

# DISSERTATIONES ARCHAEOLOGICAE

ex Instituto Archaeologico Universitatis de Rolando Eötvös nominatae



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Budapest 2015

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# Cemetery of the late Tumulus – early Urnfield period at Balatonfűzfő, Hungary

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## **Abstract**

*On the outskirts of Balatonfűzfő, an excavation was carried out by Sylvia K. Palágyi between 1991–1994 as a continuation of the excavation in 1966 that preceded the construction of the so-called Delta junction of roads no. 71–72. In 1992–1993, during the excavation of a Roman Age pottery workshop five graves of a late Tumulus – early Urnfield period (Br D2–Ha A1) cemetery came to light. Each cremation grave (with the cremated remains either scattered in the pit or put in an urn) was characterised by a certain burial rite. The richest grave (no. 6) was that of an adult male, buried with his weapons, among them a uniquely decorated knife with a grip terminating in a bird's head. Graves no. 2 and no. 4 contained female burials with jewellery, while grave no. 1 belonged to a child, and included jewellery as well as several ceramic vessels.*

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## **Introduction**

Balatonfűzfő is situated at the northeastern corner of Lake Balaton in Veszprém County (Fig. 1.1). On the outskirts of the town an excavation was carried out in 1966, preceding the construction of the so-called Delta junction of roads no. 71–72. At that time part of a Roman Age pottery workshop<sup>1</sup> came to light, which was further excavated by Sylvia K. Palágyi<sup>2</sup> between 1991–1994 (Fig. 1.3). In the area, heavily affected by recent disturbances, she managed to excavate among others a few cremation graves which could be dated to the late Tumulus period. As the documentation is quite contradictory at some points, only five graves could be distinguished with certainty (Fig. 1.2). Preserving the original grave numbers, I have already published the most outstanding grave (no. 6), the burial of an adult male containing a bronze knife with a grip terminating in the head of a scooper, a sword and a winged axe.<sup>3</sup> Unfortunately the few ceramic vessels mentioned in the documentation cannot be identified any more. Although not yet inventorised, 70% of the find material has been restored. A possible explanation to that may be that the find material of the graves, as well as other archaeological artefacts, were part of an exhibition in Balatonfűzfő from 29th September to 10th December 2000. The exhibition, organised by the colleagues of the Dezső Laczkó Museum under the leadership of Sylvia K. Palágyi, was meant to celebrate the Millennium, and also to honour the fact that Balatonfűzfő received the official title of a town. The guide to the exhibition contains a short description of the cemetery and its two most outstanding graves, written by Judit Regenye.<sup>4</sup>

1 KELEMEN 1980.

2 Here I would like to express my gratitude to Sylvia K. Palágyi for the opportunity of publishing the graves. The documentation of her excavation is available in the Archaeological Archives of the Laczkó Dezső Museum, Inv. no. 18.772–93.

3 ILON 2012.

4 DAX ET AL. 2000, 5.

**Grave no. 1 (Fig. 1.2; Fig. 2.1–3)**

Part of the grave was excavated between 9–11th September 1992 close to the eastern profile wall of section no. 78/91 as well as the stone wall of a Roman Age building (Fig. 1.2). The photographic documentation shows the remains of a large ceramic vessel which may have been arranged orderly at the time of the burial, but has been since disturbed by agricultural activity (Fig. 2.2). On 15th September a bronze ring, found in the profile wall of the section, has been recorded as belonging to the grave. On 28th September another bronze fragment came to light from the eastern part of the section, documented as “*from the filling of the grave*”. On the same day further fragments of the large ceramic vessel have been registered along with a smaller, two-handled bowl turned upside down (Fig. 2.3). The vessels and their shards came from a depth of 18–30 centimetres below the present day surface.

The excavation record mentions four vessels: “*large, broad rimmed vessel, its rim broken and incomplete*”, “*roundish urn*” (both of these contained cremated remains)<sup>5</sup>, “*two-handled bowl turned upside down*” and another “*vessel turned upside down*” (Fig. 3.1–4). These vessels can be identified with great certainty.<sup>6</sup> However, most of the cremated remains are unfortunately lost, only 1 gramm has been preserved up to this day. Based on these remains Gábor Tóth<sup>7</sup> identified a person aged 1 to 10 years.

**Grave goods:**

1–2. Urn. Shoulder decorated with a finger impressed rib. H: 550 mm; d (bottom): 180 mm; d (mouth): 475 mm. Light brown, tempered with grit and ground ceramics. I believe it to belong to the burial based on its large size, the photos and the description in the field documentation. It is because of its fragmentary state the leader of the excavation supposed it to be two different vessels (Fig. 3.1).

3. Bowl, large, two-handled. d (mouth): 370 mm, thickness: 7–9 mm. Tempered with grit and ground ceramics, grey and light brown in patches. Several other fragments also belonged to it, but not to be reconstructed any more. It can be identified with certainty based on the photos and the field documentation (Fig. 3.2).

4. Bowl, small, with one handle. H: 65–72 mm; d (bottom): 80 mm; d (mouth): 180 mm. Four small knobs on the rim. Tempered with grit, brown with patches of light grey and dark grey. It can be identified with certainty based on the photos and the field documentation (Fig. 3.3).

5. Fragment of a wire or rivet (documented on 15th September as a ringlet). Not restored. Weight: 2.9 g; length: 23 mm.

6. Deformed fragment of a ring. Not restored. Weight: 0.34 g, d (wire): 2 mm.

According to the draft of the grave, one of the unidentifiable bronze objects was about 20 centimetres east of the small bowl (Fig. 2.3; Fig. 3.3). The exact situation of the other bronze

5 In September 2010 only a very small amount of the incinerated remains was available at the museum.

6 Section no. 18.772–93. 19/a of the excavation documentation includes the inventory of the grave: 1. vessel, 2. vessel, 3. vessel, 4. vessel. This information is useless on its own, it corresponds with the excavation record and the draft, thus affirming the fact that there were four vessels altogether.

7 I would like to express him my gratitude for the evaluation of the incinerated human remains out of friendship and free of charge.

fragment is uncertain, and it is also disputable if these artefacts were put into the grave together with the remnants of the burial pyre or were placed on top of those.

### **Grave no. 2 (Fig. 1.2; Fig. 2.4–6)**

The grave was excavated on 11th of September 1992, in the northeastern quarter of the eastern half of section no. 64, 37–53 centimetres below the present day surface. No grave pit could be documented even after the cleaning of the surface following the removal of the grave goods. According to the evaluable field photos and the 1:1 scale draft, the bronze rings and anklets lied *in situ* in a pile. The field documentation and the inventory of the grave<sup>8</sup> included one more comment, stating that artefacts no. 31–32 (two rings) were intertwined. There were a few ceramic fragments strewn around the bronze artefacts, among which no. 17 can be seen on the detail draft as well, these shards belonged to a cup with a handle triangular in cross-section. The grave draft indicates a patch of cremated remains under the pile of bronze objects. Probably these were very small and unsuitable to collect, other pieces could have been conserved, but went missing later. Based on the approximately 1 gramm of calcinated bones left, the anthropologist identified a person belonging to the Infans I to adult age group. The size of the bronze ring found in the grave rather suggests an adult person, but we cannot exclude the possibility that this artefact did not belong to the deceased but to a relative.

#### **Grave goods:**

1. Ring, with open loop. Weight: 6 g; d: 41 mm (Fig. 4.7).
- 2, 6. Fragments of a pin with decorated head. Weight: 10 + 1.62 g; length: 127 + 27 mm (Fig. 4.2).
3. Fragment of a ring. Not restored. Weight: 4.58 g; d (wire): 6 mm.
4. Ring, with open loop. Deformed. Weight: 9 g; d: 44 mm (Fig. 4.11).
5. Ring, with open loop. Weight: 7 g; d: 27 mm (Fig. 5.1).
7. Ring, with open loop. Weight: 8 g; d: 32 mm (Fig. 4.15).
8. Fragment of a spiral bead. Weight: 2 g; length: 34 mm (Fig. 5.8).
9. Ring, with open loop.<sup>9</sup> Weight: 7 g; d: 33 mm (Fig. 4.16).
10. Fragments of a sheet pendant. Conical. Not restored. Weight: 1.48 g (Fig. 5.4).
11. Sheet pendant. Lost.
12. Plain finger ring. Weight: 2 g; d: 20 mm (Fig. 4.1).
13. Ring, with open loop. Weight: 9 g; d: 33 mm (Fig. 4.8).
14. Ring, two fragments. Weight: 6.16 g and 1.92 g; d (wire): 5 mm.
15. Ring, with open loop. Weight: 6.5 g; d: 34 mm (Fig. 4.14).
16. Ring, with open loop. Weight: 8 g; d: 32 mm (Fig. 4.13).
17. Handle of a cup or beaker with triangular cross-section. Grey. Width: 22 mm.
- 17b. Two neck fragments of a beaker (?). Reddish brown. Thickness of the wall: 3 mm.
- 17c. Two side fragments of a beaker (?). Grey. Thickness of the wall: 4–5 mm

8 Included in section no. 18.772–93. 8/a of the excavation documentation.

9 In the original grave inventory listed improperly as grave good no. 11.

- 17d. Neck fragments of a globular beaker (?). Black. Thickness of the wall: 4–5 mm  
17e. Side fragment of a vessel. Black, tempered with grit. Thickness of the wall: 4–5 mm  
18. Sheet pendant. Lost.  
19. Fragment of a spiral bead. Lost.  
20. Fragment of a spiral bead. Lost.  
21/1. Fragment of an armring with decoration. Restored. Weight: 32 g; d: 65 mm (*Fig. 4.3*).  
21/2. Fragment of a wire. Weight: 2 g; d (wire): 3 mm (*Fig. 5.6*).  
22. Fragment of a spiral bead. Weight: 0.82 g; length: 21 mm (*Fig. 5.7*).  
23. Fragment of an armring with decoration. Restored. Weight: 22 g; d: 6 mm (*Fig. 4.5*).  
24/1. Ring, with open loop. Restored. Weight: 8 g; d: 39 mm (*Fig. 5.2*).  
24/2. Fragment of a wire, deformed. Restored. Weight: 2 g; d (wire): 3 mm (*Fig. 5.5*).  
25. Fragment of a spiral bead. Weight: 4 g; length: 54 mm (*Fig. 5.9*).  
26. Ring, with open loop. Weight: 8 g; d: 4 mm (*Fig. 4.6*).  
27. Fragments of a conical sheet pendant. Not restored. Weight: 2.62 g.  
28. Ring, with open loop. the two ends bent upon each other. Deformed. Weight: 4 g; d: 24 mm (*Fig. 5.3*).  
29. Fragment of an armring with decoration. Restored. Weight: 9 g; d (wire): 6 mm (*Fig. 4.4*).  
30. Ring, with open loop. Weight: 15 g; d: 55 mm (*Fig. 4.12*).  
31. Ring, with open loop. Weight: 11 g; d: 55 mm (*Fig. 4.9*).  
32. Ring, with open loop. Weight: 13 g; d: 55 mm (*Fig. 4.10*).  
33. Sheet pendant. Lost.

Other artefacts, that came to light during the excavation of the grave, but did not get an individual inventory number:

34. Fragment of a spiral bead. Not restored. Weight: 0.26 g; length: 6 mm  
35. Fragments of wire. Not restored. Total weight: 1.22 g; length: 12 mm and 21 mm  
36. Fragment and molten remains of a ring, stuck together. Not restored. Weight: 1.88 g  
37. Fragments of a sheet pendant, stuck together. Not restored. Weight: 0.4 g

Based on the parallels, these pieces of jewellery and attire were presumably part of a female costume.

### **Grave no. 3 (*Fig. 3.4–5*)**

On 15th of September 1992 an almost undamaged ceramic vessel (E/1) belonging to this “grave” was found in the southwestern corner of section no. 51/A. The excavation of this area continued on 16–17th September. The “grave” was severely disturbed either in Roman times and recently, or both, as during the further fieldwork following the recovery of vessel E/1 Roman ceramic shards were found. One of the drafts documenting this area shows ceramic fragments E/2–5, of which only fragments E/2–3 can be identified at present. However, on the draft that shows the whole excavated surface, the grave was marked in section no. 50. According to the inventory sheet accompanying ceramic fragment E/2, it was found on 5th of October in the middle of

section no. 51 under a “*pile of stones*”. Although the October entries of the excavation record do not mention the grave nor its grave goods any more, the documentation includes an inventory<sup>10</sup> that mentions a “*Bronze Age grave no. 3*” with the following grave goods:

1. Small cup, displaced during the field work, exact findspot uncertain.
2. Ceramic vessel with finger impressed decoration.
3. Ceramic vessel placed upside down.
4. Ceramic vessel placed with its mouth and handle facing the ground.
5. Roman Age vessel.

E/1. Cup with high swinging band handle. Height: 125 mm; d (mouth): 165 mm; d (bottom): 80 mm. Width of the handle: 31 mm. Tempered with grit and ground ceramics. Light brown and grey in patches. Identifiable with certainty based on the inventory (*Fig. 3.4*).

E/2. Pot decorated with finger impressed ribs. Restored, completed. Height: 320 mm; d (mouth): 210 mm; d (bottom): 150 mm. Reddish. Identifiable with certainty based on the inventory (*Fig. 3.5*). There are several fragments of another vessel which are also listed as E/2 in the field documentation. This was a short-necked storage vessel, its horizontally cut rim bending slightly outward. There is finger impressed rib decoration on its shoulder. The outer surface of the vessel is yellowish brown, while the inner surface is black, cracked and smudged with white in a few patches. Tempered with roughly ground ceramics. D (mouth): approximately 390 mm; thickness of the wall: 11–12 mm.

E/3. Side and bottom fragments of a storage vessel. I found this artefact in its original field packaging and labels, it was not even cleaned. Therefore it seems certain that it belonged to this grave. The outer surface of the vessel is reddish brown, while the inner surface is black, overburnt and cracked in some patches due to secondary exposure to high heat. Tempered with roughly ground ceramics. On the inner surface the remnants of a white layer (perhaps remains of food deposited to the side of the vessel due to exposure to high heat) can be seen in patches. D (bottom): approximately 300 mm; thickness of the wall: 11–20 mm.

In my opinion, the storage vessel fragments E/2 and E/3 belonged to the same vessel.

The presence of these four vessels verifies the existence of a Bronze Age grave, probably disturbed in the Roman Age. This disturbance is also reinforced by the presence of a Roman Age vessel in context with the Bronze Age remains, as described in the field documentation.<sup>11</sup>

#### **Grave no. 4 (*Fig. 1.2; Fig. 5.10–21; Fig. 6; Fig. 7.1–3*)**

The grave was excavated between 16–17th September in the northern half of section no. 64, at 47–73 centimetres below the present day surface. There were stones to the west, south and north of vessel 1/E, which, according to the leader of the excavation, may hint to a pile of stones above the grave.<sup>12</sup> Approximately 40 centimetres northeast of vessel 1/E, the remains of a bowl (2/E) turned upside down were found beneath a stone. The excavation draft shows more ceramic fragments (3/E) north of this same stone. Between fragments 1/E and 2/E, underneath a large stone, there

10 See inventory list no. 18.772–93. 3/a

11 There are the fragments of more than one Roman Age vessels under the same inventory number.

12 In the same directions from the grave remains of the walls of a Roman Age building were unearthed.

were 'bone fragments' in an approximately 20 by 40 centimetres patch with bronze remains on top and around it. These bronze artefacts were numbered in the course of the excavation of the grave and they were indicated with numbers 1 to 12 on the drafts (*Fig. 6*). The cremated remains indicate a 25–35-year-old woman, which is reinforced by the diameter of the fragmentary bronze armring.

### **Grave goods:**

1/E. Middle sized bowl with one handle. Height: 96 mm; d (mouth): 290 mm; d (bottom): 60 mm. Tempered with grit and and ground ceramics, light brown and grey in patches. Identifiable with certainty based on the excavation draft (*Fig. 7.1*).

2/E. Middle sized bowl with one handle. Height: 95 mm; d (mouth): 285 mm; d (bottom): 40 mm. Tempered with grit and and ground ceramics, light brown and grey in patches. Identifiable with certainty based on the excavation draft (*Fig. 7.2*).

3/E. Beaker or jug with band handle. Height: 205 mm; d (mouth): 206 mm; d (bottom): 74 mm. Tempered with grit and and ground ceramics, light brown. Identifiable with certainty based on the excavation draft (*Fig. 7.3*).

1. Fragments of a spiral bead. Not restored. Weight: 1.3 g; length: 6 mm (*Fig. 5.18*).
2. Fragment of an armring. Burnt. Not restored. Weight: 10.16 g; length: 32 mm (*Fig. 5.13*).
3. Fragment of a spiral bead. Not restored. Weight: 0.84 g; length: 9 mm (*Fig. 5.20*).
4. Fragment of a spiral bead. Not restored. Weight: 0.6 g; length: 4 mm.
5. Fragment of a spiral bead. Not restored. Weight: 1.1 g; length: 13 mm (*Fig. 5.21*).
6. Unknown artefact, lost.
7. Fragment of a spiral bead. Not restored. Weight: 0.74 g; length: 10 mm (*Fig. 5.14*).
8. Ring, with open loop, the two ends bent upon each other. Weight: 5 g; d: 24 mm (*Fig. 5.10*).
9. Ring, with open loop.<sup>13</sup> Weight: 8 g; d: 32 mm (*Fig. 5.11*).
10. Ring.<sup>14</sup> Weight: 5 g; d: 22 mm (*Fig. 5.12*).
11. Fragment of a spiral bead. Not restored. Weight: 1.62 g; length: 10 mm (*Fig. 5.19*).
12. Two fragments of a spiral bead. Not restored. Weight: 1.14 g and 6.18 g; length: 16 mm and 70 mm (*Fig. 5.16–17*).

Among the cremated bones fragments of a spiral bead in bad condition were found on 16th September.

13. Three fragments of a spiral bead. Not restored. Weight: 0.46 g.

Other artefacts recovered from the filling of the grave on 16th September:

14. Fragment of a spiral bead. Not restored. Weight: 1.94 g; length: 16 mm (*Fig. 5.15*).

Based on the parallels these pieces of jewellery and attire were presumably part of a female costume.

### **Grave no. 5**

The excavation record contains no data on grave no. 5. Only on an unfinished draft of section no. 64 is there an indication to a certain 'prehistoric grave no. 5'. On 12–13th June 1993 the

13 Its identification number is lost.

14 Its identification number is lost.

excavation record mentions polished red and black ceramic fragments datable to the early Iron Age. This statement is confirmed by a fragment of this dating in the find material: a round (d: 7 mm), diagonally ribbed, high swinging handle fragment with red and black polished surface, which could have belonged to a small cup. In my belief this feature could have rather been a Hallstatt period house or the remains of a disturbed grave. The possibility of disturbance by agricultural activity was stated by Sylvia K. Palágyi in the excavation record as well.

### **Grave no 6 (Fig. 1.2; Fig. 7–9)**

In this paper I only refer to this grave briefly as I have already partially published it.<sup>15</sup> The grave was unearthed between 16–21th July 1993<sup>16</sup> in section no. 65 (Fig. 1.2). The top of the grave pit was documented approximately 100–110 centimetres below the present day surface. The vessel (grave good no. 7) that contained the cremated human remains and a bronze plate (grave good no. 4) was found broken and lying on its side, disturbed by an earlier earth moving. The remains of the burial pyre and the cremated bones were scattered on a larger surface. On this level the first grave goods were found: an axe, a sword and a knife (Fig. 8.1–3) as well as grave goods no. 8 and no. 9 which turned out to be the fragments of the same ceramic vessel, a bowl with oblique channelling. Among these, close to the hilt of the sword animal bones came to light, mostly unburnt.<sup>17</sup> The point of the sword and the edge of the winged axe both pointed to the North, while the point of the knife in the opposite direction, to the South. These three artefacts were laid parallel to each other, the knife and sword possibly in their wooden or leather sheaths.<sup>18</sup> Approximately 120 centimetres east of these two triangular bronze plates (grave goods no. 5 and no. 6) were documented. Below the above mentioned artefacts, on Monday, 19th of September, further bronze plate fragments, bronze rivets with rectangular head, tubular bronze sheet beads as well as three arrowheads and further ceramic fragments (grave goods no. 23, no. 52–53, no. 56–60) were found. On 20th September even more bronze finds (arrowhead, rectangular rivet, fragments of tubular sheet beads, miniature rivets) came to light from the filling of the grave pit, which unfortunately were not numbered. From 'below the stern ashy layer, from the filling of the grave pit' several more deformed, burnt bronze fragments and objects (arrowheads, rectangular rivets, another miniature rivet, tubular bronze plates) were collected, also without inventory number. The deepest point of the irregular grave pit was approximately 125 centimetres below the present surface.

The burial can be reconstructed as follows:

The remains of the burial pyre (documented in the excavation records as a layer of grey, very compact ashes) and the cremated human remains together with burnt pieces of bronze jewellery and arrowheads were scattered across the grave pit. The situation of the grave goods did not show any system. Among the remains of the pyre a ceramic vessel was placed containing cremated human remains as well as a bronze plate. Perhaps the urn was covered with a bowl turned upside down. Next to the urn, also on top of the remains of the pyre, the axe, sword and knife were placed. On top of these as well as around them and in the bottom of the grave

15 ILON 2012.

16 This period included a weekend and heavy rainfall was also a setback for the excavation of a grave.

17 ILON 2012, Taf. 1. 3–4.

18 HARDING 2007, Fig. 15.

pit bones of juvenile animals (pig: bottom right M3 tooth, left side ribs and pelvis fragment; goat/sheep: diaphysis, vertebrae and ribs)<sup>19</sup> were strewn, unburnt.

During the excavation of the burial 60 grave goods were inventorised. Another 35 individual items could be identified later among the smaller fragments and pieces collected without numbers. In summary, the grave included an axe, a sword, a knife, fragments of pendants, fragments of bronze plates, rivets, eight socketed arrowheads and the burnt blade of an arrowhead, molten bronze nuggets and a pin, several more wire fragments (*Fig. 8–9*) and at least seven or eight ceramic vessels: urn, bowl, cup, beaker (*Fig. 10*).

### **Grave goods:**

1. Winged axe (*Lappenbeil*). Wing situated in the middle. Bronze, complete but heavily burnt, restored. H: 184 mm; width of the blade: 41 mm; weight: 233 g (*Fig. 8.1*).
2. Sword (*Griffzungenschwert*). With articulated rib, four rivets on the *Heft* and one more rivet on the grip plaque widening in the middle. Bronze, complete but heavily burnt, restored. H: 494 mm; weight: 457 g (*Fig. 8.3*).
3. Knife (*Griffzungmesser*). With curved spine. On both sides of the hilt a plate made of stag-horn (?),<sup>20</sup> each fixed with two rivets. The hilt terminates in a backward looking head of a waterfowl. Bronze and bone, complete but burnt, restored. Length: 232 mm; weight: 57 g (*Fig. 8.2*).
4. Bronze object. Two rivets projecting from a ring. Burnt, not restored. D (ring): 20 mm; weight: 5.68 g (*Fig. 9.1*).
- 35, 37, 43, 65, 84, 85, 86, 87, 88. Arrowheads, socketed, bronze (*Tüllenpfeilspitze mit Widerhaken*). Weight: 1.56 g, 0.84 g, 7.6 g, 4.22 g, 6 g, 5 g, 5 g, 6.38 g, 1.46 g (*Fig. 8.4–12*).
61. Fragments of a bronze pin. Deformed, heavily burnt. Not restored. Length: 68 mm; weight: 5.48 g (*Fig. 9.3*).
95. Fragment of the multiple head of a bronze pin. Length: 10 mm; weight: 0.34 g (*Fig. 9.30*).
- 11, 16, 26, 33, 39, 40, 44, 46, 66, 67, 68, 89, 90, 91. Tubular bronze plates (*Blechkülsen*) (*Fig. 9.5–20*).
- 18, 21, 54, 69, 70, 71, 92. Bronze rivets. The rectangular head is decorated (*Fig. 9.23–27*).
13. Bronze rivet. The spike and part of the head is missing. Burnt, not restored. Original diameter approximately 20 mm; weight: 1.02 g (*Fig. 9.21*).
- 62–64, 72–82, 93. Miniature bronze rivet with dome-shaped head (*Fig. 9.31*).
7. Upper part of a ceramic vessel with conical neck (*Kegelhalsgefäß*). This vessel contained part of the cremated human remains as well as grave good no. 4. Reddish brown, tempered with grit and ground ceramics. Restored. D (mouth): 260 mm (*Fig. 10.1*).
8. Cup, with a band handle sprouting from below the rim and terminating at the shoulder as well as a knob handle below the band handle. The shoulder is vertically channelled. Black, polished surface, tempered with grit. Restored. Height: 98 mm; d (mouth): 172 mm; d (bottom): 60 mm (*Fig. 10.4*).

19 I thank Beáta Tugya (Nagykanizsa) for the identification of the animal remains.

20 I would like to thank István Vörös (Hungarian National Museum, Budapest) for the identification. The reason for the uncertainty is that the plates were very much worn by use and at the end of the restoration they were strongly covered by preserving material. The removal of the plates was impossible.

9. Cup, the shoulder is diagonally channelled, faceted. With high swinging handle. Grey, tempered with grit. Restored. Height: 73 mm; d (mouth): 95 mm; d (bottom): 45 mm (*Fig. 10.3*).

9b. Beaker with a high swinging handle triangular in cross-section. Grey, tempered with grit. Restored. Height: 45 mm; d (mouth): 69 mm; d (bottom): 45 mm (*Fig. 10.2*).

10. Bowl with four knob handles, with the rim angularly pointed above two of them. Grey, polished surface, tempered with grit. Restored. Height: 323 mm; d (mouth): 384 mm; d (bottom): 104 mm (*Fig. 10.6*).

10b. Bowl, with profiled, vertically pierced handle. Grey, tempered with grit. Restored. Height: 70 mm; d (mouth): 222 mm; d (bottom): 63 mm (*Fig. 10.5*).

57. Cup, the shoulder is vertically channelled. Yellowish brown, tempered with grit. Restored. D (mouth): 110 mm (*Fig. 10.7*).

In Central Europe, the sword type found in the grave was characteristic from the late Tumulus period to the early Urnfield period (Br C – Br D). It is worth mentioning that in the Carpathian Basin no sword of this type has been known before from a funerary context. Burials of the early and older Urnfield period (Br D – Ha A1) in Transdanubia, which contained swords, are as follows: a burnt and fragmentary specimen from Bakonyjákó, mound no. IV grave no. 2,<sup>21</sup> Bakonyszűcs, mound no. 8,<sup>22</sup> at least four fragmentary specimens from the cemetery of Csabrendek,<sup>23</sup> and a burnt and fragmentary specimen from Csögle,<sup>24</sup> a burnt and fragmentary specimen from Jánosháza.<sup>25</sup>

It can be generally stated that in the Bronze Age swords were not likely to be put into graves, however, the popularity of the custom of giving this weapon as a grave good changes from region to region.<sup>26</sup> In cemeteries of the Urnfield period three to eight percent of the graves contain swords,<sup>27</sup> thus it only characterized a thin, distinguished, militant layer of society.<sup>28</sup>

A sword and a knife together in a funerary context are known from grave no. 1 in Memmersdorf (early Urnfield period, Br D),<sup>29</sup> grave no. 1 in Wollmesheim<sup>30</sup> and grave no. 2 in Ockstadt<sup>31</sup> (both Ha A1), as well as grave no. 2 in Eschborn (middle Urnfield period, Ha A2).<sup>32</sup> This sparse number hints to the fact that the combination of a sword and a knife, as seen among the grave goods of the Balatonfűzfő grave, was quite uncommon in the period. Regarding the form and size, the closest parallel to the Baierdorf type knife with a curved spine has been published from the burial mound of Isztimér in Fejér County.<sup>33</sup> The fact that the end of the hilt is formed as the head of a waterfowl makes this knife very unique. In one of my earlier papers dealing

21 JANKOVITS 1992, 319, 325, Abb. 62. 4.

22 JANKOVITS 1992, 6, Abb. 3.

23 PATEK 1968, Taf. 58–59.

24 PATEK 1968, Taf. 57. 14–15; KEMENCZEI 1988, Taf. 20. 206.

25 FEKETE 2004, 162, 4. kép.

26 HARDING 2007, Tab. 7–10, Fig. 20.

27 SPERBER 1999, 606–607.

28 HANSEN 1994, 125; JANKOVITS 2008, 89.

29 CLAUSING 2005, 68, 159, Taf. 16B.

30 CLAUSING 2005, 28–29, 159–160, Taf. 21.

31 CLAUSING 2005, 68, 159, Taf. 19A.

32 CLAUSING 2005, 24, 157, Taf. 10.

33 KUSTÁR 2000, 21, Taf. 22.

with the decorations to be seen on the *Heft* of swords<sup>34</sup>, I identified this type of bird as a scooper (*Recurvirostra avosetta* L.). An almost completely identical example of the knife has been published from Riegsee (Br D) by Harmut Matthäus, with a very detailed drawing of the weapon.<sup>35</sup> Matthäus collected all known similar pieces from the late Mycenaean period (SH III C) as well as the whole Urnfield period. He determined it to be a long-lasting traditional decoration (up to Ha B1).

Although in a different form, birds' heads are depicted on the hilt of a knife from Peterd and another one from unknown "Hungarian provenance". The antecedents of this motif can be traced back to Mesopotamian, Egyptian and late Mycenaean drinking vessels made of rock crystal and ivory, decorated with birds heads. Of course the motif is also known in the form of appliques adorning bronze vessels from Tiryns to Peschiera, Mülhau and Skallerup.<sup>36</sup> Although the appearance of waterfowl in burials of the Urnfield period is quite rare, it spans the whole era, for example in the double grave of Acholshausen,<sup>37</sup> in the wagon burial of Harz a. d. Alz,<sup>38</sup> Hader<sup>39</sup> and Königsbronn<sup>40</sup>, as well as the grave of Mühlau,<sup>41</sup> and in the late Urnfield period cemetery at Szombathely-Zanat in Vas County.<sup>42</sup> However it is important to note that bird symbolism dates back to an earlier period in the Carpathian Basin<sup>43</sup> than the pieces listed by Matthäus. Of course this does not contradict the possibility that there was a complex system of intensive relations between the Aegean and Middle Europe in the 13th century BC<sup>44</sup> as well as in earlier and later centuries.<sup>45</sup>

The eye of the scooper was probably accentuated by a blue glass inset. Blue glass does appear in findspots datable to the same period as the Balatonfüzfő grave, both in narrower and wider geographic range: glass beads are known from Bakonyjákó, Jánosháza, Németbánya, Ugod, while from Nagykanizsa a ceramic vessel with glass applique came to light.<sup>46</sup> It is possible that the hilt of the Balatonfüzfő knife was covered with ivory plaques. Good examples of what this precious raw material was used for are known from the cargo of the Uluburun shipwreck, containing an ornamental piece with waterfowl decoration as well as cosmetic utensils.<sup>47</sup> Ivory combs came to light in a grave in Cyprus and in a settlement in Northern Italy.<sup>48</sup>

Archaeological finds related to Bronze Age archery are known from the Tumulus period (Phase Br B2) on, for example from Egyek, Tápé or Tiszafüred.<sup>49</sup> Depictions of archers were preserved

34 ILON 2009, 2013.

35 MATTHÄUS 1981, 278, Abb.1. 2.

36 MATTHÄUS 1981, 280–282, 291.

37 SCHAUER 1995, Abb. 30.

38 CLAUSING 2005, Taf. 14. 10–11, 16.

39 CLAUSING 2005, Taf. 60. 5.

40 CLAUSING 2005, Taf. 62. 2–6.

41 MATTHÄUS 1981, 282, Abb. 8.2.

42 ILON 2011, Fig. 36. 5.

43 GUBA – SZEVEÉNYI 2007.

44 MATTHÄUS 1981, 291–292; HASE 1995, 244.

45 FALKENSTEIN 2012–13, 522, Abb. 3; HÄNSEL 1976, 235; HÄNSEL 1981; HOCHSTETTER 1982, Abb. 9; ILON 2016; PAULÍK 1990, Abb. 9; SANDARS 1978, 83; PABST 2013, 134–136, Abb. 9.

46 FEKETE 2004, 162, 8. kép; ILON 1992, 85–86, 93; JANKOVITS 1992, 305, 28–29. and 44. ábra 9; PAULÍK 1966, 383–384, 395. and Abb. 26; VARGA 1992; HORVÁTH 2001, 39, 5. kép.

47 YALÇIN – PULAK – SLOTTA 2005, 605–606.

48 HASE 1995, Abb. 3/3-4, Abb. 5.

49 KOVÁCS 1996, 116; NOVOTNÁ 1999, 245, 247, Abb. 4/A.

not only in the form of bronze statuettes from Sardinia, but on Italian stone stelae and northern rock carvings.<sup>50</sup> From the earlier Urnfield period (Br D – Ha A1) fifty graves are known which contained arrowheads, implying the presence of this hunting and offensive weapon. Ten of these graves yielded a sword as well.<sup>51</sup> A recent study by Christof Clausning dealing with the whole Urnfield period of a certain geographic area lists 130 graves with arrowheads as well as 20 graves with the combination of arrowheads and a sword.<sup>52</sup> However there are no graves listed in Clausning's work which would contain exactly nine arrowheads (*Fig. 8.4–12*). At this moment I only know of one burial which contained a higher number of arrowheads than the Balatonfüzfő grave: grave no. 27 in Asschaffenburg with 12 arrowheads as well as a knife.<sup>53</sup> It is noteworthy that arrowheads are quite rare in depots of the period.<sup>54</sup>

Parallels to the axe found in the Balatonfüzfő grave are known among the hoards of the Kurd horizon.<sup>55</sup> In a narrower geographic relation tumulus no. 8 of Bakonyszűcs is worth mentioning, excavated in 1875, which included an axe and a sword.<sup>56</sup> An axe together with arrowheads, daggers and a razor came to light from a burial in Hagenau, datable to the later Tumulus – early Urnfield period (Br C2/D).<sup>57</sup> Among the grave goods of burial no. 2. of the Čaka tumulus, including the cremated remains of a person of high social standing, two axes, two spears, a sword and other objects are worth mentioning.<sup>58</sup> There are only four known graves including an axe on its own: the burial from Hagenau already mentioned above, the early Urnfield period grave no. 144 of Zuchering (Br D), the later Urnfield period grave of Kuhard (Ha A1) as well as the late Urnfield period burial of Ensingen (Ha B3).<sup>59</sup> Though axes are present on the depictions of warriors,<sup>60</sup> they should not be automatically interpreted as offensive weapons.<sup>61</sup>

It is questionable if miniature rivets belonged to a quiver or a helmet, or maybe to horse harness (*Fig. 8*). Parallels of the Balatonfüzfő rivets are known from grave no. 1 of Wollmesheim. In this burial ten of the 74 rivets were preserved among splint.<sup>62</sup> According to Clausning these did not belong to a quiver.<sup>63</sup> Several rivets did belong however to a quiver, remains of which were found in the Urnfield period grave of Altendorf. The quiver made of organic material (either wood or leather) was fixed on the bronze sheet underside by such rivets.<sup>64</sup> Remains of organic material, interpreted as the remnants of a quiver were documented in the Urnfield period grave no. 5 of Behringersdorf as well.<sup>65</sup> Bronze rivets could have also belonged to helmets made of organic material (leather and wood – Fiavè-Carrera<sup>66</sup>), fine examples of which are known from

50 JOCKENHÖVEL 2006, Abb. 5. 4; EKDAHL 2012, Abb. 10.

51 HANSEN 1994, 88.

52 CLAUSING 2005, 61, 157–160.

53 CLAUSING 2005, 175, Taf. 67B.

54 MOZSOLICS 1985, 47.

55 MOZSOLICS 1985, 30–31.

56 JANKOVITS 1992, 6, Abb. 3.

57 CLAUSING 2005, 18–19, 158, Taf. 12.

58 TOČIK – PAULÍK 1960, 107, 109, Obr. 14.

59 CLAUSING 2005, 77.

60 HARDING 2007, Fig. 17.

61 MOZSOLICS 1985, 32.

62 CLAUSING 2005, 159–160, Taf. 21. 23–25.

63 CLAUSING 2005, 126.

64 CLAUSING 2005, 126, 175, Taf. 67A, 24.

65 SCHAUER 1995, 143, Abb. 22/3.

66 BORN – HANSEN 2001, Abb. 54.

the Hallstatt period, from Budinjak, Libna, Molnik, Malence and Šmarjeta.<sup>67</sup> A copy of such a composite helmet, but made exclusively of bronze sheet, was found in Oder bei Stettin.<sup>68</sup> This artefact can be considered an antecedent of the true composite helmets. Another metal copy of a composite helmet is known from Hungary. On this piece the small bronze rivets which had a real function in the case of the composite version, already appear in the form of embossed decoration.<sup>69</sup>

Conical bronze sheet pendants comprised a popular element of attire, distributed over a wide geographic area in the Urnfield period between Southern Germany (Trimbs)<sup>70</sup> to Slovakia (Dedinka).<sup>71</sup>

## Conclusions

The rite of the Balatonfűzfő graves are as follows:

1. The cremated human remains were put in a ceramic vessel (grave no. 1).
- 2.1 The cremated human remains were scattered across the bottom of the grave pit and the grave goods were put on top of this layer (grave no. 2).
- 2.2 The cremated human remains were scattered across the bottom of the grave pit and the grave goods were put on top of this layer, covered by ceramic vessels (or fragments of these) and stones (grave no. 4); parallels to this rite can be mentioned from Vörs<sup>72</sup> and Velem.<sup>73</sup>
3. Part of the cremated remains together with remnants of the burial pyre were strewn across the bottom of the grave pit, another part of the cremated remains were put in a ceramic vessel probably covered with a bowl; other artefacts were either atop or under the remnants of the pyre; the grave included remains of food (meat) (grave no. 6).

Although we cannot exclude the possibility that once there were larger tumuli above the Balatonfűzfő graves, no evidence to that was documented during the excavation. Currently, researchers agree that the change between the scattered and the urn rite occurred sometime around the turn of Ha A1–2 with some divergence between geographical regions<sup>74</sup>, the urn rite becoming prevalent in Ha A2. In the Balatonfűzfő cemetery, the urn rite was documented in two cases (graves no. 1 and 6), although in grave no. 6 part of the cremated human remains was scattered among the remains of the burial pyre. Thus the cemetery could have come to existence at a time when the custom of putting the cremated remains into an urn was only emerging but not commonly in use. Therefore the Balatonfűzfő graves represent the formation of a new material and symbolic act, a mixture of old and new rites.<sup>75</sup>

Known horizontal (that is, without tumuli) cemeteries and graves in Veszprém County are: a single grave in Badacsonytördemic;<sup>76</sup> a cemetery with an uncertain number of graves in Borsosgyőr-

67 ŠKOBERNE 1999, Fig. 59–60, 63, 65–66, 70.

68 BORN – HANSEN 2001, Abb. 59.

69 BORN – HANSEN 2001, Taf. 13–14.

70 SCHAUER 1995, 139, Abb. 20/13.

71 FURMÁNEK 1996, Fig 8/12, 16, Fig 9/9.

72 HONTI 1996, 235–242.

73 MARTON 1998, 52–53.

74 LOCHNER 2013, 12, Tab 1.

75 GRAMSCH 2011, 60.

76 KUZSINSZKY 1920, 125, Abb. 165.

Téglagyár;<sup>77</sup> a destroyed cemetery in Csabrendek;<sup>78</sup> 34 graves in the Petricei major;<sup>79</sup> single graves in Dabronc-Marcalmente,<sup>80</sup> in Dabrony-Gányás-patak,<sup>81</sup> Gógánfa-Vasútállomás<sup>82</sup> and Gyulakeszi-Csobánc III;<sup>83</sup> an uncertain number of graves in Somlóhegy- close to the spring-head of the Séd<sup>84</sup> as well as in Tapolca-Avardomb;<sup>85</sup> four or five graves in Somlóvásárhely-Fekete-tag,<sup>86</sup> six graves in Szigliget-Arborétum;<sup>87</sup> single graves in Takácsi-Édenkert,<sup>88</sup> Taliándörög-Szt. András templom,<sup>89</sup> and Vid-Cikataljai dűlő.<sup>90</sup> Last but not least, the burials in Nagysomló and its close vicinity (for example Somlószőlős<sup>91</sup>) are worth mentioning, being perhaps the most important findspots of the final stage of the Urnfield period. These burials finely demonstrate the blending of the earlier, Urnfield traditions with the new, early Iron Age culture. Two cremation burials in Veszprém-Kórház utca hint to the presence of a cemetery as well, though the dating is uncertain.<sup>92</sup>

The most interesting burial of the Balatonfűzfő cemetery is undoubtedly grave no. 6, belonging to a man aged 25–35 years. In those tumuli excavated in the Bakony Hills, which belong to the late Tumulus – early Urnfield period (Br C2 – Ha A1) according to the Hungarian terminology, the cremated remains of warriors were buried along with fragmentary, burnt and heavily deformed weapons. The explanation to this is that these artefacts were put to the burial pyre together with the body of the deceased person. The grave of a member of the warrior elite in Balatonfűzfő, situated on the periphery of the Bakony Hills, belongs to the same time period<sup>93</sup> as the abovementioned burials. However, in contrast to those, it follows the scattered cremation rite but has no tumulus, and contains undamaged weapons (although in almost the same combination as the aforementioned graves). Therefore, a slight variance is to be noticed within the Bakony group of the Urnfield culture regarding the burial rites (tumuli with burnt weapons, horizontal burial with undamaged weapons). It is a question if the uniqueness of the Balatonfűzfő grave is due to the foreign origin of its owner, or it belongs to a different community, or perhaps there was a change in the rite due to an unknown reason. This question may be answered by future research. Was the man buried in the outskirts of Balatonfűzfő, on the periphery of the Bakony Hills,<sup>94</sup> a warrior, a hunter or a leader of his people?<sup>95</sup> Hints to his special status even within the elite of the period are his sword,

77 KŐSZEGI 1988, 127.

78 SZÁNTÓ 1953; PATEK 1968, 123, Taf. 59.

79 KŐSZEGI 1988, 130.

80 KŐSZEGI 1988, 133.

81 KŐSZEGI 1988, 133.

82 KŐSZEGI 1988, 141.

83 PATEK 1968, 79; KŐSZEGI 1988, 143.

84 PATEK, 1968, 80; KŐSZEGI 1988, 180.

85 PATEK 1968, 80; KŐSZEGI 1988, 189.

86 KŐSZEGI 1988, 180.

87 KŐSZEGI 1988, 186.

88 KŐSZEGI 1988, 187.

89 KŐSZEGI 1988, 187.

90 KŐSZEGI 1988, 195.

91 PATEK 1993, 3, Abb. 45–46.

92 Rescue excavation led by Judit Regenye. Dezső Laczkó Museum RA 18.535–87. Unpublished, the find material is not yet inventorised. I would like to express my gratitude to Judit Regenye for allowing me to quote this findspot.

93 FURMÁNEK 1996, 128.

94 WIRTH 1999, 587.

95 HANSEN 1994, 96–97.

representing and guarding his authority and familial territory,<sup>96</sup> his unique knife as well as the outstanding number of arrowheads in his grave. The special significance of the high number of arrowheads is reinforced by the fact that from cemeteries of the Podoli and Čaka cultures only three graves containing arrowheads are known.<sup>97</sup>

An interesting addition to the question of hunting is that while at the later Urnfield period settlements of Ormož and close to Cortaillod am Neuberger See only 10 % of the animal remains belonged to wild animals, at the contemporaneous settlements of Némethánya (Br C/D – Ha A1)<sup>98</sup> situated north of the Bakony Hills as well as in Szombathely<sup>99</sup> the presence of the remains of hunted animals is only about 1 %. The votive character of the grave,<sup>100</sup> and the combination of the animal remains implying a burial feast (pig and goat/sheep) is an important link as well as a representation of the continuity in the burial rite towards the early Tumulus period (Br B1) graves of Nagydém<sup>101</sup> situated close by and the late Urnfield period (Ha B1–3) burials of Szombathely-Zanat.<sup>102</sup>

I found no satisfactory parallels to the bronze pin found in grave no. 2 neither in the contemporaneous find material of the surrounding region, nor in the most important studies<sup>103</sup> dealing with the neighbouring territories. Some characteristics of the Balatonfűzfő pin, for example the vertical decoration of the globular head as well as the horizontal decoration of the area below the head, resemble those of a sub-type of the Deinsdorf type pins with slender, non-swelling stem.

Close parallels to the armring fragments of grave no. 2 (*Fig. 4.3–5*) and grave no. 4 (*Fig. 5.13*) were published from Bakonybél-Erdőlába and Bakonyjákó tumulus no. III and no. VI as well as from Ugod tumulus no. I, and farther away from Jánosháza (grave no. 1 of the excavation led by Jenő Lázár).<sup>104</sup> The decoration of these examples is almost identical to that of the Balatonfűzfő pieces. In his study presenting the graves excavated at Nadap,<sup>105</sup> Gábor Váczi narrowed down the dating of this widely spread type with D shaped cross-section to the Br D period. He quoted several parallels with round cross-section as well. Similar decoration (horizontal and vertical line bundles) can be seen on robust pins with D shaped cross-section datable to the earlier phase of the late Tumulus period (Br C2–D1). The smaller, round cross-sectioned pieces with open and pointed ends, which are similar to those found in grave no. 2 in Balatonfűzfő are certainly younger than these.<sup>106</sup>

Based upon the inhumed, “irregular” burials of the Gáva culture from Northern Hungary, the open rings found in graves no. 2 and no. 4 (*Fig. 4.6–16; Fig. 5.1–3, 10–11*) could have served as ornaments of the head or the hair, maybe earrings,<sup>107</sup> or even neckrings, as seen on the

96 SPERBER 1999, 631–637, 645, 656.

97 NOVOTNÁ 2007, 165.

98 ILON 1996; ILON 2014; VÖRÖS 1996, 218, chart no. 2.

99 VÖRÖS 1999, 293, chart no. 1.

100 HANSEN 1994, 381–384.

101 ILON 1999, VÖRÖS 1995.

102 ILON 2011.

103 INNERHOFER 2000, Taf. 42. 5–7; LOCHNER 1991, 172, 175, Abb. 6; NOVOTNÁ 1980; ŘÍHOVSKÝ 1983.

104 ILON 1992, 2. tábla 5; JANKOVITS 1992a, Abb. 2. 7, 9, Abb. 36. 2; JANKOVITS 1992b, Abb. 29. 1, 4, Abb. 61. 1–2.

105 VÁCZI 2013, 821, 823, Fig. 3. 6.

106 JANKOVITS – VÁCZI 2013, 61, Abb. 5. 7, Abb. 8. 1–2.

107 KIRÁLY – KOÓS – TARBAY 2014, Fig. 3. 2–3.

clay figurine found in Ludas-Varjú-dűlő.<sup>108</sup> Similar artefacts were discovered in the tumulus no. 3 in Bakonyjákó and tumulus no. 1 of Ugod<sup>109</sup> as well as in graves no. 2 and no. 13 in Sárbogárd-Tringer-tanya.<sup>110</sup>

In the close vicinity, parallels to the spiral beads found in graves no. 2 and no. 4 in Balatonfűzfő (*Fig. 5. 7–9, 14–21*) are known from the hoard of Szentkirályszabadja,<sup>111</sup> tumulus no. 1 and no. 2 in Bakonyjákó,<sup>112</sup> graves no. 1, no. 5 and no. 9 in Sárbogárd-Tringer-tanya.<sup>113</sup> Farther away, grave no. 2/1983 in Jánosháza is to be mentioned in this aspect.<sup>114</sup> This type of jewellery does not contribute to precise dating as it was commonly used in the middle Bronze Age.

In geographical terms, the closest parallels to the conical pendants (*Fig. 5.4*; grave no. 4) are known from the hoard of Szentkirályszabadja,<sup>115</sup> among the stray finds of Farkasgyepű-Pöröserdő 3. and in the tumulus of Pénzesgyőr,<sup>116</sup> in graves no. 1 and no. 6 of Sárbogárd-Tringer-tanya.<sup>117</sup> Farther away, similar pieces came to light in Jánosháza: from grave no. 1 of the excavation led by Jenő Lázár as well as from grave no. 2/1983.<sup>118</sup>

Recently, as part of his study on the bronze hoard of Balatonudvari-Fövenyes, Gábor Tarbay published a complete list of conical pendants, describing their territorial spread as well.<sup>119</sup> He outlined a concentration of the type in Transdanubia and Northeastern Hungary. He dated the earliest examples to Br D; the type reached the peak of its popularity in Ha A1 (reinforced by the highest amount of pieces datable to this period), while several examples are still present in the hoards of the Ha A2–B1 periods.

Based on the results of the anthropological examination as well as the size of a bronze ring, grave no. 2 in Balatonfűzfő, containing pieces of jewellery, belonged rather to an adult person (presumably woman). Meanwhile grave no. 4 contained the cremated remains of a 25–35-year-old woman. These two graves are situated quite close to each other, which may allude to cousinship between the two individuals. It would be enticing to interpret one of these females as the wife of the warrior buried in grave no. 6, but the topographical situation of the graves (*Fig. 1.2*) does not strengthen this theory.

The graves of the Balatonfűzfő cemetery can be dated to the younger phase of the late Tumulus period (Br D2 – Ha A1)<sup>120</sup> of the Bakony Hills region. It is highly probable that the five published graves represent a part of a larger cemetery, and there are more burials in the area which are left undiscovered or were destroyed by already during the existence of the Roman Age pottery workshop or later, in recent times.

108 KIRÁLY – KOÓS – TARBAY 2014, Fig. 2. 1.

109 JANKOVITS 1992b, Abb. 30. 2; ILON 1992, 2. tábla 6–8.

110 JANKOVITS – VÁCZI 2013, Abb. 2. 14–15, 20–21, 26, Abb. 8. 3–9.

111 ILON 1998, Tab. IV.

112 JANKOVITS 1992b, Abb. 11. 7, 9, Abb. 19.

113 JANKOVITS – VÁCZI 2013, Abb. 2. 2, Abb. 4. 5, 12, Abb. 6. 1–2.

114 FEKETE 2004, 162, 6. kép

115 ILON 1998, Tab. III.

116 JANKOVITS 1992a, Abb. 28. 9, Abb. 29. 4, Abb. 40. 8.

117 JANKOVITS – VÁCZI 2013, Abb. 2. 6–10, Abb. 4. 1–3.

118 JANKOVITS 1992a, Abb. 36. 3; FEKETE 2004, 162, 8. kép

119 TARBAY 2015, 92, 109–110, Fig. 10, Fig. 19.

120 ILON 2012, 145; JANKOVITS – VÁCZI 2013, 63.

## Appendix

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The examination of the cremated remains from the four graves concerned the physical characteristics, the distinction between animal and human remains, anatomic systematization and finally, determining the basic anthropological data. This work was done considering the recommendations of B. Hermann,<sup>121</sup> J. Nemeskéri and L. Harsányi,<sup>122</sup> and J. P. D. Wahl.<sup>123</sup>

Grave 1: middle sized fragment of a pelvis, weight: 1 g. Colour: chalk white and greyish, its burning ranging from perfect to chalk-like. Temperature of cremation: 600–800 °C. Sex non definable, age approximately 1–10 years.

Grave 2: middle sized fragment of tubular bones, weight: 1 g. Colour: chalk white and greyish, it's burning ranging from perfect to chalk-like. Temperature of cremation: 600–800 °C. Sex non definable, age approximately Infans I to adult (based on the estimated dimensions).

Grave 4: middle sized fragments of a cranium and extremities, weight: 252 g. Colour: chalk white, greyish and bluish, it's burning ranging from perfect to chalk-like. Temperature of cremation: 550–800 °C. Sex: probably female (based on the gracility of the remains), age approximately 23–25 years (based on the sutures of the cranium).

Grave 6: middle sized fragments of a cranium, vertebrae and extremities, weight: 270 g. Colour: chalk white, greyish, bluish and black. It's burning ranging from perfect to chalk-like, in the case of the fragments from filling of the grave pit, imperfect. Temperature of cremation: 300–800 °C. Sex: male (based on the estimated size of the caput femoris as well as on medium robusticity). Age: 25–30 years (based on the inner structure of the caput femoris). On some of fragments which came from beside grave good no. 41, the point of the knife as well as from the filling of the grave around it, traces of greenish patina can be seen. The bone material from between the knife and the sword, as well from the vicinity of grave good no. 7 included bone remains of mammalia.

121 HERRMANN 1988.

122 NEMESKÉRI – HARSÁNYI 1968.

123 WAHL 1981.

## References

- BORN, H. – HANSEN, S. 2001: *Helme und Waffen Alteuropas*. Band 9. Sammlung Axel Guttman. Mainz am Rhein.
- CLAUSING, CH. 2005: *Untersuchungen zu den urnenfelderzeitlichen Gräbern mit Waffenbeigaben vom Alpenkamm bis zur Südzone des Nordischen Kreises*. British Archaeological Reports – International Series 1375, Oxford.
- Cs. DAX M. – K. PALÁGYI S. – RAINER P. – REGENYE J. 2000: *Balatonfüzfő régmúltja*. Balatonfüzfő – Veszprém.
- EKDAHL, S. 2012: Bronzezeitliche Petroglyphen mit Waffendarstellungen in Schweden. *Acta Universitatis Lodziensis Folia Archaeologica* 29, 14–37.
- FALKENSTEIN, F. 2012–2013: Kulturwandel und Klima im 12. Jahrhundert v. Chr. Das Beispiel Kastanas in Nordgriechenland. *Offa* 69/70, 502–526.
- FEKETE, M. 2004: A jánosházi halomsír – Das Hügelgrab von Jánosháza. In: ILON, G. (ed.): *ΜΩΜΟΣ III. Óskoros Kutatók III. Országos Összejövetelének konferenciakötete. Halottkultusz és temetkezés*. Szombathely, 157–181.
- FURMÁNEK, V. 1996: Urnfield Age in Danube basin. In: BELARDELLI, C. – NEUGEBAUER, J.-W. – NOVOTNÁ, M. – NOVOTNY, B. – PARE, Ch. – PERONI, R. (eds.): *The Bronze Age in Europe and the Mediterranean. The colloquia of the XIII International congress of prehistoric and protohistoric sciences*. Forli, 127–149.
- GUBA, SZ. – SZEVEÉNYI, V. 2007: Bronze Age bird representations from the Carpathian Basin. *Communicationes Archaeologicae Hungariae* 75–110.
- GRAMSCH, A. 2011: Das Urnengräberfeld von Cottbus Alvensleben-Kaserne (Brandenburg): Bestattungsrituale als kommunikative Handlung. *Tübingen Verein zur Vörderung der Ur- und Frühgeschichtlichen Archäologie* 12, 51–69.
- HÄNSEL, B. 1976: *Beiträge zur regionalen und chronologischen Gliederung der älteren Hallstattzeit an der unteren Donau I–II*. Beiträge zur ur- und frühgeschichtlichen Archäologie des Mittelmeer-Kulturraumes 16–17, Bonn.
- HÄNSEL, B. 1981: Lausitzer Invasion in Nordgriechenland? In: KAUFMANN, H. – SIMON, K. (ed.): *Beiträge zur Ur- und Frühgeschichte I*. Arbeits und Forschungsberichte zur Sächsischen Bodendenkmalpflege Beiheft 16. Berlin, 207–223.
- HANSEN, S. 1994: Studien zu den Metaldeponierungen während der älteren Urnenfelderzeit zwischen Rhönetal und Karpatenbecken. *Universitätsforschungen zur Prähistorischen Archäologie* 21. Berlin.
- HARDING, A. 2007: *Warriors and weapons in Bronze Age Europe*. Archaeolingua Ser. Minor 25. Budapest.
- von HASE, F-W. 1995: Ägäische, griechische und vorderorientalische Einflüsse auf das Tyrrhenische Mittelitalien. In: *Beiträge zur Urnenfelderzeit nördlich und südlich der Alpen*. RGZM Monographien 35. Bonn, 239–286.
- HERRMANN, B. 1988: Behandlung von Leichenbrand. In: KNUSSMANN, R. (ed.): *Anthropologie I*. Stuttgart – New York, 576585.
- HOCHSTETTER, A. 1982: Spätbronzezeitliches und Früheisenzeitliches Formengut in Makedonien und im Balkanraum. In: HÄNSEL, B. (ed.): *Südosteuropa zwischen 1600 und 1000 v. Chr.* Prähistorische Archäologie in Südosteuropa 1. Berlin, 99–118.

- HONTI, SZ. 1996: Ein spätbronzezeitliches Hügelgrab in Sávolly–Babócsa. *Pápai Múzeumi Értesítő – Acta Musei Papensis* 6, 235–248.
- HORVÁTH L. 2001: Késő bronzkori település feltárása Nagykanizsán – Excavation of a Late Bronze Age settlement at Nagykanizsa. In: Kisfaludy, J. (ed.): *Régészeti kutatások Magyarországon – Archaeological Investigation in Hungary 1998*. Budapest, 37–43.
- ILON, G. 1992: Újabb későbronzkori halomsírok Ugod–Katonavágásról – Neue jungbronzezeitliche Hügelgräber aus Ugod–Katonavágás. *Pápai Múzeumi Értesítő – Acta Musei Papensis* 3–4, 85–96.
- ILON, G. 1996: A késő halomsíros – kora urnamezős kultúra temetője és tell települése Németbánya határában – Das Gräberfeld und Tell der Späthügelgräber – Frühurnenfelderkultur in der Gemarkung Németbánya. *Pápai Múzeumi Értesítő – Acta Musei Papensis* 6, 89–208.
- ILON, G. 1998: Late Bronze Age Bronze Hoard from Szentkirályszabadja, Veszprém County, Hungary. *Specimina Nova* 12, 181–194.
- ILON, G. 1999: A bronzkori halomsíros kultúra temetkezései Nagydém–Középrépusztán és a hegykői edénydepot – Die Bestattungen der bronzezeitlichen Hügelgräberkultur in Nagydém–Középrépuszta und das Gefäßdepot von Hegykő. *Savaria Pars Archaeologica* 24/3, 239–276.
- ILON, G. 2009: A kerék, a nap, a vízmadár és a napbárka késő bronzkori kardjainkon ...a kereskedelem avagy más kapcsolatok lehetséges lenyomatai? – The wheel, sun, water bird and sun bark on Late Bronze Age words ...impressions of trade or other possible connections? In: ILON, G. (ed.): *ΜΩΜΟΣ VI. Őskoros kutatók VI. összejelentelének konferenciakötete. Nyersanyagok és kereskedelem – Proceedings of the 6th meeting for the researchers of prehistory. Raw materials and trade*. Szombathely, 151–188.
- ILON, G. 2011: Szombathely–Zanat késő urnamezős korú temetője valamint a lelőhely más ős- és középkori emlékei. *Természettudományos vizsgálatokkal kiegészítve – The late Urnfield period cemetery from Szombathely–Zanat supplemented by an assessment of prehistoric and Medieval settlement features and interdisciplinary analyses*. VIA. Kulturális Örökségvédelmi Kismonográfiák – Monographia Minor in Cultural Heritage 2, Budapest.
- ILON, G. 2012: Eine weitere Bestattung der frühurnenfelderzeitlichen Elite – das Grab Nr. 6 aus Balatonfűzfő (Ungarn, Komitat Veszprém). In: KUJOVSKÝ, R. – MITÁŠ, V. (eds.): *Václav Furmánek a doba bronzová. Zborník k sedemdesiatym narodeninám*. Archaeologica Slovaca Monographiae 13. Nitra, 137–150.
- ILON, G. 2013: Das Rad, die Sonne, das Wasservogel und der Vogelbarken auf spätbronzezeitlichen Schwertern ...mögliche Ausdrucksformen des Handels oder anderer Beziehungen? In: MARTA, L. (ed.): *Die Gáva-Kultur in der Theißebene und Siebenburgen*. Satu Mare Studii și Comunicări, Ser. Arheologie 28/1, Satu Mare, 169–209.
- ILON, G. 2016: Zeitstellung der Urnenfelderkultur (≈1350/1300 – 750/700 BC) in West-Transdanubien. Ein Versuch mittels Typochronologie und Radiokarbonaten. In: *Bronze Age Chronology in the Carpathian Basin*. 2–4. Oct. 2014. Târgu Mureș. In press.
- INNERHOFER, F. 2000: *Die mittelbronzezeitlichen Nadeln zwischen Vogesen und Karpaten. Studien zur Typologie und regionalen Gliederung der Hügelgräberkultur*. Universitätsforschungen zur Prähistorischen Archäologie 71. Bonn.
- JANKOVITS, K. 1992a: Spätbronzezeitliche Hügelgräber in der Bakony-Gegend. Teil I. *Acta Archaeologica Academiae Scientiarum Hungaricae* 44, 3–81.

- JANKOVITS, K. 1992b: Spätbronzezeitliche Hügelgräber von Bakonyjákó. Teil II. *Acta Archaeologica Academiae Scientiarum Hungaricae* 44, 261–343.
- JANKOVITS, K. 2008: Die Gräber mit den Waffenbeigaben: Die sogenannten Kriegergräber in der Späthügel – Frühurnenfelderkultur /Bz D–Ha A1) in Transdanubien. In: CZAJLIK, Z. – MORDANT, C. (eds.): *Nouvelles approches en anthropologie et en archéologie funéraire*. Budapest, 88–91.
- JANKOVITS, K. – VÁCZI, G. 2013: Spätbronzezeitliches Gräberfeld von Sárbogárd–Tringer-tanya (Komitat Fejér) in Ost-Transdanubien. *Acta Archaeologica Academiae Scientiarum Hungaricae* 64, 33–74.
- JOCKENHÖVEL, A. 2006: Zu Archäologie der Gewalt: Bemerkungen zu Aggression und Krieg in der Bronzezeit Europas. *Anodos* 4–5, 101–132.
- KELEMEN, M. H. 1980: Római kori fazekaskemencék Balatonfüzfőn – Töpfereiöfen aus der Römerzeit in Balatonfüzfő. *Veszprém megyei Múzeumok Közleményei* 15, 49–72.
- KEMENCZEI, T. 1988: *Die Schwerter in Ungarn I*. Prähistorische Bronzefunde IV/6. München.
- KIRÁLY, Á. – KOÓS, J. – TARBAY, G. 2014: Representations of jewellery and clothing on Late Bronze Age anthropomorphic clay figurines from North-Eastern Hungary. *Apulum* 51, 307–340.
- KOVÁCS, T. 1996: The Tumulus culture in the middle Danube region and the Carpathian basin: burials of the warrior elite. In: BELARDELLI, C. – PERONI, R. (eds.): *The Bronze Age in Europe and the Mediterranean. The colloquia of the XIII international congress of Prehistoric and Protohistoric sciences*. Forlì, 113–126.
- KÓSZEGI, F. 1988: *A Dunántúl története a későbronzkorban – The history of Transdanubia during the Late Bronze Age*. BTM Műhely 1, Budapest.
- KUZSINSZKY, B. 1920: *A Balaton környékének archaeológiája*. Budapest.
- LOCHNER, M. 1991: *Studien zur Urnenfelderkultur im Waldviertel (Niederösterreich)*. Mitteilungen der Prähistorischen Kommission 25. Wien.
- LOCHNER, M. 2013: Bestattungssitten auf Gräberfeldern der mitteldonauländischen Urnenfelderkultur. In: LOCHNER, M. – RUPPENSTEIN, F. (ed.): *Brandbestattungen von der mittleren Donau bis zur Ägäis zwischen 1300 und 750 v. Chr.* Mitteilungen der Prähistorischen Kommission 77, Wien, 11–31.
- MARTON, E. 1998: A velemi Szent Vid-i magyar-francia ásatás eredményei (1989–1991). Késő bronzkori hamvasztásos sír és vaskori települési jelenségek – Results of the french-hungarian joint excavation between 1989–1991. *Savaria* 23/3, 51–78.
- MATTHÄUS, H. 1981: ΚΥΝΟΙ ΔΕ ΗΣΑΝ ΤΟ ΑΡΜΑ – Spätmykenische und urnenfelderzeitliche Vogelplastik. In: LORENZ, H. (ed.): *Studien zur Bronzezeit. Festschrift für Wilhelm Albert v. Brunn*. Mainz/Rhein, 277–297.
- MOZSOLICS, A. 1985: *Bronzefunde aus Ungarn. Depotfundhorizonte von Aranyos, Kurd und Gyermely*. Budapest.
- NEMESKÉRI, J. – HARSÁNYI, L. 1968: A hamvasztott csontvázletek vizsgálatának kérdései. *Anthropológiai Közlemények* 12, 99–116.
- NOVOTNÁ, M. 1980: *Die Nadeln in der Slowakei*. Prähistorische Bronzefunde XIII/6, München.
- NOVOTNÁ, M. 1999: Beiträge zur Besiedlung der Mitteldanubischen Hügelgräberkultur in der Slowakei. In: BÁTORA, J. – PEŠKA, J. (eds.): *Aktuelle Probleme der Erforschung der Frühbronzezeit in Böhmen und Mähren und in der Slowakei*. Nitra, 241–249.

- NOVOTNÁ, M. 2007: Militáriá stredodunajských popolnicových polí na Slovensku. In: SALAŠ, M. – ŠABATOVÁ, K. (eds): *Doba popoelnicových polí a doba Halštatská*. Brno, 157–165.
- PABST, S. 2013: Naue II-Schwerter mit Knaufzunge und die Außenbeziehungen der mykenischen Kriegerelite in postpalatialer Zeit. *Jahrbuch des Römisch-Germanischen Zentralmuseums* 60, 105–152.
- PATEK, E. 1968: *Die Urnenfelderkultur in Transdanubien*. Archaeologica Hungarica 44, Budapest.
- PAULÍK, J. 1966: Mohyla čakanskej kultury v Kolte – Hügelgrab der Čaka Kultur in Kolta. *Slovenská Archeológia* 14, 357–396.
- PAULÍK, J. 1990: *Mohyly z mladšej doby bronzovej – Jungbronzezeitliche Hügelgräber in der Slowakei*. Ausstellungskatalog Slovenské Národné múzeum. Bratislava.
- ŘÍHOVSKÝ, J. 1983. *Die Nadeln in Westungarn I*. Prähistorische Bronzefunde XIII/10. München.
- SANDARS, K. N. 1978: *The sea peoples. Warriors of the ancient Mediterranean 1250–1150 B.C.* London.
- SCHAUER, P. 1971: *Die Schwerter in Süddeutschland, Österreich und der Schweiz I*. Prähistorische Bronzefunde IV/2. München.
- SCHAUER, P. 1995: Stand und Aufgaben der Urnenfelderforschung in Süddeutschland. In: *Beiträge zur Urnenfelderzeit nördlich und südlich der Alpen*. RGZM Monographien 35, Bonn, 121–199.
- SPERBER, L. 1999: Zu den Schwerträgern im westlichen Kreis der Urnenfelderkultur: Profane und Religiöse Aspekte. In: *Eliten in der Bronzezeit. Ergebnisse zweier Kolloquien in Mainz und Athen. Teil 2*. RGZM Monographien 43, Mainz, 605–659.
- ŠKOBERNE, Ž. 1999: *Budinjak. Kneževski tumul*. Zagreb.
- SZÁNTÓ, I. 1953: A cserszegtomaji kora-vaskori és kora-császárkori urnatemető (Veszprém m.) – Ein Urnenfriedhof in Cserszegtomaj (Kom. Veszprém) aus der frühen-Eisenzeit und aus den Anfängen der Kaiserzeit. *Archaeologiai Értesítő* 80, 53–59.
- TARBAY, J. G. 2015: A Late Bronze Age hoard and sickle-shaped pins from Fövényes (Hungary, Veszprém county) – Késő bronzkori depó és sarló alakú tűk Fövényesről (Magyarország, Veszprém m.). *Ósrégészeti Levelek – Prehistoric newsletter* 14 (2012) 84–118.
- TOČIK, A. – PAULÍK, J. 1960: Výskum mohyly v čake v rokoch 1950–51 – Die Ausgrabung eines Grabhügels in Čaka in den Jahren 1950–51. *Slovenská Archeológia* 8, 59–117.
- VARGA, I. 1992: Későbronzkori üveggyöngy Bakonyjákóról – Glassbeads from the late Bronze age from Bakonyjákó. *Pápai Múzeumi Értesítő – Acta Musei Papensis* 3–4, 97–99.
- VÁCZI, G. 2013: Burial of the Late Tumulus–Early Urnfield Period from the Vicinity of Nadap, Hungary. In: ANDERS, A. – KULCSÁR, G. – KALLA, G. – KISS, V. – V. SZABÓ, G. (eds.): *Moments in Time. Papers Presented to Pál Raczky on His 60th Birthday*. Prehistoric Studies 1. Budapest, 817–830.
- VÖRÖS, I. 1995: Étel- és állatáldozat leletek Nagydém–Középrépaspuszta középső bronzkori temetőjében – Funde von Speisebeigaben und Opfertieren in dem mittelbronzezeitlichen Gräbensfeld Nagydém–Középrépaspuszta. *Pápai Múzeumi Értesítő – Acta Musei Papensis* 5, 149–155.
- VÖRÖS, I. 1996: Németsbánya késő bronzkori település állatsontleletei – Die Tierknochenfunde des spätbronzezeitlichen Tells von Németsbánya. *Pápai Múzeumi Értesítő – Acta Musei Papensis* 6, 209–218.
- VÖRÖS, I. 1999: Szombathely–Kámon késő bronzkori település állatsontleletei – Die Tierknochenfunde des spätbronzezeitlichen Siedlung Szombathely–Kámon. *Savaria* 24/3, 291–307.

WAHL, J. P. D. 1981: Beobachtungen zur Verbrennung menschlicher Leichname. *Archäologische Korrespondenzblatt* 11, 271–279.

YALÇIN, Ü. – PULAK, C. – SLOTTA, R. (eds.) 2005: *Das Schiff von Uluburun. Welthandel vor 3000 Jahren. Katalog der Ausstellung des Deutschen Bergbau-Museums Bochum*. Bochum.

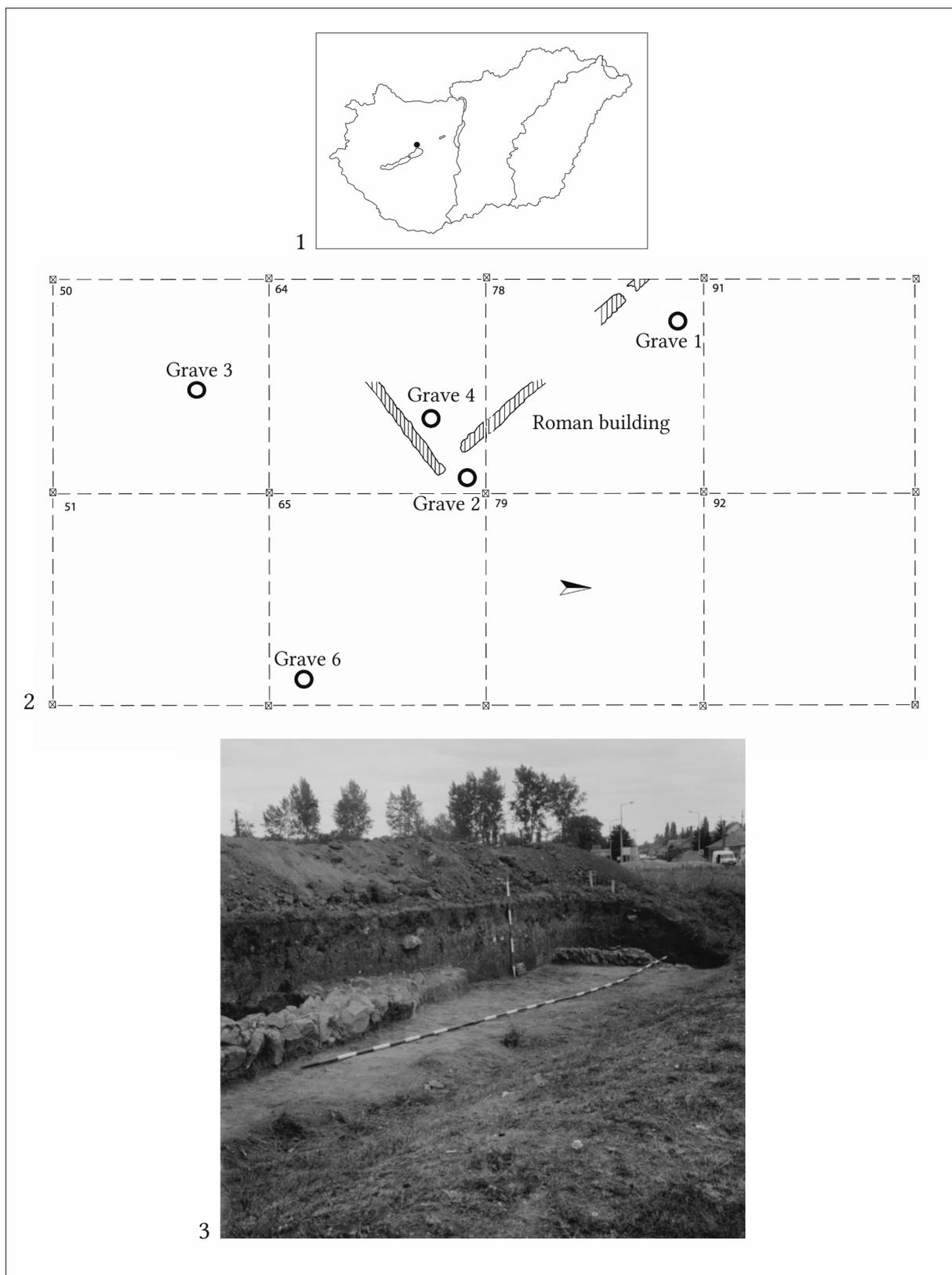


Fig. 1. 1. The site in relation to Lake Balaton. 2. Summary plan of the cemetery. 3. Detail of an excavation square with the houses of Balatonfűzfő in the background (Photo: Sylvia K. Palágyi).

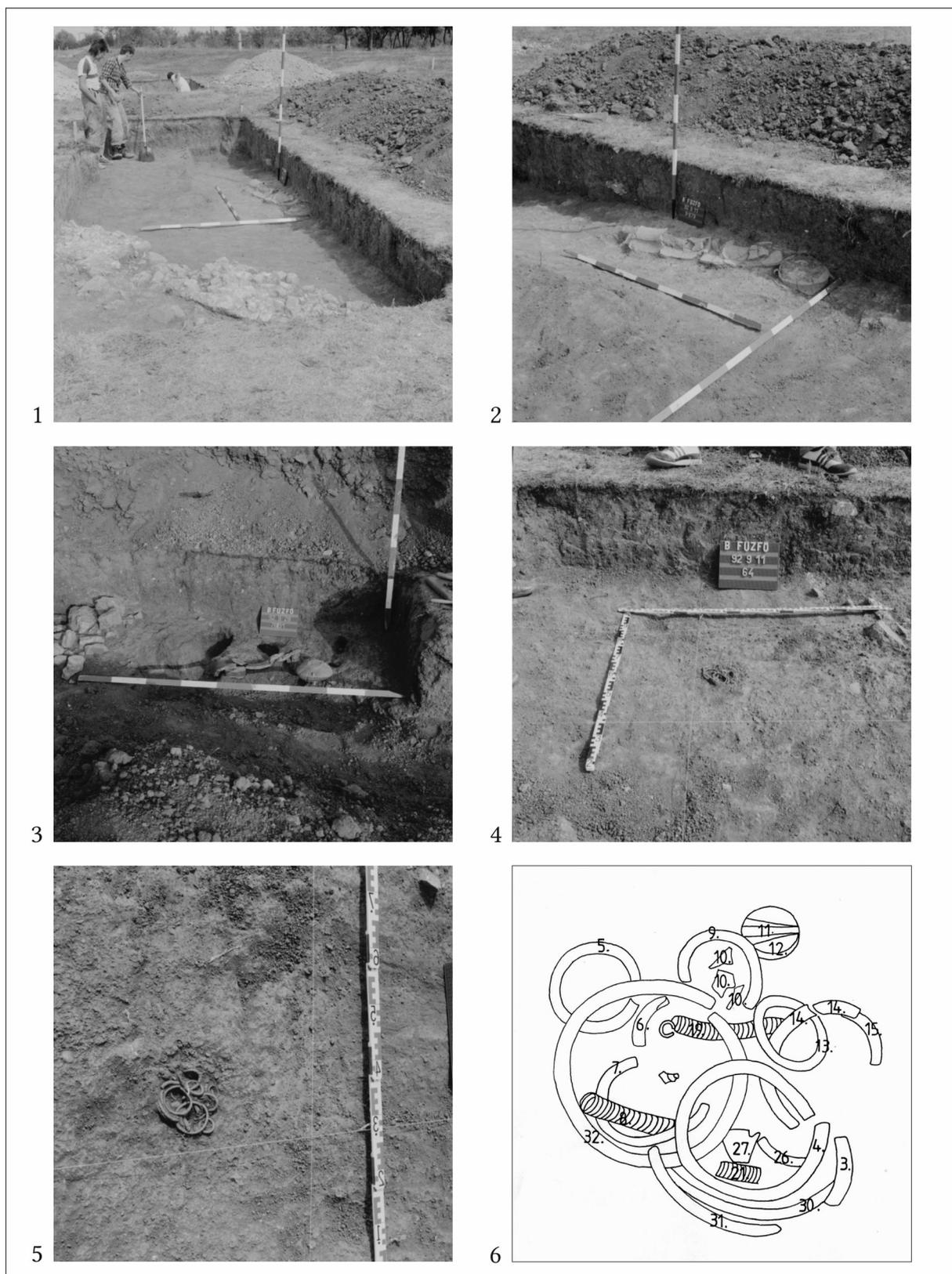


Fig. 2. 1–3. Grave 1. 4–5: Grave 2 during the excavation (Photo: Sylvia K. Palágyi). 6. Bronze finds in Grave 2 during the excavation (Field documentation).

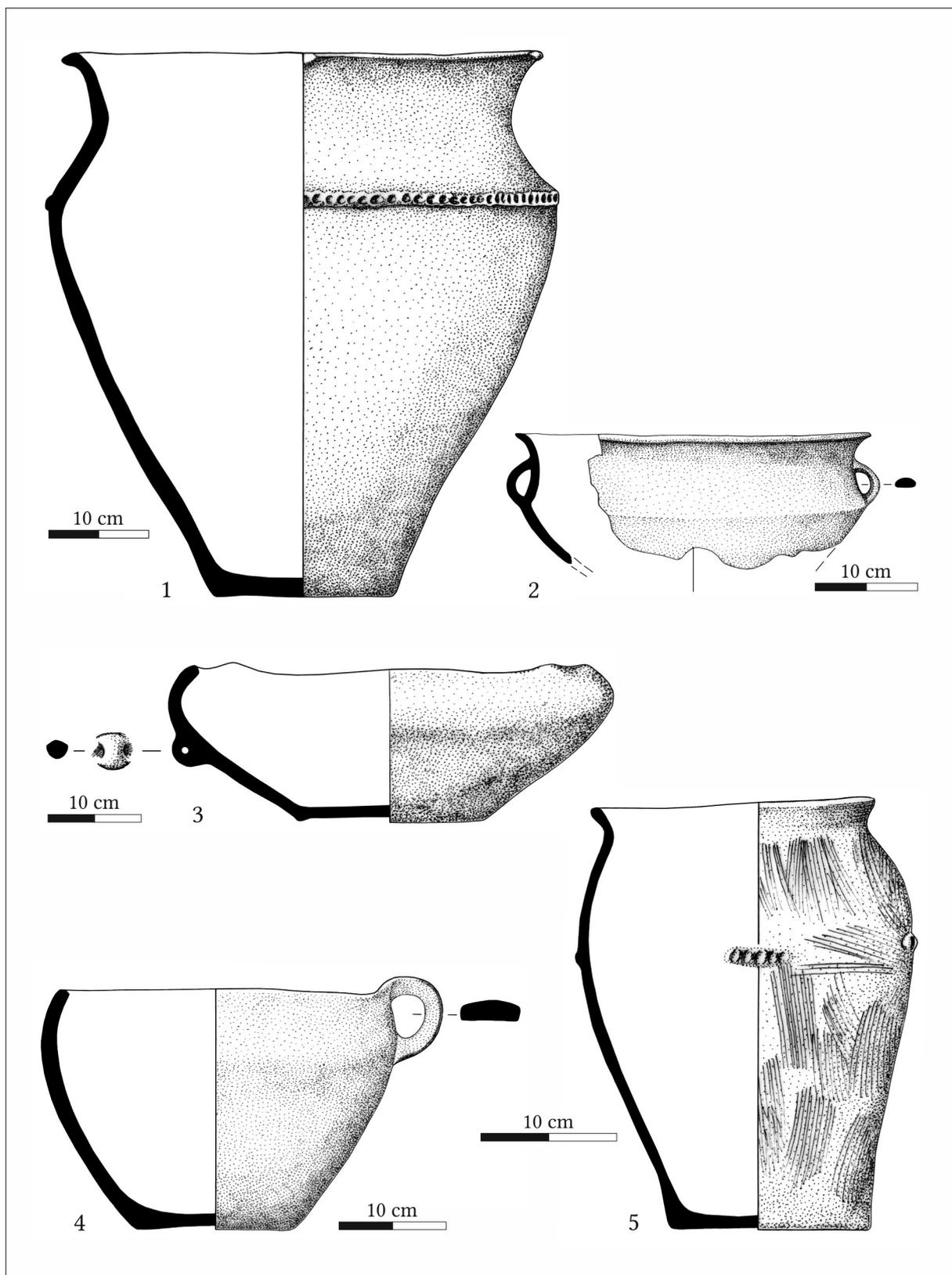


Fig. 3. 1–3. Vessels from Grave 1. 4–5. Vessels from Grave 3 (Drawing: Magdolna Mátyus).

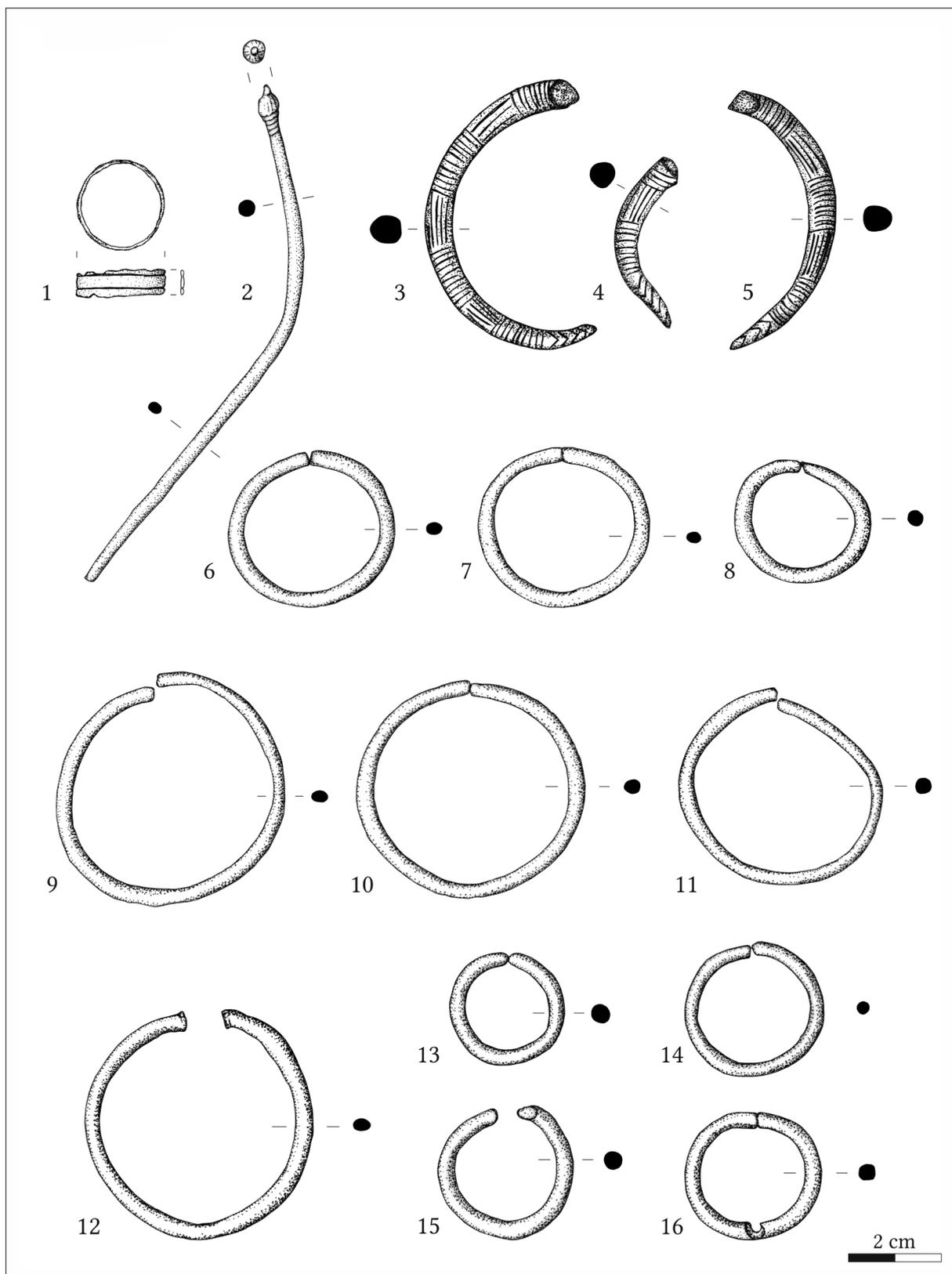


Fig. 4. 1–16. Bronze objects from Grave 2 (Drawing: András Radics).

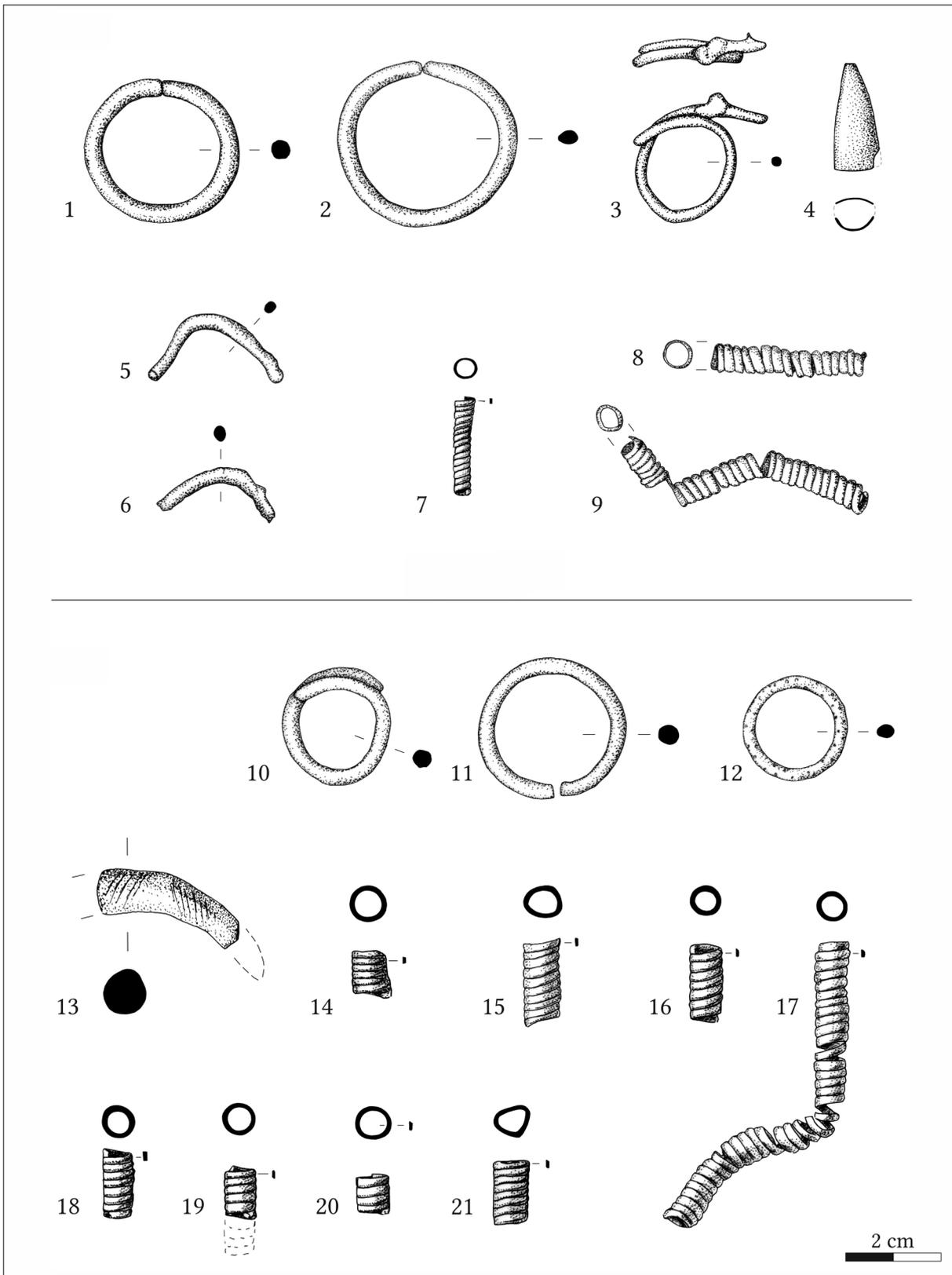


Fig. 5. 1-9. Bronze objects from Graves 2. 10-21. Bronze objects from Grave 4 (Drawing: András Radics).

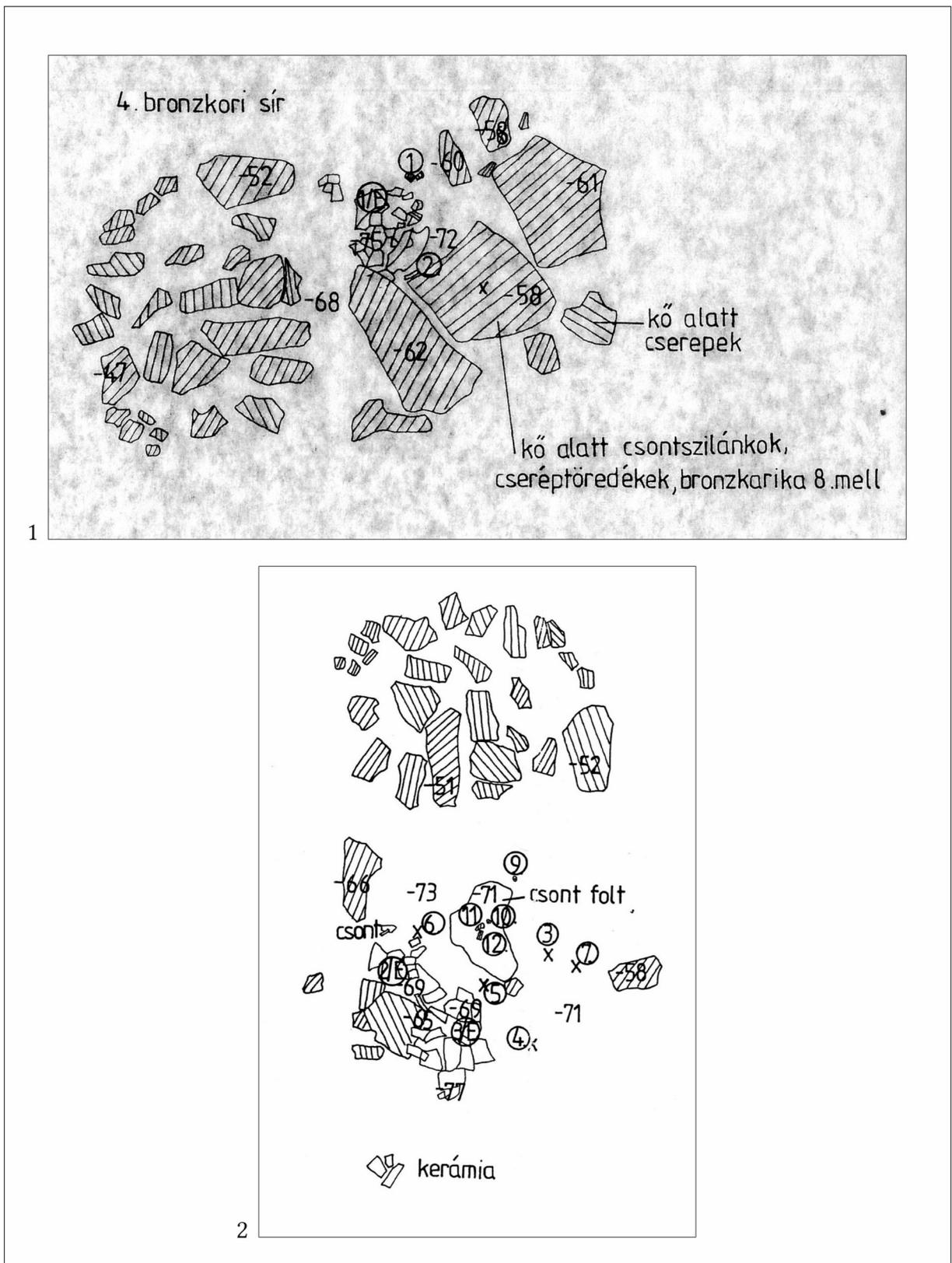


Fig. 6. 1–2. Excavation phases of Grave 4 (Field documentation).

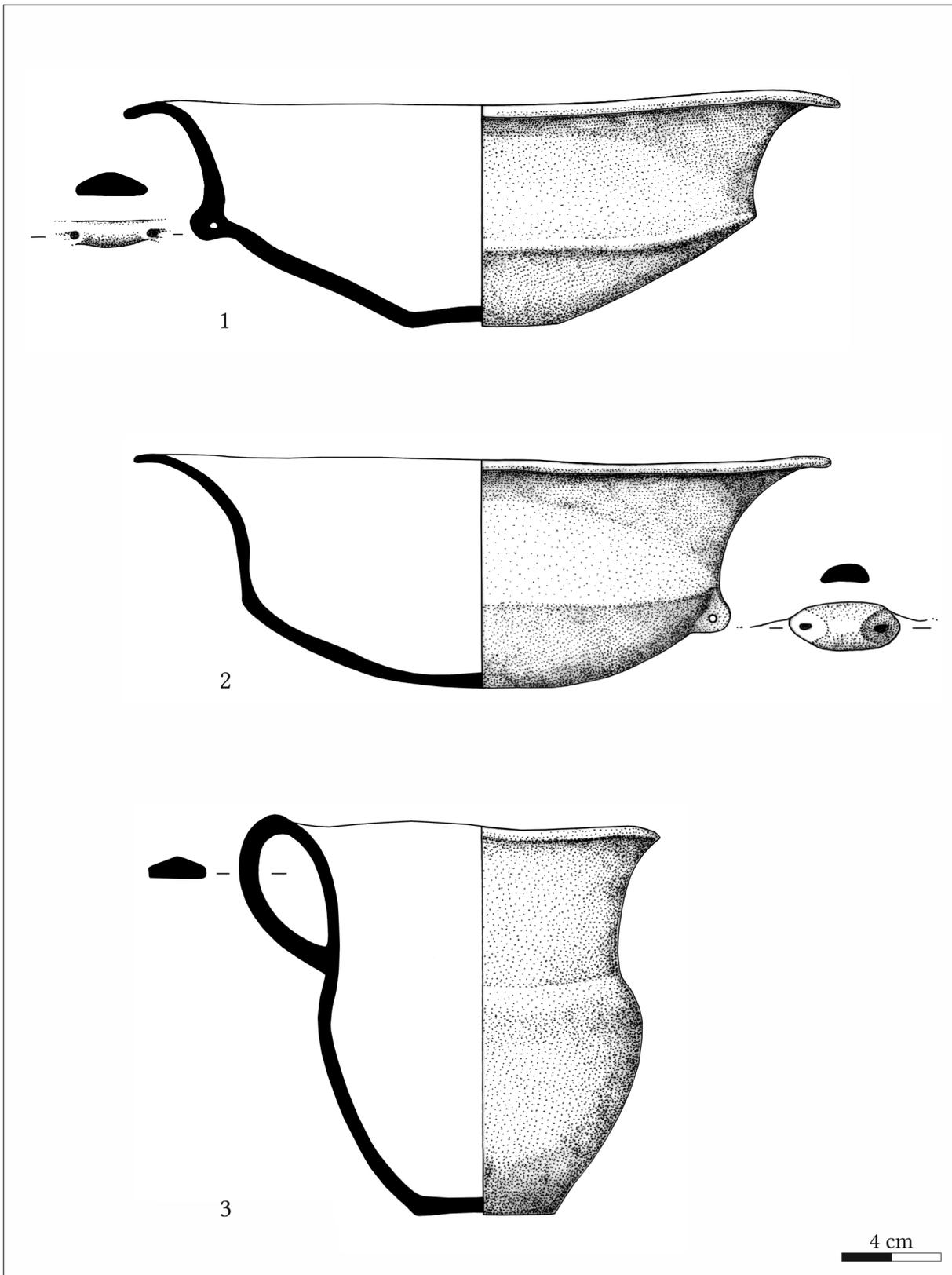


Fig. 7. 1–3. Vessels from Grave 4 (Drawing: Magdolna Mátyus).

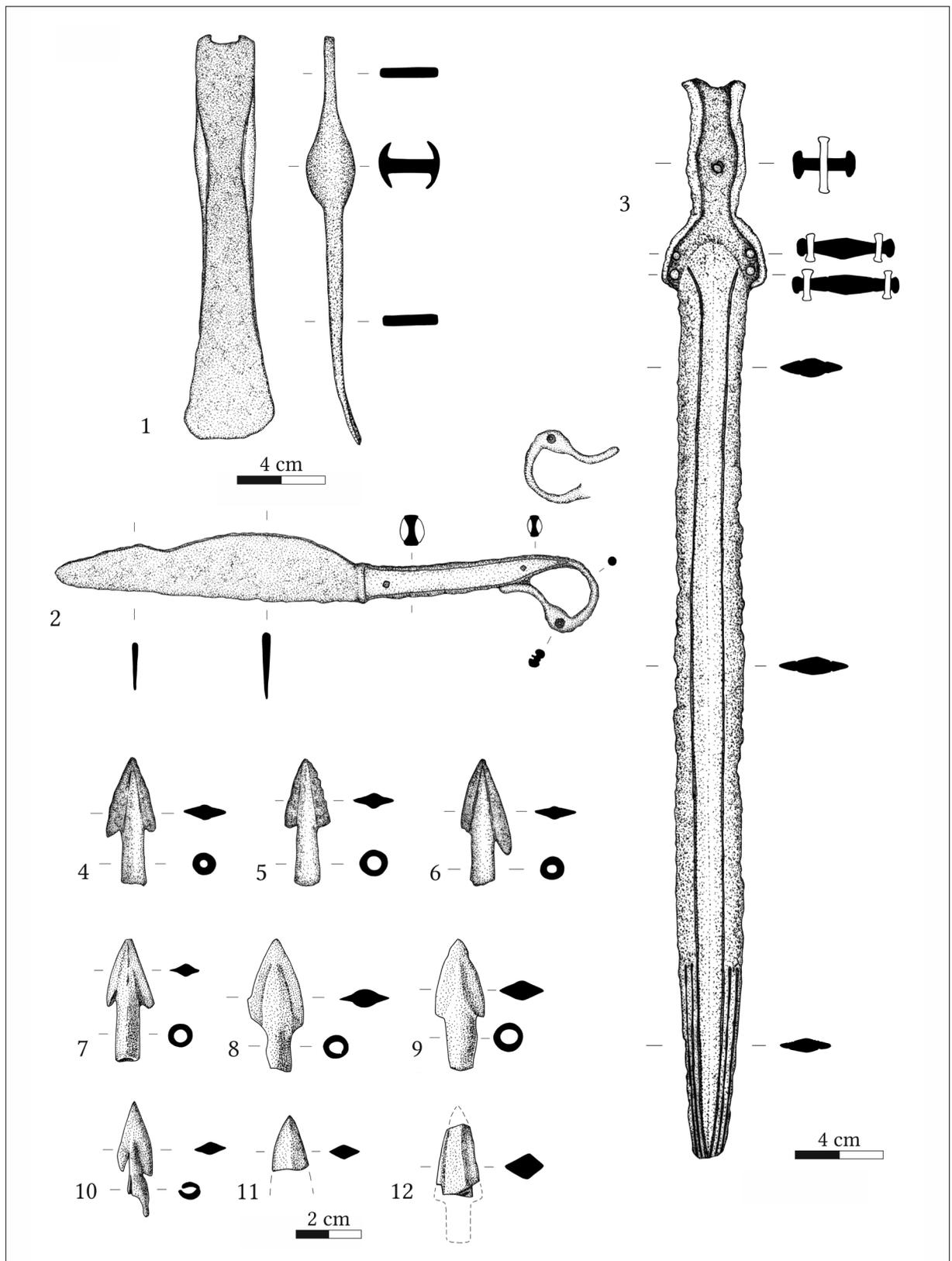


Fig. 8. 1–12. Bronze objects from Grave 6 (Drawing: András Radics).

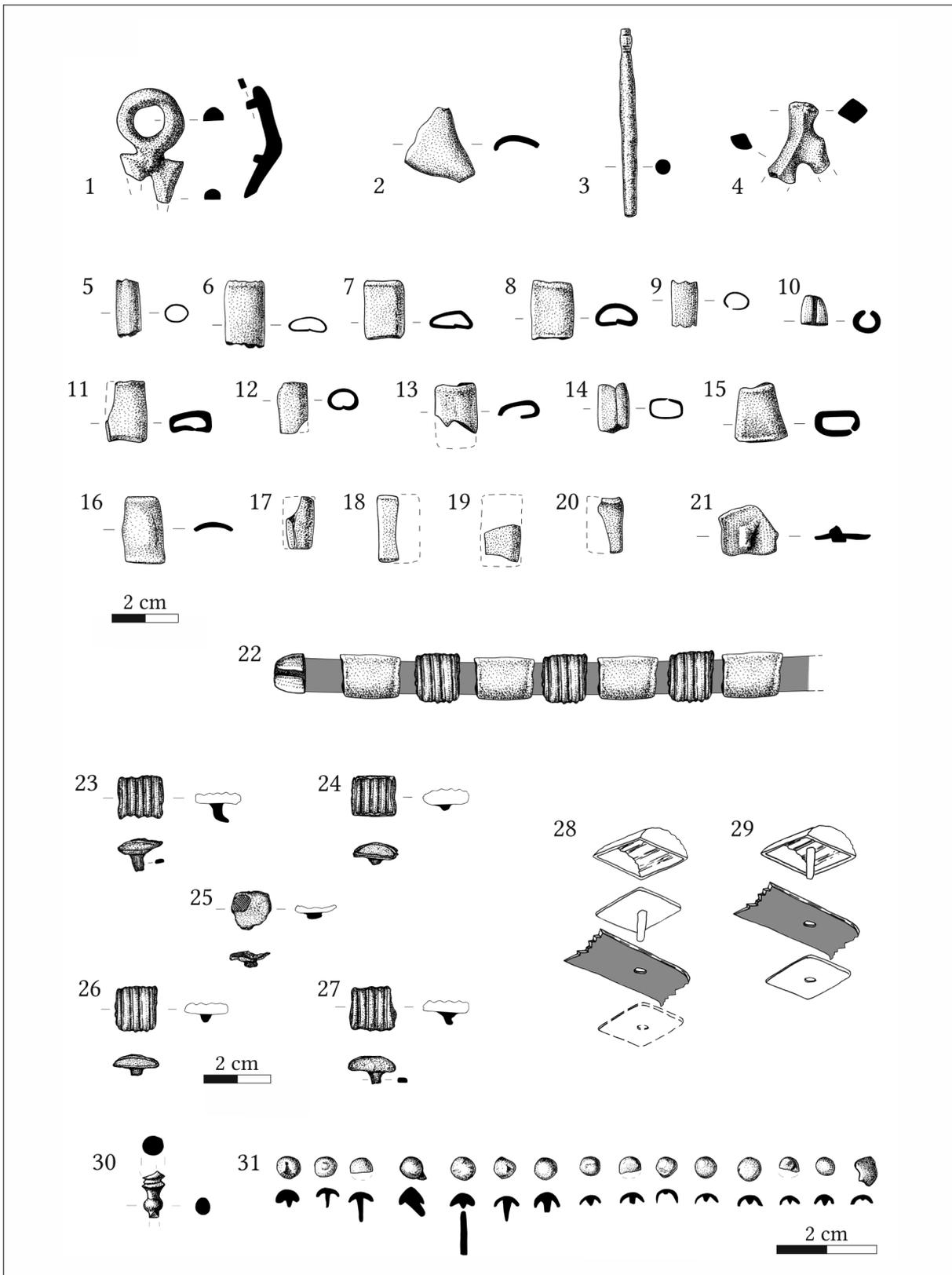


Fig. 9. 1–31. Bronze objects from Grave 6 (Drawing: András Radics).

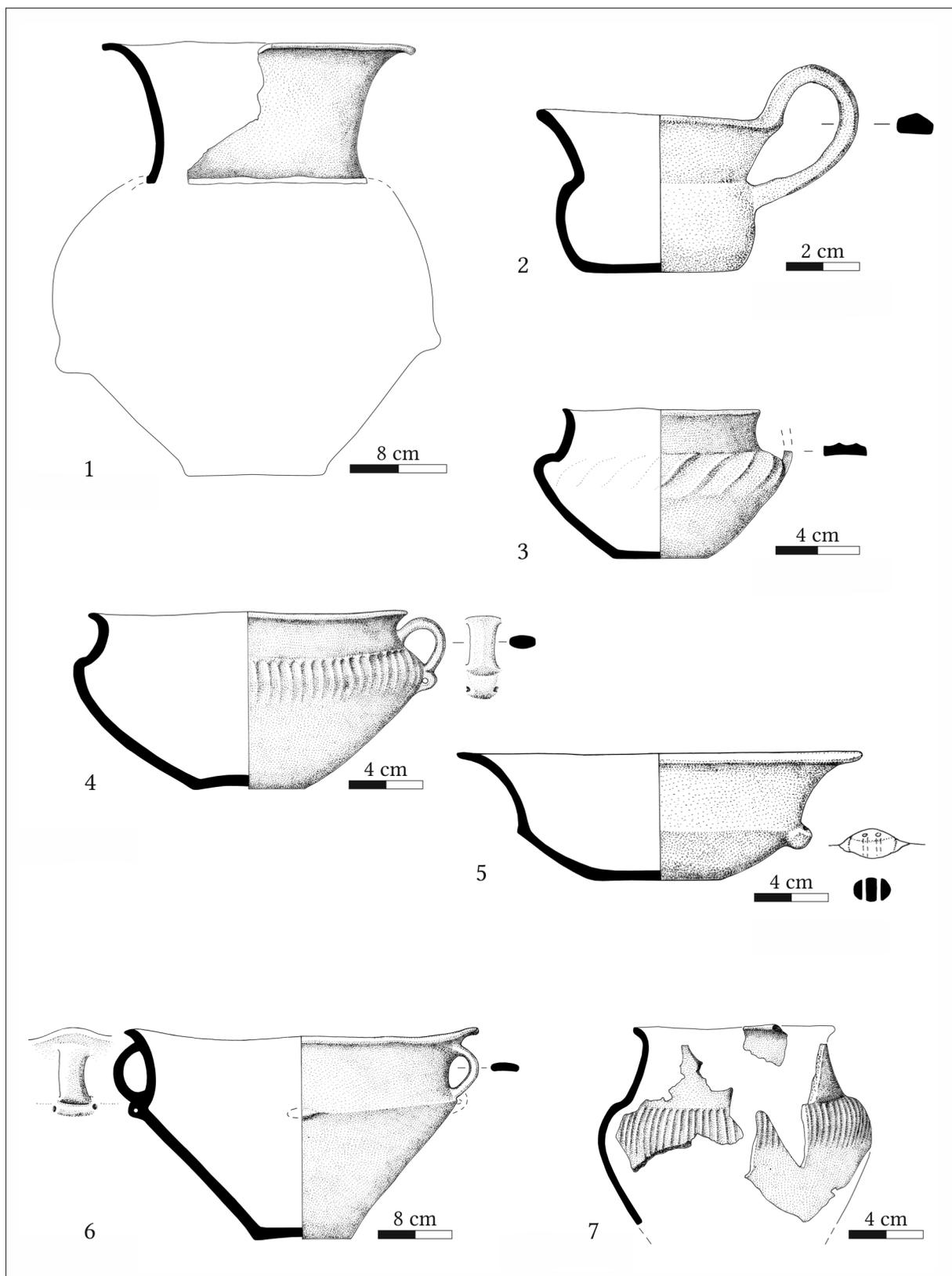


Fig. 10. 1–7. Vessels from Grave 6 (Drawing: Magdolna Mátyus).