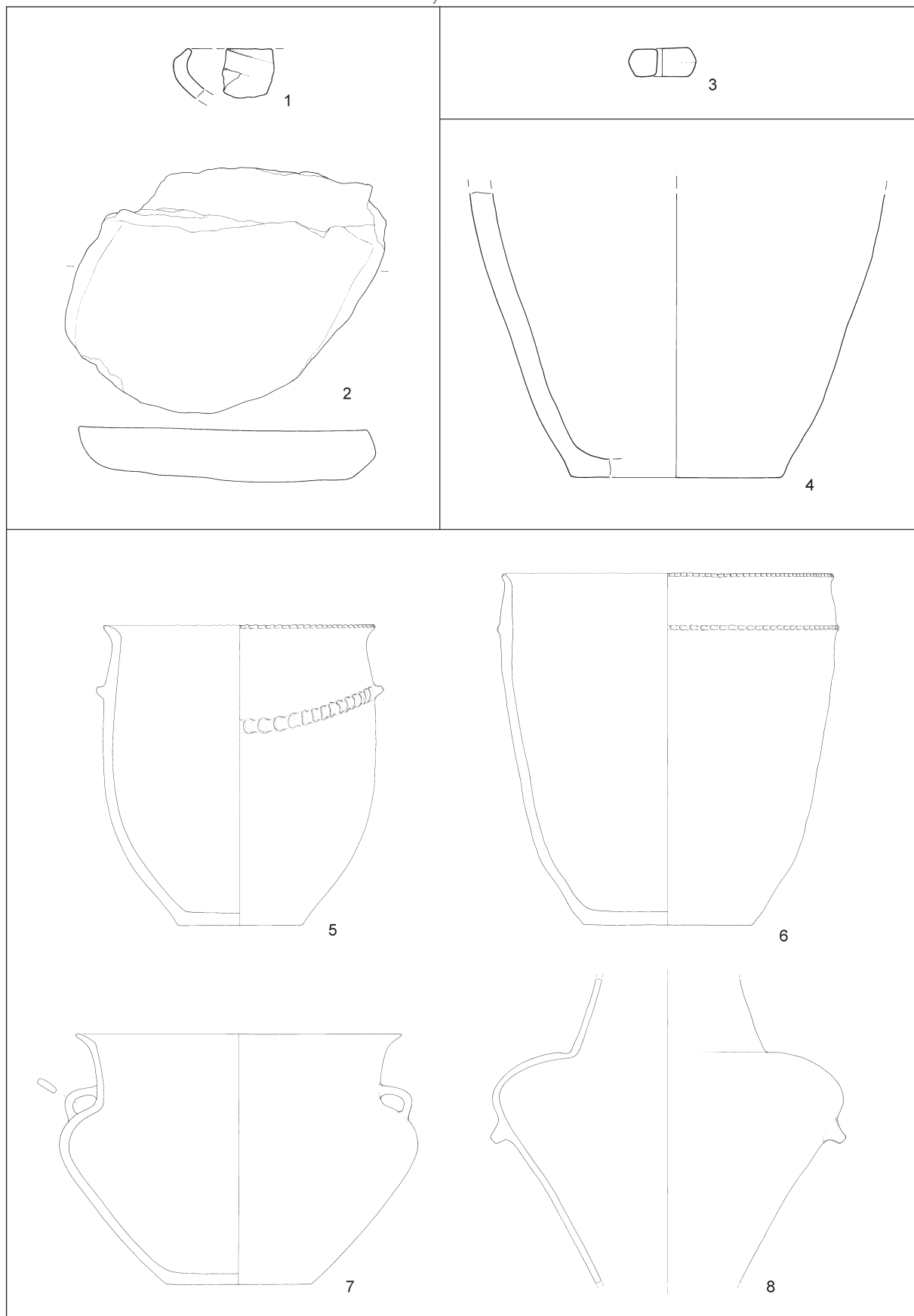
Pl. 8: Rogoza. (1) building 19; (2-4) building 22; (5-7) building 25; (8, 9) area to the east of the building 25; (10-12) building 26; (13-15) farmstead 4, SE 947. 4,5 stone; other pottery. Scale 1-3,6-15 = 1:3; 4,5 = 1:4.

T. 8: Rogoza. (1) objekt 19; (2-4) objekt 22; (5-7) objekt 25; (8, 9) območje vzhodno od objekta 25; (10-12) objekt 26; (13-15) gospodarstvo 4, SE 947. 4,5 kamen; drugo keramika. M. 1-3,6-15 = 1:3; 4,5 = 1:4.



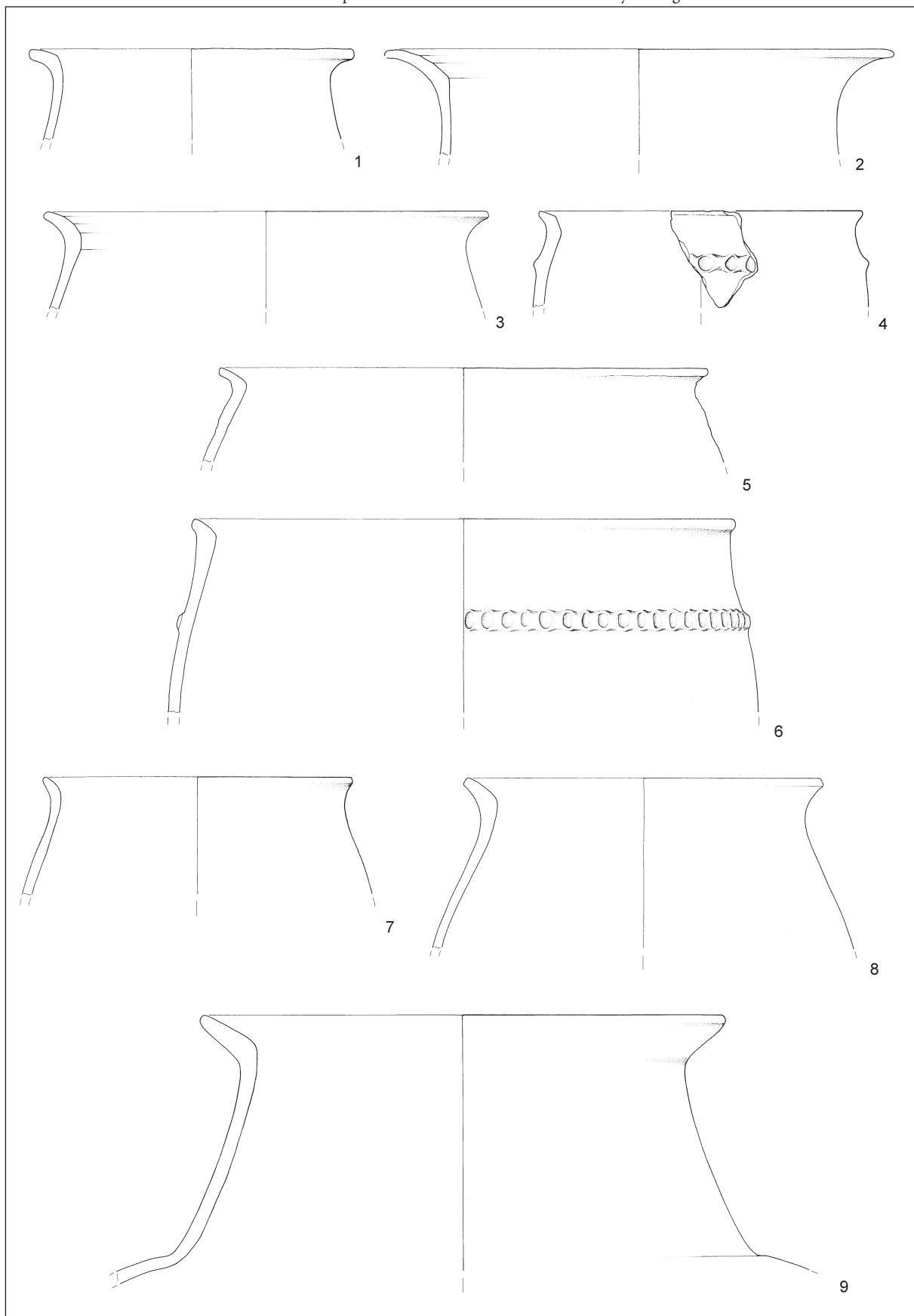
Pl. 9: Rogoza. (1) farmstead 4, SE 963; (2–9) building 24, SE 933; (10) farmstead 4, SE 900; (11–15) farmstead 4; (16–18) building 28; (19) building 29; (20) extensive enclosure, SE 226; (21–26) extensive enclosure. 10,20 metal; other pottery. Scale 10,20 = 1:2; 1–9,11–19,21–26 = 1:3.

T. 9: Rogoza. (1) gospodarstvo 4, SE 963; (2–9) objekt 24, SE 933; (10) gospodarstvo 4, SE 900; (11–15) gospodarstvo 4; (16–18) objekt 28; (19) objekt 29; (20) večji ograjen prostor, SE 226; (21–26) večji ograjen prostor. 10,20 kovina; drugo keramika. M. 10,20 = 1:2; 1–9,11–19,21–26 = 1:3.



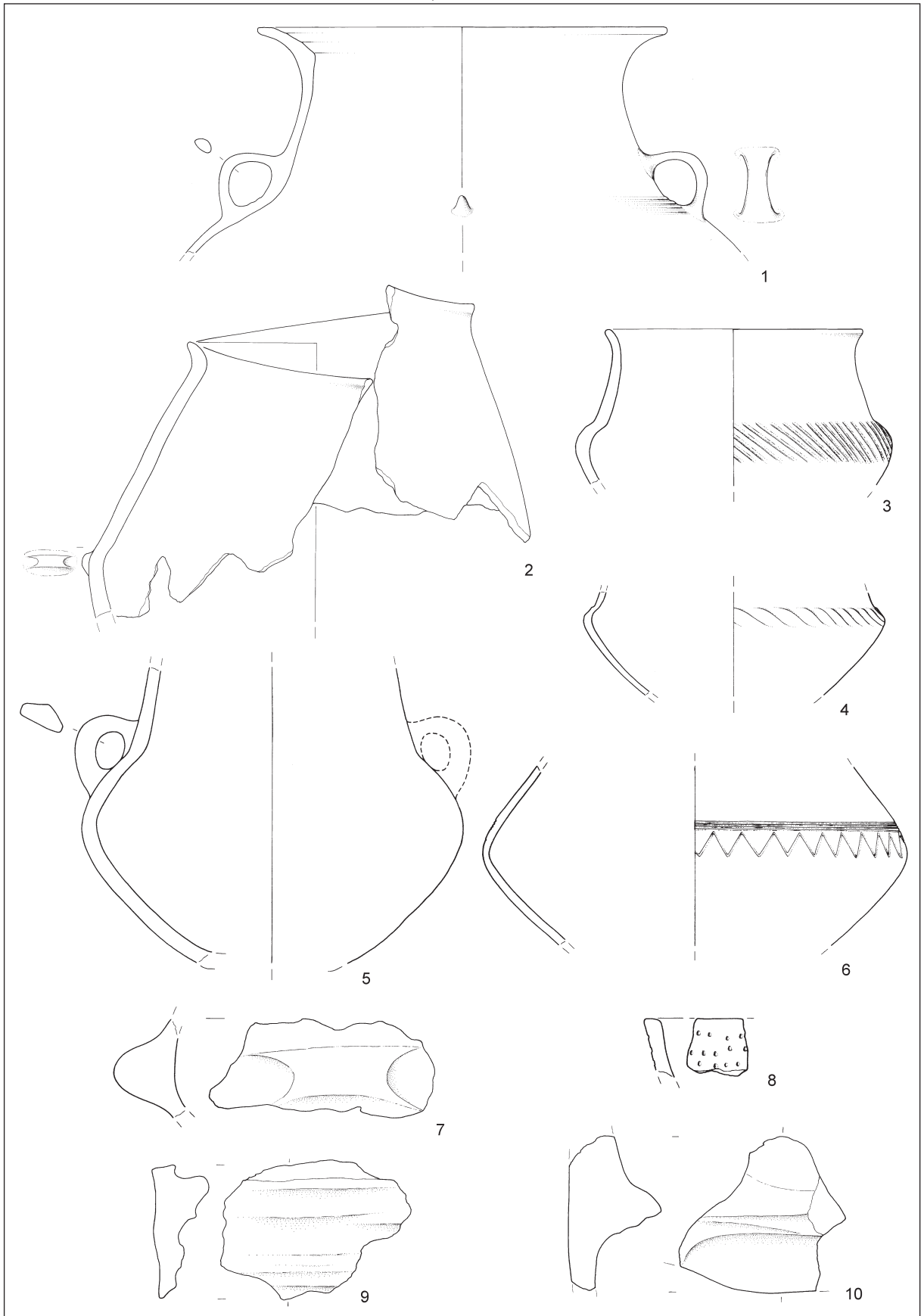
Pl. 10: Rogoza. (1–2) buildings 30 and 31; (3) hearth 5, SE 1511; (4) pit SE 1501; (5–8) pit SE 1503. 2 stone; other pottery. Scale 1,3,4 = 1:3; 2 = 1:4; 5–8 = 1:8.

T. 10: Rogoza. (1–2) objekta 30 in 31; (3) ognjišče 5, SE 1511; (4) jama SE 1501; (5–8) jama SE 1503. 2 kamen; drugo keramika. M. 1,3,4 = 1:3; 2 = 1:4; 5–8 = 1:8.



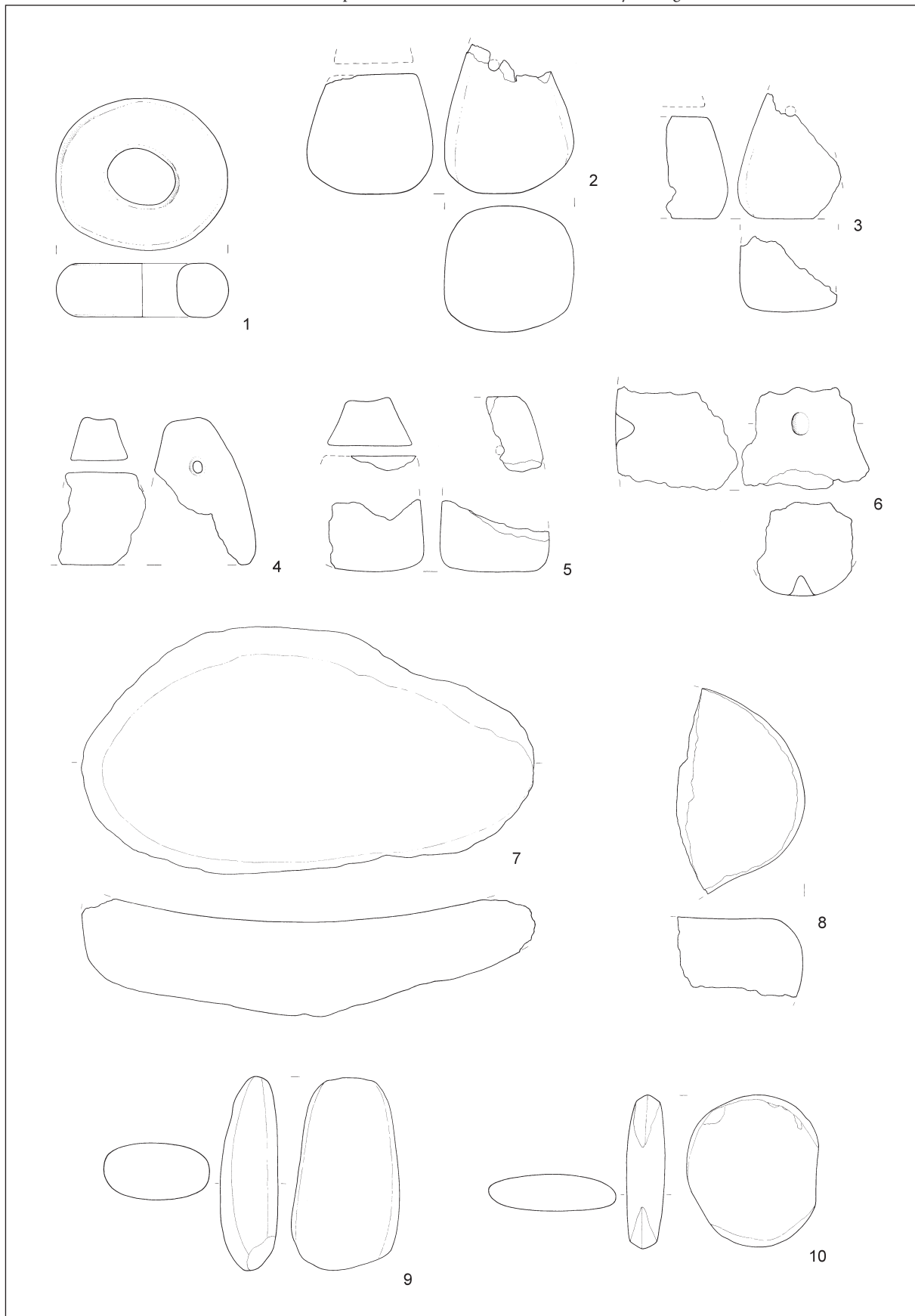
Pl. 11: Rogoza. Pit SE 1503. All pottery. Scale = 1:4.

T. 11: Rogoza. Jama SE 1503. Vse keramika. M. = 1:4.



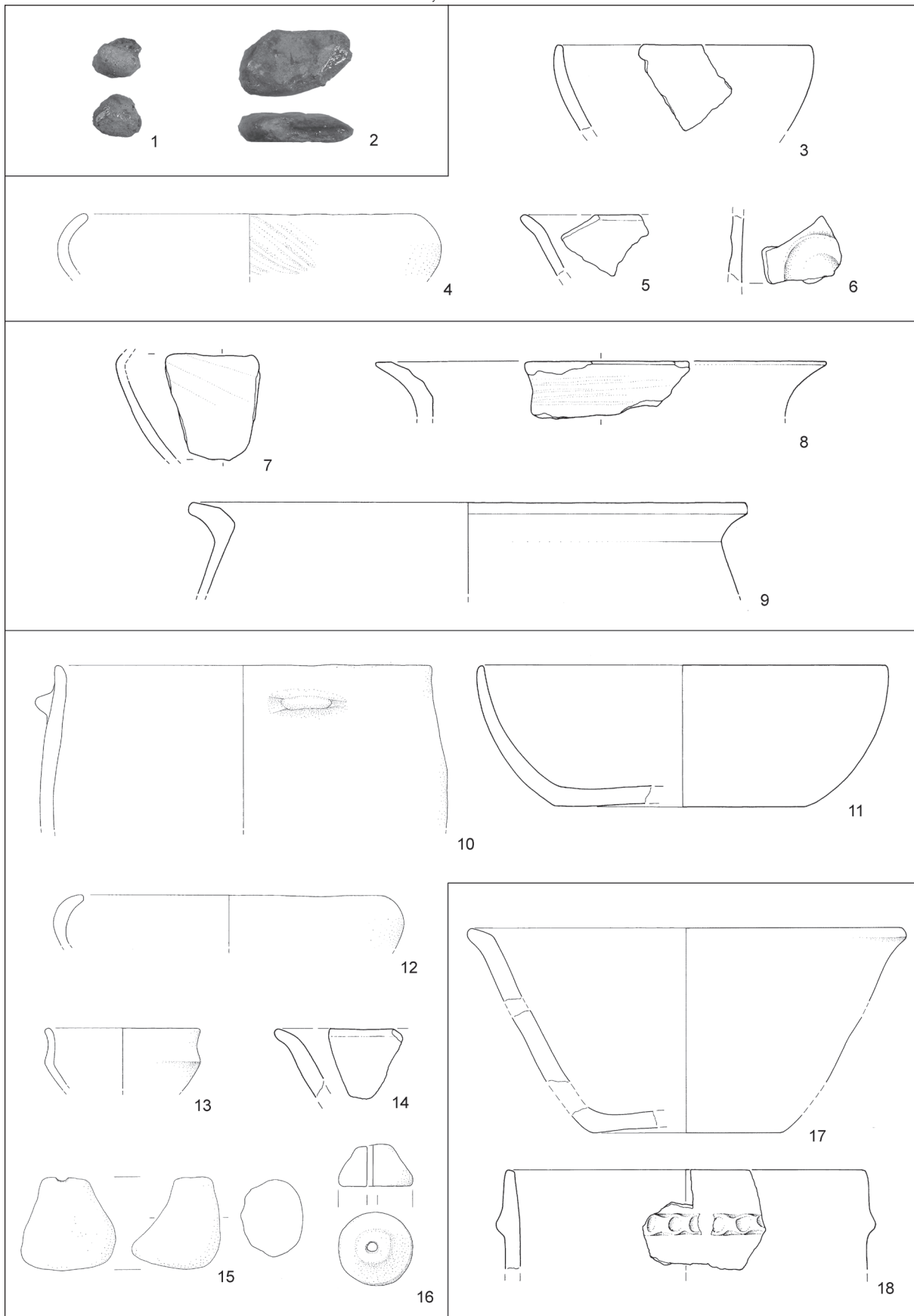
Pl. 12: Rogoza. Pit SE 1503. 9,10 burnt clay daub; other pottery. Scale 3–10 = 1:3; 1,2 = 1:4.

T. 12: Rogoza. Jama SE 1503. 9,10 prežgan stenski omet; drugo keramika. M. 3–10 = 1:3; 1,2 = 1:4.

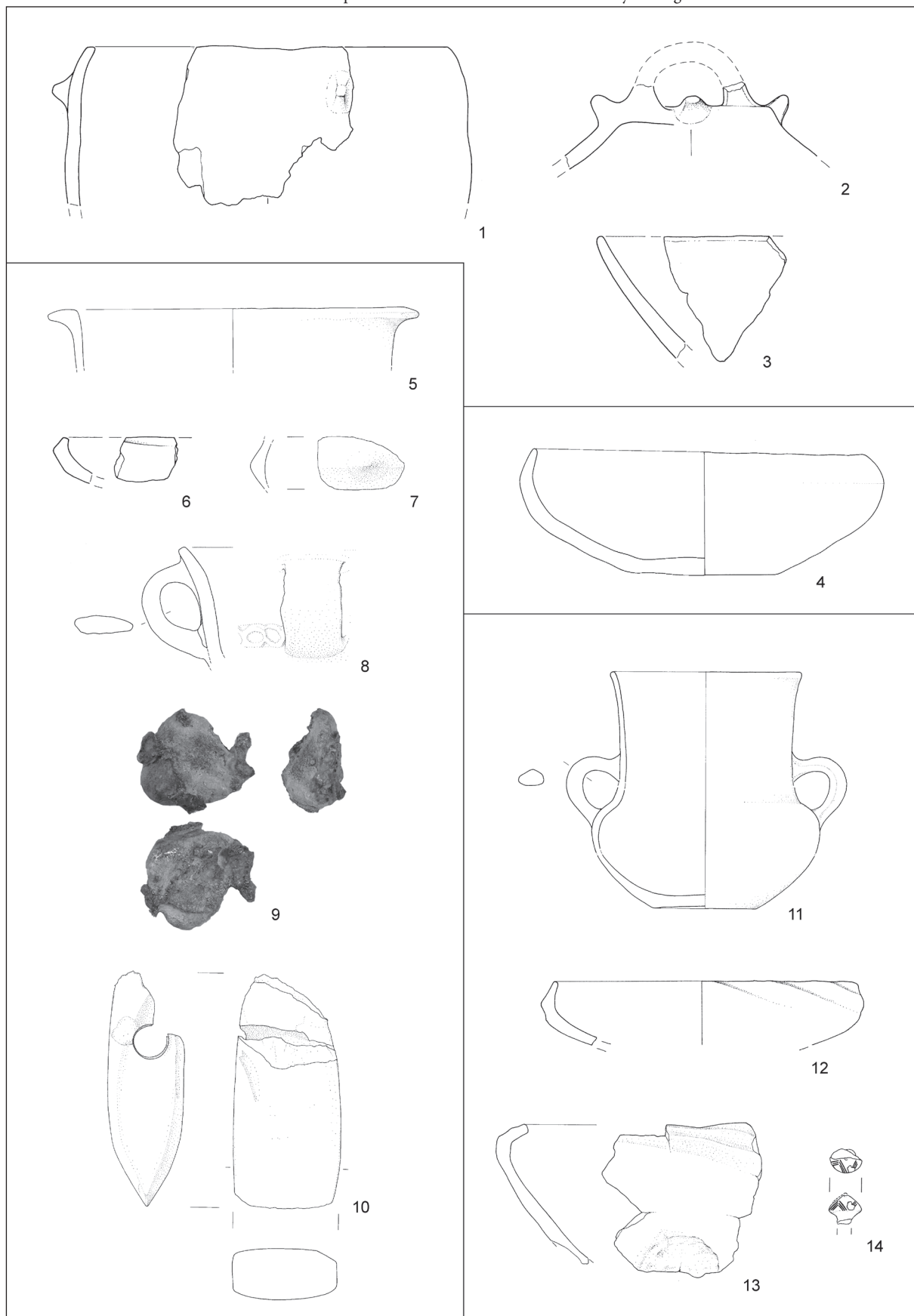


Pl. 13: Rogoza. Pit SE 1503. 7–10 stone; other pottery. Scale = 1:4.

T. 13: Rogoza. Jama SE 1503. 7–10 kamen; drugo keramika. M. = 1:4.

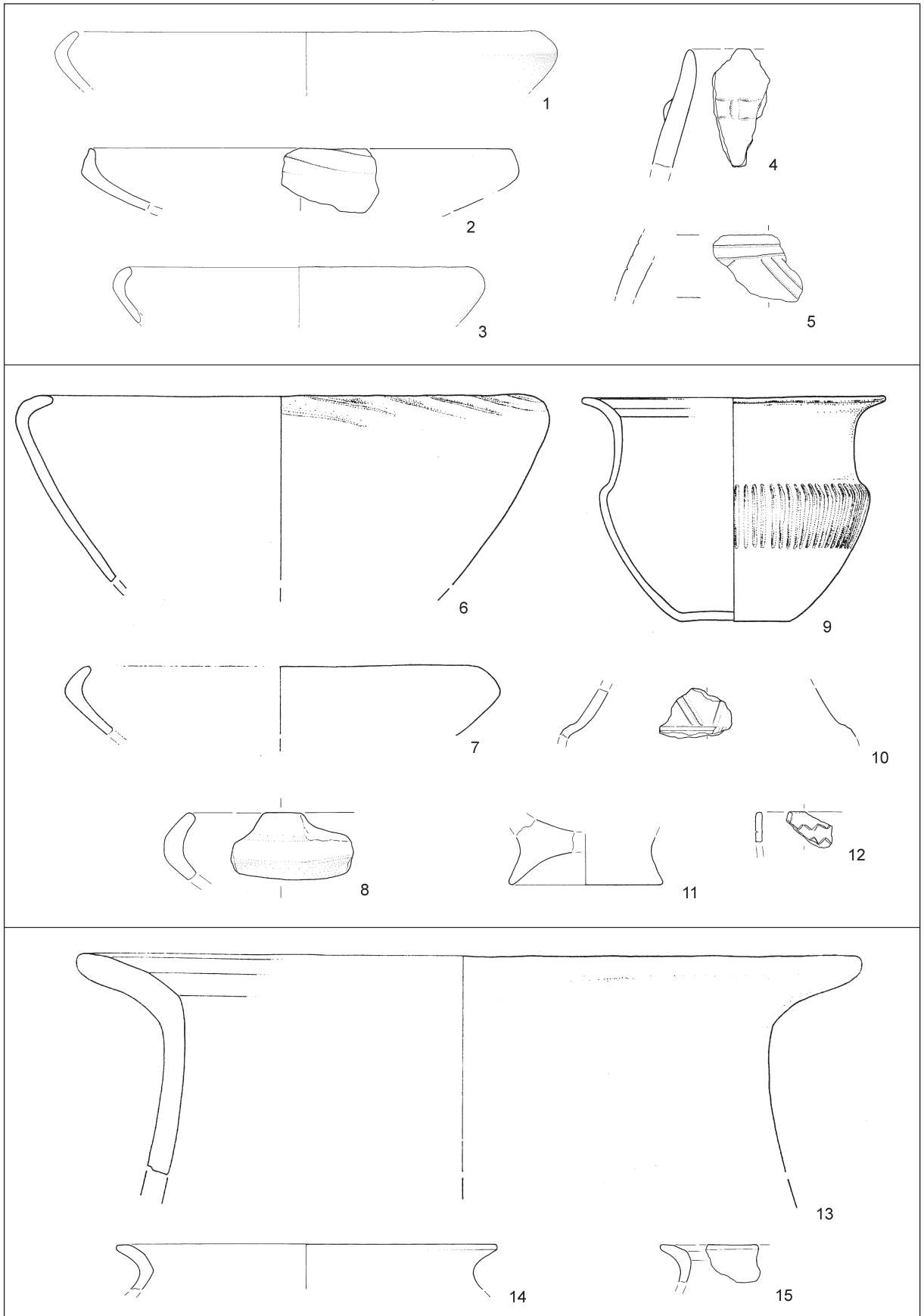


Pl. 14: Rogoza. (1–2) “cultural layer” to the south of buildings 30 and 31; (3–6) path; (7–9) line of postholes parallel with the path; (10–16) building 32, SE 554; (17–18) pit SE 577. 1,2 metal; other pottery. Scale 1,2 = 1:1; 3–16,18 = 1:3; 17 = 1:4.
 T. 14: Rogoza. (1–2) “kulturalna plast” južno od objektov 30 in 31; (3–6) pot; (7–9) s potjo vzporedna vrsta jam za sohe; (10–16) objekt 32, SE 554; (17–18) jama SE 577. 1,2 kovina; drugo keramika. M. 1,2 = 1:1; 3–16,18 = 1:3; 17 = 1:4.



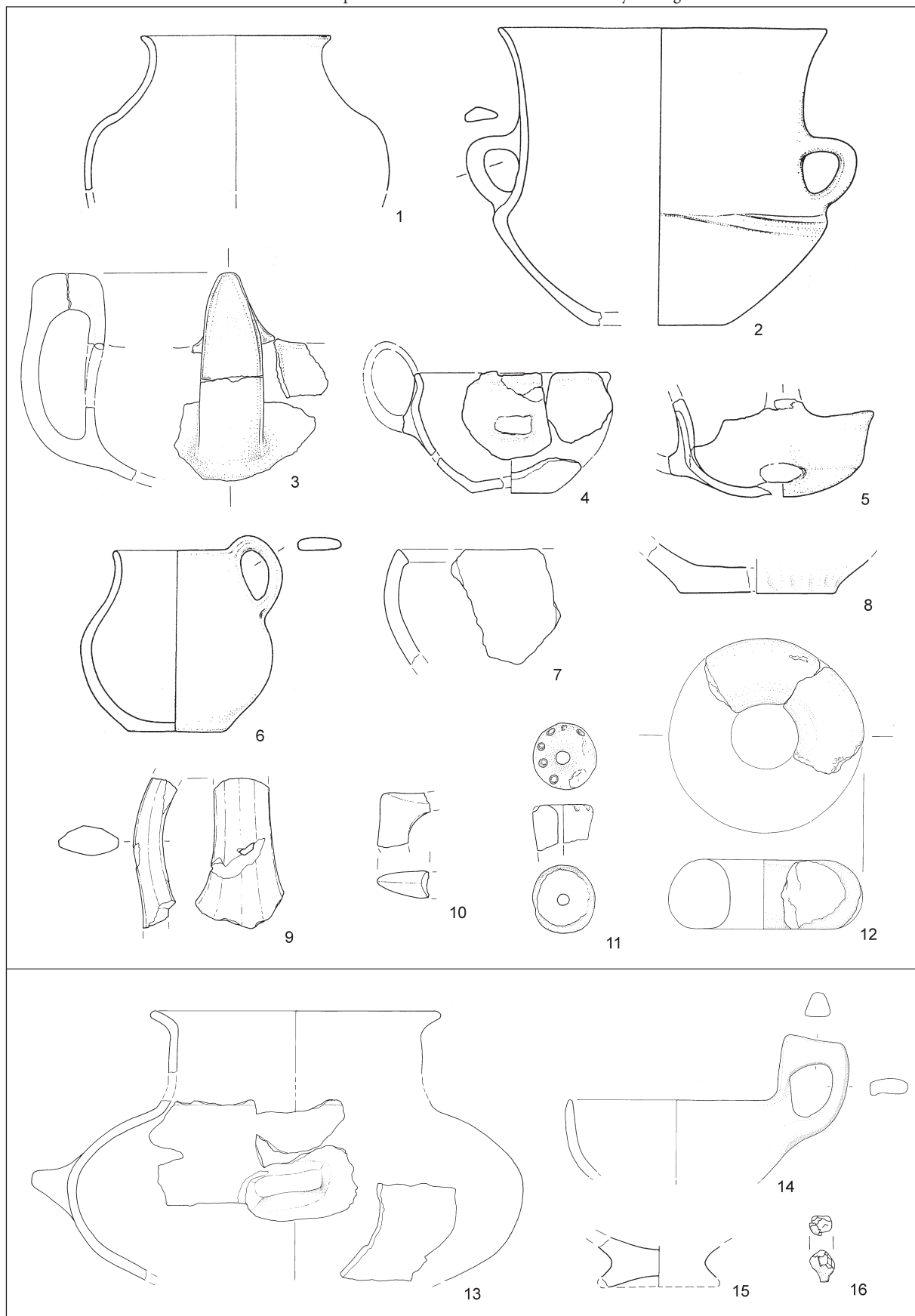
Pl. 15: Rogoza. (1–3) building 33; (4) pit SE 1546; (5–10) alluvium SE 008; (11–14) alluvial layers SE 005, SE 006, SE 006a. 10 stone; 9,14 metal; other pottery. Scale 9 = 1:1; 14 = 1:2; 1–8,10–13 = 1:3.

T. 15: Rogoza. (1–3) objekt 33; (4) jama SE 1546; (5–10) naplavinska plast SE 008; (11–14) naplavinske plasti SE 005, SE 006 in SE 006a. 10 kamen; 9,14 kovina; drugo keramika. M. 9 = 1:1; 14 = 1:2; 1–8,10–13 = 1:3.



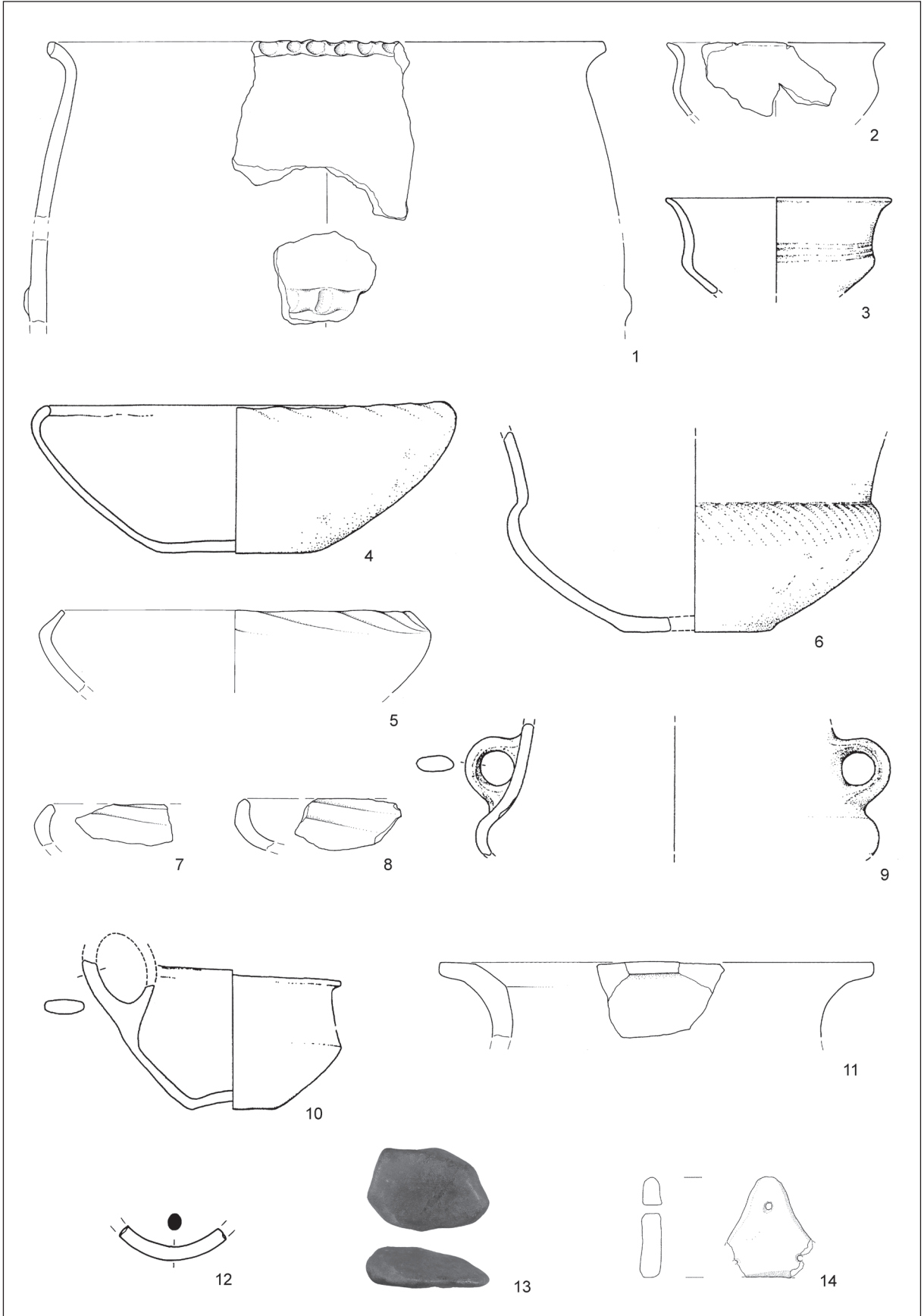
Pl. 16: Rogoza. (1–5) alluvium SE 208; (6–12) lower fill of the central part of the palaeochannel; (13–15) upper fill of the central part of the palaeochannel. All pottery. Scale = 1:3.

T. 16: Rogoza. (1–5) naplavinska plast SE 208; (6–12) spodnje polnilo osrednjega dela vodotoka; (13–15) zgornje polnilo osrednjega dela vodotoka. Vse keramika. M. = 1:3.



Pl. 17: Rogoza. (1-12) upper fill of the central part of the palaeochannel; (13-16) upper fill of the southern part of the palaeochannel. 16 metal; other pottery. Scale 16 = 1:2; 1-11,14-15 = 1:3; 12-13 = 1:4.

T. 17: Rogoza. (1-12) zgornje polnilo osrednjega dela vodotoka; (13-16) zgornje polnilo južnega dela vodotoka. 16 kovina; drugo keramika. M. 16 = 1:2; 1-11,14-15 = 1:3; 12,13 = 1:4.



Pl. 18: Rogoza. (1-11) fill of the northern part of the palaeochannel; (12-14) ploughsoil. 12,13 metal; other pottery. Scale 12-13 = 1:2; 1,3-7,14 = 1:3; 2 = 1:4.

T. 18: Rogoza. (1-11) polnilo severnega dela vodotoka; (12-14) orna plast. 12,13 kovina; drugo keramika. M. 12-13 = 1:2; 1,3-7,14 = 1:3; 2 = 1:4.

INSERTS / PRILOGE

Insert 1: Rogoza. Correlation of the finds presented in the paper with those from the catalogue of the primary publication (Črešnar 2011).

Pril. 1: Rogoza. Povezovalna tabela v članku predstavljenih arheoloških najdb s tistimi iz kataloga najdb v osnovni objavi najdišča (Črešnar 2011).

Insert 2: Rogoza. Plan of the archaeological site. Scale = 1:750.

Pril. 2: Rogoza. Tloris arheološkega najdišča. M. = 1:750.

Insert 3: Rogoza. Late Bronze Age settlement. Plan of the central part. Scale 1:250.

Pril. 3: Rogoza. Tloris osrednjega dela poznobronastodobne naselbine (M. 1:250).

Insert 4: Correlation of the material from Rogoza with material from partly contemporary settlements of eastern Slovenia.

Pril. 4: Primerjava gradiva iz Rogoze z gradivom delno sočasnih naselbin vzhodne Slovenije.

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2	G434	60	G355	2	G312	15	G678	1	G1005	8	G132
3	G255	61	G 856	3	G317	16	G683	2	G1007	9	G133
4	G523	62	G1163	4	G328	17	G685	3	G1033	10	G129
5	G566	63	G849	5	G319	18	G686	4	G1012	11	G86
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13	G741	71	G782	1	G358	6	G800	2	G1036	4	G104
14	G737	72	G408	2	G361	7	G801	3	G1039	5	G107
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16	G412	74	G89	4	G377	9	G812	5	G1031	7	G304
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18	G1037	76	G91	6	G241	11	G894	7	G1008	9	G306
19	G306	77	G214	7	G390	12	G895	8	G1018	10	G300
20	G1039	78	G275	8	G236	13	G756	9	G1049	11	G297
21	G30	79	G1060	9	G376	14	G755	10	G1058	12	G292
22	G413	80	G727	10	G357	15	G754	pl. / t. 13:		13	G445
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25	G452	83	G134	2	G405	2	G746	3	G1048	pl. / t. 17:	
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27	G295		G732	4	G412	4	G740	5	G1052	2	G430
28	G615	fig. / sl. 27:		5	G410	5	G751	6	G1053	3	G465
29	G580		G636	6	G411	6	G742	7	G1054	4	G287
30	G568	fig. / sl. 31:		7	G404	7	G743	8	G1055	5	G269
31	G1150	1	G380	pl. / t. 5:		8	G737	9	G1056	6	G446
32	G994	2	G133	1	G413	9	G749	10	G1057	7	G279
33	G644	3	G47	2	G364	10	G732	pl. / t. 14:		8	G462
34	G633	4	G908	3	G380	11	G880	1	G944a	9	G264
35	G451	5	G1244	4	G363	12	G866	2	G961a	10	G488
36	G582	6	G974	5	G365	13	G865	3	G1087	11	G275
37	G880	7	G44	6	G339	14	G861	4	G1095	12	G268/ G305
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50	G542	1	G147	5	G526	pl. / t. 10:		17	G1170	8	G561
51	G978	2	G146	6	G537	1	G947	18	G1171	9	G610
52	G1128	3	G148	7	G527	2	G965	pl. / t. 15:		10	G604
53	G75	4	G330	8	G548	3	G1062	1	G1183	11	G599
54	G12	5	G331	9	G542	4	G985	2	G1177	12	G694
55	G203	6	G336	10	G544	5	G1001	3	G1182	13	G124
56	G1010	7	G332	11	G549	6	G1002	4	G1250	14	G152

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