

## The Bronze Age Settlement from Ernei, Mureș County

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### **Rezumat: Așezarea din epoca bronzului de la Ernei, jud. Mureș.**

Așezarea preistorică de pe valea superioară a Mureșului cunoscută în literatura de specialitate pentru descoperirile fortuite aparținând neoliticului, epocii bronzului, primei epoci a fierului și epocii migrațiilor a fost cercetată în 2004 de către colectivul Muzeului Județean Mureș. Cu ocazia săpăturilor de salvare a fost identificată o așezare multistratificată aparținând mai multor perioade istorice, cu urme consistente a unei așezări din epoca bronzului, cu un strat de cultură de aproximativ 15 cm grosime. Au fost cercetate mai multe gropi de provizii și un mormânt de înhumare a unui copil, depus în poziție chircită. S-a constatat și prezența unor descoperiri Noua răzlețe provenite din stratul de cultură. Studiul prezent are scopul de a prezenta așezarea și inventarul arheologic bogat din epoca bronzului, în care predomină ceramica fină și semifină, reprezentată de cești tronconice joase cu toarta supraînălțată, castroanele cu buza lobată, oalele cu corpul aproape sferoidal ornamentate cu împunsături triunghiulare, circulare sau circulare concentrice, împunsături simultane și cele succesive fine, caneluri late verticale, meandre și triunghiurile hașurate în rețea. Pe baza analizei detaliate a materialului ceramic așezarea de la Ernei-Balastieră vine să îmbogățească repertoriul așezărilor atribuite fazei III de dezvoltare a culturii Wietenberg pe cursul superior al Mureșului.

### **Резюме: Поселення епохи бронзи з Ерней, повіт Муреш.**

Доісторичне поселення з верхів'я долини річки Муреш відоме у спеціалізованій літературі завдяки випадковим знахідкам неоліту, епохи бронзи, першої епохи заліза та епохи міграції було досліджене у 2004 році колективом повітового музею Муреш. Завдяки рятувальним розкопкам було ідентифіковано багатошарове поселення, яке належить кільком історичним періодам, з послідовними слідами поселення епохи бронзи, з шаром культури товщиною приблизно 15 см. Було досліджено кілька продуктивних ям і одне поховання дитини, розташоване у скрученій позиції. Було встановлено присутність певних неоднорідних знахідок Нова, які походять з культурного шару. Дане дослідження має за мету представити поселення та багатий археологічний інвентар епохи бронзи, в якій переважає витончена та напіввитончена кераміка, представлена низькими конічними чашками та надвисоким вушком, чаші з дольчатими губами, майже сферичні каструлі з вертикальним орнаментуванням, круглі або концентричні, однорідні стібки а також витончені, вертикальні широкі канавки, меандри і трикутники, заштриховані у мережу. На основі аналізу деталей керамічного матеріалу поселення з Ерней-Баластієра збагачує репертуар поселень III фази розвитку культури Вейтенберг у верхів'ях Муреша.

**Keywords:** Bronze Age, Wietenberg culture, Ernei, settlement, pottery.

**Cuvinte cheie:** epoca bronzului, cultura Wietenberg, Ernei, așezare, ceramică.

**Ключові слова:** епоха бронзи, Вітенбергська культура, Ерней, поселення, кераміка.

The site from the southern edge of Ernei (Hung. Nagyernye, Germ. Rohrdachen) is situated North of Târgu Mureș, close to the national road DN15, in the upper valley of the Mureș River, on a plateau with considerable visibility over the valley, with three gentle slopes and an ascent one on the western side, slightly eroded because of the modern agriculture and ploughing, delimited southwards by the valley of the Trebici/Terebics Creek. On the second military survey (1806–1869) the place is mentioned by the name “Kötös kert” (Pl. 1/1) and is situated at the western foot of the hill which represents the watershed between the hydrographical basin of the Mureș and Niraj Rivers (Pl. 1/2). Because the archaeological excavation was undertaken on the occasion of the exploitation of the gravel, the place was named “Quarry”.

The locality is hardly known for archaeological finds, on its territory only some incidental Stone Age (stone axe, bone awl, spindle-whorls) and Copper Age (antler hack, spindle-whorls, a handled cup) discoveries were found. A bronze battle axe decorated with incisions dates from the Bronze Age and it is determinative for its type (the Ernei type)<sup>1</sup>, while a bronze and an iron brooch discovered in the quarry

<sup>1</sup> David 2002, 285.

near the cemetery of the commune date from the Migration Period<sup>2</sup>.

The archaeological survey of the Mureş County Museum took place in 2004<sup>3</sup>, date when a great part of the terrace, specially the western part had already been excavated and destroyed by the gravel quarry (Pl. 1/3). A number of four surfaces and six trenches were opened, a territory of approximately 200 m<sup>2</sup> being excavated totally. The stratigraphy of the site begins with the earliest finds dating from the Bronze Age, followed by settlement features from the Early Iron Age (Gáva–Holihady culture) and Migration Period. The archaeological research surfaces and trench S4 were set in an area where the layers had already been removed down to the clayish subsoil, containing historical information. All of these features dated from the Migration Period, more precisely the last horizon of the Sântana de Mureş–Černjachov culture, or the post Černjachov horizon<sup>4</sup>.

Trench S1 was oriented north–south; the initial length was 6.5 m (enlarged later with 1 m) and the width 2.5 m (Pl. 2/1). The superior layer having a thickness between 25 and 45 cm was ploughed and therefore the finds from the Early Iron Age, Migration Period and sporadically from the Bronze Age appeared mixed together. From this level, in the northern part of the section a pit dated to the modern period deepened into the sterile soil. The second layer was characterized by a light grey coloured soil, scarcely pigmented with relatively few archaeological materials dated from the Early Iron Age. The level was 35 cm thick, and a pit deepened from this layer was observed in the southern part of the trench. The earliest archaeological layer dating from the Bronze Age was characterised by light brown coloured soil, and it was identified at a relative depth of approximately 70 cm having a thickness of 15 cm. In the south-western corner of the trench, pit G.08 was identified as belonging to this layer; it had a circular shape, straight walls, the filling containing scarce pottery fragments and a large quantity of snails and animal bones.

Oriented north–south, trench S2 was demarcated west from the earlier, having a length of 12 m and a width of 2 m (Pl. 2/2). In this region the archaeological stratum was more attenuated, having a total depth of 80 cm. The upper layers were highly affected by the modern ploughing and recent interventions, the Migration Period level being mixed with the superior part of the Early Iron Age one down to the depth of 40–45 cm, resulting a layer consisting of a soil with few but large pink-orange coloured pigments, while the greyish soil was hardly trodden. A Bronze Age feature was observed in the eastern profile of the trench, in its northern side, in a light brown and poorly pigmented layer, which deepened from -40 cm, calculated from the present surface. In this shallow and narrow pit, together with some river stones, sherds from a medium sized TA4c-Boroffka type vessel were discovered, with a cambered body decorated with combed incisions; the cylindrical neck was narrow and the rim everted. It has analogies at Sibişeni<sup>5</sup>. Because of the lack of further observations, the functionality or destination of the pit remains unknown.

Trench S3 was opened north–east from the earlier ones, where the eastern slope of the terrace begins. This zone is limited in the north-east by an area very rich in archaeological materials found on the surface after the mechanical uncovering of the topsoil. The trench was 3.5 m wide and 31 m long, with a spared profile wall between grid 15 and 16. In this place there could be also observed that the upper level of 30–35 cm was destroyed by modern ploughing. After the mechanical uncovering, a layer rich in archaeological materials (especially pottery and animal bones) appeared. At a depth of 40 cm in several places agglomerations of Bronze Age pottery were found, without the possibility to define archaeological features.

In the southern margin of the trench several hearths were identified. Three of them belonged to the Bronze Age. In hearth V.6 soil with intensive burning traces could be observed. An insignificant quantity of potsherds was recovered. In hearth V.7 there were some pottery fragments; its superior part was smoothened and a burnt soil layer with pottery could be noticed underneath, while the lower part of the hearth consisted of trodden clay. Finally, hearth V.9 was found near the western profile, without archaeological material, dated to the Bronze Age only due to its stratigraphic position.

<sup>2</sup> Lazăr 1995, 125.

<sup>3</sup> The excavations were carried out by S. Berecki, D. Cioată, C. Crişan, Z. Győrfi, K. László and Z. Soós.

<sup>4</sup> For remarks regarding the Migration period findings and chronology, and particularly the archaeological feature G.27, see Ciută/Crişan 2006; Crişan/Lăzărescu 2010.

<sup>5</sup> Boroffka 1994, pl. 122/3, 5; 124/1.

Regarding the stratigraphy of this section it could be remarked that the upper, ploughed layer, contained several stones, pottery fragments and animal bones. The second layer, assigned to the Early Iron Age consisted of highly pigmented light grey soil. The third layer from the Bronze Age was dark brown, having a clayish aspect and it was poorly pigmented.

Trenches S5 and S6 were 3.5 respectively 5.5 m wide and 13 m long; they were placed between trenches S2 and S3, in a central zone of the plateau. Unfortunately, in S6 only the upper layer was mechanically removed and the research could not be finalized in this trench. On the other hand, in trench S5 the utmost archaeological features were researched (Pl. 2/3). From the upper, ploughed layer, together with pottery from the Migration Period, Early Iron Age and some from the Bronze Age a fragmentary bronze dagger was revealed, but unfortunately it was lost later (Pl. 5/1).

At a depth of 70 cm grave M1 was researched. It was oriented east–west and belonged to a child less than one year old, laying in crouched position on the left side, without funerary inventory (Pl 2/3). Only some fragments from the skull, the clavicalae, scapula, sternum and some vertebrae were kept from the skeleton, as well as the humerus, radius, ulna and phalanges from the hands. Skeletons, parts of skeletons or remains of cremated human bones – *Siedlungsbestattungen* – are frequently discovered on the territory of the settlements of the Wietenberg culture, like the ones from Aţel, Bernadea, Derşida, Hăpria, Mereşti, Noşlac, Oarţa de Sus, Obreja and Sănnicoara<sup>6</sup>. Out of the seven graves from Derşida – two inhumations and five cremations – M1 belonged to an adult laying in crouched position on the right side<sup>7</sup>. Although at Ernei only some fragments of the skull were kept, in the cemetery from Sibişeni, in grave M43 only the skull of the child was placed. In the same cemetery, dated to the third phase of the Wietenberg culture, in grave M21 the crouched skeleton was laying on the right side<sup>8</sup>. It should be mentioned that inhumation is specific to the first and last (fourth) phases of the Wietenberg culture, the recurrence to the rite of inhumation in the last phase being connected to the contacts with the Noua culture.

Features G.11, G.13, G.15–19 and G.23–25 date from the Bronze Age. G.11 had a circular shape, it was outlined in the northern part of the trench; its diameter was 100 cm and it was 60 cm deep, with vertical walls. From the filling, a small intact vessel together with many bone and pottery fragments were revealed, some of them with traces of secondary burning, along with river stones and adobe.

G.13 was found in the southern part of the trench, partially cut by later pits. It was dug into the sterile soil at 88 cm from the present surface and contained pottery and bone fragments, among which there was a bone tool. Another shallow pit (G.15) with a fragmentary vessel was discovered east from grave M1. Pits G.16 and G.17 with oblique walls appeared near the western profile, partially under it. They were lacking any archaeological material. In the middle section of the trench two further features appeared (G.18 and G.19), superficially deepened and with poor archaeological material.

West from G.15, pit G.23 was discovered. Having a diameter of 100 cm, it was deepened, with straight walls, 88 cm from the present surface. On its bottom, south from its centre, an 8 cm deep post hole was observed. The filling contained lots of traces of burning and coal. Another pit was found in the southern profile and it contained only a few archaeological materials. The filling had black colour. Sectioned on its southern part by a pit dated to the Early Iron Age and in the north by another one from the Migration Period, G.24 was found near the western profile, and therefore it was only partially revealed. It was 160 cm deep from the present surface.

Regarding the inventory of the features one can observe that – maybe excepting pit G.23 on whose bottom a post hole was observed – in their final phase they became refuse pits, as shown by the considerable quantity of bone material found in their filling. Their initial function can hardly be defined also because lots of them were disturbed by later archaeological features or they were found close to the margins of the trench, beyond the profile.

From the 743 analysed animal bones found in the Bronze Age layer and features, 410 belonged to domestic animals (cattle, sheep and/or goat, pig, horse and dog) and only three to wild ones (roe deer and rabbit), 22 were aquatic animals (pike, Cyprinidae family, frog, clam and fish) and the rest were snail,

<sup>6</sup> Boroffka 1994, 106.

<sup>7</sup> Chidioşan 1980, 23.

<sup>8</sup> Andriţoiu 1992, 32–34.

bird or unidentified large and small mammals<sup>9</sup>. It is interesting that among the osteological waste materials from the pits that date to this period also human bones were identified.

Regarding the quantity of the materials, pottery represents the majority of the archaeological finds from the site, found mainly in the archaeological layer but also within the features (Pl. 4), while clay, bone, stone and metal objects are rare discoveries. The fragmentary character of the pottery allowed only a partial reconstruction of the forms and rendered difficult the typological examination. Even if the repertory of the forms is not very diversified, the variability is high in the case of each type.

Based on the paste of the pottery as well as the surface and thickness of the walls, the vessels could be divided in three larger categories: coarse, semi fine and fine pottery (Fig. 1). The majority of the vessels were of superior, fine quality, characteristic for the small vessels: cups, shallow and deep bowls, rarely medium sized or large bitruncated pots with smoothened surface, thin walls, tempered with fine or coarse sand and having complete firing. The semi fine category is represented by shallow and deep bowls and the majority of the bitruncated pots with a wall thickness less than 1 cm, with poorly smoothened surface, tempered with coarse sand and gravel. The coarse pottery of lower quality is formed by sack-shaped pots and a small number of deep bowls, having a superficially or medium treated surface, tempered mainly with coarse sand, gravel and crushed sherds.

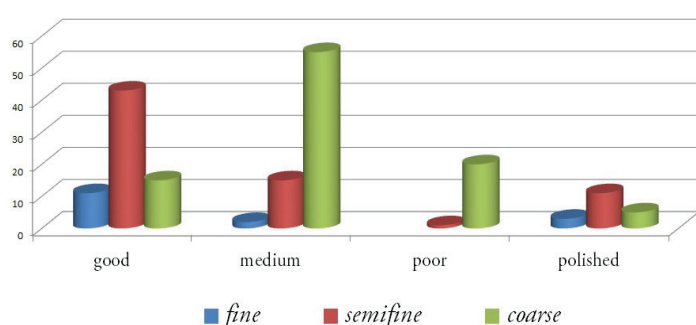


Fig. 1. Surface treatment based on ceramic categories.

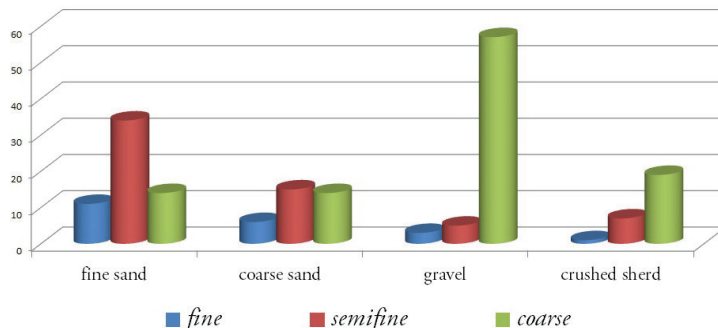


Fig. 2. Temper types based on ceramic categories.

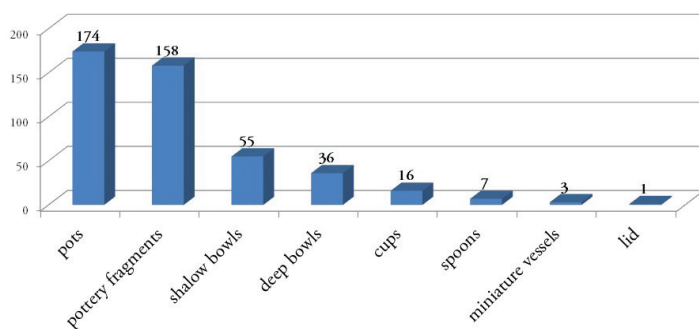


Fig. 3. Distribution of pottery shapes.

<sup>9</sup> Berecki et al. 2005.

<sup>10</sup> In the following lines the typology proposed by N. G. O. Boroffka from 1994 will be used, since this is the most recent, comprehensive and widely accepted. In the cases when this work lacks types or ornaments they will be referred from the works of K. Horedt (1960), N. Chidioşan (1980) and I. Andriţoiu (1992).

shaped pots and a small number of deep bowls, having a superficially or medium treated surface, tempered mainly with coarse sand, gravel and crushed sherds. These three basic types can be supplemented by the fine, polished pottery, represented by shallow bowls (Pl. 4/9; 6/10–11), cups (Pl. 4/14; 5/14; 6/1, 3) and bitruncated pots (Pl. 8/10–11; 10/8).

For tempering sand, coarse sand, gravel and crushed sherds were used, identified in all major categories of pottery (Fig. 2). The wares are usually well fired, less than a quarter of the entire examined sherds being fired incompletely. The predominant colours are dark ones: from grey to black and brown, rarely brick-red.

The present paper presents selectively the pottery discovered in the site, evidencing the main repertory of shapes and ornaments. A total of 448 typical pottery fragments – rims, bases, handles, ornamented body fragments – have been analysed, belonging to large and medium sized pots, shallow bowls, deep bowls, cups, spoons, miniature vessels and a lid (Fig. 3).

Pots are the best represented pottery form of the ceramic inventory from Ernei-Quarry, with several subtypes. The TA1b-Boroffka type<sup>10</sup> sack-shaped pots are the most numerous ones, with wide mouths, slightly arched walls, maximum



diameter at the level of the body, situated in the lower half of the vessel (Pl. 8/3, 6–7; 9/2, 4, 6; 10/11). It is a common form in the Wietenberg settlements, with analogies at Derşida, Chintelnic, Ciceu-Corabia, Unirea or Feldioara<sup>11</sup>. Some vessels of this type – with analogies at Cetea and Mereşti<sup>12</sup> – have the maximum diameter at the rim and their walls are relatively straight (Pl. 4/2; 9/1, 5). The TA1c-Boroffka type barrel-shaped pots have a rounded profile, the rim is smaller in diameter than the maximum diameter (Pl. 4/1; 8/1, 3), like the ones from Chintelnic, Mereşti or Nicula<sup>13</sup>. Both the sack-shaped and barrel-shaped pots are decorated with simple or impressed cordons. TA4c type bitruncated pots are both large, with 20–28 cm rim diameter and medium, with 18 cm rim diameter. Their rim is everted, the neck is cylindrical, the well defined body is curved (Pl. 8/9–11; 10/8) and they are specific for the Wietenberg culture, with close analogies at Bonţ and Cicău<sup>14</sup>. Usually, the rim is ornamented with incisions, oblique channels or zigzag incisions. TA3b type spherical vases with cylindrical neck and with the maximum diameter at the body are not common discoveries at Ernei (Pl. 8/1–2, 4). The form is characteristic for the Early Bronze Age Nagyrév and Tei cultures reappearing in the Middle Bronze Age only in the Wietenberg culture<sup>15</sup>.

With 91 registered fragments, bowls represent numerically the second most frequent pottery type. Deep bowls – their depth is equal to or larger than the half of the rim's diameter – appear in three variants. The best represented are the deep bowls with highly curved profile and straight rim, type T1b-Boroffka (Pl. 4/3, 5; 6/7; 7/1–2, 4; 10/6, 10), with analogies at Feldioara, Deva, Livezile or Nuşeni<sup>16</sup>. Truncated deep bowls with straight walls, straight or thickened rim have an opening of 30 cm (Pl. 7/6), while the smaller variant has 12 cm rim diameter (Pl. 6/9; 10/7). The deep bowls with S-shape profile, type TD2a-Boroffka have a slightly everted rim, cylindrical neck and curved body, where the maximum diameter is found. Two sizes were identified for this typical form of the Wietenberg culture<sup>17</sup> even in its final phases<sup>18</sup>, one with a larger rim diameter of 28 cm (Pl. 7/5) and a smaller one, of 12 cm (Pl. 6/5).

Among the shallow bowls – their depth is less than the half of the rim's diameter – the TD1b type cone-shaped ones with curved body are the most numerous ones (Pl. 4/9; 6/11, 13; 7/3; 10/5, 8), with analogies at Bădeni, Cicău and Sibişeni<sup>19</sup>. The TD3d type shallow bowls with S-shape profile, whose rim diameter is equal to the maximum diameter of the body, have everted rim, short, cylindrical neck and curved body (Pl. 6/10, 12), with analogies at Derşida, Ciceu-Corabia, Sibişeni and Tonciu<sup>20</sup>. The fragments are ornamented with impressions, incised lines and oblique channels.

The vessels with more or less evidenced lobed rim – shallow or deep bowls and cups – represent a separate category. Three types could be identified: TE1a type truncated deep bowls with slightly curved walls (Pl. 10/2–4); TE1c type cone-shaped vessels with highly curved body (Pl. 10/1) and TE2a type S-shaped cup with cylindrical neck and highly curved body (Pl. 4/7). Except for the last type, all forms are ornamented. All three types have analogies in the well known sites from Derşida and Feldioara<sup>21</sup>.

Cups represent a special category of the pottery in Bronze Age sites. 16 cups and beakers were identified; they could be included in four categories. TC1a type truncated or cone shaped small beakers had wide opening, slightly curved walls, without trace of handle. With analogies at Derşida, Corpadea, Lăpuş and Livezile<sup>22</sup>, their height is smaller than the rim's diameter, they are never ornamented (Pl. 4/8; 5/13, 18). The TC1c type beakers with rounded and slightly inverted rim and curved, barrel-shaped body are rare (Pl. 5/17). The F2-Chidioşan or TC3d-Boroffka type bitruncated cups with S-shaped profile have slightly everted rim, short, slightly curved neck, rounded shoulder and curved body, with a high handle and they are the most frequent type of cup both for the Wietenberg culture and the settlement from

<sup>11</sup> Chidioşan 1980, pl. 8/1; Boroffka 1994, Taf. 27/1,13; 58/12; 140/6; 73/9.

<sup>12</sup> Boroffka 1994, Taf. 22/14, 93/6.

<sup>13</sup> Boroffka 1994, Taf. 25/13; 95/11; 98/7.

<sup>14</sup> Boroffka 1994, Taf. 15/1; 37/10.

<sup>15</sup> Chidioşan 1980, 33.

<sup>16</sup> Boroffka 1994, Taf. 74/14; 68/1; 87/7; 102/6.

<sup>17</sup> Chidioşan 1980, pl. 13/5, Andriţoiu 1992, 50.

<sup>18</sup> Gogăltan 2009, 133, pl. I/4; II/2–3.

<sup>19</sup> Boroffka 1994, Taf. 3/5; 4/7, 43/7–8; 123/7.

<sup>20</sup> Chidioşan 1980, pl. 14/3; Boroffka 1994, Taf. 53/8, 124/4, 138/1.

<sup>21</sup> Chidioşan 1980, pl. 21, 6–10; Boroffka 1994, Taf. 73/12; 74/1–2; 4–6.

<sup>22</sup> Chidioşan 1980, pl. 67/9, Boroffka 1994, Taf. 63/7; 84/5; 86/4.

Ernei. With analogies at Chintelnic and Lopadea<sup>23</sup> and a deepness of 5–6 cm<sup>24</sup>, the diameter of the rim is equal with the shoulders. Usually, this type is ornamented (Pl. 4/14; 6/1, 3; 6/6). The TC2c type cups with S-shaped profile, thickened rim, cylindrical neck, profiled shoulder and curved body, with the maximum diameter at the shoulder, have a 7–8 cm height (Pl. 6/2, 4), with analogies at Derşida and Feldioara<sup>25</sup>.

The ornamentation of the Wietenberg pottery from Ernei was realised with various techniques, sometimes showing prominent precision, other times superficiality. The ornaments in relief, sometimes applied on the body, in other cases pinched from the wall of the vessel are specific to the sack-shaped pots and bitruncated deep bowls. Among these ornaments the VE10/19 type rounded flattened (Pl. 6/7–8; 8/7; 10/10) or the VE10/23 type oval, elongated buttons (Pl. 4/10), the VE1 type simple cordons (Pl. 9/1), the VE4 type impressed cordons under the rim (Pl. 4/6; 8/4, 6–7, 9/2, 6; 10/11) or on the shoulder (Pl. 4/2; 10/11), the VE7 type notched cordon (Pl. 8/3; 9/5) and the VE10/24 type short impressed cordon (Pl. 4/3) can be mentioned. On two pots, two parallel cordons were placed under the rim and on the shoulder (Pl. 9/5; 10/11). Analogies can be mentioned from Chintelnic, Mereşti, Cetea, etc.<sup>26</sup>.

The incised ornaments show a high variety: VD2 type simple, double or triple horizontally incised lines placed on different parts of the vessel (Pl. 4/14; 5/15, 10–13; 11/2, 6) sometimes delimiting other ornaments (Pl. 4/9; 6/3, 6, 8, 13; 8/8; 10/1–3; 11/1, 4–5, 9–10, 12), with analogies in almost all the sites of the period. VD14/14 type horizontal linear ornaments made by fine incisions arranged in angles can be observed on a beaker (Pl. 5/15). The 30–Chidioşan type fir-shaped ornament from a shallow bowl (Pl. 10/7) was taken over from the Otomani culture, with analogies at Derşida<sup>27</sup>. The VD4/12 type narrow band filled with parallel notches (Pl. 4/9; 6/3; 11/1, 12) has analogies at Chintelnic<sup>28</sup>, while the VD4/6 and 12 type narrow band filled with hatches sectioned by incisions of variable length (Pl. 6/8; 11/1, 4–5) has analogies at Derşida; Cicău, Feldioara and Rimet, dated in the third phase of the Wietenberg culture<sup>29</sup>. The VD2/10 type narrow band filled with X-shaped decoration is a characteristic motive of the Wietenberg culture, found especially on the rim of vessels (Pl. 8/11; 10/5), but also on the shoulder (Pl. 10/5) like in the case of the pottery from Cicău and Corpadea<sup>30</sup>. Another ornament is the VD14/16 type horizontal band with zigzag motive composed of two (Pl. 5/15), three (5/15) or more incised lines (Pl. 11/6, 12). The VD16/24 type triangles filled with oblique, incisions parallel with one of the sides of the triangle are found on the body (Pl. 6/13; 11/2, 9) or rim (Pl. 10/8), with analogies at Oiejdea, Cicău or Adămuş<sup>31</sup>. The ornament appears in the second phase of the Wietenberg culture and increases in the third one<sup>32</sup>.

Many sherds have the common ornament of striation, found mostly on the large pots (Pl. 4/6; 8/6; 9/2, 4) or medium sized pots (Pl. 8/7) similar to the ones from Ciceu Corabia and Beclean<sup>33</sup>, but also on deep bowls (Pl. 6/7; 7/3; 10/6, 10). In the majority of cases this ornamentation is combined with other motifs: impressed cordons, notched cordons, flattened circular buttons or ornament on the rim. Striation is largely used especially in the last phase of the culture.

Impressed or stamped ornaments can be frequently observed on the majority of the decorated vessels. They were realised before firing using bone or wooden tools with different tips. Impressions were applied mainly on the large and medium sized pots, in most of the cases on VE2 type cordons (Pl. 4/1–3, 6; 9/6, 10/11), with analogies in most of the contemporaneous sites<sup>34</sup>. VD5/20 type elongated oval impressions can be found on the shoulder of the vessels (Pl. 4/12; 10/12), under the rim of shallow bowls (Pl. 7/3) or in association with other patterns (Pl. 10/1; 11/8–9), with analogies at Derşida<sup>35</sup>. The VD5/13 type half-moon impressions appear on the rim (Pl. 8/9) or under the rim (Pl. 7/1; 8/9) of vessels, like in the case of a deep bowl from Ciceu Corabia<sup>36</sup>. VD5/14 type circular impressions of different sizes

<sup>23</sup> Boroffka 1994, Taf. 29/2, 88/8.

<sup>24</sup> Chidioşan 1980, 39.

<sup>25</sup> Chidioşan 1980, pl. 18/4, 6; Boroffka 1994, Taf. 78/1.

<sup>26</sup> Boroffka 1994, Taf. 21/11; 22/14; 25/13; 27/13; 35/8; 93/6.

<sup>27</sup> Chidioşan 1980, 56, pl. 29/5, 7, 10.

<sup>28</sup> Boroffka, 1994, Taf. 29/4.

<sup>29</sup> Chidioşan pl. 28/2, 12; Boroffka, Taf. 41/1, 4; 77/10; 113/3, 6, 7, 11.

<sup>30</sup> Boroffka, 1994, Taf. 37/10; 63/4.

<sup>31</sup> Ciugudean 1989, 74, fig. 3/3; Boroffka 1994, Taf. 47/10–11, Berecki 2009, 102, pl. 5/4, 6.

<sup>32</sup> Chidioşan 1980, 75.

<sup>33</sup> Boroffka 1994, Taf. 52/12; 10/1.

<sup>34</sup> Cetea (Andriţoiu 1992, pl. 27/3; Boroffka 1994, Taf. 25/13), Chintelnic (Boroffka 1994, Taf. 26/1–4), Derşida (Chidioşan 1980, pl. 27/3, 9, 11).

<sup>35</sup> Chidioşan 1980, pl. 28/1, 6.

<sup>36</sup> Boroffka 1994, Taf. 53/9.

arranged in horizontal lines are frequently met under the rim of the vessels (Pl. 6/10–11; 10/4), like at Apahida, Chintelnic and Ciceu Corabia, and sometimes in association with incised lines (Pl. 6/10), like at Sibișeni and Derșida<sup>37</sup>. The VD6/14 type smaller (Pl. 4/5) or larger (Pl. 6/7; 10/6) stamped circles are usually arranged in horizontal lines on the rim of deep bowls or sack-shaped pots (Pl. 9/2–3); VD6/30 type concentric stamps can be seen on the rim of a deep bowl (Pl. 6/9) or organized in VD6/29 type parallel lines on the shoulder of the vessel (Pl. 11/13), other times grouped in the shape of a rhomb (Pl. 10/12). These are frequently met ornaments on the pottery from Chintelnic and Sibișeni, and even on the harness mounts made of bone from Cetea or Dumitra<sup>38</sup>. The VD6 type impressed triangles are arranged in horizontal lines, laying with tips to the right (Pl. 5/17), similar to the fragments from Alba Iulia<sup>39</sup> while the VD6/24 type has two lines with opposed tips (Pl. 8/8) with analogies at Cicău, Merești and Cetea<sup>40</sup>. Fine and narrow successive impressions forming triangles, specific to the third and especially fourth phase of the Wietenberg culture<sup>41</sup>, with analogies at Cetea, Micești and Cicău<sup>42</sup> could be seen only on the body of one vessel (Pl. 4/4). The VC1 type *Zahnstempelung* made by using a crested tool was used in order to fill meanders from the lobe of a deep bowl (Pl. 10/3), like at Cicău and Livezile<sup>43</sup>.

Among the channelled ornaments the most frequent is the VA10 type distant channels specific to the second and third phase of the culture, arranged obliquely on the body of cups (Pl. 5/16; 6/2) with analogies at Feldioara and Derșida<sup>44</sup>, or the rim of a bitruncated vessel (Pl. 8/10). Va11/18 type adjacent wide channels are found on the body of deep bowls (Pl. 6/12; 11/7), with analogies at Feldioara<sup>45</sup>. A cup with an S-shaped profile was ornamented with the VA5/8 type wide vertical channels placed on the shoulder (Pl. 4/14), pattern which appears in the third phase of the culture, specific to the fourth and fifth levels at Derșida<sup>46</sup>.

Both in the layer and features several clay objects with different destinations were found. A miniature vessel imitates the form of normal hemispherical bowls; it was shaped rudimentarily of semi fine paste and tempered with crushed sherds (Pl. 5/12); analogies can be mentioned from Derșida and Meteș<sup>47</sup>. Four fragments of strainers were found, out of which only one's shape could be reconstructed (Pl. 5/8). It was the bottom of a vessel made of semi fine paste, tempered with fine sand, probably a plate similar to the ones from Derșida and Feldioara<sup>48</sup>, or a bowl like the ones from Feldioara and Unirea<sup>49</sup>. Only a fragmentary flat, circular lid is known from the site; it had a small handle on the middle of the upper side (Pl. 5/10). Analogies are known from Cetea and Derșida<sup>50</sup>. None of the round, handled, semi fine clay spoons tempered with fine sand were ornamented (Pl. 5/4–5). Similar objects are known from Lăpuș, Chintelnic, Feldioara and Sighișoara<sup>51</sup>. A single round spindle whorl of 4 cm diameter was discovered in the layer belonging to the Bronze Age (Pl. 5/6). The fragmentary cylindrical wagon wheel belonging to the type without an axle has 5 cm diameter (Pl. 5/7). Originating in the Near East, the miniature wagon wheels appeared in the Neolithic<sup>52</sup>. On the territory north of the Danube the first products were found in settlements of the Glina III culture. In Transylvania they become widespread during the Wietenberg culture<sup>53</sup>, the piece from Ernei having numerous analogies at Chintelnic, Feldioara, Lopadea Nouă, Târgu Mureș, etc.<sup>54</sup>. A clay object had the form of a miniature perforated axe (Pl. 5/9). Having its origins in the

<sup>37</sup> Chidioșan 1980, pl. 12/5; Boroffka 1994, Taf. 2/2; 35/1; 53/8; 124/4.

<sup>38</sup> Boroffka 1994, Taf. 35/8; 22/13; 71/2.

<sup>39</sup> Andrițoiu 1992, pl. 30/6.

<sup>40</sup> Andrițoiu 1992, pl. 27/10; Boroffka 1994, Taf. 38/22; 51/8; 92/4–8.

<sup>41</sup> The categorization of this ornament was made by T. Soroceanu (1973, 495) based on the materials from Obreja. Two types of successive impressions were defined: fine and narrow ones specific to the third phase of the culture and wide and deep ones used mainly in the last phase of the culture. This determination was accepted also by N. Chidioșan (1980, 79), I. Andrițoiu (1992, 52) and N. G. O. Boroffka (1994, 287).

<sup>42</sup> Ciugudean 1989, 73–75, pl. 2/3; 4/13; Boroffka 1994, Taf. 52/4.

<sup>43</sup> Boroffka 1994, Taf. 48/5, 9; 87/6.

<sup>44</sup> Boroffka 1994, Taf. 78/1; Chidioșan 1980, pl. 18/4, 6.

<sup>45</sup> Boroffka 1994, Taf. 77/1–2, 4–5, 7, 9–12.

<sup>46</sup> Chidioșan 1980, 75; Pl. 18/5; Andrițoiu 1992, 52.

<sup>47</sup> Chidioșan 1980, pl. 23/5.

<sup>48</sup> Chidioșan 1980, Pl. 24/5; Boroffka 1994, Taf. 79/13.

<sup>49</sup> Boroffka 1994, Taf. 79/14–15; 140/5.

<sup>50</sup> For the typology of lids from Derșida see: Chidioșan 1980, pl. 22/7; Boroffka, 1994, Taf. 22/12.

<sup>51</sup> Boroffka 1994, Taf. 28/6–7; 72/1–2; 84/8; 132/9.

<sup>52</sup> Ordentlich/Chidioșan 1975, 33; Bondár 1992, 115.

<sup>53</sup> Ordentlich/Chidioșan 1975, 34–35; Schuster 1996, 119. Regarding the repertory of Bronze Age wagons models and wagon wheels see: Bichir 1964; Ordentlich/Chidioșan 1975; Boroffka 1994; Schuster 1996; Németh 2012.

<sup>54</sup> Bichir, 1964; Boroffka 1994, Taf. 33/7; 84/1; Németh 2012, 32, pl. 4.

Early Bronze Age Schneckenberg culture<sup>55</sup>, a similar object was found at Rimeț<sup>56</sup> and the unpublished settlement from Luduș.

Besides pottery and clay objects several bone tools were also found: a fragmentary bone needle with a hole in one end (Pl. 5/2), with analogies at Derșida or Chintelnice<sup>57</sup>, a piercing tool with traces of use on both ends (Pl. 5/3), with analogies at Derșida<sup>58</sup>.

Among the animal bones of the stratum a scalloped scapula specific to the Late Bronze Age, especially the Noua culture was also found (Pl. 5/19). Besides marks of present fragmentation, the artefact shows traces of abrasion and fragmentation from the period when it was in use. Thus, the original number of the teeth could not be established, a number of 20 intact teeth being preserved, cut at equal distances from one another but with different lengths. The piece was made from the scapula of a bovine, preferred in most of the cases when confectioning these artefacts instead of the bones of porcine. Interpreted initially as tally, score or stamps, recently based on the ethnographic and historical analogies they were convincingly reconsidered as tools used in the processing of leather<sup>59</sup>.

Having a light green patina, the bronze dagger discovered in the Bronze Age layer was the only metal object found in the site for this period. It was 8 cm long and its maximum width was 2.7 cm (Pl. 5/1). The blade was broken in ancient times. The leaf-shaped artefact has eastern origins and based on its morphology it can be dated to the Middle Bronze Age, probably to the end of this period<sup>60</sup>.

Regarding stone tools, a fragmentary polished stone axe with a transverse perforation (Pl. 5/11) can be mentioned, broken in half close to the perforation. The blade is ragged and broken probably due to usage. Analogies can be mentioned from Derșida, Chintelnice, Feldioara or Sighișoara<sup>61</sup>.

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Taking into consideration the typological series defined for the Wietenberg culture<sup>62</sup>, the archaeological layer and features from Ernei are chronologically contemporaneous with the fourth and fifth layers from Derșida. Besides some forms perpetuating from the earlier phase, the third – III or C<sup>63</sup> – phase of the Wietenberg culture is defined by A5-Horedt, A4-Chidioșan spherical pots with cylindrical neck (Pl. 8/2; 11/8), TA2b-Boroffka type pots (Pl. 4/1; 8/4), TD1b-Boroffka type truncated bowls with slightly curved body (Pl. 5/14–15), F2-Chidioșan type truncated cups with large handles (Pl. 6/3, 6), TE1c-Boroffka type lobed deep bowls with arched body (Pl. 10/1), TE2a-Boroffka type lobed cups with S-shaped profile and short, cylindrical neck (Pl. 4/7) and miniature vessels (Pl. 5/12)<sup>64</sup>. Regarding the ornamentation of pottery, patterns like fine successive impressions (Pl. 4/4), the VC1-Boroffka type *Zahnstempelung* (Pl. 10/3), the VC40-Boroffka type meanders (Pl. 10/3), the VA5/8-Boroffka type vertical channels (Pl. 4/14), the VD5-Boroffka type concentric circular impressions (Pl. 6/9; 10/12; 11/13) or VD6-Boroffka type triangular impressions (Pl. 5/17; 6/6; 8/8) and the VD17-Boroffka type incised triangles (Pl. 6/13; 10/8) are specific<sup>65</sup>.

In conclusion, the archaeological material from Ernei–Quarry can be dated to the Middle Bronze Age, more precisely to the third phase of the Wietenberg culture, which corresponds to the Reinecke Bz.C period, also considered the beginning of the Late Bronze Age<sup>66</sup>. Since a Late Bronze Age layer corresponding to the Noua culture is lacking, the appearance in the Bronze Age level of a fragmentary handle with a knob (Pl. 4/13) and the scalloped scapula (Pl. 5/19) can be considered the result of early contacts between the Noua and Wietenberg communities. The presence of materials specific to the Noua culture found in sites dated to the third phase of the Wietenberg culture can be mentioned from the settlement in

<sup>55</sup> Sztáncsuj 2009, 55.

<sup>56</sup> Boroffka 1994, Taf. 111/12–13.

<sup>57</sup> Chidioșan 1980, pl. 39/26–28; Boroffka 1994, Taf. 25/4.

<sup>58</sup> Chidioșan 1980, pl. 39/16–19.

<sup>59</sup> Bălășescu/Dietrich 2009, 38–39, pl. 5.

<sup>60</sup> Regarding further chronological and typological considerations of the dagger see also: Rezi 2014, in this volume.

<sup>61</sup> Horedt 1960, Abb. 14/3; Chidioșan 1980, pl. 38/17, 18; Marinescu 1980, pl. II, 4/426; Boroffka 1994, Taf. 76/9.

<sup>62</sup> Horedt 1960, 107–137; Abb. 12; Chidioșan 1980, 77–81; Andrițoiu 1992, 49–54, pl. 43; 242–243; Boroffka 1994.

<sup>63</sup> Wietenberg III (Chidioșan 1980, Andrițoiu 1992); Wietenberg C phase (Boroffka 1994, 258).

<sup>64</sup> Chidioșan 1980, 78; Andrițoiu 1992, 51–52; Boroffka 1994, 250.

<sup>65</sup> Soroceanu 1973, 495; Chidioșan 1980, 78–79; Andrițoiu, 1992, 51–52; Boroffka 1994, 250–251.

<sup>66</sup> Kacsó 1990, 41–50; Gogăltan, 2001, 191–214.



Bistrița-Cighir, the urn from Băcăinți, the grave from Band–Omláshegy or the cultic pit from Măhăceni<sup>67</sup>. Eastern influences or contacts are represented also by the bronze dagger. However, the lack of archaeological features with materials from both cultures calls for further argumentations when discussing these contacts between the Bronze Age communities.

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<sup>67</sup> Andrițoiu 1992, 49, 68, pl. 28/2; Andrițoiu/Vasiliev 1993, 128–134; Vasiliev 1999, 174; Cavruc 2001, 54; Vasiliev 2005, 8; Popa/Totoianu 2010, 193–195.

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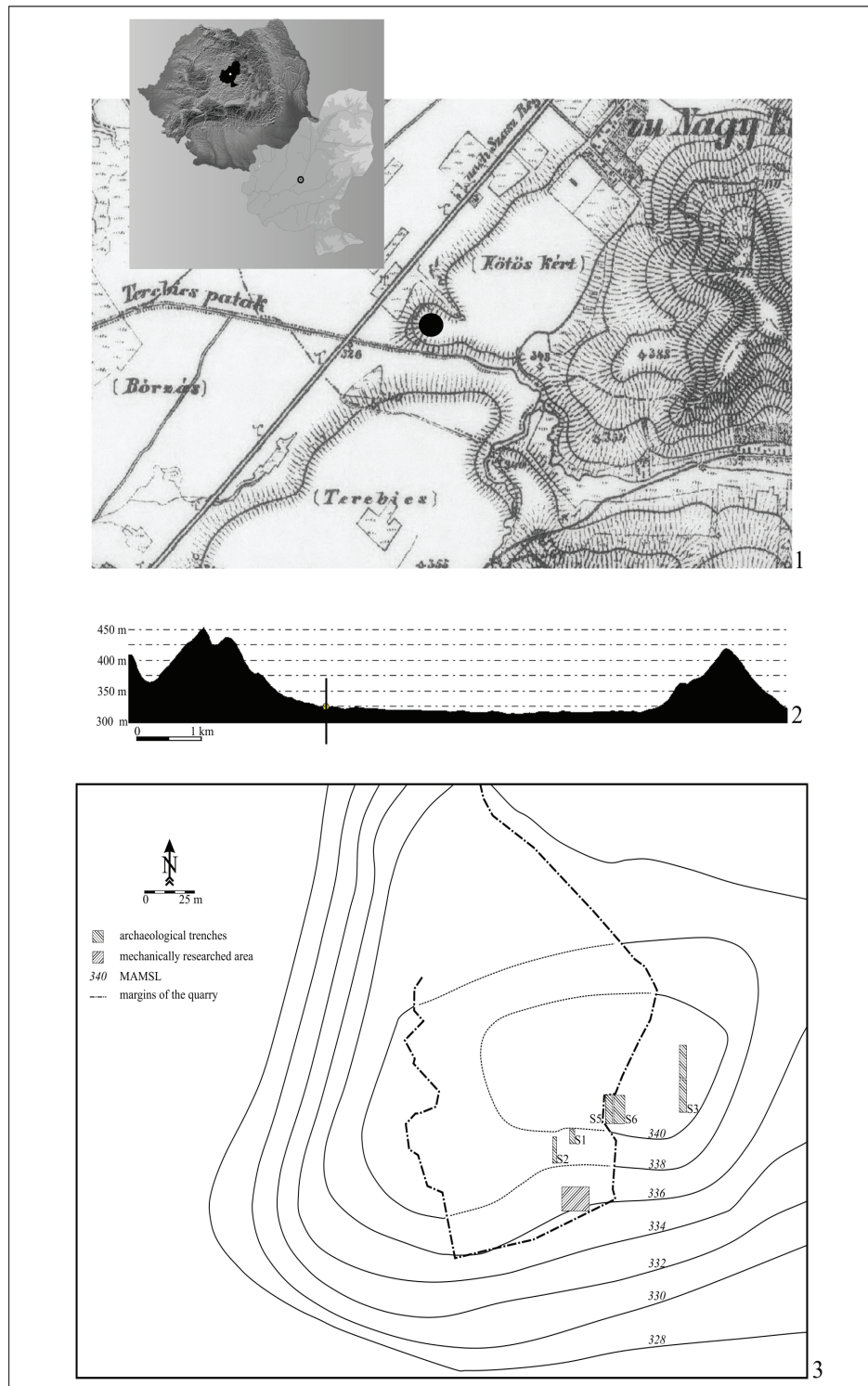


Plate 1. 1. The location of the site on the second military survey (1806–1869);  
2. East–west section of the Mureş valley at the site; 3. Topographic map of the site.

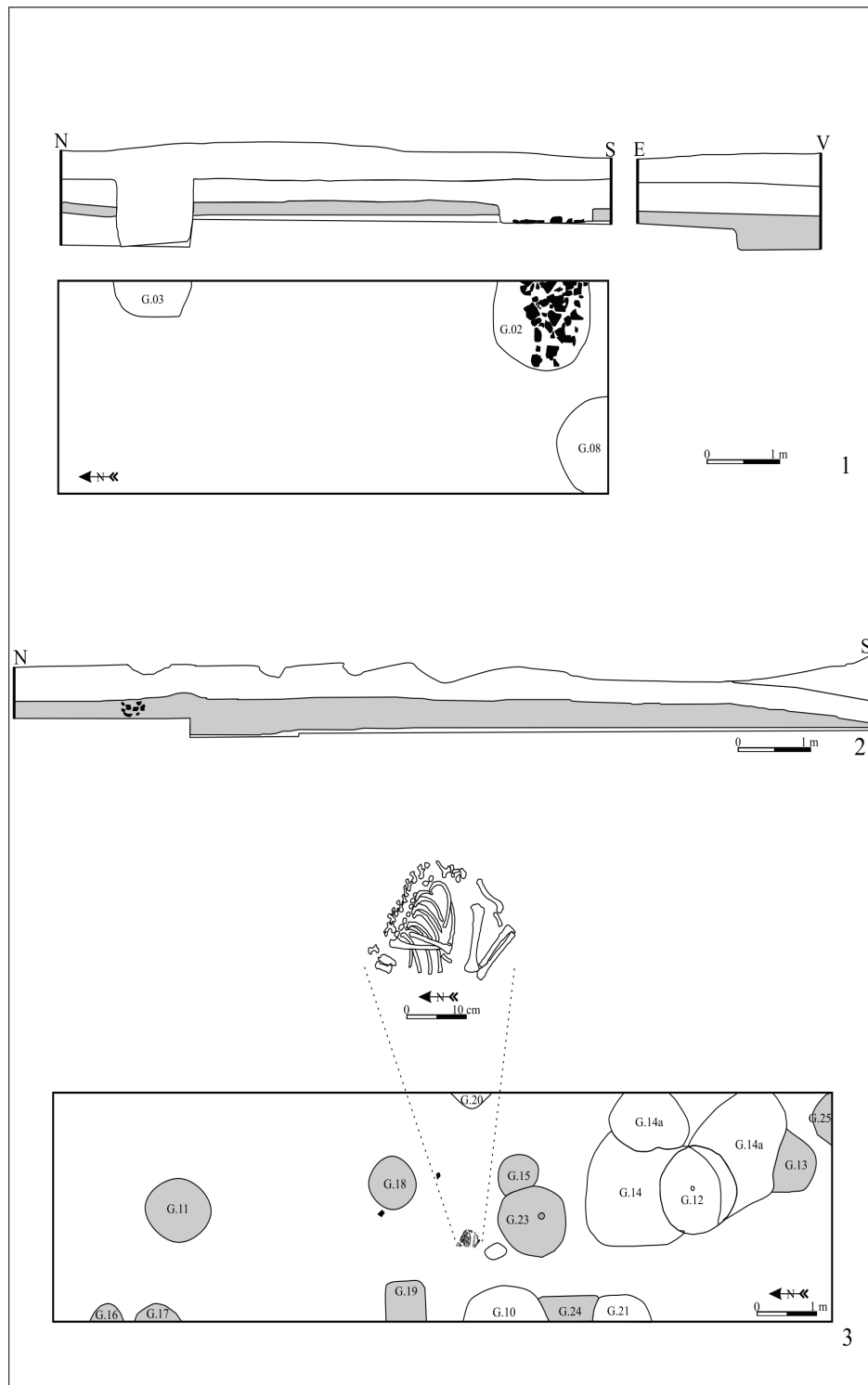


Plate 2. 1. Trench S1: profiles and plan; 2. Trench S2: profile; 3. Trench S5: plan and the grave.





Plate 3. 1. Aerial view of the site (photo: S. Berecki, November 2013); 2. Trench S3 with the hearths; 3. Trench S5.

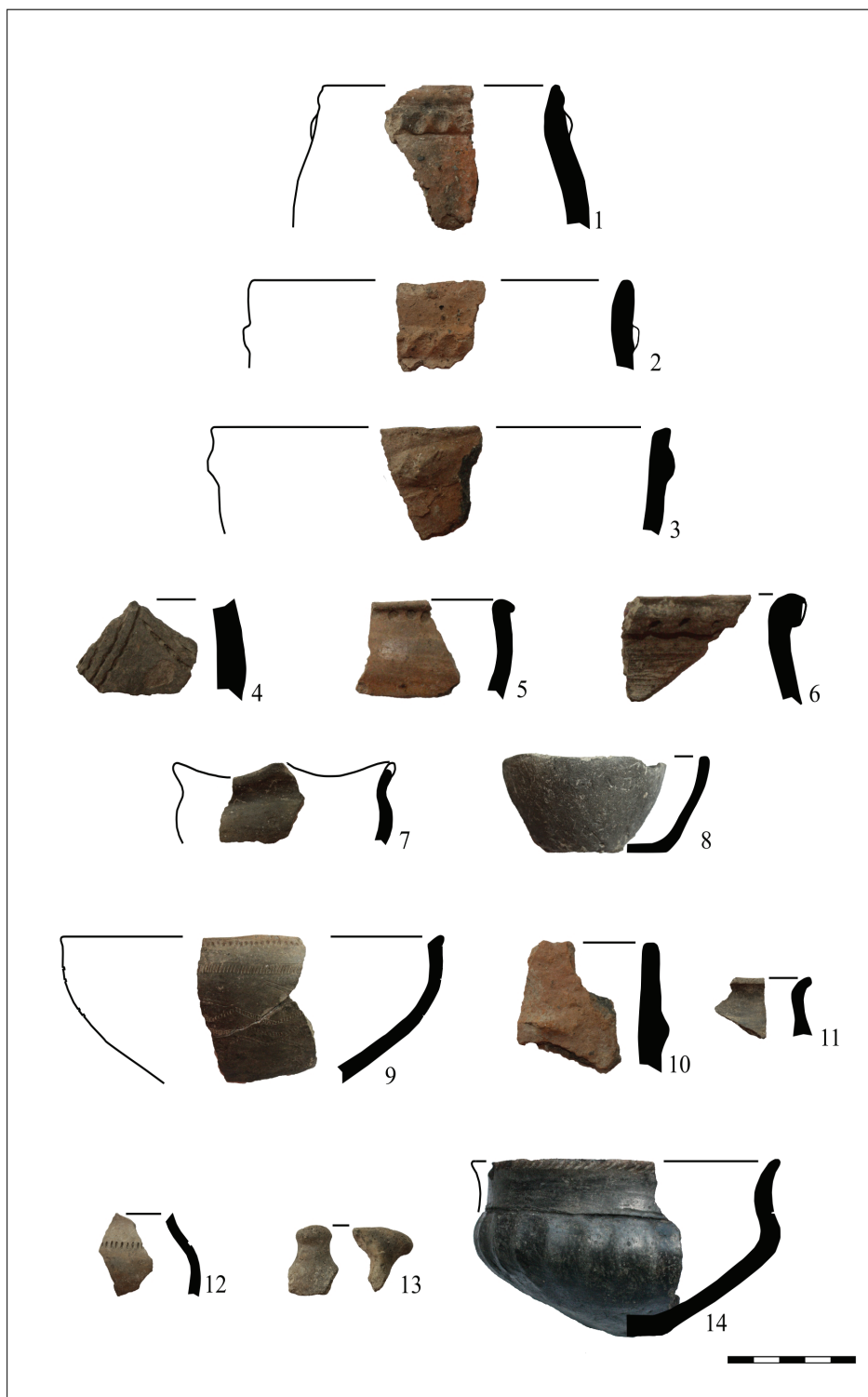


Plate 4. 1–6. Pottery fragments from G.11; 7–12. Pottery fragments from G.24.

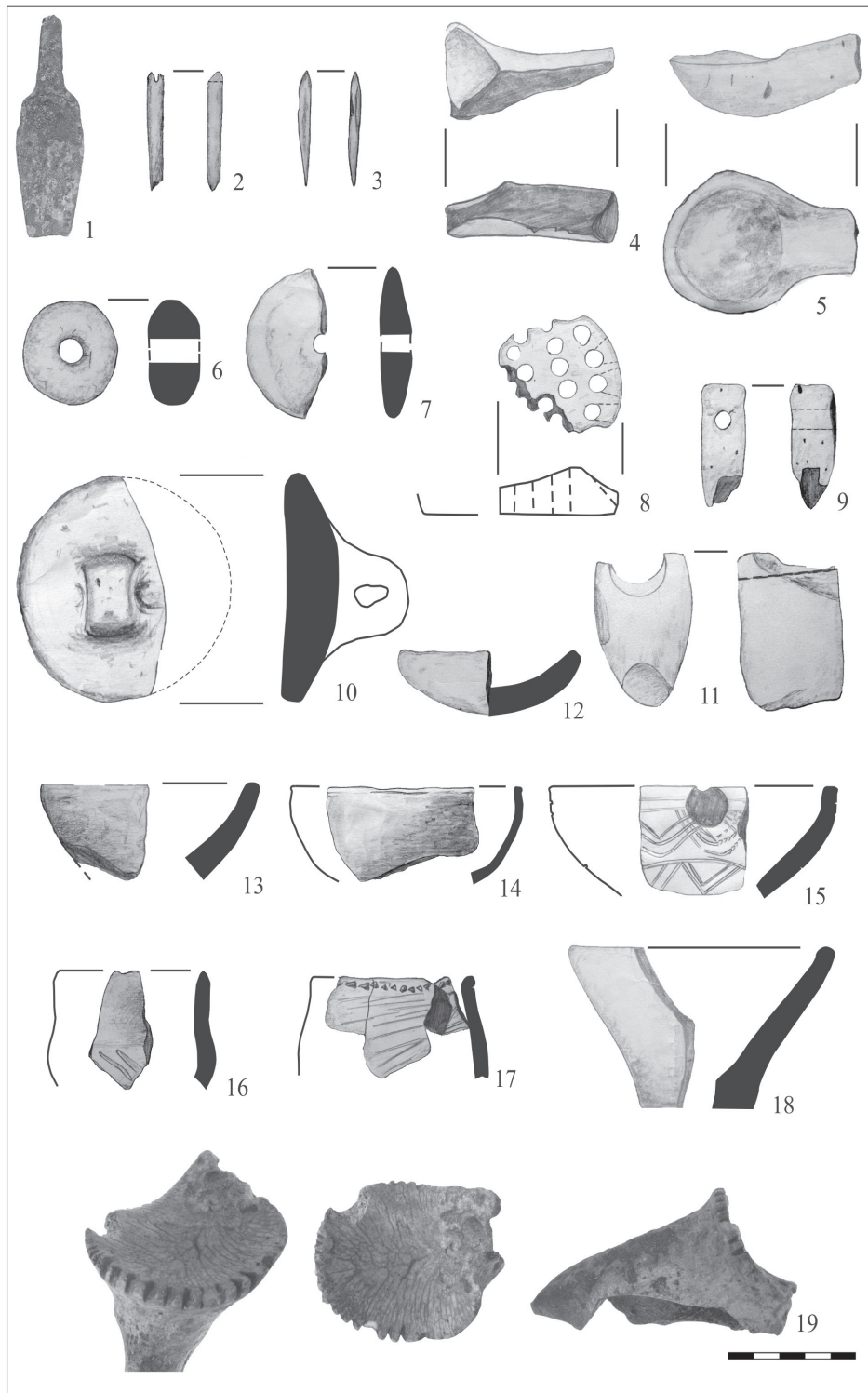


Plate 5. 1. Bronze dagger; 2–3. Bone tools; 4–10. Clay objects;  
11. Stone Axe; 12–18. Cups; 19. Scalloped scapula.

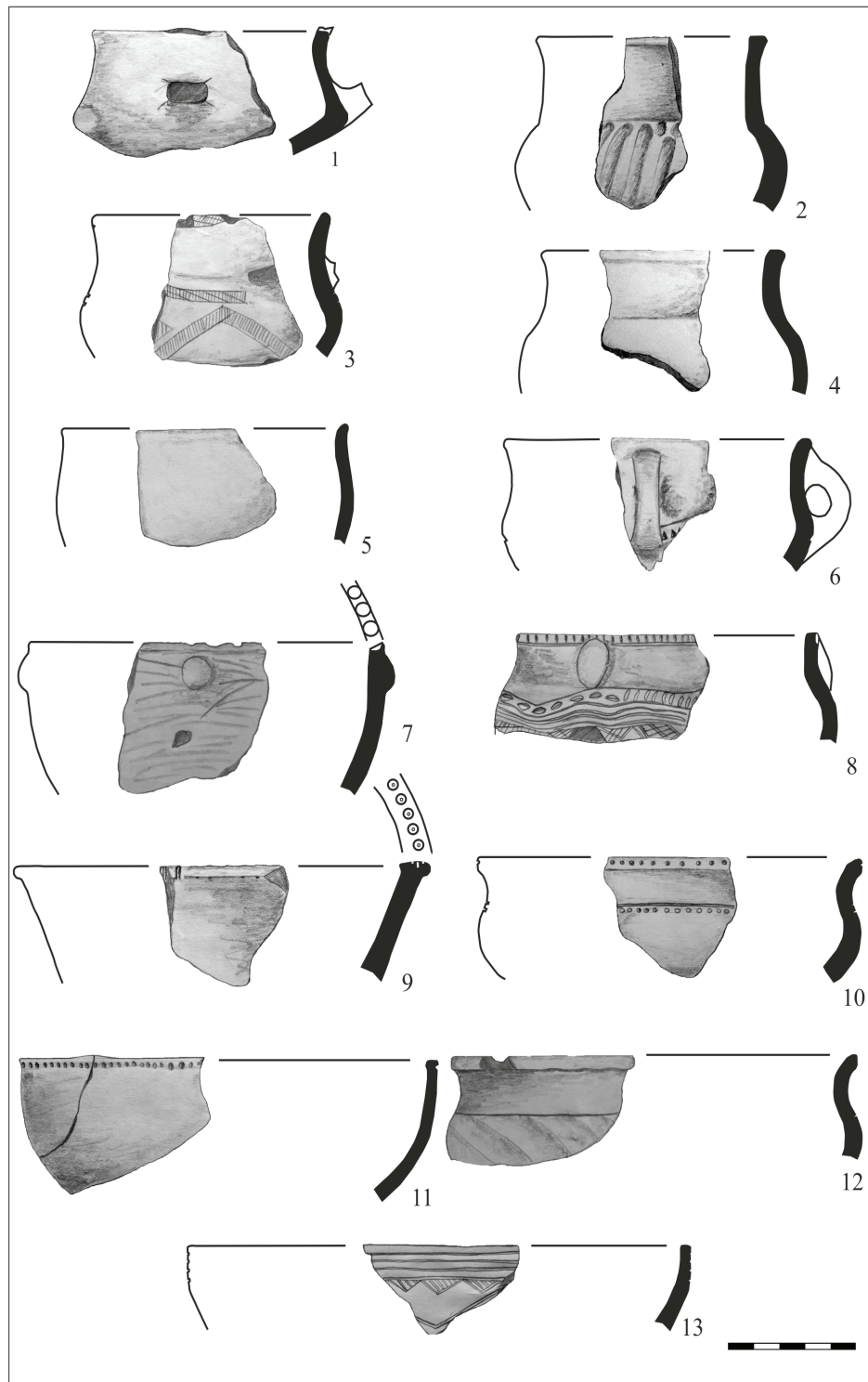


Plate 6. 1–6. Cups; 7–13. Bowls.



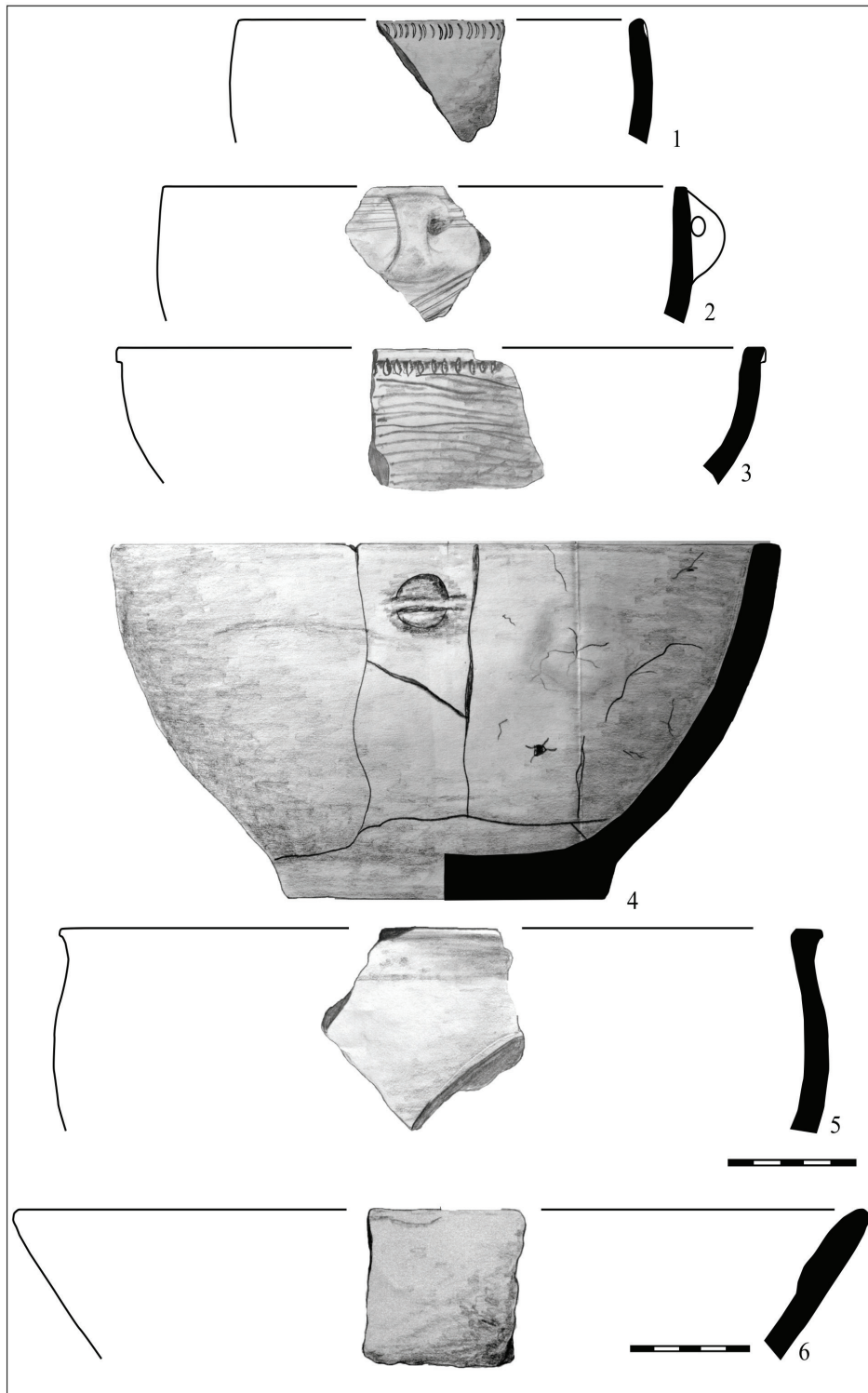


Plate 7. Bowls.

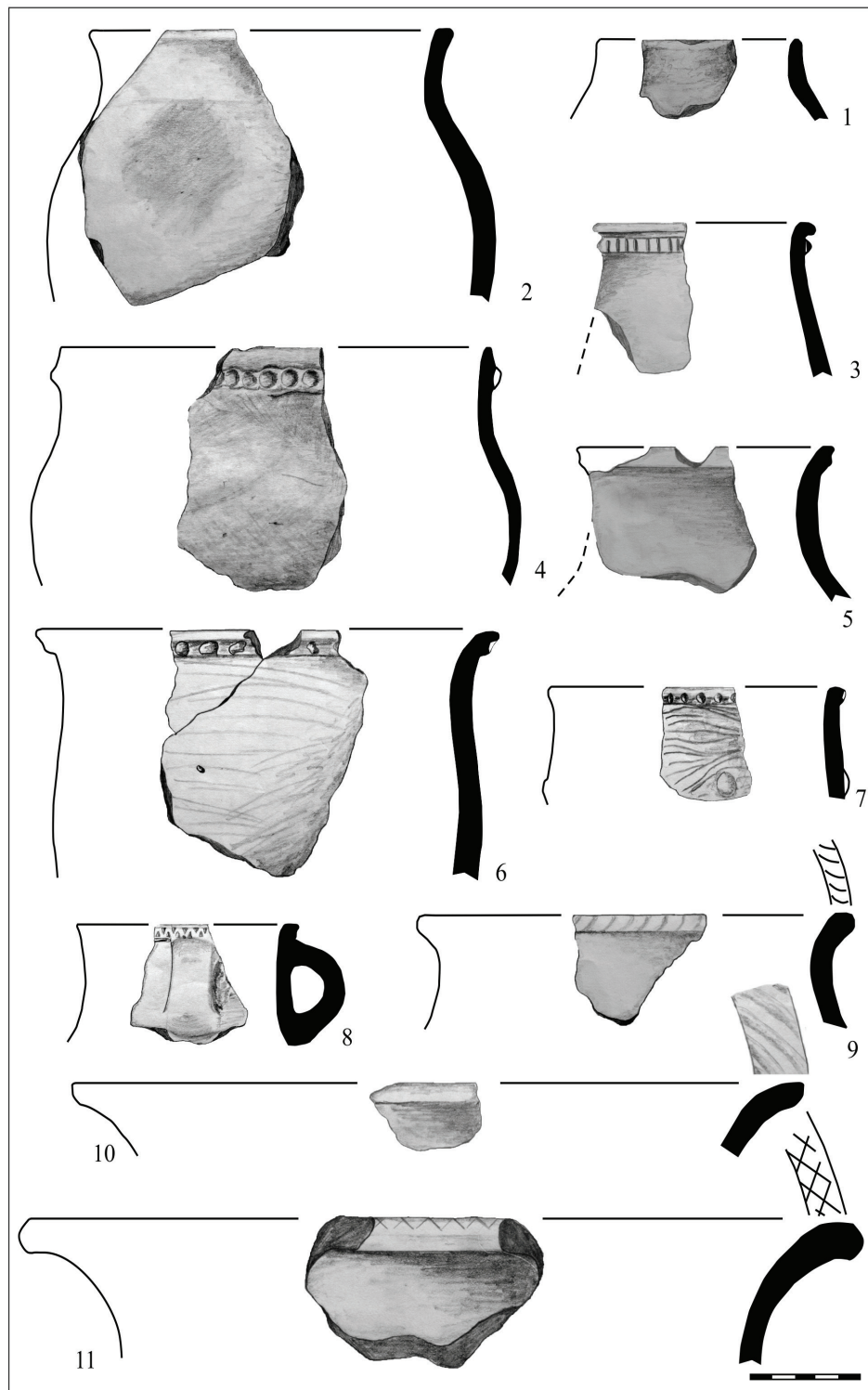


Plate 8. Pots.

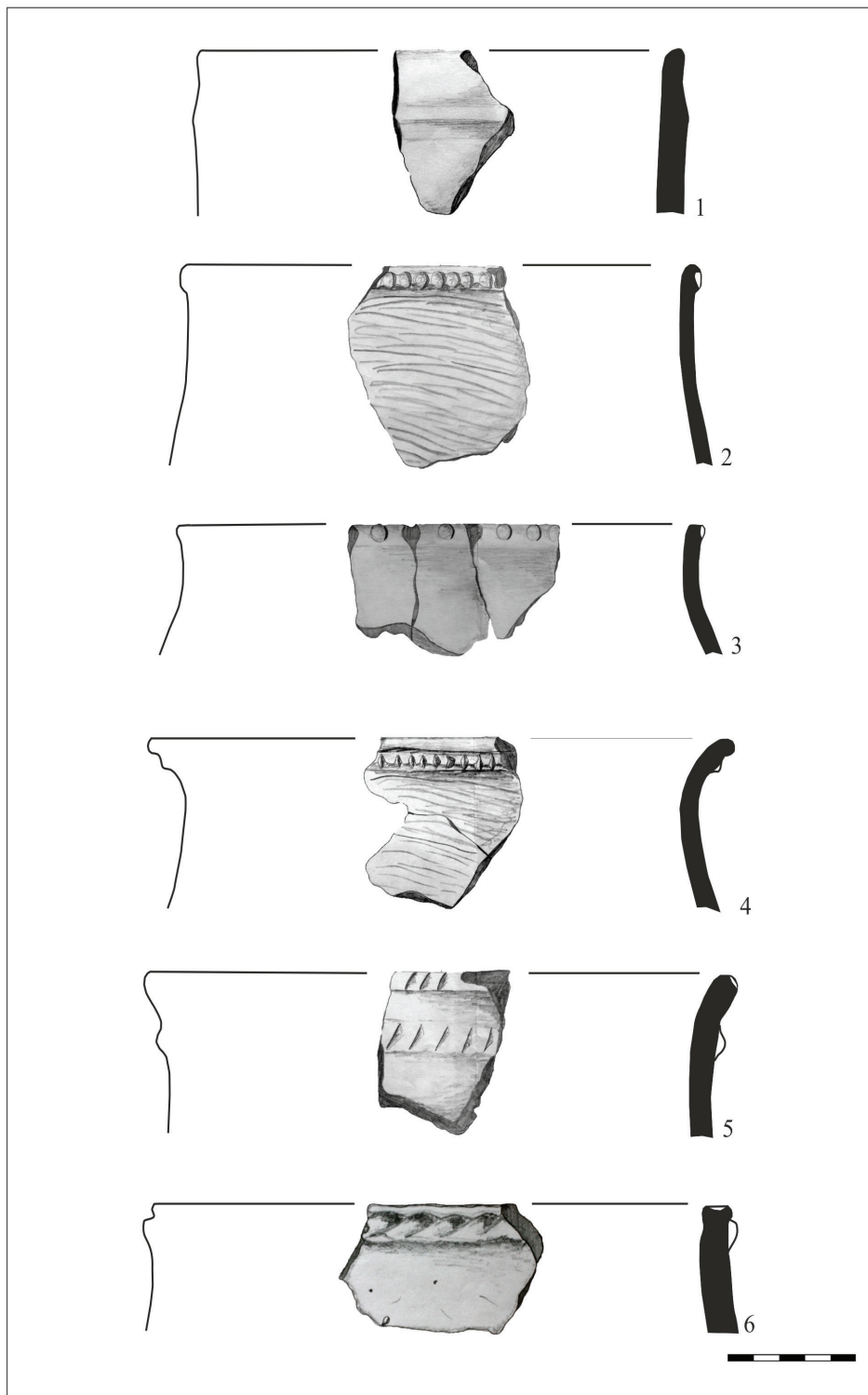


Plate 9. Pots.

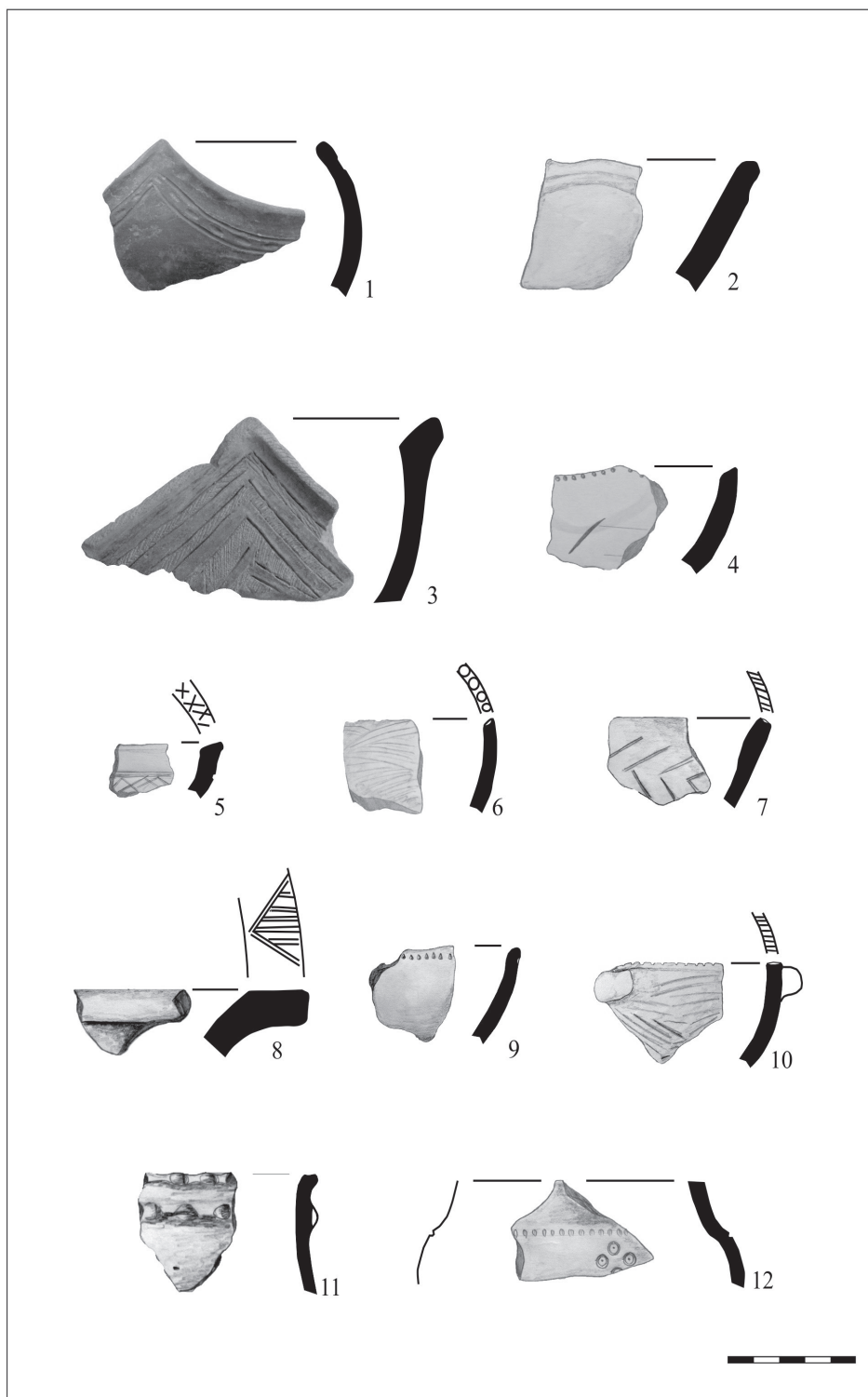


Plate 10. Pottery fragments.



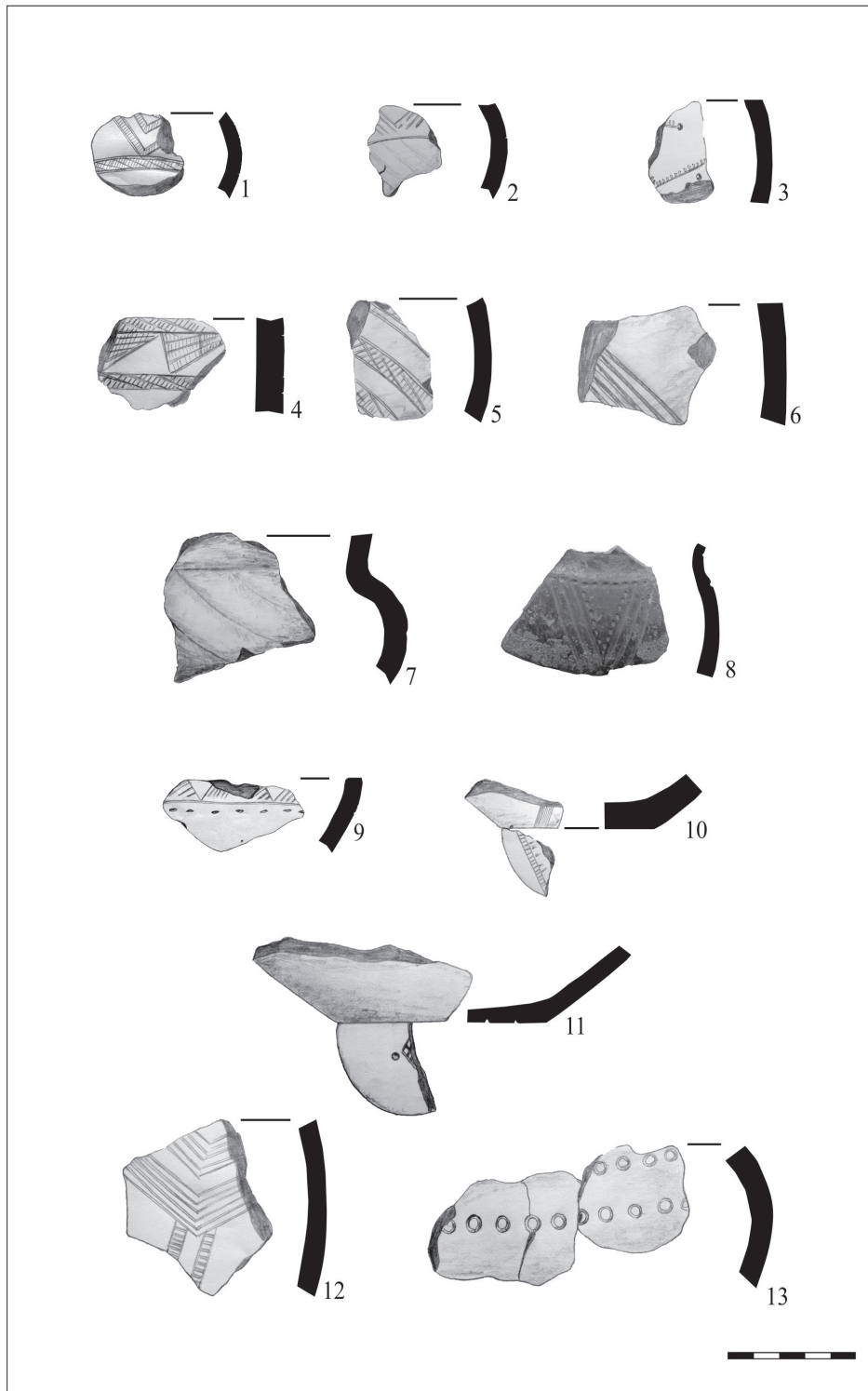


Plate 11. Pottery fragments.