THE CELTIC CEMETERY AT MÉNFŐCSANAK. THE EXCAVATION BEFORE THE CONSTRUCTION OF ROAD NO. 83 IN 1993–94

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Abstract: One of the important cemetery and settlement of the Celts lies in a plateau on the southern side of the the Öreg Rába river, in the vicinity of Győr-Ménfőcsanak. The first burials were found in 1967 during a short rescue excavation, however it made Ménfőcsanak a key La Tène site in the Carpathian Basin. Excavations investigated on a larger scale in the area of previously known cemetery in 1993–94. The burial rite of the necropolis was mainly inhumation and only two graves were cremated and two biritual graves. Celtic warriors with swords and richly furnished female with fibulae, coral, amber, and glass beads jewelry were also buried in this part of cemetery. Few graves were limited by rectangular enclosing trenches. According to find analyzing this part of the cemetery dates to the LT B period, and that is why Ménfőcsanak became an important archaeological site in terms of burials in the history of the Celtic "migrations" in the fourth century BC.

Keywords: Late Iron Age, La Tène culture, Celtic cemetery, NW Hungary

I. INTRODUCTION

In 1993–94, the excavations of the track of national Road 83 bypassing Ménfőcsanak, which has been constructed since then, unearthed further graves of the biritual Celtic cemetery at Ménfőcsanak-"Savanyító" rescued and published earlier by András Uzsoki.[1] Another rescue excavation was conducted on the surface adjoining Road no. 83 in 1995–96.[2] Here the Celtic graves unearthed at the rescue excavations of the Road no. 83[3] will be published.[4]

In the course of the investigation of the continuous track, rescue excavations were conducted in three subsequent territories. One was the so-called Szeles part joining the exit of highway M1 from the west,[5] the second one was the so-called third surface bordering the previous one from the north-west and the third one was the Savanyító surface beyond the former one.[6] The Zsigmond király Road partly covered by concrete, flanked by gutters, runs between the Savanyító and the third surface. It leads from the settlement of Ménfőcsanak toward the dead

[1] András Uzsoki published not the complete excavation and only some of the graves found during the excavations. Uzsoki 1968, Uzsoki 1969a, Uzsoki 1969b, Uzsoki 1970a, Uzsoki 1970b, Uzsoki 1970c, Uzsoki 1987.

[2] The excavations were conducted by Ildikó Egry, Eszter T. Szőnyi, Péter Tomka and Andrea Vaday. The rescue excavations were carried out on separate surfaces. The publication of the Celtic graves of the former cemetery found this time was passed to I. Egry according to a consensus with E. T. Szőnyi and P. Tomka.

[3] Vaday 2003, 201–202, Vaday 2004, 201–202, Vaday 2006a, 597–610, Vaday 2006b, 279–294.

[4] The processing was made with the financial assistance of the competition of OTKA T 32253 and OTKA T 047072. Map of the cemetery made by Andrea Nagy, the plates made by Margit Szabados and A. Vaday, the figures made by A. Nagy and A. Vaday. The photos made by Tibor Kádas and A. Vaday.

[5] This surface is the closest to Győr.

[6] It was a lucky coincidence that the three excavation surfaces yielded finds and features from different archaeological periods as well. The marking of the territories by different names was also necessitated by the parallelly conducted excavations in the territories.

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channel of the Marcal, then turns westwards toward Gyimrót.[7] At the time of A. Uzsoki's rescue excavations, it was only a dirt road. The Kertészeti Vállalat (Horticultural Enterprise) used the lands south of the stretch that runs in a west–east direction, nearly parallelly to the Marcal. The Zsigmond király Road, the fence of the one-time Savanyító buildings and its older buildings together with the high-tension line that crosses the road, which ran in a N-NW direction of the projected Road no. 83, helped the connection of the old rescue excavations and the surfaces of the excavations conducted in 1993–94. The buildings of the former acidifying plant *(savanyító)* or raspberry acidifying plant were raised S-SW of the track. A drainage ditch ran outside the southern side of the fence of the works, which has mostly been overgrown by now.[8] A. Uzsoki rescued Celtic graves and collected data of destroyed graves during the digging of the drainage ditch, the constructions carried out in the territory of the works as well as on the lands of the Horticultural Enterprise.

The excavations in 1993–94 were carried out, according to the preliminary plans, in a 30 m broad stripe, sometimes with smaller corrections. Zsuzsanna B. Kiss helped with the excavation of the Celtic cemetery. Occasionally Elek Benkő, Gabriella T. Németh, and Miklós Takács gave a helping hand.[9]

In 1995, new rescue excavations were started, connected to those of Road no. 83, next to the Szeles surface before the construction of the METRO shopping center. Rescue excavations had already been conducted beside the so-called third surface as well in 1996, which resulted in further Celtic graves. There were no Celtic graves in the cuttings opened in the Szeles part.[10]

II. GEOGRAPHICAL FEATURES OF THE SURFACE UNEARTHED IN 1993–94

A hill topped by a plateau follows the bank of the Öreg Rába. Several old ravines running approximately from the north to the south segment the plateau. They are partly filled in with loam and alluvial deposits, while the hill itself is covered with sand or loess sand. The surface layer is thin greyish humus enriched partly with sand, partly with loess both on the plateaus and in the ravines.

A hill covered with sand on the crest crosses the track in an approximately N–S direction close to the Zsigmond király Road at the end of the Savanyító surface. Most of the Celtic graves were found on this hilltop and only a few were scattered in the western and eastern slopes. The last graves of the cemetery were situated 30–32 m west of the Zsigmond király Road. Neither Celtic graves nor Celtic settlement features were spotted in this 30–32 m broad stripe and the so-called third excavation surface east of it. This stripe had been the basin of an intermittent stream partly filled up by the Celtic period. There was a gradually darkening, blackening, moist clayey filling mixed with humus at the slope in the south-eastern part of the cutting. The soil changed towards the north-west, 80 m from the concrete road, at the north-western slope: the yellow sand was gradually replaced by a grey than a black layer between 80–92 m. Here a yellowish-grey thick clay was found, which filled in the deeper ravines. *(Fig. 1.2)*

Besides the Celtic cemetery, some scattered Iron Age, Roman, and Avar period settlement fragments were found in this excavation area. The features of the Roman and Avar settlements were distributed mainly above the south-eastern part of the Celtic cemetery on the slope that was yet very moist at the turn of the 4th/3rd centuries BC but dried up by the Roman period and thus became suitable for settlement. In the north-western part, at the same time, the last features of a settlement from the Árpádian Era were detected partly overlapping the last graves of the Celtic cemetery. Due to the various soil qualities, the possibilities for observation on the surface were not uniform. The features from the Roman and Migration periods were excellently outlined after the scraping of the black clayey, moist filling in the south-eastern part of the Celtic cemetery. The Celtic graves and grave ditches were also visible although less clearly than the former ones (features 298, 738, 307, 301, 351, and partly 302). The situation was different in the north-western part of the hilltop. The features from the Roman, Migration, and Árpádian periods showed sharp outlines against the greyish white clayey surface. The westernmost Celtic objects outlined on the

[7] Road no. 83 joining into the stretch of highway M1 bypassing Győr, where rescue excavations were conducted in 1993–94 and which was opened in 1994, intersected the Zsigmond király Road. The Old Rába could no longer be reached from here. At present, Zsigmond király Road ends at the buildings of the Savanyító.

[8] This is the same ditch that separated the Szeles and the third excavation surfaces to the north-east.

[9] Here we would like to thank them for their contribution.

[10] The rescue excavations were conducted by I. Egry, E. T. Szőnyi, P. Tomka (Museum of Xantus János, at Győr) and A. Vaday (Archaeological Institute of the Hungarian Academy of Sciences).

scraped surface were the following ones from north to south: 755, 756, 368, 377, 450, and 465. Grave ditch no. 745 appeared 25 cm even deeper than the above features. The outlines of graves nos 754 and 752 appeared under the levels of the Migration and Árpádian periods. Graves nos 754 and 737, at the same time, could be spotted only 45–47 cm deeper. At present the surface is flat. The original surface formation was significantly different.

Both the south-eastern and the south-western slopes were partly filled up before the Celtic period but both depressions contained intermittent watercourses at the time of the Celtic occupation. So it is plausible that the graves stretched until the desiccated bank of the watercourse. It means that the expansion of the cemetery towards east and west was hampered in this part of the track by the watercourse, the groundwater, and also by the weather, and, at the same time, they functioned as boundaries as well. The deeper graves were covered in the north-western, deeper clayey part by the fluviatile clay deposit of a greater flood after the Celtic period. The slope was significantly steeper here in the Celtic period than in the south-eastern part and the graves at the edge of the slope were covered with the deposits of a flood sometime between LT B1 and the 8th century AD. The features of the Avar period were sunk into this, by then desiccated filling.

Both the sandy and the grey clayey soils made the spotting of the graves difficult. The so-called Ménfőcsanak-Szeles surface was first uncovered, where the same changes of soils could be observed as later along the track of the Savanyitó. The outlines of the shafts of the Middle Bronze Age graves were only rarely visible on the scraped surface of the sandy hilltop in the Szeles part. The surfaces between the graves seemed archaeologically intact. Nevertheless, the surface of the sandy soil open to the strong winds changed where there was no high vegetation in the area of the cemetery to bind it. New topsoil was built by the wind in the spring and the late autumn or at the beginning of the winter. This resulted that a seemingly intact, unbroken layer was deposited by the wind over the earlier graves. For lack of thick vegetation, the humus layer under the ploughed layer could be differentiated by its organic material content and not by its colour or texture, which made the recognition of the grave outlines difficult. A 30–40 cm thick humus was removed by the scraper in this area, and the black humus stripes of the modern deep ploughing often appeared on the scraped surface. Some of the graves of the Encrusted Pottery Culture lay on the border of the ploughed soil, so sometimes the plough dragged the graves that lay higher. The same was the situation in the depressions between the hilltops where the floods of the Rába covered the archaeological floor levels with a clayey inundation loam. On both surfaces, test cuttings were deepened to a greater depth even where there appeared no trace of human activity on the surface, and we found further archaeological features that had been covered with inundation soil or drifted sand. After the experiences on the Szeles surface, similar control cuttings were used in the Savanyitó territory both in the looser sand and in the inundation area where no archaeological features had been found. In result, we found out that the ravine in the south-western part of the Celtic cemetery was filled up mainly before the LT B1 period, while another flood deposit covered the inundation layer from before the LT B1 at the deeper slope on the north-western, steeper side of the hills after the LT B1. In the Celtic period, however, both ravines must have been dryer than at present, as the graves were often moist in the two above-mentioned lateral belts during the rescue excavations and some of them even stood underwater. Groundwater seeped strongly in the lowermost 10–20 cm of graves nos 752, 754, and 737 in the north-western part, and it was evident from the bones and the finds as well that they had frequently stood in intermittently rising water. It is improbable that the graves were deepened to the groundwater level or even deeper in the Celtic period, so this observation offered another opportunity for comparison. The traces of a filling in a dryer and windy period could be observed on the crest of the hill. Sand mixed with drifted loess covered the earlier unearthed graves nos 376/A and 376/B, while the nearby grave no. 377 must have been deepened already into the accumulated sand since this appeared first at scraping.

The extension of the cemetery could be determined in the track of the road from excavation experiences as well as from the soil structure, which was supported by later excavations along the track towards south-east and also north-west.

III. DESCRIPTION OF THE CEMETERY

a. Description of the graves

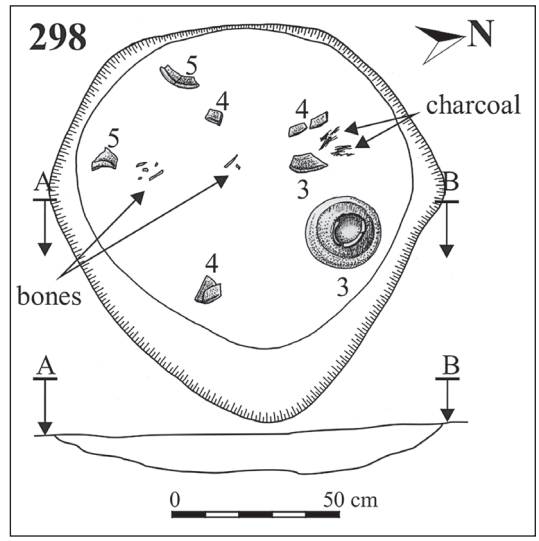
The ritual elements and the order of use are rather complex. The graves were not numbered continuously, the numbers of the graves and the grave ditches are the numbers given to the features at the excavations. The graves were not given new numbers in the publication. Characters A-B-C are added to the numbers if the burials were in superposition. The sub-numbers 1 or 2 after the grave numbers indicate the contemporary burials in the same grave shaft.

In the inventory, the number of the grave sheet was indicated beside the ordinary number of the described find. This number is identical to the find numbers on the grave sheets of the excavation documentation.

Grave no. 298

Shape and measurements of the cremation grave: The outline of the grave shaft appeared as an irregular round discolouration in the black, greasy, moist clayey soil in the level of the subhumus. Its filling could be distinguished from the environment being darker black, sooty with several large charcoal lumps.

The diameter of the elongated circular shaft was 120 × 120 cm. Relative depth: 12 cm.[11]



Description: A Roman sherd with striped red painting was found during scraping. Besides, the fragments of a brick-coloured wheel-thrown **bowl** with everted rim were found in the centre and in the northern part of the discolouration, which was separated by the plough. The fragments are weathered. The small fragments of the same bowl and other, indeterminable sherds were found in the western part of the pit, together with large charcoal lumps 2–6 cm above the bottom of the shaft. The cross-section showed that the whole shaft was full of smaller and larger charcoal lumps. The charred bones lay in the filling also in the central part of the grave. The most intact find was an urn. The filling of the urn was different from that of the shaft. It contained a little soot and was of a lighter colour. The quantity of charcoal was also smaller than in the shaft. The human ashes were in the urn, and two burnt iron fibulae lay on the bottom of the urn under the ashes. Traces of secondary burning could be detected on the urn itself.

There is no definition of sex and age determination of the cremation grave.

Finds:

1. A large ***iron fibula***. Only the spring gear with a large spiral, the bow, and a fragment of the pin survived. The bow is circular in cross-section. Probably burnt. *(Fig. 2.2)*

[11] The relative depth was measured from the scraped surface where the features appeared.

2. A smaller ***iron fibula***. It has broad spiral wings with the chord external, the bulging bow is round in cross-section. The end of the foot, which is narrower than the bow, was returned on the bow. *(Fig. 2.1)*.

Grave furniture:

1. A greyish black, wheel-thrown ***urn***. It was baked in a reducing environment and it was secondarily burnt as well. The bottom is omphalos-shaped, and there is a circular groove 1 cm above the omphalos. M.d. = 11 cm, B.d. = 3 cm, H. = 14.6 cm. *(Fig. 2.4* and *Fig 31.3)*

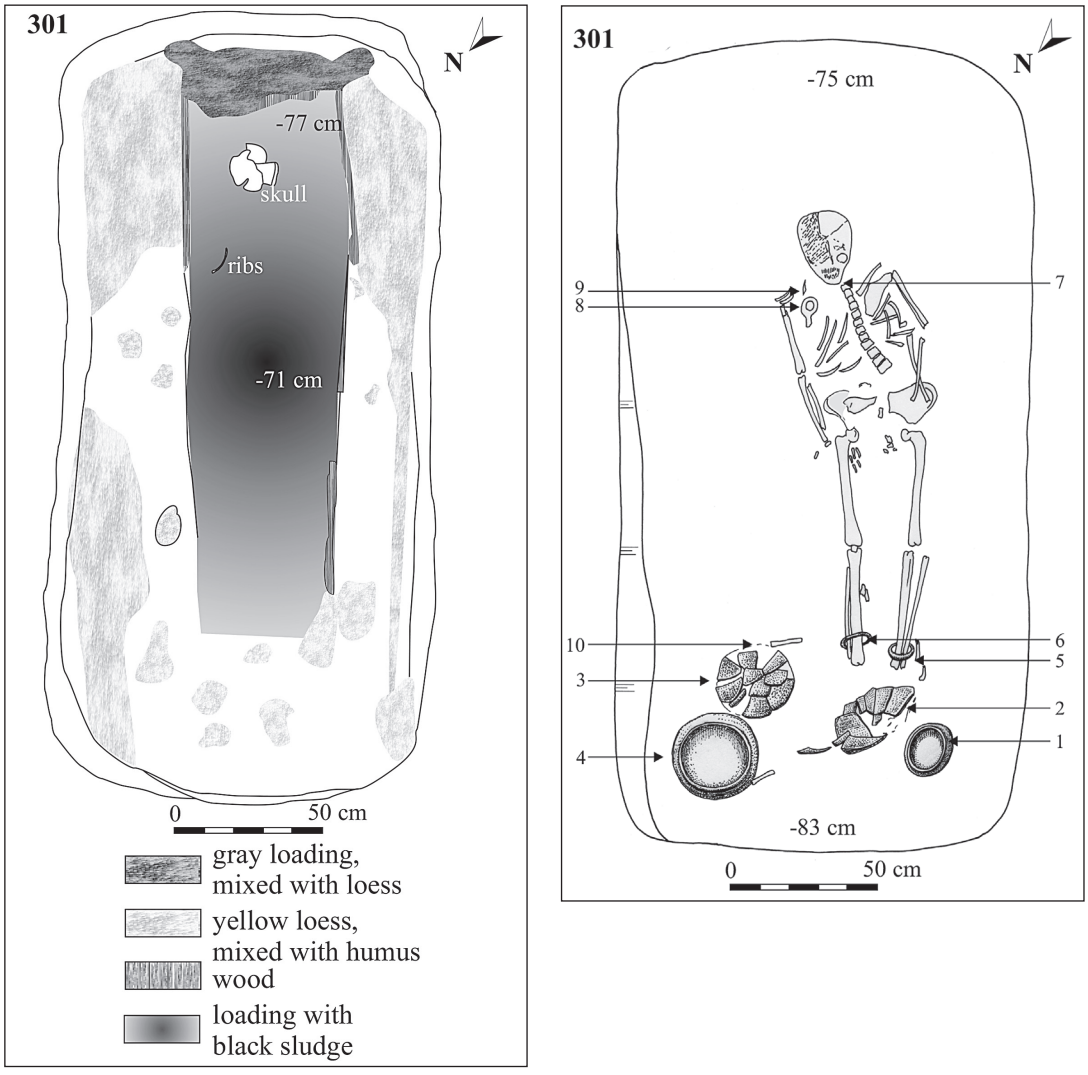
2. A wheel-thrown, greyish yellow ***bowl*** with everted rim. The clay was tempered with sand. There is a rib in the arch of the neck. M.d. = 23 cm. *(Fig. 2.5)*

3. A fragmentary ***urn***. The rim is burnt to a light grey colour, the shoulder is greyish brown, the bottom is reddish. Only fragments have been preserved. The clay was tempered with sand. M.d. = 13 cm. B.d. = app. 12 cm. *(Fig. 2.3)*

Grave no. 301

Grave ditch: feature no. 351

The surface slopes in the north-eastern part of the area, where the yellow sandy soil is gradually replaced by a black, moist deposit that fills in the natural depression. The grave ditch (feature no. 351) was vaguely outlined already in this greyish black transitional zone. The grave ditch is of an irregular quadrangular shape with rounded



corners. The sections of the ditch are not straight, their direction is sometimes irregular. Measurements of the ditch: length in the eastern part: 7.65 m, width 25 cm, inner length: 7.15 m; outer length in the north: 7.25 m, inner length: 6.70 m, width: 30 cm, length in the west: 7.35 m outside and 6.60 m inside, width: 30 cm, length in the south 7.40 m outside and 7.30 m inside, width: 30 cm. The filling of the ditch is uniformly greyish yellow, somewhat mixed with sand. It could be observed only vaguely in narrow lines on three sides, while the south-western part could not be spotted at the first scraping. Later, 5 cm deeper, this section also appeared, although dimly. The ditch was difficult to excavate here, it could barely be distinguished from the surrounding, inundated humus. The filling of the ditch was dark brown here in the blackish humus. It had a semicircular cross-section, its depth varied between 8 and 10 cm from the surface where it had appeared. The direction of the axis of the grave ditch was the same as that of the grave it framed. Twenty-five cm from the southern corner of the south-eastern section of the ditch, a circular discolouration of a diameter of 60 cm appeared, which was younger than the grave ditch since it intersected the latter. It contained no find material, the filling was uniform, greyish, mixed. Another circular spot appeared at the northern third of the western section of the ditch 150 cm from the corner. Its diameter was 90 cm. The grave ditch intersected this pit. The filling of the ditch was uniform greyish humus, while the intersected pit was naturally filled in with darker greyish black humus during a longer time. It did not contain find material either.

Shape and measurements of the grave: The grave appeared on the surface as a sub-quadrangular discolouration with rounded corners. The soil was darker, black, and moist in the eastern part. The grave shaft somewhat narrowed downwards. Its length was 270 cm (along the medial axis), its width was 130 cm at the southern end and 120 cm at the northern one. Its depth was 83 cm in the northern side and 79 cm at the head in the southern side. The bottom slightly rose towards the head.

Orientation: N + 237°

Description: The spot of the grave appeared as a dark discolouration. The shaft had a dark brown, moist filling in the upper 23 cm, then a sandy yellow filling, strongly mixed with loess followed. Here, the walls of the shaft were deepened into a bright dark yellow compact waterlogged soil. Under this level, the shaft was dug into a loose ground of fluviatile sand mixed with clay. Tiny charcoal pieces were densely scattered in the filling of the grave.

The first find, a cracked vessel, was found in the shaft in the depth of 60 cm. Another grave appeared as a narrower black discolouration in the depth of app. 70 cm, under the loess. A clayey band, probably plaster, could be observed at the skull in the eastern and southern sides. The skull was strongly fractured. The poorly preserved fragments of **iron** and **bronze objects,** better to say their rust and patination, could be observed in the filling of the shaft.

The bottom of the shaft sloped, brownish, scaly, flaky discolourations appeared in the depth of 70 cm in the northern side and in the depth of 77 cm in the southern part. The discolourations imply a **catafalque**. The length of the catafalque was 225 cm, its width 50 cm, the discolouration of the wood was 2–3 cm thick. The handles of the catafalque standing at a slight angle to one another could be documented in the southern part, they reached 17 cm over the frame of the catafalque. The traces of a crossbeam could be observed on the northern side (foot region of the grave) parallelly to the end of the catafalque near the middle of the grave. The crossbeam was 42 cm from the foot-part of the catafalque.

In this depth, traces of surface destruction could be observed along the longitudinal axis between 140 and 190 cm from the northern end of the grave, approximately in the central part, in a width of 102 cm. At first sight, it seemed to be a later violation. At scraping, however, it turned out that the filling was blackish, moister, and loamier in a band. It seems that a heavier rainfall had washed earth into the deeper parts of the grave at the time of the burial before the rite was finished. The traces of this rain were unearthed.

The 150 cm long, very poorly preserved skeleton did not lie in the axis of the grave but in the eastern half, with the skull in the south-east. It was laid on the back, in an extended position, the right hand was put under the pelvis, the left hand on the pelvis (the bones of the hand are missing). The bones of the legs were also missing. The vertebral column was bent towards the middle of the grave. The smaller bones crumbled, and the rest of the bones were also very poorly preserved. Juvenile, 17–19 years old, the sex cannot certainly be determined.[12]

[12] Determination by Kitti Köhler. Here we should like to thank her for her work.

Articles of wear:

There were several fragmentary iron objects found at the right clavicle, which could not be determined. Some of them were only indicated by their traces (grave sheet nos 8–9).

1. (7) A ***bronze chain*** round the neck, it slipped towards the left clavicle. The first three small links of round cross-sections were joined, then the three chains were twisted together. *(Fig. 3.2)*

2. Fragments of chains from circular, massive links: one was made from larger oval links (diam.: 2.5 × 1.5 cm) *(Fig. 3.8)*, the smaller one was also of oval links (diam.: 1.8 × 1 cm), with textile remains in the iron rust. *(Fig. 3.10)*

3. A broken iron pin of circular cross-section. *(Fig. 3.9)*

4. An amorphous laminated (?) iron lump with textile remains. *(Fig. 2.9)*

5. An iron sheet fragment also with textile remains. *(Fig. 2.10)*

6. Fragments of iron objects of various measurements, outlining an 8-shape, with earth rusted onto their surfaces. Remains of textiles could be spotted on their surfaces on both sides. The textile imprints on the two sides of the objects suggested cloths of different thread thickness and weaving methods. *(Fig. 2.6,7,8)*

7. An ***iron fibula***, rusted to a degree that it could hardly be identified, was found at the same place. The knob at the end of the foot of the one-piece fibula rusted to the bow. A fragment of the pin could also be identified. *(Fig. 3.6)*

8. Another one-piece ***iron fibula*** rusted to the above one. The knob at the end of the foot was returned to the bow. It bears an arched ridge ornament. *(Fig. 3.7)*

9. (6) A bronze ***anklet*** on the right leg. It is solid, round in cross-section, plain inside, beaded outside, with grooved transversal lines on the protuberant beads. Both terminals are arched and strongly seal-shaped. Diam. = 7.5 cm. *(Fig. 3.5)*

10. (5) A bronze ***anklet*** on the left leg. It is the pair of the above one. Diam. = 7 cm. *(Fig. 3.4)*

11. Fragment of a ***bronze wire*** found in the filling in the upper part of the grave shaft. It is round in cross-section. It could be a fragment of the chain. *(Fig. 3.1)*

12. A kidney-shaped ***iron object*** from the filling of the grave. It is a thin iron sheet. *(Fig. 3.3)*

Grave furniture:

1. (3) The fragments of a larger broken ***urn*** were found 20 cm outside the right ankle. The bones of the right foot were scattered among the sherds of the urn (an animal must have displaced them). The clay of the urn was slightly tempered with sand, its colour is black in the centre of the cross-section and brick-colored near the surfaces. A black layer covers both surfaces. It has an everted rim and bears a rib on the neck. It is strongly weathered. M.d. = 16 cm, B.d. = 11.6 cm, H. = ? *(Fig. 3.14)*

2. (4) The fragments of a larger ***bowl*** were found in the corner between the urn and the northern shorter wall of the grave. It is black on both surfaces, brick red in cross-section, the rim is everted and there is a ridge in the arch of the neck. The vessel was broken and only the weathered fragments could be found in the grave. M.d. = 29 cm, B.d. = unmeasurable, H. = unmeasurable. *(Fig. 3.13)*

3. (2) A ***vessel*** broken into pieces was found at the feet. Some small perforations of a diameter of 2–3 mm can be observed in the wall of the vessel, one of the perforations was not completed. The rim is everted and there is a rib in the arch of the neck. M.d. = 14 cm, B.d. = unmeasurable, H. = unmeasurable. *(Fig. 3.12)*

4. The sherds of a dark, wheel-thrown ***vessel*** were found among the fragments of the bowl no. 3. M.d. = 9 cm, B.d. = unmeasurable, H. = unmeasurable. *(Fig. 3.11)*

5. (1) There was a smaller ***vessel*** beside the above one. The bowl? baked in a reducing environment broke into tiny pieces and it could not be reconstructed even by restorers, it practically weathered away.[13]

6. (10) ***Animal bones*** beside vessels nos 1 and 2.

Young ***swine*** (subadult): bones of the right forelimb (scapula distal end, humerus, radius, ulna).

Cattle: rib fragments, upper part (6 items), and lower part (7 items) of the rib cage + small rib fragments: at least 4 ribs.

Bird bone (hen? ulna).[14]

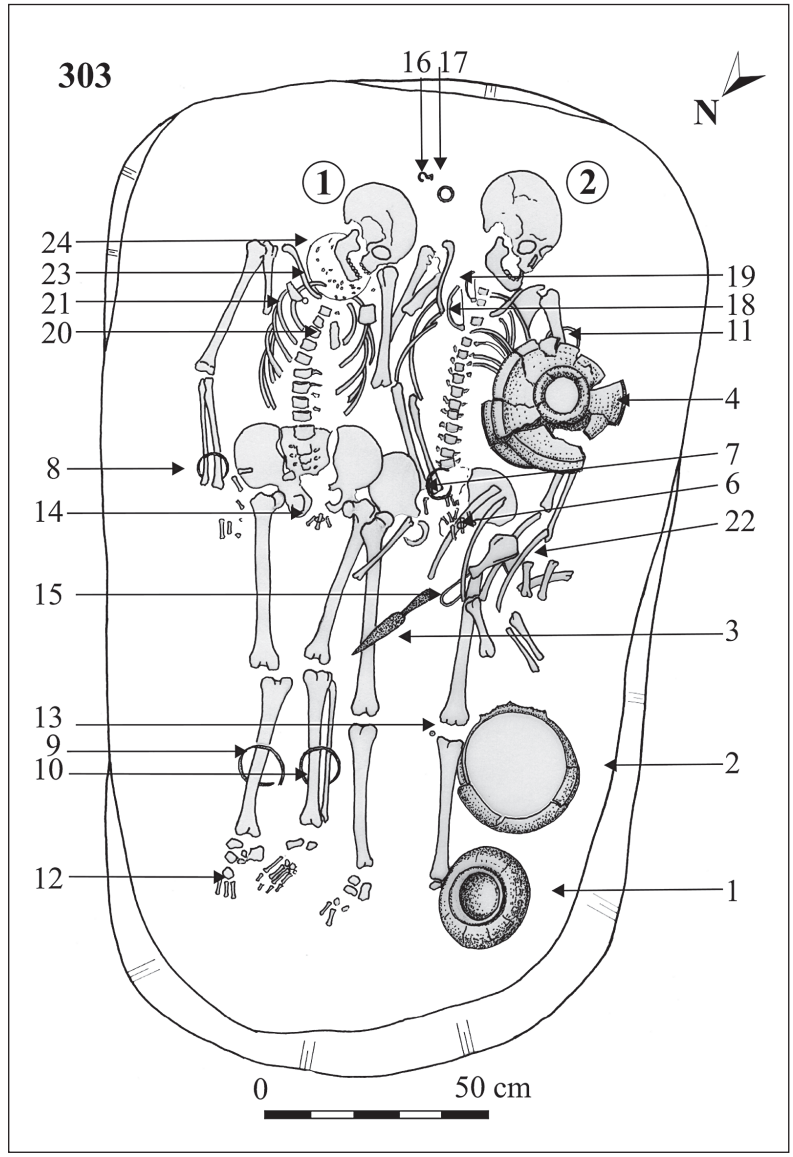
[13] All the vessels were very poorly preserved, most of the fragments could not be fit together, although the vessels were originally entire.

[14] The animal bones were determined by László Bartosiewitz. Here we should like to thank him for his work.

Grave no. 303

Grave ditch: feature no. 653 = 363

The short stretch of ditch no. 653 ran along the eastern side of Celtic grave no. 303 but it was not aligned. Only on a short section remained due to a later disturbance. It seems to be the continuation of grave ditch no. 363 running on the other side. Stretch no. 363 was a shallow and vaguely outlined ditch that ran parallel to the longitudinal western wall of grave no. 340. Two oval discolourations were outlined beside the grave but their orientations were different from the direction of the ditch.



The length of the grave ditch in the east was 4.5 m outside and 4 m inside, its width was 25 cm. The western stretch was 4.6 m outside and 4.2 m inside, its width was 20 cm. The length of the northern stretch of the ditch was 5 m outside and 4.4 m inside and it was 35 cm wide. On the southern side, the ditch was not preserved.

A multiple superpositions could be observed on the surface around the grave and its ditch. Ditch no. 652 was narrow with a uniform filling and it did not contain finds. This ditch intersected the ditch of grave no. 303

(363 + 653). At the same time, ditch no. 652 was intersected by grave no. 362, which means that the former one was the older.

Shape and measurements of the grave: The grave had trapezoid shape with rounded corners. Its axis was 220 cm long. Its width was 120–125 cm in the north and 100 cm in the south. Its depth measured 60 cm.

The grave was not placed in the centre of the ditch. The ditch was dug along the western wall of the grave, while the axis of the northern stretch of the ditch diverged similarly to that of the eastern stretch. Only a part of the ditch could be observed in the south. The grave appeared on the scraped surface as an oblong discolouration with rounded corners, filled in with slightly grainy brownish grey soil.

Orientation: N + 245°

Description: Two skeletons an adult female, 35–45 years old (303.1), and an adult male, 40–50 years old (303.2)[15] lay in the grave with the skulls to the south-west. The two skeletons were extended on the backside by side. The male skeleton (303.2) was 162 cm long with the face turned to the west. The arms lay along the body. The length of the female skeleton (303.1) was 147 cm and the face was also turned to the west. The right arm was extended along the body, the left hand was placed on the pelvis of the male skeleton. The bones were medium preserved.

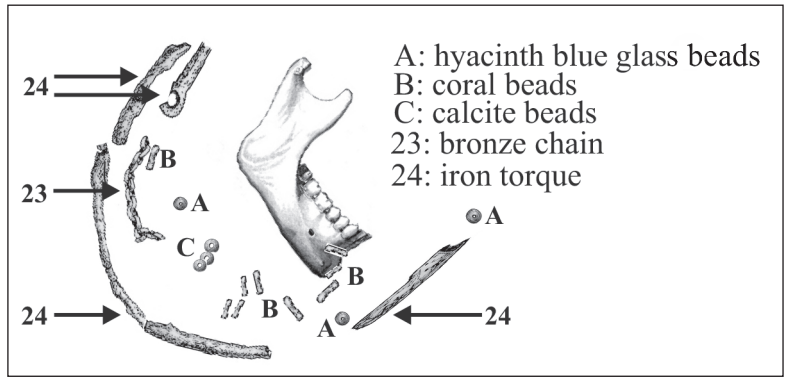
Articles of wear:

A female skeleton (303.1)

1. (23) A ***bronze chain*** round the neck, made of small bronze links *(Fig. 4.1A).* The entwined bronze wire links are of oval and round cross-sections, the closing link is a double ring. *(Fig. 4.1B)*

2. (23) A bronze ***pendant*** beside the chain. A closed, cast ring of a semicircular cross-section closed by a small, plate element on the top, which was cast in one piece. The end of the plate element is broken. *(Fig. 4.2)*

3. (23) A ***string of beads*** beside the bronze chain: 11 hyacinths blue, transparent, biconical, globular and amorphous glass beads, 1 cylindrical amber bead of a cut base, a transparent blue glass bead twisted in spiral coils *(Fig. 4.8),* 43 amorphous coral and white calcite beads (the latter ones disintegrated when moved). *(Fig. 4.3,7)*



The following items lay between the skulls of the man and the woman towards the wall of the grave.

1. (16) A bronze ***pendant.*** It is a cast, closed, circular pendant of round cross-section, with one terminal ending in a funnel-shaped element. *(Fig. 4.5)*

2. (17). A cast closed ***bronze ring*** (probably an element of the necklace of the woman displaced by an animal). *(Fig. 4.6)*

3. (21) An ***iron fibula*** under the right clavicle. It had an external chord, and textile remains at several spots. Length: 4.5 cm. *(Fig. 4.9)*

4. (20) Fragments of an ***iron*** and a ***bronze chain*** on the left side of the vertebral column. The bronze chain was made of double oval links. The iron chain was similar but the links rusted together. *(Fig. 4.10)*

5. (8) A ***bronze bracelet*** on the right wrist (the traces of silver plating could still be observed at the excavation), the remains of the cloth of the dress were conserved in the rust. It is an open bracelet with slightly thickening terminals. Its cross-section is octagonal at the terminals and round elsewhere. Diam. = 6 cm. *(Fig. 4.12)*

[15] Determination of K. Köhler.

6. (7) A ***bronze bracelet,*** similar to the above one, on the left wrist. Diam. = 6 cm *(Fig. 4.11)*

7. (10) A bronze ***anklet*** of oval cross-section on the bones of the left leg. There is a perforated disc on one terminal, the other terminal is hooked. Diam. = 8.5 cm. *(Fig. 4.16)*

8. (9) A ***bronze anklet***, similar to the above one, on the right leg. It conserved textile remains. Diam. = 9 cm. *(Fig. 4.17)*

9. (14) An animal displaced the bones of the fingers and the hand to between the thighbones. Among the bones, there were the fragments of an ***iron ring*** of round cross-section. Diam. = 2.4 cm. *(Fig. 4.14)*

10. (6) A ***bronze ring*** of round cross-section on the ring finger of the left hand. It is ornamented with densely incised, ridged patterns. It was not cast in one piece, the open terminals fit closely. Diam. = 2.3 cm. *(Fig. 4.13)*

11. (5) A hooked, quadrangular ***iron clasp*** with a rivet was found in the pelvis. The oblong-shaped body is 3.2 cm long and 3.8 cm wide. The bent-up terminals suggest that it was fastened to an approximately 3.2 cm wide leather belt. *(Fig. 4.15)*

12. (12) ***Beads*** at the bones of the right foot. 4 amber beads of various sizes, 1 biconical large, transparent, turquoise blue glass bead. *(Fig. 4.18)*

13. (24) An ***iron torque*** around the neck beside the bronze chain. It conserved textile remains. The solid, rusted, fragmentary torque is circular in cross-section, the terminals are missing. *(Fig. 4.4)*

Male skeleton (303.2)

1. (19) Fragment of an ***iron fibula*** and its pin on the right clavicle. The foot is missing. *(Fig. 5.1)*

2. (18) Another ***iron fibula*** under the above one (at the lower end of the displaced right clavicle). Length = 10.5 cm, fragmentary, with the chord external. *(Fig. 5.2)*

3. (11) A ***bronze bracelet*** on the left humerus with textile remains. The solid bracelet was bent into waves. Diam. = 8.5 cm. *(Fig. 5.9)*

4. (13) Traces of an ***iron object*** at the left patella. The object has disintegrated.

5. (13) A globular ***amber bead*** at the same place. *(Fig. 5.3)*

6. (15) An ***iron clamp*** bent at both terminals lay between the spearhead and the femurs under the cattle bones. Length = 9 cm. *(Fig. 5.7)*

7. (22) An ***iron band***. One terminal is a perforated disc with a rivet, the other one is returned. It was found outside the left femur, also among the cattle bones. *(Fig. 5.6)*

Grave furniture:

8. (3) A ***spearhead*** lay across the right femur of the male skeleton no. 2, pointing towards the feet. As suggested from its position, the wooden shaft of the spear was about 70 cm long or it was broken before being placed in the grave. The length of the spearhead is 25.5 cm, the socket is 4.5 cm long. Socket diam. = 2 cm. *(Fig. 5.13)*

9. (4) An ***urn,*** broken to pieces, on the left humerus. A rib runs round on the neck under the everted rim. The profile is stepped between the shoulder and the belly. M.d. = 12.5 cm, B.d. = 10 cm, H. = 20 cm. *(Fig. 5.10* and *Fig. 30.3)*

10. (2) A larger ***bowl*** between the left patella and the wall of the grave. The rim is everted, there is a rib in the arch of the neck, the bottom is omphalos-shaped. M.d. = 23 cm, B.d. = 3 cm, H. = 10 cm. *(Fig. 5.11* and *Fig. 34.4)*

11. (1) A smaller ***urn*** beside the left ankle bone. The rim is everted, there is a rib on the neck. M.d. = 14 cm, B.d. = 9 cm, H. = 18 cm. *(Fig. 5.12* and *Fig. 31.1)*

12. ***Cattle*** ribs and clavicle of on the left hipbone and thigh bone.

Finds recovered from the filling of the grave:

13. 6 hyacinths blue globular and a disk-shaped also hyacinth blue ***glass bead*** *(Fig. 5.4)*, 11 amorphous ***coral beads*** *(Fig. 5.5)*

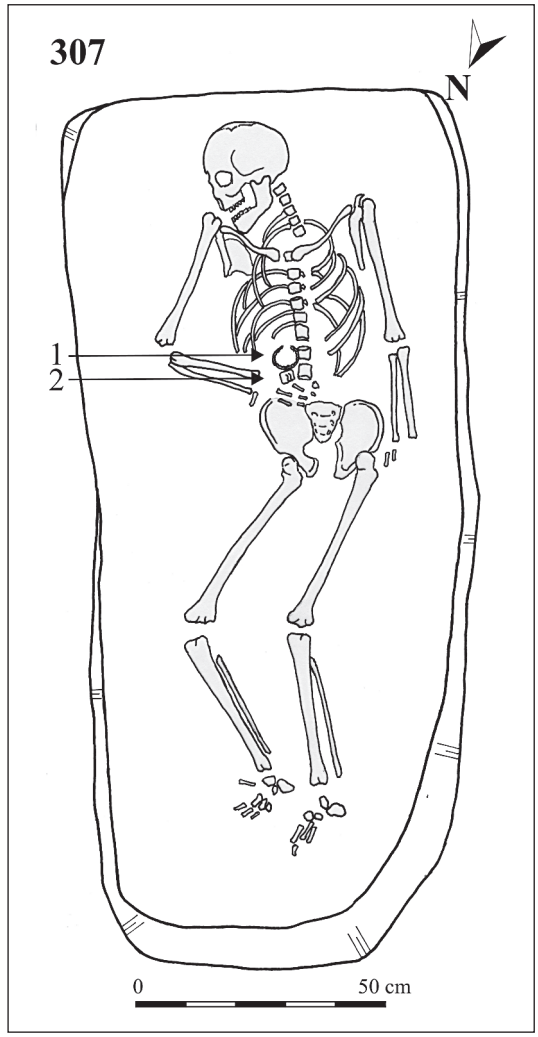
14. The fragment of an ***iron bracelet*** also from the filling of the grave. It conserved textile remains in the rust. *(Fig. 5.8)*

15. ***Cattle bones*** beside the skulls.

Vessels and animal bones were found only beside and partly over the male skeleton.

Grave no. 307
Without grave ditch

Shape and measurements of the grave: The south-eastern, shorter wall was 80 cm broad, the north-western wall was more rounded and irregular. It was 55 cm broad. The longitudinal axis of the grave was 165 cm in a N-NW–S-SE direction. The grave was 96 cm deep from the mechanically scraped surface. The western half of the grave was somewhat deeper.



Orientation: N + 245°

Description: It appeared as a slightly brownish discolouration. The filling of the spot was light brown, grainy, approximately 1 m × 0.5 m large. A single skeleton lay in the grave in a S-SE–N-NW orientation with the skull to SSE. The bones are medium well preserved. The skeleton was partly extended on the back, the face was turned to the east, the right lower arm was bent over the pelvis, the left arm was extended along the body. The legs were parallelly flexed and turned to the east. Length of the flexed skeleton: 138 cm, skeleton length: 148 cm. Anthropological determination: female, 20–59 years old.[16]

[16] Determination of K. Köhler.

Articles of wear:

1. (3) A ***silver ring*** on the right hand. Closed, cast. In cross-section, it is arched, laminar. Diam. = 2 cm. *(Fig. 6.3)*

2. (1) A ***bronze bracelet*** on the right wrist. The terminals are ridged, open, and seal-shaped. It is plain both inside and out. Diam. = 6 cm. *(Fig. 6.1)*

3. (2) A quadrangular, hooked ***iron clasp*** with a rivet, next to the bracelet. Fragmentary. Length: 3 cm. *(Fig. 6.2)*

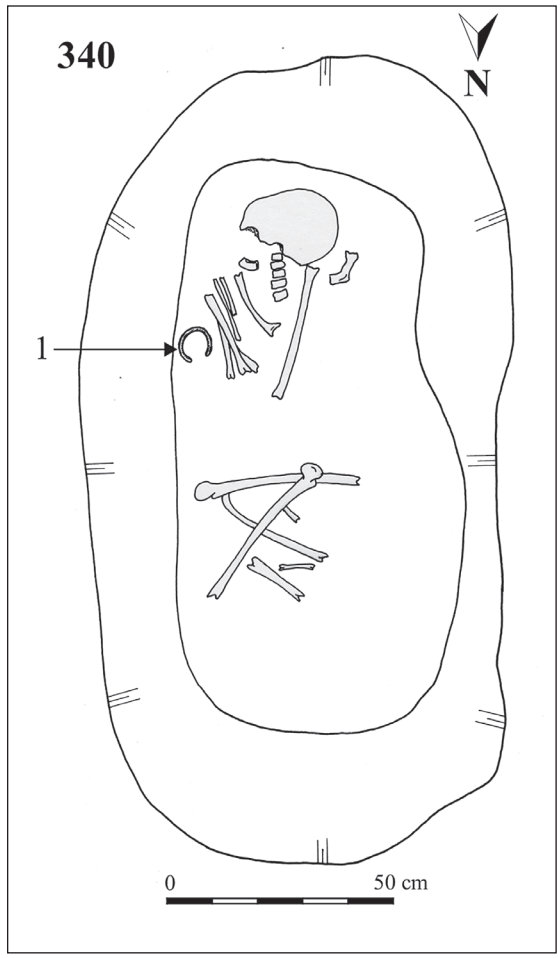
Grave furniture:

There wasn't any.

Grave no. 340

Without grave ditch

Shape and measurements of the grave: It appeared on the scraped surface as an oval discolouration in the yellow fluviatile sand. Its length was 179 cm, its width 91 cm. Its filling was humus with sand grains. The shaft of irregular oval outlines narrowed downwards in the sand keeping a similarly irregular shape. The bottom of the grave was reached at 72 cm from the mechanically scraped surface. On the bottom, it was 125 cm long and 50 cm wide at both the head and the feet.



The longitudinal axis of the grave was N–S oriented, it measured 179 cm when the grave appeared and 125 cm on the bottom. The maximal width of the grave was max. 90 cm.

Orientation: N + 135°

Description: A large, vague, greyish discolouration appeared on the mechanically scraped surface. Scraping the surface deeper, two more discolourations appeared beside grave no. 340 (in a different orientation than the grave!). The irregular one at grave no. 362 yielded neither find material nor bones except for an indeterminable prehistoric sherd at the NW side in the depth of 20 cm. This pit probably belonged to the Early Iron Age settlement that A. Uzsoki had also observed. It could be its last feature toward the west.

Originally, the skull was in the southern end (as suggested by its orientation). The position can only be estimated since the skeleton is very defective. At first glance the grave seemed to have been robbed or violated, the bones of the skeleton, first of all, those of the leg, were replaced in the shaft in a secondary position. The post-cranial bones of the adult and the length of the grave suggest, at the same time, that there was not enough space in the grave for a body in an extended position. The arrangement of the long bones indicates that the body was crouched, perhaps on the right side.[17]

Find:

1. A closed iron ***bracelet*** of a round cross-section between the right arm and the wall of the grave. Diam. = 5.6 cm. *(Fig. 4.13)*

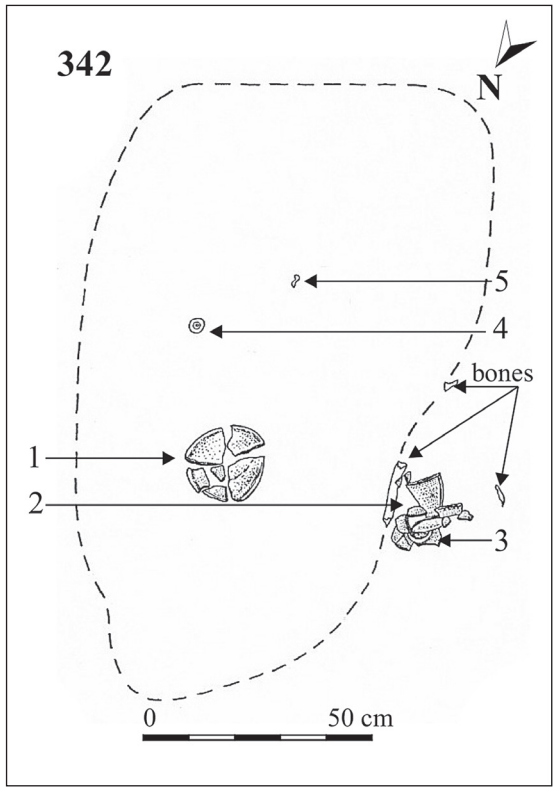
Grave furniture:

There wasn't any.

Grave no. 342 *(Fig. 23)*

Without grave ditch

Shape and measurements of the grave: They cannot certainly be told. The grave appeared on the mechanically scraped surface as a very vague, darker brown discolouration in a length of 135 cm and a width of 40–85 cm.



[17] The bones were mixed when the Archaeological Institute's warehouse was soaked.

Orientation: N + 226° (The orientation is only estimated from the straight line of the discolouration accepted as the original wall of the grave.)

Description: A part of the discolouration has disappeared and the yellow stripe of an animal burrow was outlined in the darker brown discolouration. It seemed that the remains of the burial of a woman could be registered on the mechanically scraped surface. It was striking that the graves in the area all appeared deeper than the grave ditches. The bottom of the grave – if the discolouration ever indicated a grave – was higher here than the grave ditches of the neighboring graves Nr. 364 and 360!

The dead or the remains were placed on the surface or into a very shallow pit and a mound was raised over them. During its clearing, a very shallow pit of NW–SE orientation appeared on a 1.43 m × 0.92 m large surface filled in with light yellowish mixed soil. The unbroken ground was reached already in the depth of 6 cm. The sherds of the damaged vessel were pressed into the earth, they stood separately as shifted into a secondary position. There was no human skeleton in the grave, only the fragment of a human fibula and a few scattered bone flakes were found. Human bones in a flaky condition could be spotted only in another, 30 cm × 20 cm large area outside the one described above (they were not charred!). The articles of wear and use and the grave furniture were scattered to a depth of 5–7 cm from the mechanically scraped surface. After the clearing of the grave, a few sherds were found on the bottom, outside the estimated grave pit, together with a few burnt bone flakes. Concerning these latter ones, it cannot be told if they came from humans or animals.

Article of wear:

1. Two fragments of an ***iron fibula*** (?) in the southern part of the discolouration, perhaps the bow and the knob. The remains were so strongly rusted than they crumbled even when they were removed together with the embedding earth.

Article of use:

1. A biconical ***spindle whorl*** 20 cm north of the fibula.[18]

Grave furniture:

1. The fragment of a so called ***Linsenflasche*** among the bones. M.d. = 7 cm, B.d. = 7 cm, H. = 18 cm. *(Fig. 6.7* and *Fig. 32.2)*

2. Fragments of a ***bowl*** in the centre of the discolouration. It is hemispherical with slightly everted rims, made of coarse clay. M.d. = 14 cm, B.d. = 5 cm, H. = 6 cm. *(Fig. 6.6* and *Fig. 35.6)*

Fragments found on the bottom of the grave:

1. The belly fragment of a brick-coloured, wheel-thrown ***bowl***. The exact shape cannot be reconstructed.

2. The belly fragment of a brick-coloured, yellowish, wheel-thrown ***urn***, tempered with sand. The exact shape cannot be reconstructed.

3. Fragment of a ***vessel*** between the flask and the bones. The rim is straight and there is a horizontal ridge segmented with finger imprints under the rim. M.d. = 15 cm. *(Fig. 6.5)*

Grave no. 343/A, 343/B

Grave ditch: feature 344

The quadrangular grave ditch could not entirely be unearthed since the northern stretch extended under the humus deposition.

The width of the trench varied between 20–40 cm, its depth between 10–20 cm from the mechanically scraped surface.

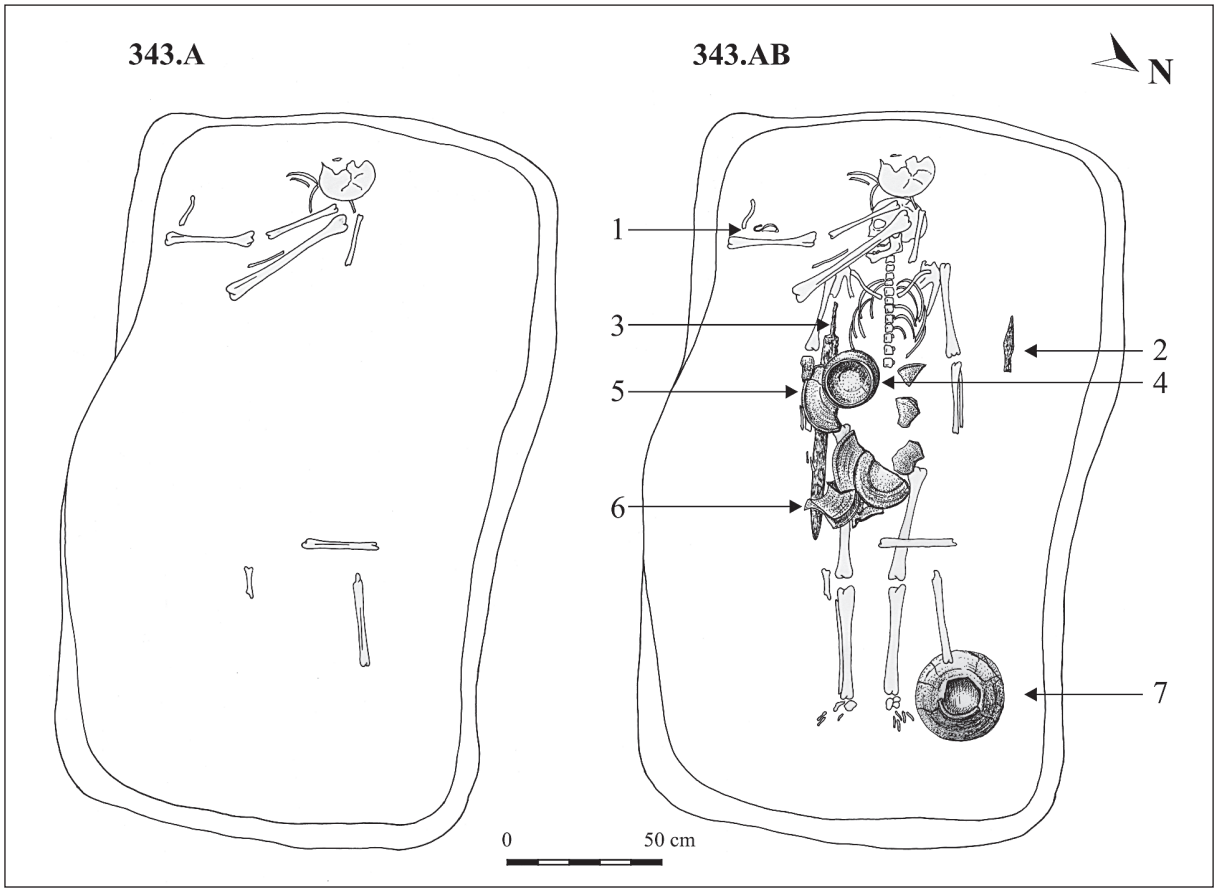
The length of the entirely unearthed southern stretch was 5.45 m long outside and 4.95 m inside in a width of 30 cm. The western stretch of the ditch was unearthed to a length of 5.75 m outside and 5.40 m inside in a width of 35 cm. The eastern one was unearthed to a length of 5.1 m.

Shape and measurements of the grave: The oblong-shaped shaft with rounded corners was 220 cm long and 130 cm wide.

Orientation: N + 240°

Description: The grave was not placed in the axis along the medial line of the area bordered by the western and the eastern stretches of the ditch, it was closer to the western section. The filling of the ditch was greyish

[18] It has been lost.



uniform humus, slightly different from the sandy unbroken ground. The grave ditch intersected the eastern stretch of grave ditch no. 346 of the neighbouring grave 345.

The discolouration with rounded corners and an axis of N + 198° orientation appeared with very vague and uncertain outlines within the grave ditch. Five cm deeper, however, the axis of the grave distinctly showed in a direction diverging 42° west from the above longitudinal axis. During the excavation, we found that the shaft of a later burial was dug over an earlier grave. The dead buried first (grave 343/A) was disturbed by the second burial (grave 343/B). The bones were probably removed during the digging of the grave and were thrown back into the shaft when the dead in grave B was buried. So the bones lay partly over the body of the second burial in the upper part of the grave. The depth of the grave was 20–24 cm from the surface where the spot distinctly appeared. The filling at the bottom of the grave was not uniform. In the north-western part of the grave, the second shaft was dug somewhat deeper than the earlier one, which was refilled with darker earth mixed with charcoal grains. The bottom of the intact part of the first grave was found only in an area of a diameter of about 65–70 cm on the NE side. During the second burial, the wall of the grave fell in at some places, which appeared at the excavations as a somewhat looser, crumbling soil, a shade darker than its environment.

Grave 343/A

The long bones and the skull lay in the southern part of the grave. The position of the bones suggests that a long time must have passed between the first and the second burials. Two long bones were found across the left thighbone of skeleton B, and outside the left leg bone. The top of the skull of skeleton A faced N and was thrown back, together with the earth, at the time of the second burial on top the skull of skeleton B. The fragments of the arm and the ribs lay under it. It can be judged from the position of the bones that the bones of the arms were yet

held together by the ligaments when they were thrown back into the grave. Anthropological determination: female, 20–30 years old man(?).[19]

It cannot be told which articles and which grave furniture could have belonged to this burial. We only suppose from the position that the fragment of the large ***iron object***, outlined by rust, noted between the bones thrown back in the shaft at the northern corner of the grave, could belong to this burial together with the broken vessels (not by the weight of the earth!).

Article of wear:

1. (1) Bronze ***fibula***, in the south corner of the grave.[20]

Grave 343/B

The grave shaft only slightly diverged from the shaft of grave 343/A. The skeleton lay in it with the skull to S-SW. The body was extended, the bones of the right hand and partly those of the lower arm were missing. The bones were poorly preserved. Anthropological determination: male(?), 20–30 years old.[21]

Articles of wear:

1. (12) The fragment of a small link of a round cross-section from a ***bronze chain*** was found in the skull during cleaning. *(Fig. 7.1)*

Weapons:

1. (2) A midribbed iron ***spearhead*** pointing towards the head was found in the height of the left lower arm and the elbow, 20 cm toward the western wall of the grave. Its length is 15.5 cm, the socket is 5 cm long, the diameter is 2 cm. *(Fig. 7.2)*

2. (3) An ***iron sword*** between the right upper arm and the breast bone (damaged, length: 73 cm). The pommel is disc-shaped,[22] and there is a suspension mount on the upper part of the scabbard. Facing the suspension mount, finely woven textile was found on the scabbard. The chape is arched, two small rivets fastened it to the scabbard. Both the scabbard and the blade are midribbed. The width of the blade is 5.2 cm. The edges of the scabbard are broken. Length of the hilt: 12 cm. Each rivet of a hemispherical head can be found on the two sides of the chape. Another rivet with a hemispherical head can be observed 7.4 cm from the above ones, in the axis of the scabbard above the chape. *(Fig. 7.4a–4b)*

3. (–) Little iron fragment, near to the sword. *(Fig. 7.3)*

Grave furniture:

The vessels placed into the graves cannot be separated. It was probably the intact vessels that belonged to the second burial and the broken ones must have belonged to the grave furniture of the first burial, which were broken at the time of the second burial.

1. (7) A large, broken ***urn*** at the left foot. There is a rib in the arch of the neck under the everted rim. M.d. = 14 cm, B.d. = 10 cm, H. = 23 cm. *(Fig. 8.4* and *Fig. 31.4)*

2. (5) A shallow ***bowl*** on the sword, on the right hipbone. It is a simple vessel with an inverted rim and cut bottom. *(Fig. 8.2)*

3. (6) A ***bowl,*** broken to pieces, was found partly beside the above bowl on the sword and partly on the right thighbone and hipbone. The rim is everted and two parallel grooves run in the arch of the neck. M.d. = 21 cm, B.d. = 4 cm, H. = 8 cm. *(Fig. 8.1* and *Fig 33.1)*

4. (4) An ***urn,*** broken to pieces, was found between the thighbones. The rim is everted, there is a rib in the arch of the neck and two grooves on the shoulder. M.d. = 14 cm, B.d. = 10 cm, H. = 20 cm. *(Fig. 8.3* and *Fig. 31.5)*

Double burial no. 345/A, 345/B

Grave ditch: feature 346

There is an approximately 20 cm wide ditch around the grave on the SE and SW sides, which was intersected by the adjacent grave ditch no. 344. The NE and NW sides could not be seen in the whole length, on the NW side, it stretched under the humus depot at the edge of the cutting. The southern ditch was 5.25 m long outside and 4.5 m inside, its width measured 25 cm. The unearthed part of the western section was 3.5 m long outside and 3.25 m inside in a width of 30 cm. The eastern section of the grave ditch was destroyed at the digging of grave ditch no. 344.

[19] Determination of K. Köhler.

[20] It was destroyed during restoration.

[21] Determination of K. Köhler.

[22] It was destroyed during restoration.

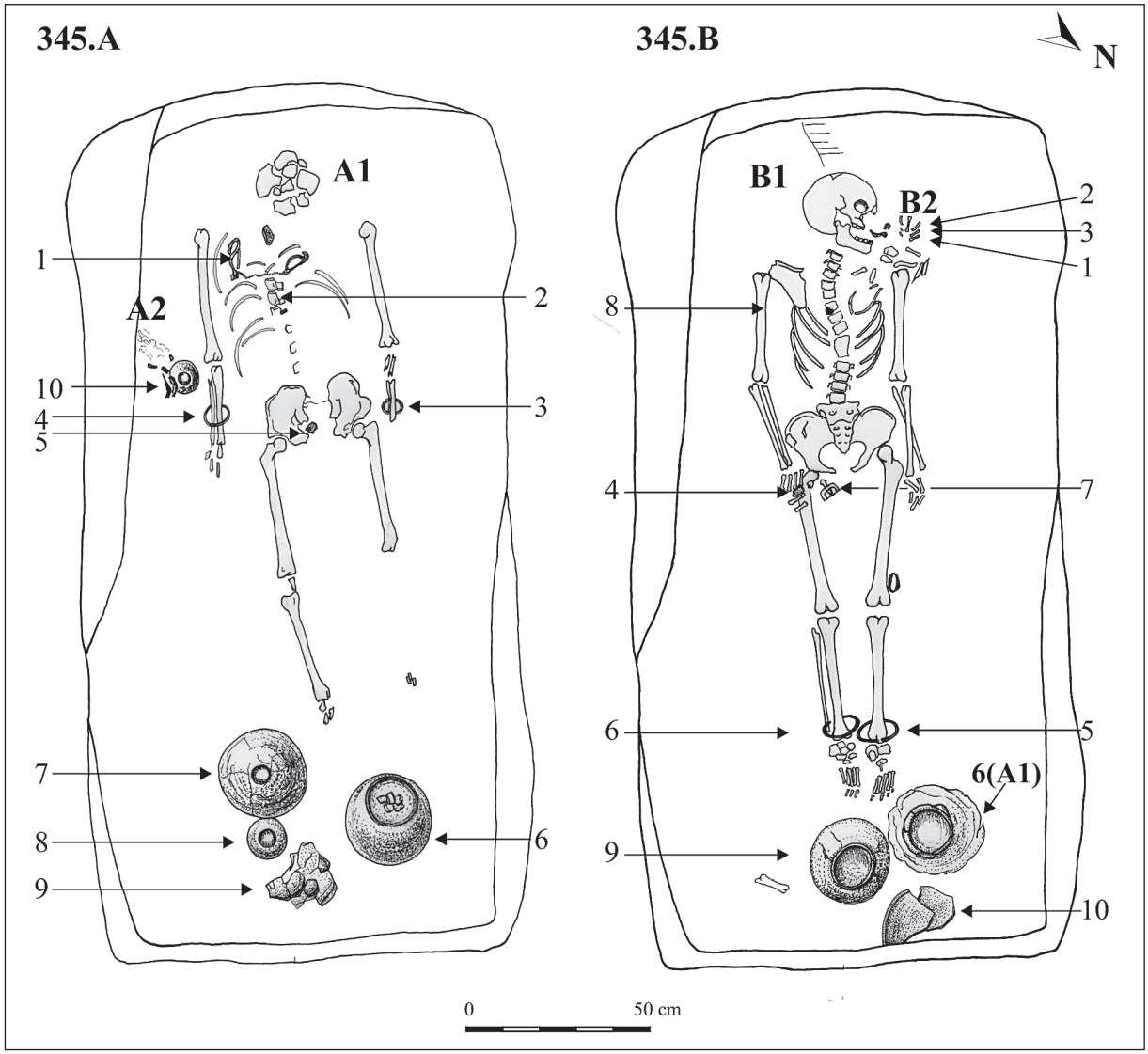
Shape and measurements of the grave: The elongated, oval grave appeared as a darker brown discolouration **(345/B)**. Downwards, the oblong shape of the shaft with rounded corners was filled in with a mixed brown soil with some infiltrated yellow. At the scraping of the oval spot, the pit of the second burial got outlined: its length was 235 cm, its width was 115 cm in the south, and 105 cm in the north. The discolouration of the earlier grave appeared somewhat deeper, and it somewhat diverged from the axis of the later shaft toward the west. This one was 245 m long and 130 m wide in the south and 115 cm wide in the north.

Orientation: **345/B**: N + 234.5°

Description: The few bone splinters that appeared during scraping already indicated more than one burial. Grave ditch 346, nevertheless, was not dug again at the burial in grave no. 345/B, which means that the ditch of the earlier grave could still be seen at the time of the second burial although the grave itself had already disappeared.

Burial no. 345/A1–A2 (double, contemporary burial)

The depth of the grave varied between 46 and 57 cm slightly deepening eastwards in the whole length of the grave. The filling of the grave was darker than that of the second one dug over it.



Skeleton no. 345/A1:

Description: The skeleton of an adult on the back in an extended position. Anthropological determination: male (?), 23–39 years old.[23]

The bones of the left leg are missing. The grave was damaged probably by the later burial. This is suggested by the fact that some of the tarsals stayed in place. The arms were extended along the body. The widely apart legs, the flattened pelvis, and the position of the bones of the chest are characteristic of a fat person. The skull was cracked. The bones of the skull and the chest were fragmentary.

The measurable length of the skeleton was 155 cm.

Articles of wear:

Two ***bronze fibulae*** joined by a chain lay on the breastbone.

1. (1) Fragment of a ***bronze fibula*** on the left side of the chest (Dux-type). The beaded and ridged foot was returned on the bow, it is broken, only the returned section is preserved. The fibula has an external chord and the last link of the chain was fastened to the chord. *(Fig. 10.1)*

2. (1) An intact ***bronze fibula*** on the right side of the chest. (Perhaps Predux-type) It was a one-piece fibula with the chord external. The beaded and ridged end of the foot is returned on the bow. Here it is of round section. The bow is ridged, two ridges along the length of the bow are beaded. The beading at the end of the foot encloses two panels, originally both used to hold enamel insets. Now only one shows the remains of white enamel. The closing link of the chain was fastened to the chord. Length: 10 cm. *(Fig. 10.2)*

3. (1) The ***bronze chain*** that joins the above two fibulae. The chain was made of double circular links, which are 4 mm in diameter. At the two terminals, open bronze rings fasten the chain to the fibulae. Their diameters are 1.3 cm and 1.6 cm. *(Fig. 10.1–2)*

4. (4) An open ***bronze bracelet***, broken into two, on the right wrist. It is plain, solid, and cast, oval in cross-section. Diam. = 6 cm. *(Fig. 10.4)*

5. (3) A ***bronze bracelet***, similar to the above one, on the left wrist. The terminal broke off. Diameter: 5.5 cm. *(Fig. 10.3)*

6. (2,5) An ***iron clasp*** on the right side of the pelvis. The body of the clasp lay in the right, the lower part of the pelvis, the hook was displaced higher to the vertebral column during the second burial. Length of the clasp body: 2 cm, width 2.8 cm. It belonged to a 2.4 cm wide leather strap. *(Fig. 10.6)*

Grave furniture:

1. (6) An ***urn*** between the legs, between the feet and the wall of the grave. The rim is everted, and there is a rib in the arch of the neck and a groove around the shoulder. M.d. = 14 cm, B.d. = 10 cm, H. = 19 cm. The rim of the urn already appeared on the bottom of the grave B at the excavation of the latter one. *(Fig. 10.8* and *Fig. 31.2)*

2. (7) A wheel-thrown ***bowl*** with the mouth turned down between the right foot and the wall of the grave. M.d. = 23 cm, B.d. = 4 cm, H. = 8 cm. *(Fig. 10.5)*

3. (8) A ***cup*** at the foot. The rim is slightly everted, the bottom is omphalos-shaped. M.d. = 8 cm, B.d. = 2 cm, H. = 5.5 cm. *(Fig. 10.9* and *Fig. 35.3)*

4. (9) An ***urn*** at the foot between the cup and the northern wall of the grave. It is dark grey, light grey in breakage, broken to pieces. B.d. = 12.5 cm. *(Fig. 10.7)*

Skeleton no. 345/A2:

Description: Cremation burial with scattered ashes beside the right arm of skeleton **A.1,** toward the eastern wall of the grave. The ashes and the charred bones were scattered on a surface of about 20 cm × 10 cm. No separate pit could be identified and neither burial seemed to be above the other. This implies that the two burials took place at the same time.

Article of wear:

1. (10) The fragment of a ***bronze fibula*** beside the ashes. (Perhaps Pre-Duchov-type) It is small, the spring is damaged, only a fragment of the pin survived. The returned end of the foot is four times beaded. H. = 5 cm. *(Fig. 10.11)*

[23] Determination of Zsuzsa Zoffmann. Bones have since been lost.

Grave furniture:

1. (10) A ***cup*** north-west of the ashes, partly on them. The bottom is omphalos-shaped. M.d. = 8 cm, B.d. = 4 cm, H. = 5.5 cm. *(Fig. 10.10* and *Fig. 35.1)*

Burial no. 345/B (double, contemporary)

Description: A small, intact, brown, wheel-thrown flask stood, somewhat inclined, in the NW end of the grave shaft much higher than the skeleton.

The extended skeleton of a woman lay on the back (345/B1), with an intact vessel at the foot. The skull turned to the left, the lower part of the orbits, the nasal bone and the frontal part of the facial skull were missing. The sharp edges of the bones suggest cutting. Female (?) 30–40 years old.[24] The remains of a child were found beside the skull, on the left side, in the place or under the missing facial skull (345/B2). The cremated children neonatus, Infans I. 0.5–5.5-year-old.

The traces of calcification(?), deformities could be observed on the vertebral column of the adult. The pelvis was very wide as if fallen apart during the delivery of a child. The right foot was turned awry, the ankle was on top. The feet were closed, the right hand rested on the upper part of the right thigh bone.

Articles of wear:

1. (1) A two-piece, incised, so-called bird head bronze ***fibula*** with a rosette on the returned foot. The pin is missing. H. = 4.5 cm. *(Fig. 9.1)* The fragment of the spring of the fibula was removed by some burrowing animal into the filling of grave no. 345/A1

2. (2) A zoomorphic bronze ***fibula*** with stylized griffin head under no. 1. The end of the foot imitates an animal. Bunches of lines, grooved obliquely at a right angle, cover the bow on the two sides of the central ridge in five bands. It is a one-piece fibula with the chord external. H. = 5.5 cm. *(Fig. 9.3)*

3. (8) A pointed, very rusty ***iron pin*** on the right side of the skeleton, on the fourth cervical vertebra. Its trace could be observed on the vertebra. The pin is fragmentary, it is round in cross-section. *(Fig. 9.2)*

4. (4) A bronze ***ring*** on the middle finger of the right hand. The open ring was made from a wire of round cross-section. Diam. = 2.3 cm. *(Fig. 9.5)*

5. (5) A bronze, solid, so-called sleeved ***anklet*** of round cross-section on the left ankle. One terminal is funnel-shaped and hollow, the other ends in a rod. Diam. = 8 cm. *(Fig. 9.6)*

6. (6) A similar bronze ***anklet*** on the right ankle. Diam. = 7.7 cm. *(Fig. 9.7)*

7. (7) A hooked ***iron clasp*** with an angular body under the caput femoris of the right thighbone. The tongue is fastened to the body by a rivet. L. = 2.5 cm, W. = 4.3 cm. The width of the strap was 3.8 cm. *(Fig. 9.4)*

Grave furniture:

1. (10) Fragments of a wheel-thrown ***bowl*** with inverted rim were found at the end of the grave next to the wall of the grave shaft. The bottom is omphalos-shaped. M.d. = 15 cm, B.d. = 3 cm, H. = 7 cm. *(Fig. 8.6* and *Fig. 35.4)*

2. (9) An intact, wheel-thrown, brownish grey ***urn*** under the level of the skeleton, between the feet and the northern, short wall of the grave. M.d. = 10 cm, B.d. = 9 cm, H. = 16.5 cm. *(Fig. 8.5* and *Fig. 35.7)*

3. A little animal bone was in the remains of the children.

Grave no. 347

Grave ditch: feature no. 359

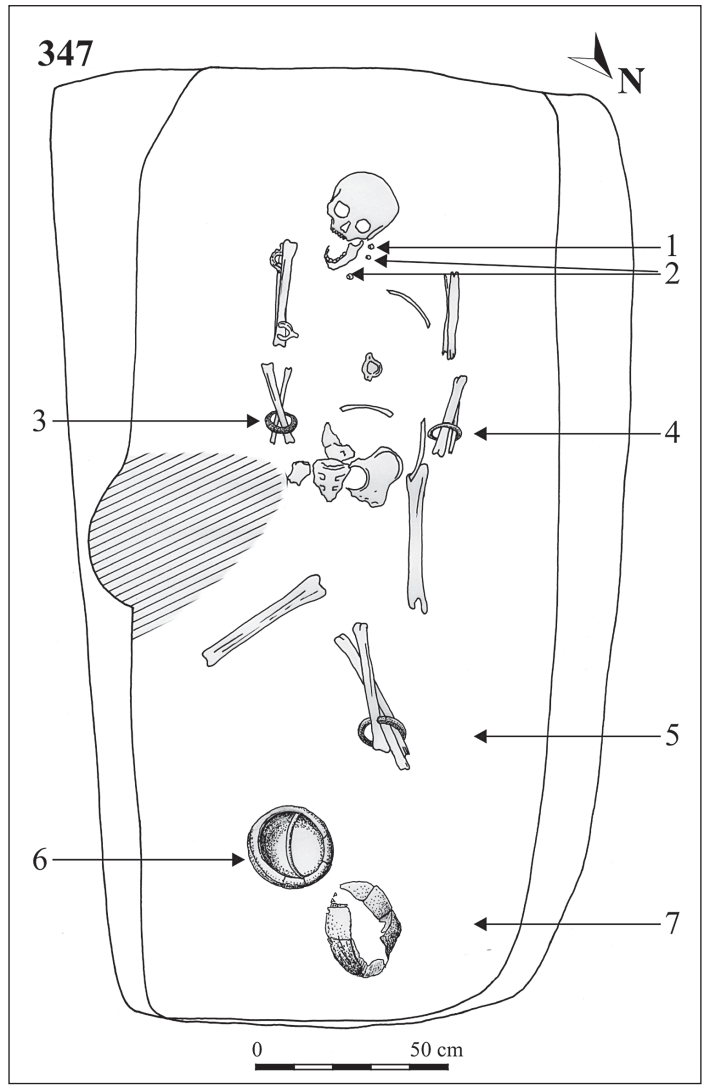
The ditch was barely visible. It encircled only the eastern part of the grave in a U-shape. Its width was approximately 30–35 cm. There was a huge thunderstorm with heavy rain during its excavation. After the thunderstorm, the surface was scraped again but the ditch could not be observed any more either on the eastern part of the grave or from the middle of the southern part parallelly to the edge of the grave. Only a section of the western ditch appeared the northern stretch was missing, the eastern stretch was 5.6 m long outside and 5 m inside in a width of 35 cm. The southern stretch measured 5.8 m outside and 5.6 m inside, its width was 40 cm, its depth 6 cm.

Ditch no. 359 was intersected by ditch no. 299, which means that grave ditch no. 359 was dug earlier than ditch no. 299.

Orientation: N + 228°

[24] Determination of K. Köhler.

Shape and measurements of the grave: Length 240 cm. The width on the south-eastern side was 150 cm, and 100 cm on the north-western side. Depth from the mechanically scraped surface: 62 cm.



Description:

A 60 cm × 75 cm large light brown discolouration could be seen beside the grave shaft. It did not contain any material and its edges were not clear either. The walls of the grave shaft were irregular as if two graves had been dug one over the other. The shaft and partly the level of the skeleton were disturbed by an animal burrow, which ran into the shaft at the N-NE wall and disturbed the burial at the right thigh bone and at the chest, where the bones were removed from their original position. The filling of the shaft was dark brown, mixed, the outlines were less regular than those of the neighbouring graves. The bones of the skeleton of a woman extended on the back were poorly preserved. The length of the skeleton was about 140–142 cm. The entire chest of the skeleton was missing, neither the ribs nor the vertebrae survived. The skull turned to the right. The arms were extended along the body. The right thighbone fell from the socket, the leg bones were crossed. The metal finds were also poorly preserved, they crumbled during the clearing of the grave. There were three vessels at the feet of the skeleton. An animal burrow could be seen in the wall in the middle of the grave, this could remove the bones and disrupt the middle part of the skel-

eton. During the clearing of the grave, iron fragments were found in the animal burrow and under the skull. Anthropological determination: female, 30–40 years old.[25]

Finds:

1. The fragments of two iron plates ***(clasps?)*** were found in the filling of the grave in the uppermost 20 cm. One was flat, the other had a slightly oval cross-section. *(Fig. 11.9–10)*

Articles of wear:

1. (1–2) Red, irregular coral ***beads*** left of the skull. *(Fig. 11.1)* Each a round amber bead without base was found under it and the jaw. *(Fig. 11.2)* Further beads were found during the cleaning of the skull: 1 transparent, white, amphora-shaped glass bead and 3 round amber beads without bases in various sizes. *(Fig. 11.3)* Some more beads were found under the chest at the picking up of the skeleton: 3 amber beads without bases of various sizes, 1 hemispherical amber bead, and a flat disc-shaped amber bead. *(Fig. 11.5)*

2. (3) A ***bronze bracelet*** on the right wrist. The open bracelet is twice segmented by ridges and engraved lines. Densely engraved oblique lines decorated the barrel-shaped swollen part. Sleeved type. Diam. = 6.2 cm. *(Fig. 11.7)*

3. (4) A ***bronze bracelet*** on the left wrist. The open bracelet is twice segmented by ridges and engraved lines. Densely engraved oblique lines decorated the barrel-shaped swollen part. It is the pair of the above one. Diam. = 6.2 cm. *(Fig. 11.6)*

4. (5) A ***bronze anklet*** on the left ankle (its pair was removed by the animal). It is round in cross-section, hollow and sleeved. Diam. = 8.7 cm. *(Fig. 11.8)*

5. The fragment of a small ***iron object*** under the skull. *(Fig. 11.4)*

Grave furniture:

1. (6) A ***bowl*** on the feet. M.d. = 24 cm, H. = 8 cm, B.d. = 1 cm. The bottom is omphalos-shaped, the rim is everted. There is a rib in the arch of the neck, its colour is brownish-black in consequence of being baked in a reducing environment. *(Fig. 11.12)*

2. (6) Another ***bowl*** in the above one. It has a similar colour, it is fragmentary, the bottom is missing and there are two grooves in the arch of the neck. M.d. = 26 cm, B.d. = unmeasurable, H. = 7.6 cm. It had been on top of the smaller bowl with the mouth down, later it got pressed into it. *(Fig. 11.11)*

3. (7) Broken vessels between the bowl and the northern short wall of the grave: an ***urn*** with everted rim, a groove on the shoulder. It is matt and grainy, tempered with some sand. M.d. = 7.5 cm. *(Fig. 11.14)*

4. (7) The fragment of another ***urn*** among the sherds. It is brownish black, and there are two grooves on the shoulder. It cannot be measured. *(Fig. 11.13)*

Grave no. 348

Without grave ditch

Shape and measurements of the grave: The oblong-shaped grave shaft had rounded corners at the southern shorter wall, rectangular ones at the northern wall. The longitudinal axis was 195 cm long, the width was 83 cm at the southern part and 75 cm at the northern one, its depth was 20 cm.

Orientation: N + 226°

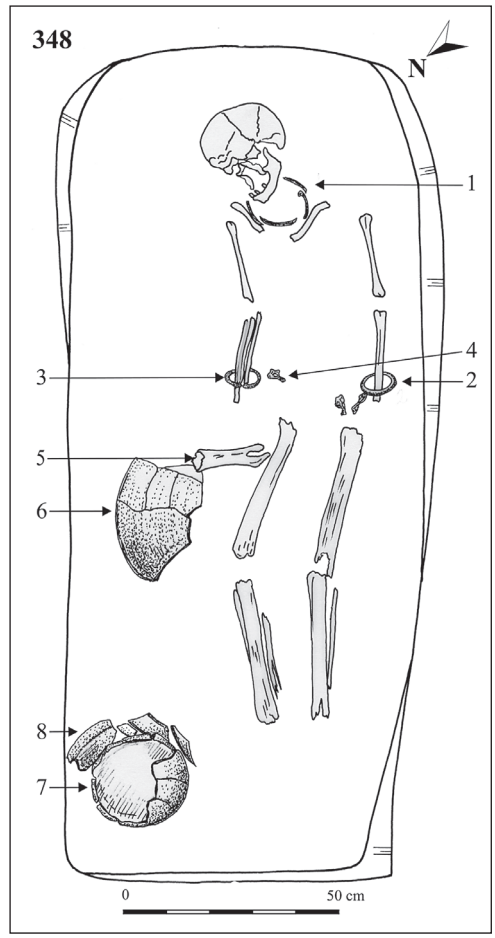
Description: The very poorly preserved skeleton of a woman lay in the depth of 16 cm. The bones of the chest and the pelvis were missing similarly to the bones of the hand and the foot. The remaining bones were very poorly preserved. The skeleton was extended on the back and slightly turned to the right, both the arms and the legs were bent slightly to the right. Even the facial skull was turned to the right. The legs were slightly raised at the knees. The length of the skeleton was 150 cm, the length of the flexed skeleton was 142 cm. Anthropological determination: female? 20–x years old.[26]

Articles of wear:

1. (1) A two-piece bronze ***torque*** around the neck. It consists of two wires of round cross-section. The terminals are bent into hooks and interlocked. *(Fig. 12.1)*

[25] Determination of K. Köhler.

[26] Determination of K. Köhler.



2. (3) A bronze ***bracelet*** on the right wrist. It has open terminals, one terminal slightly widens and overlaps the other, both are ridged. It is solid and round in cross-section. Diam. = 5.8 cm. *(Fig. 12.3)*

3. (2) A bronze ***bracelet*** on the left wrist. It has open terminals, one terminal slightly widens and overlaps the other, both are ridged. It is solid and round in cross-section. Diam. = 5.8 × 5 cm. *(Fig. 12.2)*

4. (4) Fragment of the ***hook of an iron clasp*** between the left wrist and the pelvis. *(Fig. 12.4)*

Grave furniture:

1. (6) The fragment of a large ***bowl*** outside the right thigh bone. It is brownish, spotted with grey, wheel-thrown, perforated under the rim beside the breakage. It shows traces of horizontal smoothing. M.d. = 18 cm, B.d. = 6 cm, H. = 12 cm. *(Fig. 12.5)*

2. (7) Fragments of an ***urn*** in the north-eastern corner of the grave. It was tempered with sand and spotted from the baking. B.d. = 16 cm. *(Fig. 12.7* and *Fig. 35.9)*

3. (8) The fragments of a smaller ***bowl*** on the urn. Originally it was placed on the mouth of the urn with the mouth up. The wheel-thrown vessel has an everted rim and a rib in the arch of the neck, the bottom is omphalos-shaped. M.d. = 25 cm, B.d. = 5 cm, H. = 9 cm. *(Fig. 12.6* and *Fig. 34.5)*

4. (5) An ***animal bone***, probably pig, between the right thighbone and the large bowl.

Graves 350/A – 350/B

Grave ditch: feature no. 349

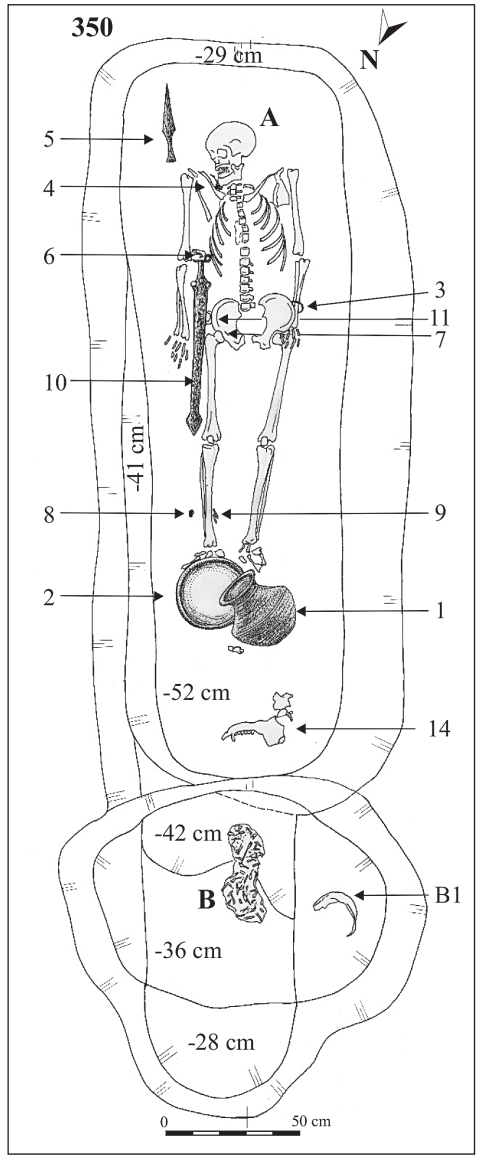
A quadrangular grave ditch with rounded corners. The western stretch was entirely excavated. Here it was 5.20 m long and 40 cm wide, the inside length of the stretch was 4,75 m. The northern stretch could be followed to a length of 3.60–3.70 m, where the inside length measured 3.20 m. The southern stretch was 4.50 m long outside

until the corner, where its width was 40 cm, the inner length was 4.20 m. At this point, it broke in an obtuse angle. The reconstructed original shape is somewhat irregular and the grave was not placed in the medial axis of the ditch. The ditch could be observed in a width of about 25 cm on the scraped surface with an interruption at the northern corner. The average width was 28–30 cm, the depth was 8–10 cm. In cross-section it was semicircular, and it was filled in with greyish, uniform humus. The continuation of the ditch on the northern side could not be observed, it was intersected by ditch no. 351. Only a 40 cm long stretch could be seen from the eastern part of ditch no. 349. Here ditch no. 351 of grave no. 301 intersected it once more.

Orientation (350/A): N + 234.5°

Shape and measurements of the grave: The second burial disturbed grave no. 350/A.[27]

Description: A discolouration that seemed unusually long and had an average width appeared along the axis in the centre of grave ditch no. 349 against the dark soil. It was light yellow at the edges and mixed in the centre. During its excavation, the original edges of the shaft were outlined both in cross-section and on the surface,



[27] The measurements see at the description of the burial.

together with the traces of a later pit at the northern end. Based on the colours the later pit appeared with a blackish grey filling in the middle and southern part of the narrow grave and extended westwards. The extremely soft filling of the shaft was strongly mixed sand with humus patches. The later pit in the northern part of the discolouration was different, here the heap of charred bones appeared in the hard, yellow loess in one block (scattered ashes of burial no. 350/B). The ground was very hard above and around the charred bones. Next to the charred bones some weathered, poorly preserved black-and-red sherds with black breakage were found. The vessel stood above them.

Measurements of the grave: The length of the discolouration on the scraped surface was 390 cm, its width was 100 cm and 90 cm. It could be observed during the excavation that the pit of cremation burial no. 350/B caused the disproportion. The discolouration of grave 350/A was 260 cm long on the scraped surface. A bench appeared on the southern side in the depth of 29 cm. The same bench could be observed on the northern side as well although only in a short, 10 cm wide section. The bottom of the cremation burial (350/B) was found in a depth between 42 cm and 36 cm. At the inhumation grave, black soil mixed with loess, the filling of the shaft, appeared behind the slightly slanting, sandy bench between 41–43 cm next to the eastern wall of the shaft. This discolouration was oblong-shaped with rounded corners in the south. Its length was 210 cm, its width measured 50 cm in the north.

Burial no. 350/B

Description:

A round pit disturbed the inhumation grave in the north-western part of the shaft. It was a cremation burial with scattered ashes, which was younger than inhumation grave no. 350/A, as revealed by the overlapping outlines.

A very poorly preserved broken vessel was found above the ashes. The ashes appeared already in the depth of 28 cm, but most of the charred bones lay on the bottom of the pit in the depth of 42 cm. Here the bottom of the grave reached the yellow sand.

Grave furniture:

1. A large ***urn*** tempered with coarse, grainy sand. B.d. = 12 cm. It was secondarily burnt. *(Fig. 12.12)*[28]

2. (2) A handmade ***bowl***, which was also secondarily burnt. It is black with red spots and broken to pieces. M.d. = 22 cm, B.d. = 14 cm, H. = 11 cm. It is distorted. *(Fig. 12.11)*

Inhumation burial no. 350/A

Shape and measurements of the grave: An oblong-shaped shaft with rounded corners. The later pit damaged the length of the grave in the north along the axis to a depth of 40 cm. The shaft was 280 cm long, and 265 cm long at the bottom. The width was 98–100 cm in the south, and 100 cm in the north.

Description:

The skeleton of a man lay in the grave extended on the back with the skull to S-SE, and the face turned to east. The right arm was extended along the body, the left hand rested on the thigh bone. Anthropological determination: male, 30–40 years old.[29]

Articles of wear:

1. (3) A bronze ***bracelet*** on the bones of the left lower arm. It has open, seal-shaped, touching terminals. Textile remains could be observed at several parts on the bracelet. It is solid with an oval cross-section. Diam. = 6 × 7 cm. *(Fig. 13.7)*

2. (4) An ***iron fibula*** on the right clavicle. It is a one-piece fibula twisted from a wire of round cross-section, fragmentary. Length = 6.5 cm. *(Fig. 13.2)*

3. (6) ***Bronze fibula*** (Marzabotto type) between the right elbow and the hilt of the sword. It is a one-piece fibula twisted from a wire of the oval section. The spring is large, the end of the foot is returned to the bow and is four times beaded in disproportionate segments. Length = 8.5 cm. *(Fig. 13.1)*

Weapons:

1. (7) ***Iron rivets*** beside the sword on the right hipbone. The diameter of the heads is 1.8 cm. Fragmentary. *(Fig. 13.6)*

2. (8-9) An ***iron shield rim*** 10 cm outside the right leg. It is semicircular in cross-section and fragmentary. It could be observed only at the foot. *(Fig. 13.9a–9b)*

[28] It was originally above the ashes but a worker lifted it from the grave.

[29] Determination of K. Köhler.

3. (10) An ***iron sword*** between the right arm and the body, between the elbow and the knee. Wood remains were observed on the hilt and the scabbard. Total length: 62 cm, length of the hilt: 11.6 cm. There is a pommel on the hilt and a rivet on the cross-bar standing perpendicular to the blade, ending in hemispherical heads on both sides. This fastened the grip covering the hilt iron. The diameter of the grip cover can be estimated from their measurements to have been 2 cm. The blade is midribbed. The arched scabbard closed at the top bears the traces of two rivets on one side *(Fig. 13.8a),* and the traces of two more rivets could be observed on the cordiform chape *(Fig. 13.8b).* On the other side, there is a vertically placed suspension mount made for a 2.2 cm wide leather strap. Facing the suspension mount, large remains of coarse textile adhered to the scabbard, while the rust preserved plant remains at the chape. The width of the blade is 4.4 cm. The total length of the scabbard: 58 cm. Width of the scabbard at the hilt: 5.3 cm. *(Fig. 13.8c)*

4. (5) A ***spear*** at the skull above the right shoulder pointing toward the shorter southern wall of the grave. The total length is 24 cm, the length of the socket is 5.5 cm, its diameter is 1.8 cm. *(Fig. 13.3)*

5. An ***iron ring***, a suspension element of the sword, round in cross-section, fragmentary. Diam. = ca. 4 cm. *(Fig. 13.5)*

6. A small, closed, flat ***iron ring*** rusted to the scabbard of the sword. Diam. = 2.5 cm. Thickness = 0.3 cm.

7. Two closed, flat ***iron discs*** perforated in the center. Diam. = 4 - 4 cm. *(Fig. 13.4)*

Grave furniture:

1. (1) An ***urn*** tilted to the side between the left foot and the shorter wall of the grave with the mouth towards the bowl. The rim is everted, there is a rib in the arch of the neck, the shoulder, and the belly are separated by a groove. M.d. = 14 cm, B.d. = 9 cm, H. = 25 cm. *(Fig. 13.10* and *Fig. 30.2)*

2. (2) A large ***bowl*** beside the urn close to the right foot. The rim is everted, the neck is segmented by a rib in the arch, the bottom is omphalos-shaped. M.d. = 24 cm, B.d. = 5 cm, H. = 8 cm. *(Fig. 13.11* and *Fig. 33.2)*

3. A ***pig jaw*** at the foot between the vessels and the shorter wall of the grave.

Grave no 360

Grave ditch: feature 302

Bone splinters[30] were found in a heap in one-third of the northern stretch of the ditch in the upper 3 cm of the filling. Two discolourations could be discerned within the ditch. The ditch was parallel only to the larger one. Only the NE and the NW sides could be seen in an L-shape on the scraped surface. The ditch became shallow on the NW side, its continuation was not outlined. The SE part extended under the wall of the cutting. The width of the ditch was irregular, the cross-section was approximately U-shaped. Its greatest depth was 20 cm.[31] The grave ditch was 5.75 m long outside and 5.45 m inside on the eastern side, its width measured 50 cm. On the northern side its length was 7.5 m outside and 6.9 inside in a width of 40 cm. The western stretch was destroyed at the digging of ditch no. 306.

Shape and measurements of the grave: could not be determined.

Orientation: could not be determined.

Description: The feature was situated at the southern edge of the territory, partly under the humus deposition. Two discolourations (360.I and 360.II) appeared at the scraping of the surface. The larger one (360.I) had an NW–SE orientation, it measured 2.40 × 1.20 m. It was oblong-shaped with rounded corners filled in with strongly mixed, loessy humus. The scraping revealed slight iron oxide traces. There was no find in the shallow, only 3–5 cm deep mixed soil. The smaller discolouration (360.II) was perpendicular to the former one. It measured 0.9 × 0.4 m. Its shape was oblong with rounded corners showing iron oxide traces on the scraped surface. It did not resemble a grave. It had a NE–SW orientation. Its length was 92 cm, width 41 cm and ended in a depth of 6 cm. In the SW part, parallelly to the longer wall, two iron objects were found in the depth of 2 cm, partly as a rust mark.

Finds:

1. Iron ***knife***. Not even the core of the iron survived, only a strong rusty mark outlined its shape.[32] *(Fig.14.6c)*

[30] They are unsuitable for anthropological determination.

[31] In the spirit of the contract with the *Autópálya Igazgatóság* (Highway Directorate) excavations could be conducted only within the track. Accordingly, the cuttings could only exceptionally be enlarged. Here, it could not be done because of the service road beside the deposition.

[32] The objects are described after the excavation drawings in original size. Although it was lifted together with the embedding earth, the remains could not be conserved.

2. The fragments of an ***iron object*** (perhaps scissors?) were found beside it. The laminar object seems to be returned from the point, the two edges are thick. *(Fig.14.6.a–b)*

3. A Münsingen-type ***bronze fibula*** was found by a metal detector in the seemingly unbroken yellow ground in the depth of 12–20 cm, about 30 cm north of the axis of the ditch. On the foot returned on the bow, there is a small disc decorated with a circle of punched dots in the centre. Dense transversal lines cover the bow. *(Fig.14.5)*

We started from the supposition that the grave ditch was shallower than the grave and the objects got to the level of their appearance in consequence of a later burial or a violation. So after having scanned the area with a metal detector, a pit was opened in the territory of the supposed grave within the grave ditch to a depth of 180 cm yet no trace of a grave could be observed. The cross-section of the control pit showed a lack of disturbance. It also revealed that similar to the sandy Szeles surface, patches of iron oxide discolourations appeared in the loessy sand, which is natural iron precipitation in the sand.

Surface remains suggest that the dead were only placed on the surface of the ditch, or were placed in a very shallow pit dug into the destroyed humus layer and then carried over to the top of the grave. The fences were deeper at this burial (!) than the grave itself.

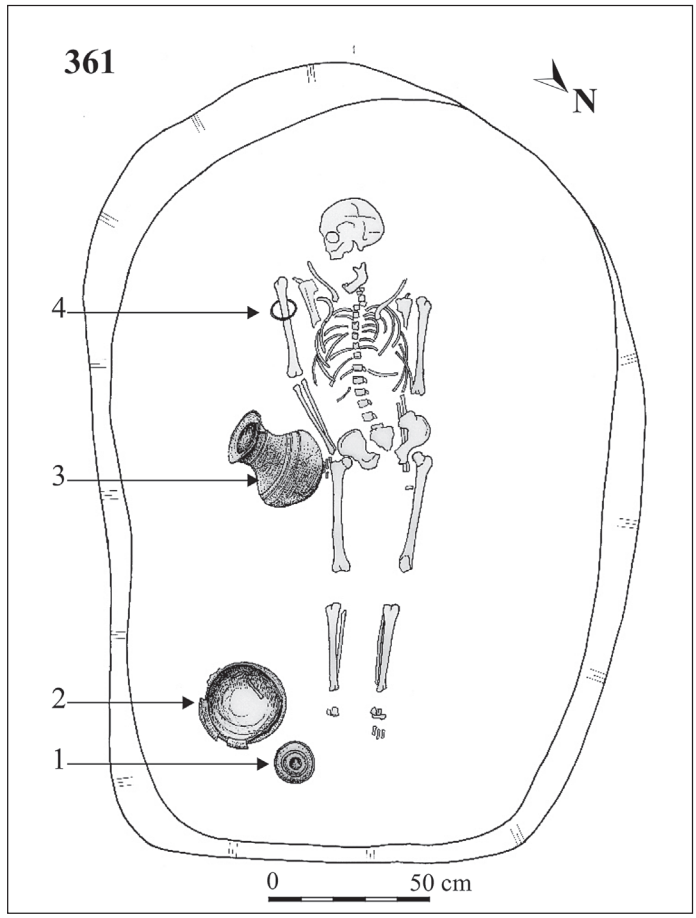
Grave no. 361

Without grave ditch

Shape and measurements of the grave: The longitudinal axis of the grave has an S-SW–N-NE orientation. It was 170 cm wide in the middle. The depth of the grave shaft was 48 cm from the scraped surface.

Orientation: N + 226°

Description: The grave appeared with an oval shape in the yellow alluvial sand. The skeleton of an adult lay in the grave on the back in an extended position. The right hand rested on the right hipbone, the left hand under



the left hipbone. The face was turned to the right, to N-NW. The bones were relatively poorly preserved. Anthropological determination: male(?), 40–59 years old.[33]

Article of wear:

1. (4) A closed, solid, cast, undecorated, smooth bronze ***bracelet*** of round cross-section was found on the right upper arm. Diam. = 9 cm. *(Fig.14.1)*

Grave furniture:

1. (3) An ***urn*** tilted on the side was found outside the upper part of the right thighbone. It seems to have been tilted by the weight of the earth and, at the same time, it got shifted towards the right hand and the pelvis of the deceased during the burial. The urn has an everted rim and two parallel ribs in the arch of the neck. The shoulder is separated from the belly by a groove and two further grooves run round the belly. M.d. = 16 cm, B.d. = 10 cm, H. = 31 cm. *(Fig.14.2* and *Fig. 30.4)*

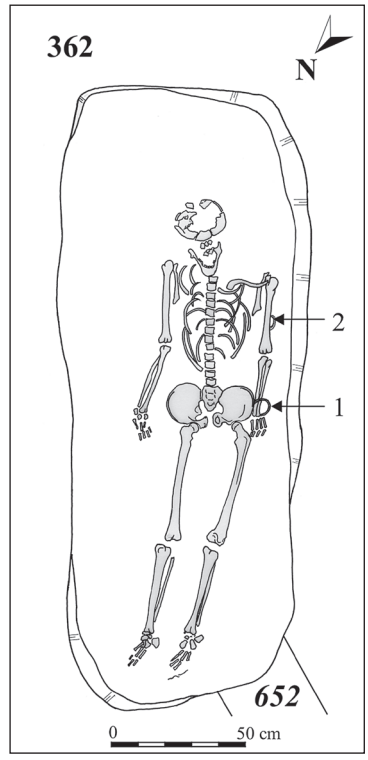
2. (2) A large ***bowl*** stood between the right ankle and the longitudinal wall of the grave. It was already fragmentary when placed in the grave. The bottom is very weathered. It is black, the clay was tempered with sand. In section it is lighter grey in the middle. There is a rib in the arch of the neck bordered by a groove below it and another groove runs round the shoulder. M.d. = 25 cm. *(Fig.14.3)*

3. A small – Beled-type – ***bowl*** beside grave furniture no. 2 and the right foot. There is a double groove on the omphalos-shaped bottom. The surface is horizontally smoothed in the upper part and coarsened in the lower one. The colour of the wheel-thrown vessel is greyish brown, the clay was tempered with sand. M.d. = 11 cm, B.d. = 6 cm, H. = 3 cm. *(Fig.14.4)*

Grave no. 362

Without grave ditch

Shape and measurement of the grave: The irregular, narrow grave shaft had an S-SE–N-NW orientation. Its width was 90 cm, its length 225 cm. Its depth 26 cm. The grainy sand filling of the shaft was lighter than the environment. The grave was excavated to a depth of 200 cm because of the depth of the grave and the sandy soil,



[33] Determination of K. Köhler.

although the hardness of the filling of the shaft could be differentiated from that of the bottom. In greater depths, the ground proved to be unbroken

The grave intersected ditch no. 652.

Orientation: N + 242°

Description: The skeleton lay in the grave on the back with the skull to S-SE. The legs were bent in an arch toward the northern corner of the grave. The arms were extended only the right arm was slightly bent at the elbow. The skeleton was medium well preserved, its measurable length was 167 cm. The age and sex are indeterminable.[34]

Articles of wear:

1. A ***bronze bracelet*** of oval cross-section with open terminals was found on the left lower arm. The open terminals are ridged. Very thin bronze wire is densely coiled on one of the open terminals in a length of 1.9 cm. *(Fig. 11.16)*

2. The fragment of a Dux-type ***iron fibula*** was found under the left upper arm. The bow is of round cross-section, the foot is returned on the bow, its end is divided into three segments. A part of the catch plate, the head and the pin is missing. Only a small part of the pin survived. *(Fig. 11.15)*

Grave no. 364 *(Fig. 16)*

Grave ditch: feature no. 365

It is wider and shallower than the other grave ditches. Its average width was between 50-30 cm, its depth measured 8–10 cm. It is semicircular is cross-section. There was an oval depression in the northern stretch, which was of the same depth as the ditch. Its uniform filling, which did not contain finds, was also identical with that of the grave ditch. It is contemporary to the grave ditch. The ditch was later disturbed by several features, still it seems that it did not have a regular quadrangular course. The northern and the eastern ditches were arched, the southern one was straight. The arch of the eastern section, nevertheless, does not imply a regular circular shape for the grave ditch. The length of the eastern ditch stretch was 6.2 m outside and 5.9 m inside, its width was 50 cm. The northern one measured 5 m outside and 4.8 m inside in a width of 50 cm.

Roman ditch no. 299 intersected it to a depth of 86 cm and disturbed the grave as well.

Shape and measurements of the grave: cannot exactly be determined, except for the length of the axis, which was 270 cm. The estimated depth of the grave was 58 cm.

Orientation: N + 232°

Description: It appeared as an oval, light brownish discolouration, which was intersected by a Roman ditch with darker filling. Celtic sherds were found already on the surface during scraping, which suggested disturbance. The filling of the grave was light, somewhat brownish loessy. The outlines were vague. It was not only the ditch that damaged the grave, the looser sandy loessy soil fell in and was washed in at several places, first of all at the longer sides of the grave. Its length was 164 cm, its width 100 cm at the vague outlines during scraping. 10–12 cm deeper, the shape of the shaft with the fallen insides was rectangular with rounded corners. Its width was about 90 cm in the south and 110 cm in the north in a depth of 58 cm.

Ditch no. 299 that intersected the grave passed in the southern third of the shaft. Its bottom was deeper than that of the grave. The ditch was 86–87 cm wide in the middle with slanting walls. Based only the relatively less disturbed bones of the legs, the skeleton had a S–N orientation with the skull to the south. Some of the bones were washed down on the southern wall of the ditch. Anthropological determination: Female, 20–x years old.[35]

Article of wear:

There wasn't any, or nothing survived.

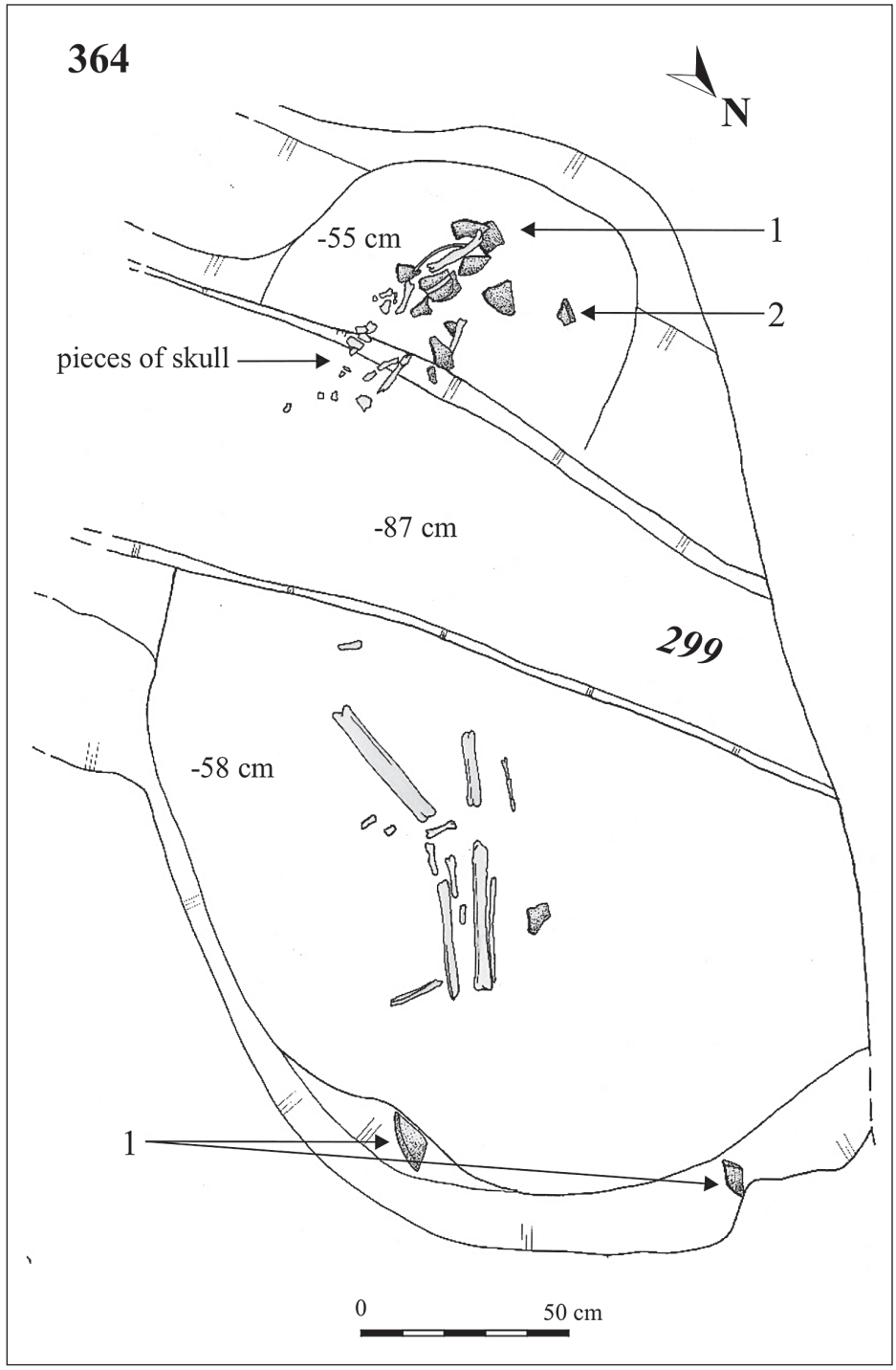
1. Fragment of an ***iron object*** of oval cross-section from the filling of the grave. *(Fig. 14.7)*

Grave furniture:

1. An ***urn*** *was* broken to pieces in the southern corner of the shaft in the depth of 55 cm. Some sherds were found in the filling where the ditch intersected the grave, a rim fragment lay at the northern wall of the grave. The rim is everted, there are two ribs on the neck and two grooves on the shoulder. M.d. = 16 cm, B.d. = 10 cm, H. = 28 cm. *(Fig. 14.8* and *Fig. 30.5)*

[34] Determination of K. Köhler.

[35] Determination of K. Köhler.



Grave no. 367 *(Fig. 17)*

Without grave ditch

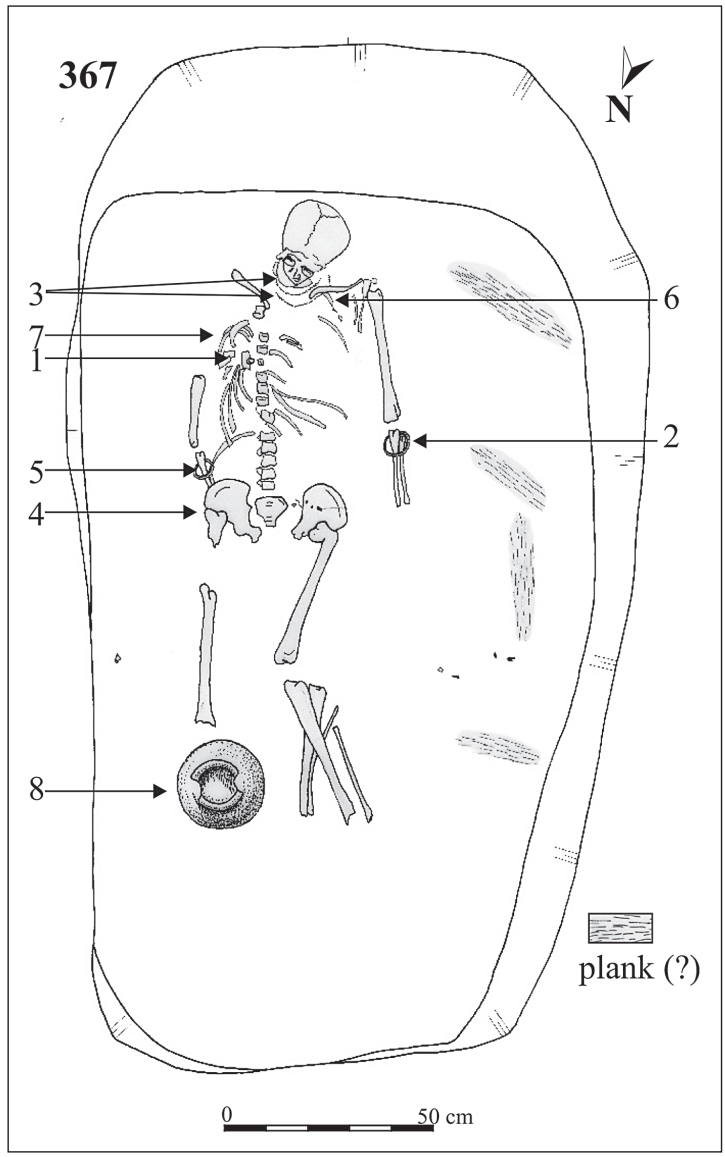
Appearance: at ditch no. 368/378 + 746. It intersects the ditch.

Shape and measurements of the grave: It was an elongated, oval discolouration with 250 cm and 117 cm long axes. Direction: NW–SE. The grave was filled in with a light mixed soil. The length of the axis was 230 cm on the scraped surface. The grave had a regular oblong shape at the bottom, where its length was 210 cm. The width of the grave was 115 cm. The depth of the grave was 78 cm from the scraped surface.

Orientation: N + 228°

Description: The longitudinal axis of the grave shaft had a N-NW–S-SE orientation. The short south-eastern wall of the grave ended in a semicircle on the surface. The length of the poorly preserved female skeleton was 144 cm. It lay extended on the back. The bones of the right foot and partly those of the left leg were displaced by an animal. Under and beside the skeleton, a plank (?) appeared as a brownish discolouration.

Anthropological determination: sex is uncertain. 40–x years old.[36] The grave-goods suggest a woman.



[36] Determination of K. Köhler.

Articles of wear:

1. (3) A ***bronze torque*** at the cervical vertebrae. It was made of a twisted wire of round cross-section with hooked terminals. *(Fig. 15.1a)*

2. (3) Another ***bronze torque***, similar to the former one, around the cervical vertebras. *(Fig. 15.1b)*

3. (1) A so-called bird head bronze ***fibula*** on the right side of the chest. The wide head plate is ornamented, the cord is internal, the bow widens similarly to the returned part of the foot. Both bear double incised lozenge ornaments. (so-called *Doppelpaukenfibel*) Length: 5.7 cm. *Fig. 15.2*)

4. (1) A bronze ***pendant*** beside fibula no. 3. It consists of 5 thin trapezoid bronze plates with punched ornaments on the edges and a punched row in the middle. Below it there is a row of dot-and-circle patterns followed by two horizontally arranged dot circles. The plates were perforated at the top and threaded on an iron ring. Only the butt of the iron ring survived.[37] *(Fig. 15.3)*

5. (7) Another fragment of an iron ***fibula*** on the chest (Dux-type?).The fragmentary fibula with the chord external conserved textile remains. Length: 9 cm. *(Fig. 15.4)*

6. (6) The fragment of an ***iron fibula*** on the left clavicle. *(Fig. 15.9)*

7. (2) A bronze ***bracelet*** on the left lower arm, under the elbow. The bangle is oval in cross-section, cast, and solid. Diam: 7.3 cm × 6.5 cm. Textile remains were found at several spots on the surface *(Fig. 15.5)*

8. (5) A bronze ***bracelet*** on the right lower arm also at the elbow. It is similar to the above one except for the cross-section, which is semicircular. Diam: 6.7 cm. *(Fig. 15.6)*

9. (4) The fragment of an ***iron clasp*** on the left hipbone. Fragments of the bent plate of an angular, hooked clasp with the remains of a rivet. *(Fig. 15.7)*

Grave furniture:

1. (8) An ***urn*** at the right foot. The rim is everted, there is a rib on the neck, the shoulder, and the belly are separated by a sharp carination. The bottom is omphalos-shaped. M.d. = 13 cm, B.d. = 3 cm, H. = 15 cm. *(Fig. 15.10* and *Fig. 31.6)*

2. Several wall fragments of vessels were found in the filling of the grave. They were red outside and black, burnt inside, crumbling, impossible to reconstruct. Together with them lay a fragment of a small sandstone pipe-form ***fulgurite***. *(Fig. 15.8)*

Grave no. 375 (?)

Grave ditch: feature no. 374

The ditch intersected grave ditch no. 450. Its shape was different from that of the other ditches, it followed a round track. Its filling was uniform, the cross-section was semicircular. It was shallow with an average depth of about 8 to 15 cm. It was interrupted in the southern section or it became so shallow that it gradually disappeared. The area enclosed by the round grave ditch was 14.11 m^2.

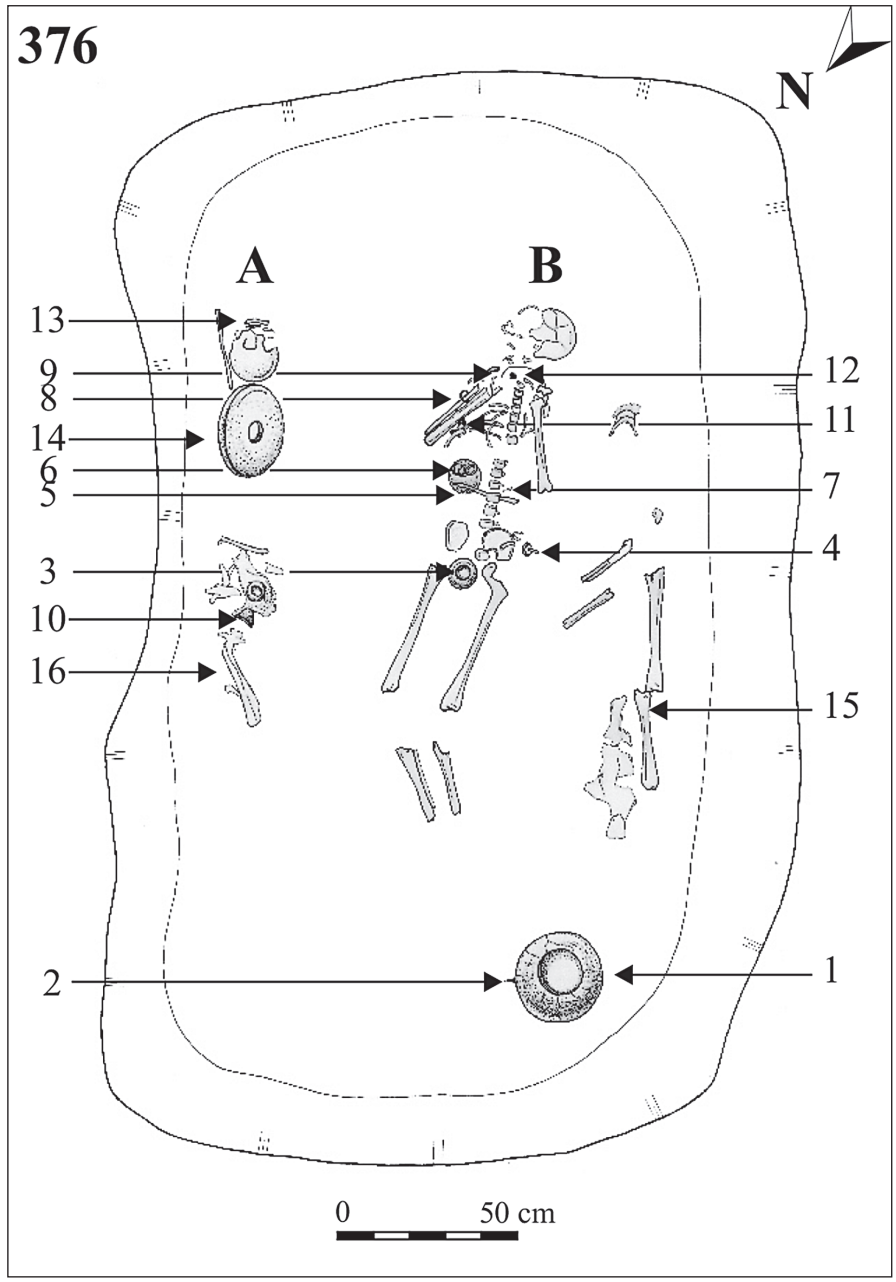
Description: It appeared as a round, brownish-yellow discolouration with a diameter of 90–95 cm in the centre of the round ditch no. 374. The discolouration had vague outlines. It was divided into two sections and one half was first excavated. The discolouration gradually became fainter and ended in the depth of 20 cm. It did not contain either animal bones or anthropological material or archaeological finds. Due to the character of the sandy soil, we deepened to a depth of 200 cm cutting though the discolouration but the unbroken ground did not change, it did not contain archaeological finds and traces of pits.

Graves nos 376/A – 376/B

Without grave ditch

Description: Grave no. 376 appeared deeper than the neighbouring grave no. 377 encircled by a grave ditch. It could not be spotted on the mechanically scraped surface, or even on the manually scraped surface although grave no. 377 could be observed there. Only some moist spots of vague outlines indicated that a disturbed soil, looser than the unbroken ground with different absorption qualities, can be found under the sand filling. On the second manually scraped surface, 5–7 cm deeper in the sandy soil, a very faint discolouration indicated the oblong-shaped grave with somewhat irregular, rounded corners and spots caused by the one-time vegetation. At the place

[37] The remains of the iron ring perished during restoration.



where the moisture of the soil showed the corners of the grave, the discolouration was 200 m long and 80–85 cm wide. The outlines of the real grave shaft appeared only 5–7 cm deeper from the scraped surface during excavation. Here the length of the shaft was 300 cm, its width 192 cm. The shaft all around narrowed downwards. The shaft of the second burial was dug along the same axis, and it was probably larger in every direction. The appearance of the grave shaft suggested that that the second burial no. 376/B and the underlying grave 376/A were older than the neighbouring grave no. 377.

Shape and measurements of the grave: The grave shaft was oblong-shaped with rounded corners and irregular sides. The length at the bottom (first shaft) was 268 cm, its width 150 cm. Depth: 92 cm.

Orientation: N + 228°

Burial no. 376/A

The skeleton was disturbed, it lay along the eastern longitudinal wall of the shaft. It seemed that the remains of the dead and the grave-goods were heaped up on the bottom of the grave in the depth of 78 cm just before the second burial. Only the skull and the fragments of the long bones were preserved from the skeleton.[38]

Articles of wear:

1. (13) An iron ***fibula*** was found beside the skull among the bones. *(Fig. 16.1)*

2. (10) The fragment of a thin bronze ***fibula (?) pin*** of round cross-section was found among the animal bones in the medial line of the grave on the eastern side. *(Fig. 16.2)*

Grave furniture:

1. A ***bowl*** with everted rim with a rib in the arch of the neck. The bottom has a double omphalos-shape. M.d. = 24 cm, B.d. = 8 cm, H. = 8 cm. *(Fig. 16.3* and *Fig. 33.3)* It stood next to the skull in a secondary position.

2. ***Animal bones*** beside the eastern wall of the shaft (a cattle shoulder blade could be determined).

Burial no. 376/B

The second burial seems to have followed the first one after a longer period. The skeleton lay extended on the back not in the axis of the grave but somewhat to the west. Its orientation was also different from that of the grave. The depth of the shaft was 84 cm. The legs lay parallelly, somewhat drawn up at the knees (flexed position). The right arm was bent to the shoulder. Only the left upper arm stayed in the original position, a burrowing animal removed the ulna. The position of the radius suggests that the left arm was bent under the body at a right angle above the pelvis. The place of the bracelet implies the same position. The post-cranial bones were incomplete, the bones of the hand and the feet were missing together with some of the ribs. Anthropological determination: male(?), 40–59 years old.[39]

Articles of wear:

1. (4) An open ***bronze ring*** of oval cross-section and overlapping terminals on the left side of the pelvis. The left lower arm was missing, the ring must have been on the left hand. *(Fig. 16.6)*

2. (5) A bronze ***bracelet*** between the pelvis and the elbow of the bent right arm, at the end of the left lower arm, which was bent under the body. A closed, solid, cast bronze ring with textile remains on the surfaces. There is a cast knob on one side. Diam. = 8 cm. *(Fig. 16.10)*

3. (6) Two adhered, cast, and closed ***bronze rings*** of oval cross-sections on the above bronze bracelet. Both preserved textile remains. Diam. = 3–3 cm. *(Fig. 16.11)*

4. (6) An open, cast, distorted ***ring*** of round cross-section on the above rings. The exterior is ridged. It also preserved textile remains on the surfaces. *(Fig. 16.12)*

5. (2) A fragment of a ***bronze wire*** of round cross-section beside the urn at the northern corner of the grave. *(Fig. 16.15)*

6. (3) A brick-coloured ***clay ring,*** burnt at some places to a lighter reddish shade, was found between the two caput femoris. Diam. = 8 cm. *(Fig. 16.13)*

7. (7) The fragment of a ***bronze wire*** of round cross-section between the left upper arm and the vertebral column. *(Fig. 16.5)*

8. (8) The fragment of a bronze ***bracelet*** at the wrist of the bent right arm. It is oval in cross-section with the imprint of densely woven textiles in the patination. *(Fig. 16.9)*

9. (9) A bronze ***torque*** of round cross-section round the neck. One terminal ends in a perforated disc, the other terminal is hooked. The remains of three types of textiles were preserved on the surface. *(Fig. 16.4)*

10. (11) A Dux-type ***bronze fibula*** with textile remains between the elbow of the bent right arm and the ribs. The foot of the one-piece fibula with the chord external is returned on the bow. It is beaded in six segments. The bow is of round cross-section and the two sides bear incised ornaments. *(Fig. 16.7)*

11. (12) A closed ***bronze ring*** of oval cross-section on the finger of the bent right arm. It preserved the remains of fine, densely woven textiles. *(Fig. 16.8)*

[38] The bones were destroyed.

[39] Determination of K. Köhler.

Grave furniture:

1. (1) An ***urn*** in the north-western corner of the grave. The rim is everted, there is a rib in the middle of the neck, the shoulder is sharply divided from the belly by a groove. The bottom is slightly arched. M.d. = 15 cm, B.d. = 12 cm, H. = 23 cm. *(Fig. 16.14* and *Fig. 32.3)*

2. ***Cattle*** long bones between skeleton B and the western wall of the grave shaft.

Grave no. 377

Grave ditch: feature (?) no. 368 = 378

It is a stretch of a ditch broken at a right angle. Only sections of the northern and the eastern stretches survived. A N–S directed oblong-shaped discolouration appeared in the northern part of the ditch, not in the middle of the section but closer to the north-eastern corner: this was feature no. 746. Feature no. 746 was intersected by grave no. 367. Neither the ditch nor feature 746 contained find material. The position of the features, namely that grave no. 367 intersected both grave ditch no. 368=378 and feature 746, suggests that grave 367 was later than the ditch section and grave no. 377.

Orientation: N + 228°

Description: The outlines of grave no. 377 were quite vague on the mechanically scraped surface, it was rather the moisture of the soil that indicated it in a length of 250 cm and a width of 110 cm. On the manually scraped surface (5–10 cm under the mechanically scraped surface) it was 230 cm long and 80 cm wide. The filling was a light mixed soil, somewhat darker than the environment. A darker discolouration of irregular outlines appeared at the southern third of the eastern longitudinal wall of the grave of a regular shape and another similar one could be observed aligned with it behind the western longitudinal side of the grave. Both of them intersected the grave on the surface where they appeared, they are the traces of vegetation posterior to the burial. They could be documented at the depth of 42–47 cm. In this depth both discolourations intersected the walls of the grave. Two similar irregular discolourations could be discerned in the northern third of the grave. These, nevertheless, were situated inside the grave. The clearing of the pits revealed that they contained a natural humus filling mixed with sand. Their depth was 18–22 cm. In the undisturbed area, the wall of the grave shaft was sand to a depth of 44–46 cm, which was lighter than the filling of the discolourations and the grave shaft. In the depth of 52–56 cm, the sand became darker and mixed with greyish earth. The disturbance could not be detected here, only the clear outlines of animal burrows of sandy filling could be observed. The bottom of the grave was reached in a depth of 67 cm. Neither bone nor finds were found in it. We carried on deepening to a depth of 250 cm although the bottom of the grave was distinguishable. The ground was unbroken without disturbance or finds, the colour turned first into light grey which was gradually replaced by dark grey clay.

Grave no. 379

Without grave ditch

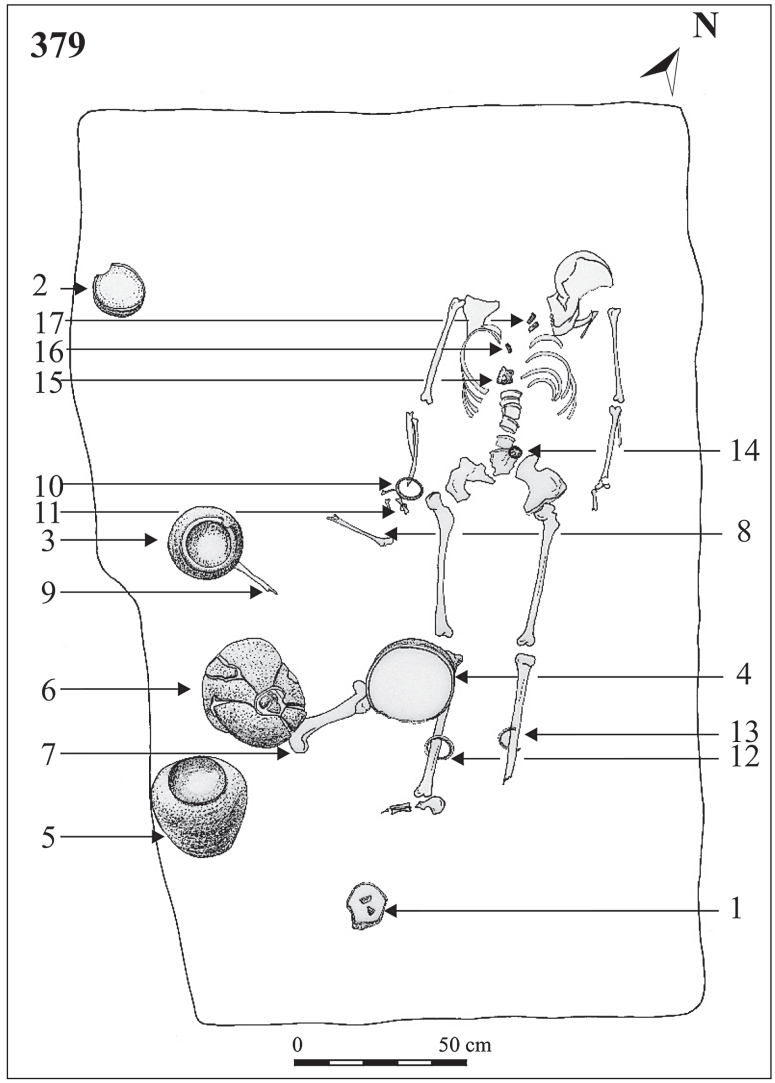
The outlines of the grave could not be discerned on the mechanically scraped surface, only an amorphous discolouration indicated it, which reminded of the corner of a house. The soil was greyish clayey around the discolouration. The outlines of the grave distinctly appeared only in the depth of 60 cm.

Orientation: N + 232°

Shape and measurements of the grave: The shaft was 101 cm deep from the mechanically scraped surface. The width of the grave in a W-NW direction was 176 cm, in the opposite direction it measured 132 cm. Its axis was 260 cm long. The eastern wall of the shaft bulged at an angle in a length of 135 cm. A vessel (No. 2) stood in this niche 15 cm above the bottom of the grave. The depth of the grave was 45 cm.

Description: The body lay on the back in an extended position in the north-eastern half of the shaft in an 80 cm wide stripe. The vertebral column was bent towards the wall of the grave, the skull was inclined on the right clavicle, the left shoulder was drawn up. The maxilla slid into the skull. The bones were very poorly preserved. Some or all of the bones of the left hand and the left foot were missing. The right thighbone turned out of the socket. Anthropological determination: male(?), 20–59 years old.[40] The belt clasp implies a woman!

[40] Determination of K. Köhler.



Finds:

1. (10) A ***bronze bracelet*** on the right wrist. The solid, open bracelet has seal-shaped terminals with two grooves. The body is all around ornamented by obliquely incised lines. Diam. = 6.5 cm. *(Fig. 17.6)*

2. (11) A bronze ***finger ring*** on a finger of the right hand (cannot be told on which one). It is round in cross-section, solid and fragmentary. A sheet is bent over it in a section. Textile remains rusted onto the surface. *(Fig. 17.4)*

3. (12) An ***anklet*** above the right ankle. It is hollow, round in cross-section, sleeved. There are incised linear ornaments on the two edges of the closing section. The engraved linear pattern fills in each a horizontal triangular field on the two terminals. There are four punched dot circles on the tops of the triangles. Textile rusted onto the anklet. Diam. = 9 cm. *(Fig. 17.8)*

4. (13) A damaged bronze ***anklet*** above the left ankle. It is hollow, hooked, the terminal is broken, textile rusted onto the body in broadband. One terminal is transversally perforated and iron rust marks beside the hole indicate the missing iron rivet. Diam. = 9 cm. *(Fig. 17.7)*

5. (14) An ***iron clasp*** of a hooked-quadrangular plate on the left pelvis. W. = 4 cm. It must have been attached to an approximately 2,6 cm broad leather strap. *(Fig. 17.5)*

6. (15) An ***iron fibula*** on the right part of the chest. Fragmentary, the returned fragmentary foot is four times beaded. It is one-piece with the chord external. *(Fig. 17.3)*

7. (17) An ***iron fibula*** on the breast bone. It is fragmentary, oval in cross-section, only a section of the bow and the spring were preserved. *(Fig. 17.1)*

8. (16) A ***bronze fibula*** on the breast bone. It is small, one-piece, with the chord external, the catch plate is turned to the side, the beaded end of the foot is returned on the bow. Both the end of the foot and the bow are ornamented with incised lines. L. = 2.5 cm. *(Fig. 17.2)*

Grave furniture: There were six vessels in the grave beside the articles of wear. All except one lay in the north-western part of the grave shaft.

1. (1) The fragment of a small ***vessel*** between the right foot and the shorter wall of the shaft. It is a brownish fragment tempered with sand, the mouth is missing. There are vertically incised double lines on the lower part. B.d. = 5 cm. *(Fig. 17.11)*

2. (2) A small ***bowl*** in the north-western corner of the grave in a depth of 95 cm. It is small, with a vertical rim and a pressed globular body. The bottom is omphalos-shaped. M.d. = 8.8 cm, B.d. = 3 cm, H. = 5 cm. *(Fig. 17.9)*

3. (3) An ***urn*** with the mouth down outside the right thighbone The rim is everted, a rib runs round the arch of the neck and another one on the shoulder. It has a foot disk. M.d. = 15.5 cm, B.d. = 12 cm, H. = 22 cm. *(Fig. 17.12* and *Fig. 32.4)*

4. (4) A ***bowl*** with the mouth down on the right leg bones. It lay partly on the leg bones and partly on the animal bone (no. 7). The rim is everted, the bottom is slightly omphalos-shaped. M.d. = 24 cm, B.d. = 3.4 cm, H. = 9 cm. *(Fig. 17.13* and *Fig. 33.4)*

5. (5) An ***urn*** in the northern corner. The rim is everted, a wide grooved rib runs round under the rim and another groove in the arch of the neck. There are two parallel grooves at the joining of the shoulder and the neck. The bottom is cut. M.d. = 17 cm, B.d. = 14 cm, H. = 29 cm. *(Fig. 17.14* and *Fig. 32.6)*

6. (6) A broken, so-called ***Linsenflasche*** between grave furniture nos. 3 and 5 at the wall of the shaft. It is matt, tempered with sand, the mouth slightly widens, the neck bulges. The bottom continues without break from the belly. M.d. = 8.3 cm, B.d. = unmeasurable, H. = 27.6 cm. The vessel cracked under the weight of the earth, the neck sank into the broken body of the vessel. *(Fig. 17.10* and *Fig. 32.1)*

7. Cattle ***foot bone*** between the right patella of the skeleton and grave furniture no. 4.

8. ***Pig*** bone at the right hand.

9. ***Animal bone*** (indeterminable) beside grave furniture no. 3.

Grave no. 464

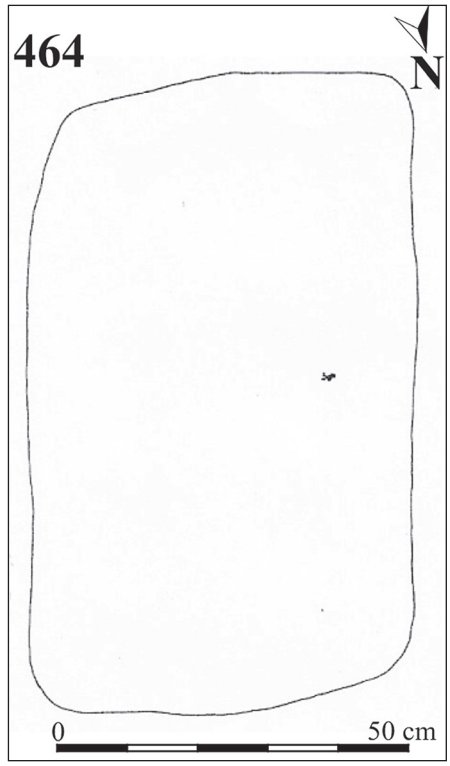
Grave ditch (?) feature no. 450

The narrow, irregular grave ditch breaks at an obtuse angle. The axis of the grave is not parallel to that of the ditch but no other feature can be considered within the ditch frame since grave no. 465 is too far from the ditch. Grave ditch no. 450 was disturbed by the round ditch no. 374. It partly cut off the northern and eastern sections of ditch no. 450. The section of the ditch where it turns to south-west and the southern section was damaged by later features as well. At the neighbouring features, it could be observed that the original floor surface was shallower in the southern part and some of the features were ploughed away. The preserved northern section of the ditch was 3.6 m long and 25 cm wide. The western section was 3.5 m long and 30 cm wide.

Orientation: N + 204°

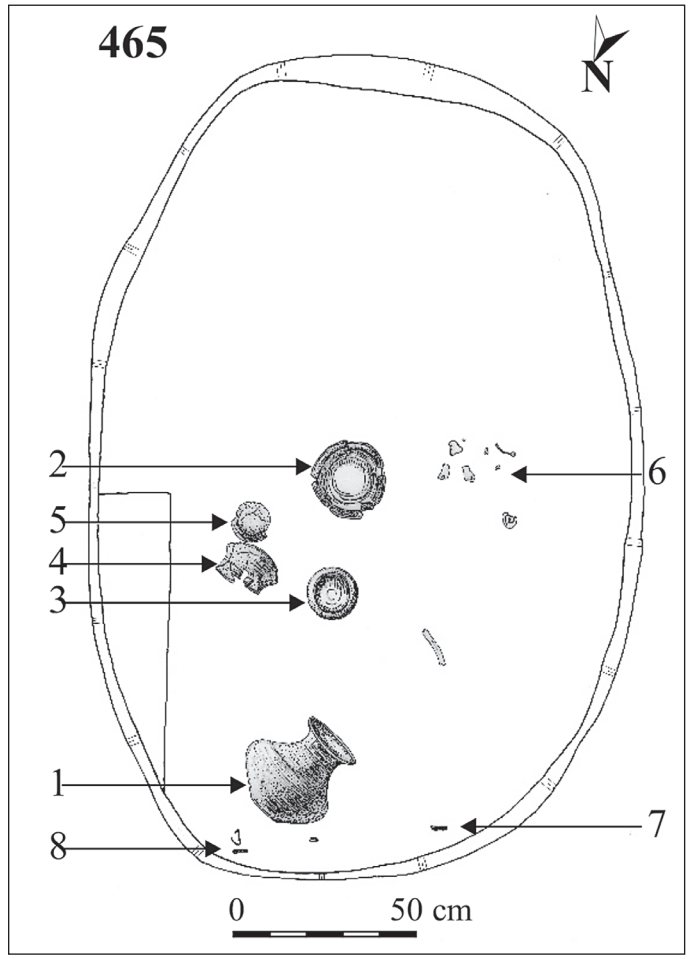
Shape and measurements of the grave: The length of the grave shaft with rounded corners was 180 cm, its width was 110 cm and 100 cm. Depth: 35 cm.

Description: It appeared as a light brown discolouration against the greyish yellow, mixed sandy-clayey soil. The unbroken ground, a brownish, mixed sandy soil could be seen in the walls of the shaft to a depth of 10–11 cm. Deeper down, the shaft was dug into yellow sand. The bottom of the grave shaft was reached in a depth of 35 cm. Neither bones nor finds lay in the shaft. To be certain, the control shaft was deepened first to the depth of 80 cm, but it was filled only with seemingly intact yellow sand. Then we dug on to a depth of 200 cm but the situation did not change.



Grave no. 465
Without grave ditch
Orientation: N + 228°
Shape and measurements of the grave: An oval shaft, the longitudinal axis is 200 cm long, the shorter one is 150 cm long.
Description: It appeared as an oval patch with a sandy filling. Two small patches resembling animal burrows appeared in it. The sand fell in although it seemed intact, and a mixed layer appeared under it. The urn came to light in the north-eastern third right under the sand. A bench was found at the eastern, longitudinal wall in the depth of 58 cm but it stretched only to about half of the grave. It seemed as if the original wall of the grave were there. Total depth: 78 cm. The skeleton was missing, only a few bone splinters remained at the western side: teeth and splinters of long bones. Feature 305 intersected the grave, which means that the grave was older than ditch no. 305. Anthropological determination: Infans I–II., 1–14 years old not cremated(!) child.[41]
Articles of wear:
1. (6) An ***iron fibula*** among the bone splinters. Textile remains could be found in the rust at several places. It is a one-piece fibula with the chord external, the end of the foot, and the pin broke off. *(Fig. 18.1)*
2. (6) A small, arched, flat iron ***plate*** fragment beside the iron fibula with wood remains in the rust. *(Fig. 18.2)*
3. (7–8) Iron fragments at the northern edge of the grave: the edge plates and mounts of a ***shield*** (?). Wood remains adhered to the iron. Judged from the arch of the edge plate, the wood could be 0.5 cm thick. *(Fig. 18.3–6)*
Grave furniture:
1. (3) A so-called Beled-type ***bowl*** with omphalos-shaped bottom encircled by a double foot ring was found in the centre. The rim is slightly everted, the wall was smoothed in two bands probably bordering a slight ridge in the arch of the neck. M.d. = 13 cm, B.d. = 4 cm, Height = 4 cm. *(Fig. 18.8)*

[41] Determination of K. Köhler.



2. (1) A large ***urn*** in the northern end of the grave. The rim is everted, There are a groove and a rib on the neck, a wide groove on the shoulder and an even wider, shallower groove under it. M.d. = 16 cm, B.d. = 10 cm, H. = 25 cm. *(Fig. 18.9* and *Fig. 30.1)*

3. (2) A small ***bowl*** broken to pieces was found in the central part. M.d. = 18 cm, B.d. = 2,5 cm, H. = 6 cm. The rim is everted, there are two grooves on the neck. It is greyish brown, wheel-thrown, the clay is sandy. *(Fig. 18.7)*

4. (5) A small hand-made ***bowl*** beside the bench. It was adjusted on a wheel. It is brownish grey, tempered with sand. M.d. = 11 cm, B.d. = 3 cm, H. = 5 cm. *(Fig. 18.10)*

5. (4) Another vessel beside grave furniture no. 4. It is a small ***urn*** of everted rim, with a rib on the neck and a groove on the shoulder. It is wheel-thrown, brownish back, tempered with sand. M.d. = 12 cm, B.d. = 6 cm, H. = 12 cm. *(Fig. 15.10)*

6. An ***animal bone*** fragment among the bones of the child.[42]

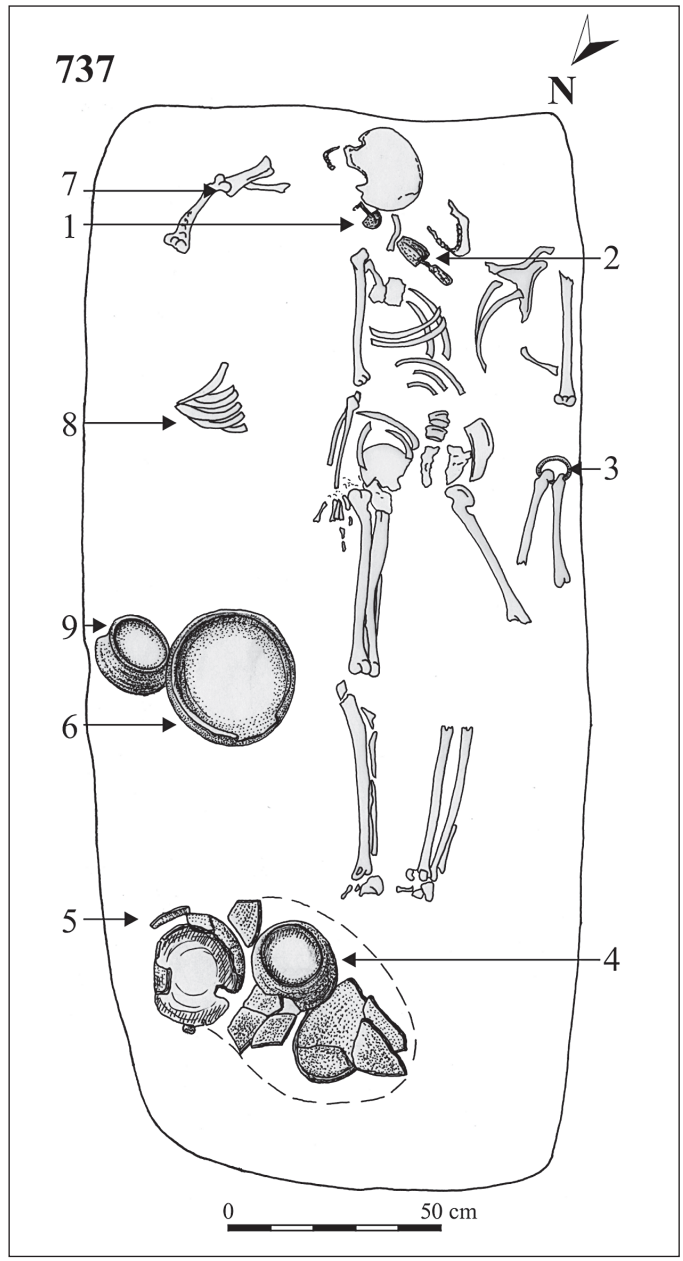
Grave no. 737
Without grave ditch
Orientation: N + 212°

Shape and measurements of the grave: The grave did not appear either on the mechanically or on the manually scraped surfaces. Here the ground was a dark grey, clayey, loamy alluvial soil. We worked in a controlled cutting measuring 10 × 10 m. The slightly irregular, oblong-shaped grave shaft appeared in the depth of 58–60 cm

[42] It cannot be determined more accurately.

under the archaeologically intact soil. The width of the grave shaft was 120 cm in SE (at the skull) and 110 cm at the foot. (For fear the wall could fall in, the grave could not be opened in the whole width, since the earth scaled off in large lumps and fell into the shaft from every direction.) The relative depth from the mechanically scraped surface was 121 cm.

Description: A very poorly preserved skeleton lay in a S-SE–N-NW direction in the grave. The measurable length of the skeleton was 160 cm. The skull tilted from the original position, similarly to the jaw. The left arm and the left thighbone were in a secondary position as well. No animal burrow could be seen in the soil or the wall, but animal holes could not be observed anywhere in the greyish, clayey soil. The whole grave was underwater at the time of the excavation. The clearing of the grave proved difficult in the greyish black, smearing earth and the ceramics had to be removed with the earth packing. It could be seen both on the finds and the bones that they were



strongly deteriorated by the frequently rising groundwater. The bones were brownish black, spongy and the pottery was soaked and pulpy. Anthropological determination: male, 40–50 years old.[43]

Articles of wear:

1. (1) An ***iron fibula*** in the place of the right clavicle. It is fragmentary, a part of the bow together with the end of the foot is missing. It is a wide and large fibula with a spring gear and a large returned knob on the bow. It could be lifted only together with the earth. *(Fig. 19.6)*

2. (2) An ***iron fibula*** near the dislocated jaw, next to the left clavicle. It has a large spring of a large diameter. The bow bulges in the middle, the returned end of the foot ended in a large double globule. L. = 13.5 cm. Similarly to the above item, it could be lifted only with the earth packing. *(Fig. 19.5)*

3. (3) A ***bronze bracelet*** on the left lower arm close to the elbow, where the animal burrow disturbed the grave. It is an open bracelet with slightly thickening terminals, cast, solid, oval in cross-section. Diam. = 7 × 6.2 cm. *(Fig. 19.7)*

Grave furniture:

1. (4) A broken ***vessel*** in the northern corner of the grave at the foot. The neck is steep, the clay was tempered with sand. The situla-shaped vessel has a shallow groove under the rim. A roulette ornament runs in a wavy line between two horizontal grooves on the carinated shoulder. M.d. = 10 cm, B.d. = 11 cm, H. = 16 cm. *(Fig. 19.9* and *Fig. 35.8)*

2. (5) A broken ***urn*** at the wall in the northern corner of the grave. The rim is everted, a rib runs round the neck. There are two shallow grooves on the shoulder. Its colour is grey due to being baked in a reducing environment. At the top it is brick coloured, baked to a yellowish colour. The clay was tempered with sand. Originally it was grey on the outside. M.d. = 13.4 cm, B.d. = 10.4 cm, H. = 26 cm (?). *(Fig. 19.12)*

3. (6) A large ***bowl*** between the right knee and the wall of the grave. It broke in the grave. On the inside there is a double roulette ornament in a wavy line, the waves leaning leftwards. It was baked in a reducing environment, its colour is brownish-black, lighter in cross-section. M.d. = 24 cm, B.d. = 5 cm, H. = 9 cm. *(Fig. 19.11* and *Fig. 34.3)*

4. (9) A biconical ***bowl*** with everted rim leaning against the middle of the south-eastern wall of the grave beside the large bowl. It was secondarily burnt and became reddish grey in spots, the clay was finely levigated. M.d. = 14 cm, B.d. = 5 cm, H. = 6.5 cm**.** *(Fig. 19.8)*

5. A broken ***urn*** beside vessels nos 4–5. The rim is everted, there are a rib on the neck and two grooves on the shoulder. It is light grey, the clay was tempered with sand. M.d. = 13 cm, B.d. = 10.6 cm, H. = 24 cm. *(Fig. 19.10)*

6. (7) ***Animal bones*** in the south-eastern corner of the grave shaft (***sheep bones***).

7. (8) ***Animal bones*** between the right elbow and the longer wall of the grave (***cattle*** ribs).

Grave ditch no. 738

The ditch is semicircular in cross-section with a uniform filling. It reached under the southern humus deposition. It extended towards the centre of the surface. The section turning to the west could be seen, while the northern and western sections could not be observed on the scraped surface. It was 20–25 cm wide and 12 cm deep in the excavated 5.2 m long section. The filling was uniform, only slightly darker than the blackish-grey environment. It did not contain finds. The outlines of a grave could not be observed within the ditch nor did the metal detector indicate finds. To be certain, a control cutting was opened within the ditch but no pit could be found and there weren't any finds either. From the features of the Celtic cemetery only cremation burial no. 298 fell between the grave ditch and the black, deep part with moist filling in the blackish grey soil.

Grave no. 744

Grave ditch: feature no. 745

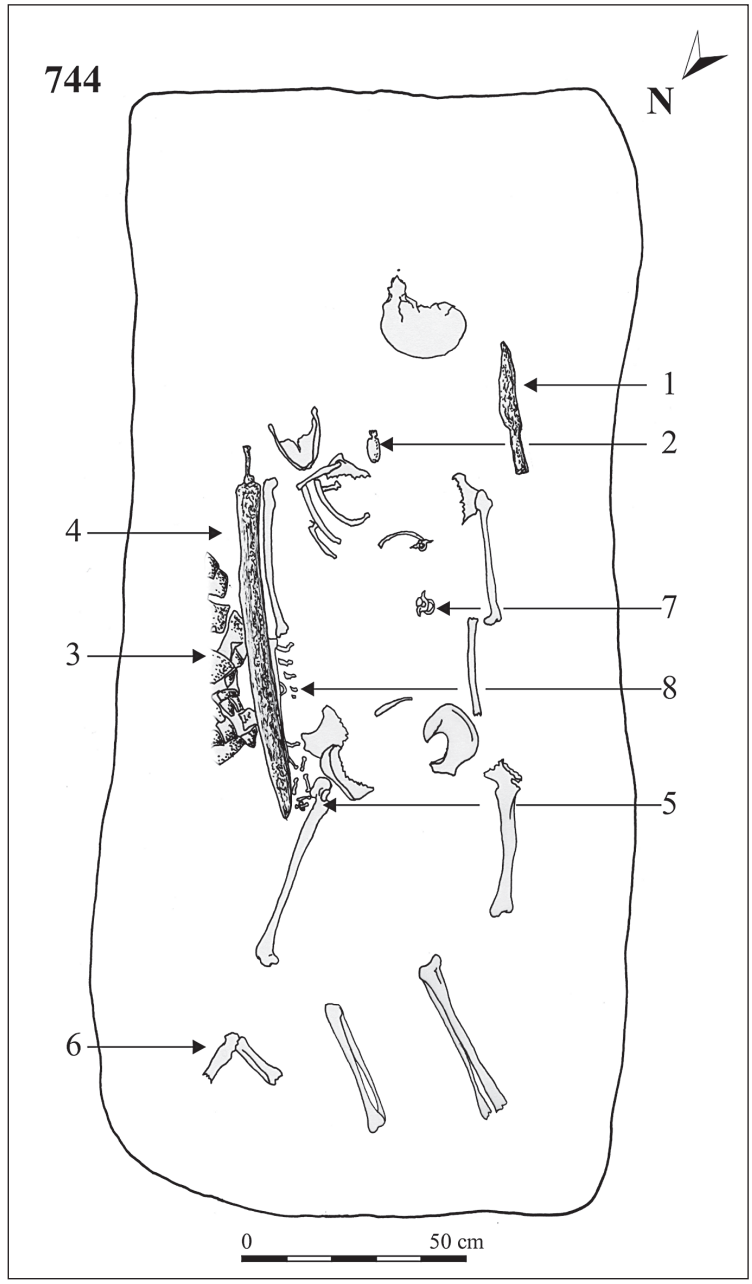
The grave ditch was intersected by grave ditch no. 306 and it destroyed the eastern and partly the northern sections of ditch no. 745. A small, round depression appeared in the western stretch, which intersected only the southern wall of the ditch. The western stretch of the grave ditch was 5 m long outside and 4.8 m inside, its width measured 35 cm. The northern stretch was 4 m long and 30 cm wide.

[43] Determination of K. Köhler.

Orientation: N + 228º

Shape and measurement of the grave: An oblong-shaped shaft with a S-SE–N-NW directed axis. Its width at the south-eastern wall was 113 cm, and 105 cm at the N-NE–S-SW wall. The length of the axis was 254 cm, its depth 67 cm.

Description: The soil was greyish, clayey, and mixed. Downwards it became more and more grey and moist, a smearing yet compact clay. The poorly preserved skeleton was disturbed by animal burrows. It lay on the back with slightly flexed legs toward NE. Intermittent groundwater deteriorated the bones and the metal finds. The skull tilted from its original position. It lay close to the southern wall, the mandible was displaced into the height of the right shoulder. Anthropological determination: male(?), 35–45 years old.[44] The archaeological material implies a male!



[44] Determination of K. Köhler.

Articles of wear:

1. (1) A one-armed ***iron fibula*** at the right clavicle. H. = 6.5 cm. *(Fig. 20.2)*

2. (7) An ***iron fibula*** above the right pelvis. It is solid, bent to the side, the catch-plate is small. It has broad spring arms, the chord is external. H. = 5.3 cm. *(Fig. 20.4)*

3. (5) A silver finger-ring on the middle finger of the right hand. It is solid, cast, of round cross-section. Diam. = 2.3 cm. *(Fig. 20.3)*

4. (8) Fragment of an ***iron ring*** under the sword (disintegrated).

Weapons:

1. (1) A ***spearhead*** beside the right upper arm, between the upper arm and the wall of the grave pointing toward the shorter wall at the head (which means it was probably put into the grave with the intact shaft). H. = 25 cm, Diam. = 2 cm, length of the socket = 7 cm. It is midribbed, the socket is oval in cross-section, and shows the places of two rivets. *(Fig. 20.1)*

2. (4) An ***iron sword*** between the right shoulder, and the thigh bone, beside the body, in the direction of the grave wall. It is double-edged, 82 cm long, the hilt is 11.5 cm long, ending in an antenna, which was preserved only on one side. The width of the remaining antenna was 2 cm. The blade has a midrib, the width of the blade is 5.3 cm at the hilt. Under the antenna, a small fragment of the bone grip plate is preserved with the remains of an iron rivet. The thickness of the bone plate is 0.9 cm. The scabbard with an arched termination was 5.6 cm wide at the top. The textile of coarse weaving was found at several parts of the scabbard. The length of the suspension mount, which ends in two semicircles, is 4 cm, it was prepared for an approximately 2 cm wide leather strap. At the same place, two ***iron nails*** with hemispherical heads were also found. *(Fig. 20.6a–c)*

Grave furniture:

1. (3) A broken ***urn*** between the sword and the wall of the grave. There are two grooves on the shoulder and a horizontal S-motive arranged within an imprinted triangle under it. M.d. = 20 cm, B.d. = 12 cm, H. = 24 cm. *(Fig. 20.5* and *Fig. 32.5)*

2. (6) ***Animal bone*** remains between the right leg and the wall if the grave.[45]

Grave no. 752

Without grave ditch

Orientation: N + 240°

Its top was partly intersected by medieval ditch no. 382. The skeleton was not disturbed.

Description: The grave shaft was deepened into the grey, moist, paludal mud, and the bones were rather poorly preserved. The grave shaft was narrow, oblong-shaped, its relative depth from the mechanically scraped surface was 59–62 cm. The width of the grave shaft was 53 cm, its length measured 161 cm. Its axis had a S-SE–N-NW direction. The skeleton lay with the skull to S-SE. It did not lie in the middle but the eastern half of the narrow grave. The skull-faced east, the left arm was bent at the elbow and placed across the chest. The right arm was extended along the body. The right leg was slightly bent at the knee. There is a mark of a blow on the left temple. Perhaps this must have caused the death. Measurable length of the skeleton in the grave: 151 cm. Anthropological determination: female, 34–43 years old.[46]

Articles of wear:

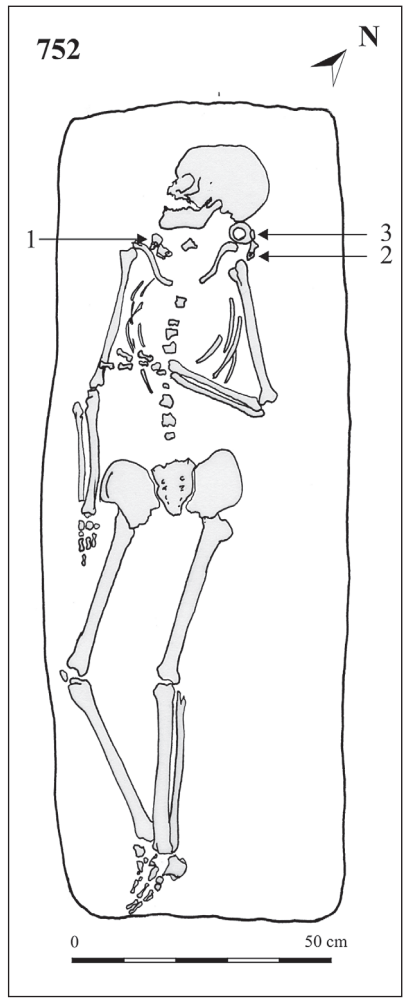
1. (1) A ***bronze fibula*** on the right clavicle. It is a one-piece fibula with the chord external, the foot returned on the bow was twice partitioned with beading. There is an engraved pattern on the bow: a ring within a lozenge. Length: 2.7 cm. *(Fig. 12.9)*

2. (2) A ***bronze fibula*** on the left clavicle. The small one-piece fibula with the chord external had the foot returned on the bow. The foot is terminated in a hemisphere above triple beading. The bow is round in cross-section. Length: 3 cm. *(Fig. 12.8)*

3. (3) A solid, closed ***iron ring***, round in cross-section, beside the fibula on the left clavicle. Diam. = 3 cm. *(Fig. 12.10)*

[45] They cannot be determined more accurately.

[46] Determination of K. Köhler.



Grave no. 754

Without grave ditch

A surface of daub was unearthed above the grave (feature no. 386). The daub surface was burnt, red, with precipitated lime grains and traces of mortar around it. It appeared already on the scraped surface. The outlines were irregular measuring 90 × 72 cm, its depth was 20 cm.

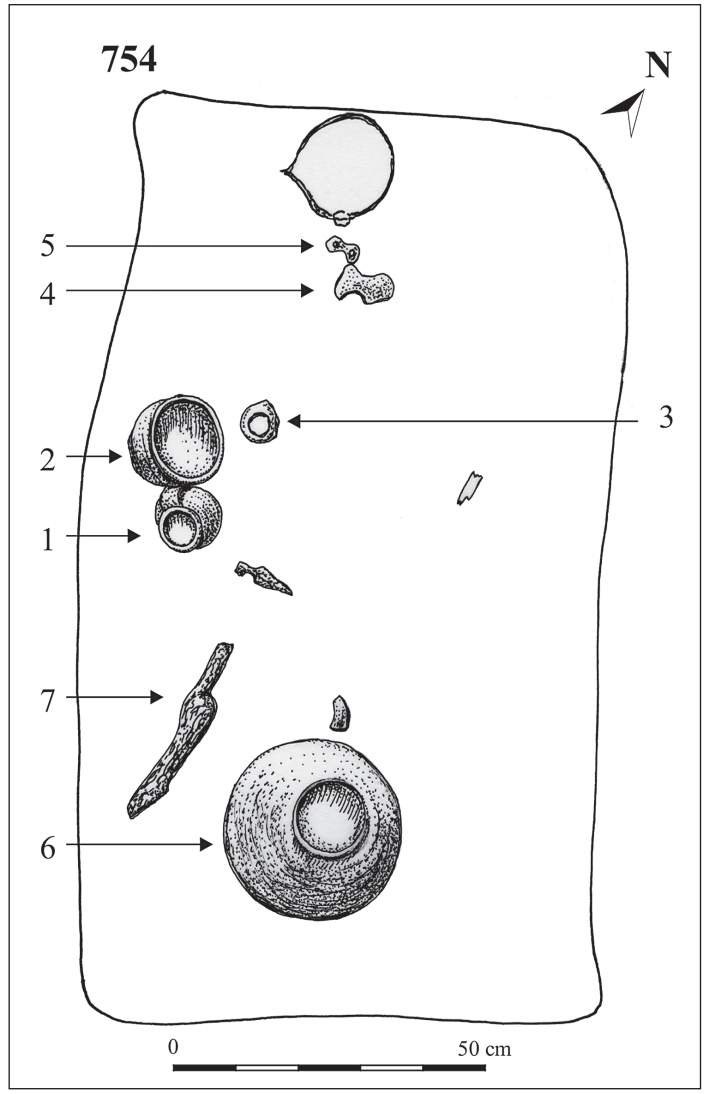
Orientation: N + 234.5°

Description: It did not appear on the mechanically scraped surface since in this area nothing appeared in the black, clayey humus. Its faint outlines appeared 30 cm deeper in the control cutting. The oblong-shaped grave shaft was dug in the grey paludal clay. The axis of the grave had a S-SE–N-NW orientation. The width of the grave shaft was 70 cm, and 80 cm at the feet. The length of the axis was 145 cm. Its depth (from the mechanically scraped surface) was 70–78 cm. The bones were rust coloured and crumbled in splinters. The length of the skeleton could not be measured. It could not be observed, either, how the skeleton lay. The axis length of the grave, which was strikingly short in the cemetery, and the measurements of the surviving post-cranial bones (an adult!) suggest a crouched position. The filling of the grave was mixed clayey, moist. The remaining bones were coloured to brown and disintegrated into splinters. Only the outline of the skull remained on the western edge of the grave.

The grey clayey unbroken ground taken out at the digging of the grave was refilled in large lumps. Bone remains unsuitable for anthropological determination.

Articles of wear and use:

1. (5) An iron ***awl*** at the neck. It is round in cross-section, with a tapering end. L. = 7.6 cm. *(Fig. 19.3)*



2. (4) An iron ***fibula*** at the neck. It has a wide arm with a large spring, the foot is returned at an angle on the bow and terminates in a globular element. *(Fig. 19.1)*

3. (3) An iron ***ring*** in the place of the right arm. It is closed, round in cross-section. Probably a closed-ended iron ***bracelet***. Diam. = 5.5 × 7.5 cm. *(Fig. 19.2)*

4. (7) An iron ***knife*** in the place of the lower right leg. Single-edged, slightly arched back. A fragment of two rivets on the handle of the handle and a fragment of an angle indicates the attachment of the wood handle. *(Fig. 19.4)*

Grave furniture:

1. (6) A black ***bowl*** baked in a reducing environment. The rim is everted, the bottom is omphalos-shaped. M.d. = 25.8 cm, B.d. = 5.8 cm, H. = 9 cm. *(Fig. 18.15)*

2. (3) Another broken ***bowl***. It was baked in a reducing environment. M.d. = about 20 cm. *(Fig. 18.14)*

3. (2) A ***bowl*** between the wall of the grave and the place of the right arm. M.d. = 11.5 cm, B.d. = 4 cm, H. = 5.5 cm. *(Fig. 18.12* and *Fig. 35.2)*

4. (1) A ***cup*** next to the previous bow. It is one-handled, burnt (?) to a black colour, the surface is coarse. The band handle is oblong-shaped in cross-section, it starts from the rim and joins the shoulder of the vessel above the biconical carination on the belly. M.d. = 7 cm, B.d. = 5 cm, H. = 7.6 cm. *(Fig. 18.13* and *Fig. 34.1)*

Grave no. 755

Grave ditch: feature no. 756

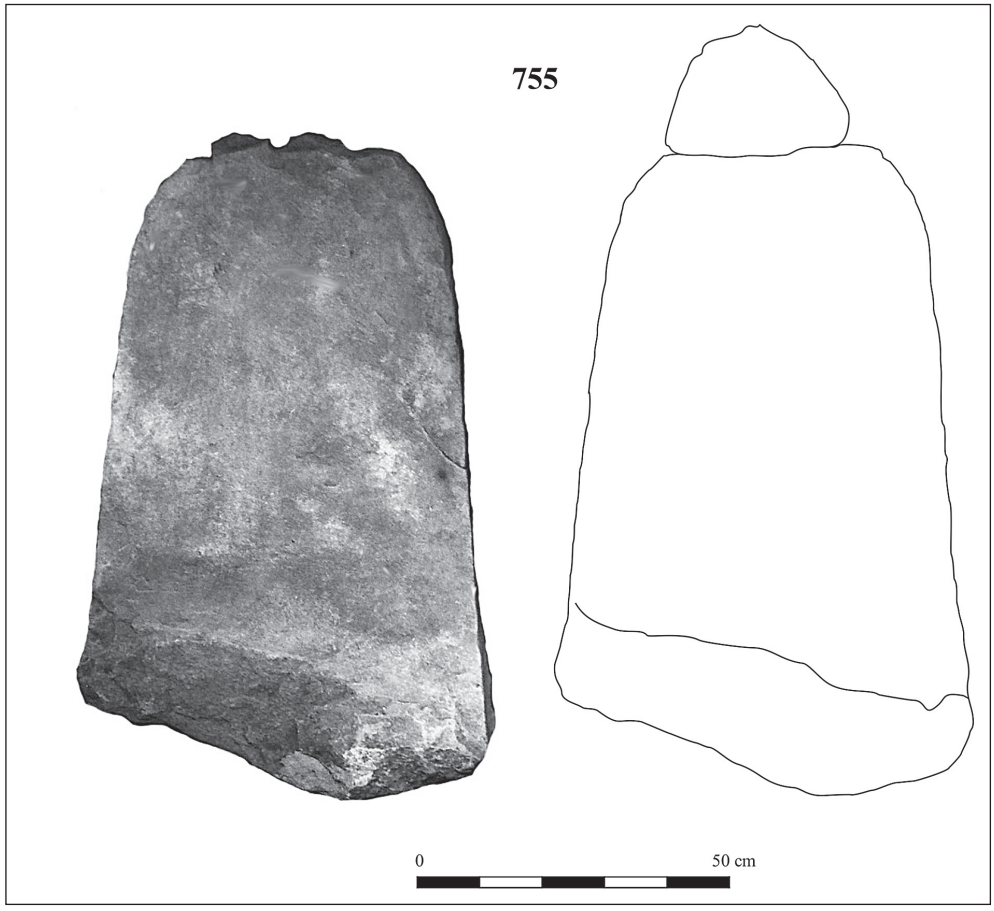
The grave ditch was partly destroyed. The northern section reached under the humus deposition. The western stretch was 4 m long outside and 3.85 m long inside. The southern stretch was 5 m long outside and 4.8 m long inside, where it was 30 cm wide. The width of the ditch varied between 15 and 30 cm, its depth was 20–22 cm. It was semicircular in cross-section. It was filled with a slightly brownish, mixed sand. There were no finds in it.

Orientation: N + 224°

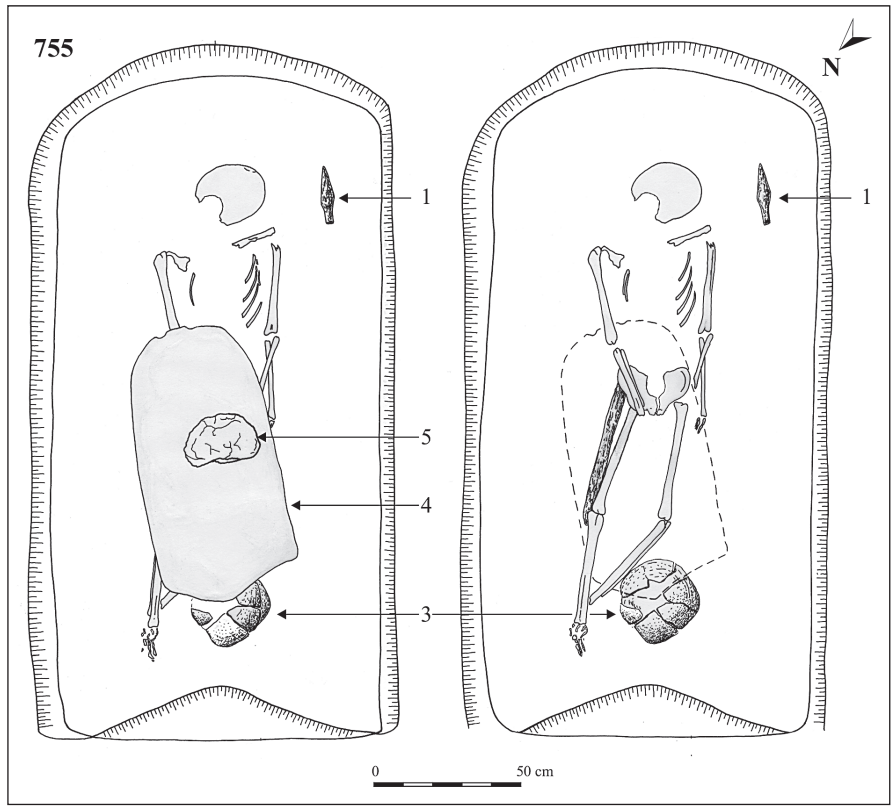
Shape and measurements of the grave: The grave shaft was rounded, arched on the southern side, where its width was 121 cm. On the northern side, it was 126 cm wide. The length of the grave was 230 cm. A small pit could be observed at the feet, partly under the humus deposition, the bottom of which was somewhat deeper than that of the grave. Depth of the grave: its discolouration appeared 74 cm under the present ground level, the bottom of the grave was 115 cm from the mechanically scraped surface and 75 cm from the appearance.

Orientation: S-SE–N-NW. The skull lay to S-SE.

Description: The grave was in the southern part of the area unearthed in 1993, under the humus deposition. It appeared in the black, moist, clayey soil as a slightly darker moist discolouration. It could be spotted directly under the ploughed layer. A roughly carved piece of limestone with rounded corners was found in the centre in a vertical position. Under it, a large, carved sandstone with semicircular end lay horizontally indicating the grave. The sides of the large tombstone were carved smooth, its bottom was 25–30 cm large. It is rough, prepared with a bush-hammer. This part was originally sunk in the earth. The length of its base was 56 cm, its height was 106 cm, its thickness was 9 cm at the bottom, and 7 cm at the roughly carved part. One of the corners of the bushhammered part of the tombstone broke off before being placed on the grave. There are two carved regular grooves on the upper, regular part, which could hold the smaller stone.



The filling of the grave shaft was greyish black in a thickness of 20–25 cm. Under it, the soil gradually turned lighter and moister. A darker band could be observed right above the large fallen tombstone. This band was of uneven thickness. It was thicker above the foundation of the tombstone, which is at the northern part, and narrowed at the arched end. It disappeared 30 cm south of the arched part. It seems that the tombstone was set up at the foot after the dead had been placed in the shaft but not yet covered with earth. After having placed the stone, the humic soil was refilled to the foundation of the tombstone and partly over the body. The direction of the burial was from the north as it can be read from the cross-section. Later the tombstone fell over the body but by that time the body had already been covered with a 10–12 cm thick, solidified layer of earth. The upper part of the tombstone fell over the larger stone slab and cracked the urn at the foot of the dead. *(Fig. 36)*



The bones of the dead were very poorly preserved. They lay partly in the grey, moist clay, which deteriorates the bones. The skull was barely more than a discolouration but it could be discerned that it originally faced east. The left shoulder was somewhat drawn up. The left-arm lay along the body, the right hand was put on the pelvis. The right leg was extended toward the north-eastern corner of the grave. The left leg was bent at the knee, the foot was found under the right leg. The irregular position of the foot was explained by the fact that the urn was placed in the grave earlier than the dead, which had to be laid a little obliquely beside the urn. The sword lay on the right side of the skeleton under the arm, the pelvis and partly under the right thighbone, and it was found only after the skeleton had been lifted. This means here that the sword, although found where it had been worn, was placed in the grave together with the urn before the body was lowered.

Measurable length of the skeleton: 169 cm. Anthropological determination: male: 20–39 years old.[47]

Finds:

1. An ***iron spear*** pointing toward S-SE. It lay on the left side of the skeleton between the skull and the wall of the grave. It had a short, wide, angular blade with a midrib. H. = 13.5 cm, Socket l. = 4 cm, Diam. = 2 cm. *(Fig. 21.1)*

[47] Determination of K. Köhler.

2. A long double-edged ***iron sword*** under the right leg. It was 69 cm long, the hilt was 7.8 cm long. The end of the hilt broke off. The scabbard had an arched terminal where the rusted remains of the suspension mount can be seen. Opposite the suspension mount coarse textile remains of thick threads can be observed. Length: 3.5 cm. Width of the scabbard at the top: 5.5 cm. *(Fig. 21.4a–b)*

3. The fragment of a small iron ***ring*** of round cross-section under the sword. Diam. = about 3 cm. *(Fig. 21.3)*

4. A small iron ***tool*** in the urn. It is 10.5 cm long of a round cross-section at the top at the handle, the blade is oblong in cross-section. *(Fig. 21.5)*

Grave furniture:

1. (3) An ***urn*** at the left foot. It is black, grey in cross-section, broken to pieces, crumbling, the clay was tempered with sand. The rim is everted, the shoulder runs stepwise into the belly. M.d. = 16 cm, B.d. = 9 cm, H. = 28 cm. *(Fig. 21.6)*

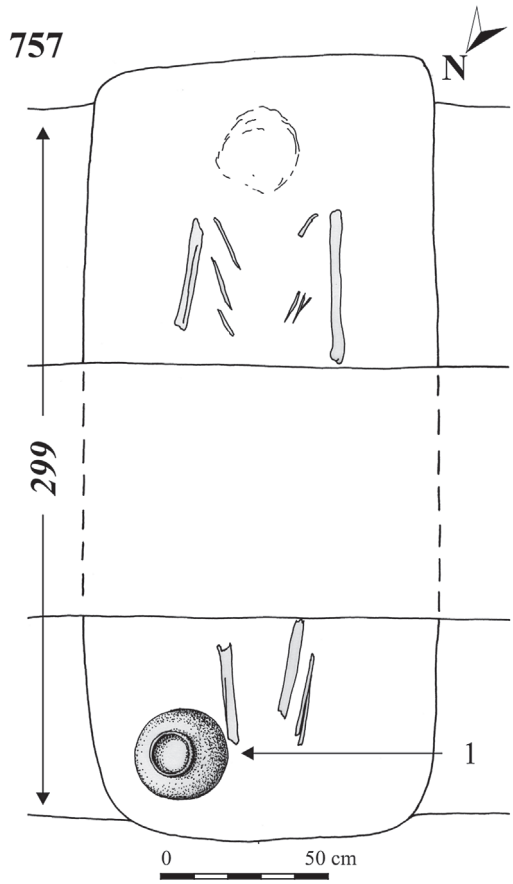
2. (3) The fragments of a small ***bowl*** among the fragments of the urn. It is thick-walled, baked in a reducing environment, brick-coloured in cross-section, black inside and out, the clay was tempered with sand, disintegrated. M.d. = 13 cm, B.d. = 4.8 cm, H. = 8.8 cm. *(Fig. 21.2* and *Fig. 35.5)*

Grave no. 757

Orientation: N + 225°

Shape and measurements of the grave: It was oblong-shaped with rounded corners. The width of the grave was 80 cm at the head and 75 cm at the feet. Its length measured 185 cm. Its depth was 40 from the mechanically scraped surface, that is 110 cm from the actual ground surface.

Description: The Roman period ditch no. 299 intersected the grave destroying its central part. The bones were very poorly preserved, the skull appeared only as a discolouration. The bones of the chest and the upper arms



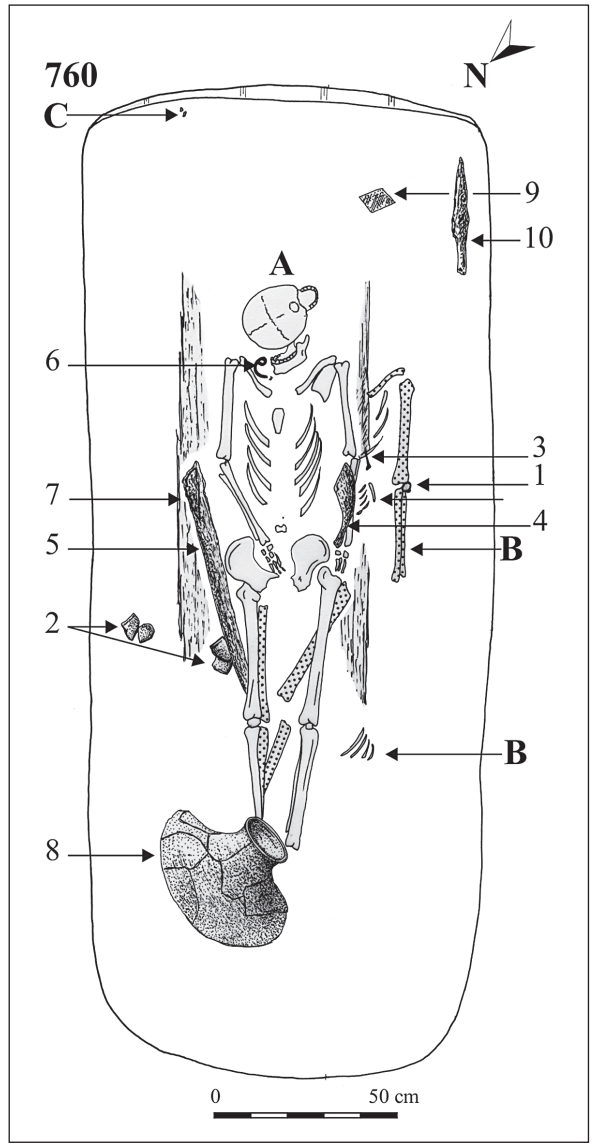
were preserved similarly to those of the leg. The rest of the skeleton was destroyed by the ditch. Anthropological determination: female(?), 20–39 years old.[48]

The only **grave furniture** was a grey ***vessel***, so-called ***Linsenflasche*** with the mouth down next to the right foot, cracked by the weight of the earth. There are twice two grooves on the inwards narrowing neck. The lower part is flattened globe-shaped, the bottom is omphalos-shaped. The upper part is broken.

M.d. = 10 cm, B.d. = 6 cm, H. = 13 cm. *(Fig. 15.11* and *Fig. 34.2)*

Graves no. 760/A, 760/B
Grave ditch: feature no. 759

The northern part reached under the humus deposition. The eastern and western stretches could not entirely be excavated. The western section of the ditch was 4 m long, the southern one was 5.9 m long outside and 5.4 m long inside in a width of 30 cm. It was semicircular in cross-section, its width varied between 20 and 37 cm, its depth between 7 and 16 cm from the surface where it appeared. The uniform filing did not contain finds.



[48] Determination of K. Köhler.

Orientation: N + 222°

Description: An inhumation burial with a second burial above it. The second, later skeleton (B) was an adult male, and there was another skeleton (760/A) under it. Anthropological determination: 760/A: male, 20–30 years old; 760/B: male, gracile, 20–x years old.[49]

Shape and measurements of the grave: Its length was 270 cm, its width 110 cm at the head, and 90 cm at the feet. It appeared during the scraping of the yellowish-grey sand surface 70 cm under the original ground surface. Its filling was somewhat darker. (The 70 cm means the depth of the cutting as well.) The depth of the grave was 30 cm at the head and 47 cm at the feet. The shaft was dug at an approximately right angle at the head, while the corners were rounded at the feet. The upper 20 cm of the filling contained densely scattered ash and charcoal pieces. In the south-eastern part of the grave, there was a discolouration (an animal burrow) of vague outlines, which disturbed the filling of the grave in the depth of 2–20 cm. The bottom of the burial A appeared in the depth of 65 cm.

Skeleton no. 760/A

The very poorly preserved skeleton lay on the sandy bottom of the grave. The bones were not all preserved, most of them were destroyed by the second burial. The skeleton lay extended on the back, the left leg was crossed over the right foot. The left arm was extended along the body. The bones of the chest and the skull crumbled or cracked. Some were damaged or destroyed by the second burial, some were deteriorated by the moist soil.

Finds:

1. There was a beveled bronze ***ring*** in the middle of the well-preserved left arm. It is closed, cast, solid, round in cross-section. It has a projecting round element. Diam. = 2.3 cm. *(Fig. 23.3)*

2. Fragment of an iron ***fibula*** at the left chest. The returned foot and the catchplate were destroyed, only the end of the foot survived adhered to the bow. *(Fig. 23.2)*

Grave furniture:

3. Fragments of a thick-walled ***vessel*** partly under skeleton A, partly between the right thighbone and the wall of the grave. The surfaces of the thick bottom and wall fragments are coarse, they are dark grey. B.d. = 9 cm, M.d. = ?, H. = ? The position of the fragments suggests that the vessel, as grave furniture, was placed on the right side of the dead, next to the pelvis. *(Fig. 23.4)*

Skeleton no. 760/B

It had a S-SE–N-NW orientation with the head to S-SE. It lay extended on the back. The dead were wrapped in a shroud, its traces were outlined in a width of 53–55 cm, especially next to the skeleton. The position of the skeleton (tightly drawn up shoulders) also implied its being wrapped in a shroud. The skeleton lay extended on the back. The legs were closed. The left-arm lay along the body, the right hand was placed on the pelvis. The bones were rather poorly preserved especially those of the chest and the extremities. The jaw was in its place, while the skull was displaced by an animal burrow so that the foramen magnum was turned upside. The sword and the spear were wrapped into the shroud together with the dead, the shaft of the spear must have been broken. The urn was placed later on the wrapped dead. This is suggested by its position and by the fact that it fell on the feet of the dead under the weight of the earth thrown into the shaft. The dead was a young male, the length of the skeleton measured in the grave was 162 cm.

Finds:

1. (4) A midribbed ***spearhead*** on the left lower arm, pointing toward the skull. The socket is round in cross-section. L. = 19 cm, socket l. = 5 cm, socket diam. = 2 cm. *(Fig. 22.3)*

2. (5) An iron ***sword*** and the ***scabbard*** with wood covering were placed nearly parallelly to the body pointing toward the feet. It started at the right elbow and the tip was under the right thighbone. L: 80 cm. The length of the hilt is 11 cm, the width of the pommel is 3.5 cm. The upper width of the scabbard at the hilt is 5 cm. There is a vertically placed suspension mount under the upper, arched termination of the scabbard. A small plate covers the arched terminal of the scabbard along the edge. A rivet of a semicircular head can be seen on the side of the upper part of the scabbard opposite the suspension mount. The two ends of the suspension mount are rounded, shield-shaped. The length of the suspension element is 7.7 cm. The length of the arch is 3 cm, it could belong to an approximately 3 cm wide leather strap. A roughly woven textile remain adhered to in the rust on the scabbard opposite

[49] Determination of K. Köhler.

the suspension mount and a somewhat more finely woven textile remain can be observed in a larger rust lump. An intact and two fragmentary flat iron ***rings*** and an iron ***rivet*** rusted to the sword. *(Fig. 22.a–b)*

3. (6) At the right shoulder is a fragment of an iron ***fibula***. *(Fig. 22.1)*

4. (7) Fragments of the ***sword chain*** beside the iron sword in a very poor condition. Fragments of iron links of round cross-sections. *(Fig. 22.2)*

5. (7) Fragments of two iron ***nails*** with disc-shaped heads next to the iron band. *(Fig. 22.4b)*

6. (7) The fragment of a small iron ***plate*** with two rivets on the backside. *(Fig. 22.4a)*

7. (7) The fragment of a flat iron ***ring*** of oval cross-section. Perhaps the fragments of the ***sword chain.*** *(Fig. 22.6)*

Grave furniture:

8. (8) The ***urn*** (broken to pieces) was placed on the feet of the wrapped dead. The urn was black inside and out, red in cross-section, the rim is everted. There is a rib in the arch of the neck and twice three parallel, horizontal ribs with deep smoothing on the neck and the shoulder. The surfaces of the vessel are strongly worn, fragmented. It was already broken when placed into the grave since it had been perforated at several places along with earlier fractures. The bottom melted away in the moist soil. M.d. = 13.2 cm. *(Fig. 23.1)*

9. The fragments of a small, brick-colored, wheel-thrown, smoothed ***vessel*** were found among the sherds of the urn. It cannot be reconstructed.

Note: There was an iron ***spearhead*** in the SW corner of the grave pointing toward the western wall of the grave. (10) The spear lay outside the shroud so it probably belonged to grave A. Neither its depth nor its position connects it unilaterally to burial B. It has a midrib, the tip broke off. Length in the broken condition: 28 cm, length of the socket: 5.5 cm, diameter: 2 cm. *(Fig. 23.6)*

2. (9) There was a split shist plate in the filling near the south-western corner of the grave. At some places, it bears green patination and traces of sharpening. (***Whetstone***?) *(Fig. 23.5)*

760/C

There were two milk teeth in the western corner of the 760 graves. No other child's bone was in the grave. There are several possibilities: one of the dead could have been placed with his child's missing teeth, or it is possible that the two teeth were accidentally mixed in the soil.

Grave ditch no. 306

A wide and shallow grave ditch. There was a larger oval depression in the middle of the northern section and a smaller shallower depression within it. **Feature no. 466** is a grave-like discolouration in the middle section of the northern stretch of grave ditch no. 306. It probably belonged to the grave ditch. There was no grave enclosed by the grave ditch. The southern part of the ditch reached under the southern humus deposition so we could not unearth it. Yet the length of the excavated northern and eastern stretches excluded the possibility of a grave that had been dug under the level where the ditch appeared placed within the ditch. The surface was deepened to a depth of 2 m in a controlled cutting but no grave was found, the ground was unbroken. The length of the oval discolouration no. 466 was 230 cm, its width 100 cm. In its centre there was another concentric smaller depression with a diameter of 100 × 64 cm. The grave ditch was 60 cm deep and 70 cm deep here at the joining. The filling was uniform, identical to that of the graves. There were daub grains in the filling on the surface and the soil was slightly burnt.

The northern section of the grave ditch was 7 m long outside and 6.4 m inside, its width was 80 cm. The eastern stretch was 5.4 m long outside and 5.2 m long inside, its width was 35 cm. The excavated western section was 4.5 m outside and 4.2 m inside, its width was 50 cm.

Grave ditch no. 306 was intersected by grave ditch no. 304 = 366, which means that ditch no. 306 was older than the latter. Ditch no. 306 intersected ditch no. 302 encircling grave no. 360. *(Fig. 24)*

b. Other features from the area of the Celtic cemetery

Several archeological features have been unearthed in the Celtic cemetery. See their location: *Fig. 24*. Here we mention only the features that have a chronological relevance to the Celtic cemetery.

1. Celtic feature from the area of the cemetery

Feature no. 652

The preserved section of the ditch ran in a N-NE–S-SW direction. In the NE part, it broke at an angle and a short section could still be followed. It contained neither archaeological nor archaeozoological material. The filling was uniform. This ditch was intersected by ditch no. 304 = 366, which did not contain finds, either. Ditch no. 652 intersected grave ditch no. 363 = 653 of grave no. 303, that is ditch no. 652 was younger than grave no. 303 and its ditch no. 363 = 653. At the same time, the N-NE part of ditch no. 652 was intersected by Celtic grave no. 362, which means that no. 652 was the older. Accordingly, ditch no. 652 was also dug in the Celtic period and can be dated from the time between the two Celtic features. The ditch, nevertheless, is longer where it can be observed than the grave ditches in the cemetery, which suggests that its original function in the cemetery was something else than a grave ditch.

We have to consider settlement features from later periods that sometimes disturbed the Celtic cemetery. Although they do not belong to the Celtic cemetery either chronologically or with their find material, their effects, the rearrangement of the surfaces often rendered the observation of Celtic features difficult.

2. Disturbances in the Roman period

Roman ditch no. 299 ran in a N–S direction across the south-eastern part of the Celtic cemetery. The ditch oven no. 300 was dug into this filled in ditch during the Migration period. The Roman ditch intersected grave ditch no. 359 encircling the Celtic grave no. 347 and the Celtic grave 364 encircled by ditch no. 365. The northern stretch of ditch no. 299 crossed and intersected ditch no. 304 = 366 running also transversally across the area. This means here that ditch no. 304 = 366 was older than the Roman ditch no. 299. Ditch no. 304 = 366, at the same time, is younger than grave no. 465 and its Celtic grave ditch no. 306 since ditch no. 305 intersected grave no. 465, which was, in turn, intersected by ditch no. 304 = 366. Ditch no. 652 from the Celtic period was also intersected by ditch no. 304 = 366, that is ditch no. 652 was older than ditch no. 304 = 366.

Another section of the above-mentioned ditch no. 299 intersected grave no. 757 destroying its central part.

Ditch no. 369 ran in a N–S direction intersecting ditch no. 370. Ditch no. 370 ran in a E–W direction and it was intersected by feature no. 372.

Ditch no. 369 intersected grave ditch no. 368 = 378, which belonged to grave no. 377. In the north it extended under the humus deposition, in the south, it disappeared after 10 m and did not reach grave ditch no. 450 belonging to the grave no. 464.

3. Disturbances in the Árpádian Era

Some settlement features from the Árpádian Era (11th–14th century A. D.) disturbed the Celtic cemetery but luckily not to the depth of the skeletons and the finds (see ditch no. 382 running above grave no. 752).

4. Features of uncertain dating, which disturbed Celtic cemetery features

The wide and shallow ditch no. 305 ran in a W–E direction across the cutting between two grave ditches (nos. 363 = 653 and 302) without having any contact with them, and here it ended. This ditch was intersected by the narrow ditch no. 304 = 366, which means that ditch no. 305 is earlier than ditch no. 304 = 366. Ditch no. 305 also intersected the Celtic grave no. 465, it is younger than the grave. Ditch no. 304 = 366 is also younger than grave no. 364 and grave ditch no. 365. Feature 304 = 366 is older than Roman ditch no. 299. As feature 304 = 366 intersected ditch no. 305, ditch no. 305 is older than the Roman ditch no. 299.[50]

The relationship between ditch no. 304 = 366 and grave ditch no. 306 see at the description of feature no. 306.

[50] Features older than Roman feature no. 299 that intersected the Celtic graves can be dated from earlier phases of the Roman period or from the Celtic period, since the archaeological material they contained does not determine their accurate age.

5. Features of uncertain dating

There were features in the area of the cemetery that could not stratigraphically be fitted into the structure of the Celtic cemetery or among any older or younger features.

Feature no. 758

It appeared as a short, ditch-shaped discolouration. Its length was 1 m, its maximal width was 52 cm. Its depth varied between 24 and 50 cm. It narrowed downwards. Its filling was sandy, mixed, and brownish and mixed in the deeper eastern part. It contained a stone, a sherd of uncertain age, and animal bones (dog and cattle).

IV. THE INNER CHRONOLOGY OF THE CEMETERY AFTER THE EXCAVATIONS[51]

It was a lucky circumstance offered during the rescue excavations[52] that the interpretation of the archaeological features helps the determination of the relative chronology from more than one respect. Relative chronology is evident at the superimposed features, they provide the so-called primary relative chronological links. The graves of the grave rows also imply a chronological order among themselves. These links indicate further relationships. These are the secondary chronological associations. Besides one can compile other hypotheses as well concerning relative chronology. These latter ones can be regarded as hypothetical relativity from which the model of the chronological structure of the cemetery can be created.

The problem is that relativity means a chronological subsequence and never absolute chronological accuracy or a numerical chronological interval. In some cases, we have to use the expressions longer and shorter periods at burials in superposition, but they cannot be determined to numerical accuracy.

This model derived from the analyses is, consequently, no more than a relative chronological sketch, which can or cannot be corrected by the analogical typo-chronological determination of archaeological finds. This is determined by the homogeneity of the materials or the chronological/cultural mobility in the archaeological period. In both cases, it is worth setting up the model and analysing it.

The model has been built on various information levels, which can be completed with further hypothetical elements.

a. Primary chronological links

A primary chronological link exists between the grave and the grave ditch or another grave in central superposition. It does not mean an incidental superposition coming from an intersection but a consciously superposed burial. The superposition caused by the intersection of graves and grave elements provides another primary chronological link, similarly to the succession deduced from the surface features observed during the excavations.

1. The contemporaneity of graves and grave ditches

Where the graves are encircled by ditches, the graves, and the ditches are contemporary. When another grave was subsequently centrally superposed,[53] the grave ditch preserved its function. The following features represent this relationship:

Grave no. 301 is contemporary to grave ditch no. 351.
Grave no. 303 is contemporary to grave ditch no. 363/653.
Grave no. 343/A is contemporary to grave ditch no. 344.
Grave no. 345/A is contemporary to grave ditch no. 346.
Grave no. 347 is contemporary to grave ditch no. 359.

[51] Preliminary reports: VADAY 2006a, and VADAY 2006b.

[52] Here we deal with the chronology of only the cemetery fragment unearthed in 1993–94.

[53] If the burial was not incidentally placed there after a long time.

Burial no. 350/A is contemporary to grave ditch no. 349.
Grave no. 360 is contemporary to grave ditch no. 302.
Grave no. 364 is contemporary to grave ditch no. 356.
Grave no. 377 is contemporary to grave ditch no. 368.
Grave no. 464 is contemporary to grave ditch no. 450.
Grave no. 744 is contemporary to grave ditch no. 745.
Grave no. 755 is contemporary to grave ditch no. 756.
Grave no. 760/A is contemporary to grave ditch no. 759.
Feature (grave?) no. 375 is contemporary to the roundish ditch no. 374.

2. Superposition of the younger graves (post-burials)

Burial no. 343/B is younger than grave no. 343/A and consequently it is younger than ditch no. 344.
Burial no. 345/B is younger than grave no. 345/A and consequently it is younger than ditch no. 346.
Burial no. 350/B is younger than grave no. 350/A and consequently it is younger than ditch no. 349.
Burial no. 376/B is younger than grave no. 376/A.
Burial no. 760/B is younger than grave no. 760/A and consequently it is younger than ditch no. 759.

3. Chronological succession derived from the intersection of graves and grave elements

In this case, the situation is not so clear as it was in the aforementioned one. The relatív connection of more features must be fixed and in some cases, more solutions exist. If in case of variations their chronological situation could not be expressly fixed the model diverges into two or more directions. Alongside these directions probability of the model can be fixed sometimes ambiguously but in other cases only hypothetically. Occasionally further definitions never could end in an exact model. Here we can determine the relative sequence of more features.

Features nos 343/A – 346 – 344 – 345/A

Burial no. 343/A is younger than the neighbouring burial no. 345/A also with a grave ditch, since grave ditch no. 344 intersects the eastern section of grave ditch no. 346 of burial no. 345/A. Here however something must be clarified. Grave no. 345, namely has a secondary burial and the above-mentioned superposition is unambiguous only in the case of grave no. 345/A. The chronological order of graves no. 345/A and the superposed burial no. 345/B is unambiguous, while it is less certain if grave no. 343 is younger than the second burial no. 345/B. Theoretically, two or three versions can exist at the ambiguous chronological situations.[54] In this case, we use the most probable version. When, however, the probability of two versions is 50–50%, the model branches according to the versions. There can also be a situation when the reality of the probability of the models cannot be decided either with certainty or even hypothetically. In the above-cited case, the grave ditch was not renewed at the time of the subsequent burial, so it can be supposed that it was still visible when the second grave was superposed.[55] In this case grave no. 343/A is younger than either grave no. 345/A or the subsequent burial no. 345/B.

Features nos 301 – 351 – 349 – 350/A – 350/B

Grave no. 301 and grave ditch no. 351 are contemporary, and they are younger than burial no. 350/A and its ditch no. 349, since ditch no. 351 of grave no. 301 intersects grave ditch no. 349. The succession of cremation burial no. 350/B and grave no. 350/A is also unambiguous, since grave no. 350/B was dug over grave no. 350/A. Cremation burial no. 350/B is probably younger than grave no. 301 since the central place of the neighbouring grave and grave no. 350/A under it, both enclosed by a grave ditch, were not taken into consideration at the digging

[54] Contemporary, younger, older. In lucky cases the observation of details can help to decide which version seems to be most correct.

[55] The condition of the skeletons of graves no. 345/A and 345/B skeleton indicates that not too much time has passed between the two burials. Post-burial does not differ from the first tomb, which also refers to a shorter period.

of the grave. Disregarding the ritual differences we could set up another chronological model, namely that grave no. 301 and its ditch no. 350 are younger than cremation burial no. 350/B. This model is less probable than the previous one since grave no. 350/B contained a cremation burial and grave ditch no. 349 around grave 350/A could not belong to it. So the chronological implication of the superposition of the ditches cannot be correlated to the grave that is not related to the ditch. Grave no. 350/B is not in the centre of the surface encircled by the ditch, which shows that the ditch around the grave was not visible at the time of the burial and it was not renewed.[56]

Features nos 306 – 360 – 744

Grave ditch no. 306 is younger than graves nos. 360 and 744, since it intersected the ditches of both graves (no. 302 of grave no. 360 and no. 745 of grave no. 744). Two models are possible here as well. According to the first one the chronological sequence if the following: grave ditch no. 306 is the youngest, followed by ditch no. 745 and its grave no. 744, then finally grave ditch no. 302 and its grave no. 360. According to the other model, grave ditch no. 306 is the youngest, grave ditch no. 302 and its grave no. 360 are older, while grave no. 744 enclosed by ditch 745 is the oldest. Regarding, however the hypothesis that burials in graves with grave ditches followed an east-west succession from the top of the hill,[57] grave no. 360 bordered by grave ditch no. 302 is older than grave no. 744 with grave ditch no. 745. This version corroborates the first model.

Features nos 375 – 374 – 464 – 450

The fragment of round ditch no. 374 of the round dicolouration no. 375 intersects grave ditch no. 450 of grave no. 464, the round discolouration and its ditch are younger than grave no. 464 and its ditch no. 450. Here we only conditionally linked the 464 to the tomb with the trench 450 because of its shape. If not included in the tomb, the chronological connection is only between 375 and 450 and does not apply to tomb 464.

Relativity deduced from the surface formations

The surface formations observed during the excavations also contribute to the determination of the relative chronology of the cemetery. Graves nos 376/A and 376/B are older than the neighbouring grave no. 377, since the adjacent graves appeared in different depths. Grave no. 377 was outlined on the scraped surface, while grave no. 376/B appeared deeper. It is also evident that grave no. 376/A is older than the superposed grave no. 376/B. This relative order is completed by grave ditch no. 368 around grave no. 377, which is intersected by the younger grave no. 367.

b. Secondary relative chronological associations

The characteristics of rite and the more accurate dating of finds help in determining the secondary relative associations. In the north, on the territory unearthed by A. Uzsoki, there were only inhumation graves. The cemetery was already biritual along the track of Road no. 83, while in the southern part, in the service territory and at the water trench, most of the graves contained cremation burials. The earliest grave in the northern part was of Late LT A features,[58] while the graves found in the water trench and south of it can partly be dated from the LT C. Another possibility is that there are four rows of graves with ditch. The groups are also differentiated by a divergence in the orientation of the axes of the grave ditches. Graves and grave ditches with axes of identical orientation compose a relatively closed group of burials probably within a short chronological period. Summarizing what has been said, the following picture can be drawn, adding the position of the graves.

The first line of graves: nos 343, 345, 760, 757. 755, and 348. The grave no. 345/A is evidently the oldest in the first row of graves. Grave no. 343, which intersects the ditch of this grave is younger. It is not clear, however,

[56] Grave ditch no. 351 already intersected it!

[57] This direction could be demonstrated from the intersecting graves.

[58] The earlier grave of burial no. 4 in A. Uzsoki's publication.

to which grave nos 760 and 755 should be compared. It can be seen in the map of the cemetery that the axes of graves nos 343, 760, and 755 have the same direction and they are evenly distributed. So we can suppose that they composed a sequence. Burial no. 345/A and its grave ditch no. 346 are older than burial no. 345/B. Burial 345/B, at the same time, is older than grave no. 343 and its grave ditch no. 344. Burial 760/A and its grave ditch no. 759 are younger than grave 343. Grave 755 and its ditch no. 756 are younger than burial no. 760/A. As burial 760/B is obviously younger than grave no. 760/A, the relative chronological order can be continued. The relationship between burials nos 760/B and 755 is not clear, we can only suppose that the grave in superposition is younger than grave no. 755. The grave no. 348 is not exactly aligned with the others, it has no observable connection to them.

The next row runs parallel to the first: nos 301, 350/A and 347, 364, and 367. It is conceivable that cremation graves 298 and 350/B also belong to this series of graves. However, this is questionable. The grave no. 350/B is much later than the grave no. 350/A. The grave no. 301 was already dug when the grave ditch no. 349 of the grave no. 350/A was no longer visible, so a much longer time elapsed at the next burial. It should be added that cremation tombs seem to be the latest here. Grave no. 301 and its ditch no. 351 are younger than burial no. 350/A and its grave ditch no. 349. According to the structure of the cemetery, grave no. 347 and its ditch no. 359 may have been the earliest grave of the grave-row, adapting to the above mentioned first grave row.

The chronological relationship between the two rows of the group can be determined by the N–S extension of the cemetery. The relationship between the elements of the two rows of graves means another relativity, the particular chronological intervals and how the individual graves can be distributed among these intervals cannot be determined solely from the surface formations.

The third row is not very regular, it includes the next graves: nos 361, 376/A, 376/B and 379. Only superposition is certain in the row.

It is characteristic of the graves in the next group that the direction of the axes of their ditches somewhat diverges towards SE as compared to those of the former group. Here are four rows of graves. There is only one grave in the first row (no. 367). Cut the 368 = 378 trench. In the second row lies the graves no. 377 and perhaps no. 342. The third line of the second grave group consists of the grave: nos 303, 307, 362, and 464. There are two graves in the fourth row of the group: no. 360, and no. 744. But here you can see the 738 and 306 ditches, in which the graves are no longer left. The easternmost grave of the row was the burial enclosed by ditch no. 738. Here the grave itself could not anymore be observed inside the ditch, and the ditch itself is incomplete, which suggests that the erosion had destroyed the higher parts of the grave ditch.

Interpretation is the most difficult in this group since the erosion of the sandy soil on the higher altitude and the features of later periods often damaged the Celtic graves and the grave ditches. Sometimes the ditches were not even outlined. It is certain that the trench no. 306 cut the trench of the grave no. 302, and the trench of the grave no. 745. Some of the graves were shallower than the grave ditches (see the position of grave ditches nos 360 and 306). Grave ditch no. 306 (contemporary to feature no. 466) was younger than grave no. 744 and its ditch no. 745, while the latter ones are younger than grave no. 360 and its ditch no. 302. Grave ditch no. 738 is the youngest of all. The abovementioned graves no. 298 and no. 350/B is questionable. Both are located in 2 rows of the first group, but presumably much later. There are three more graves in the north-eastern part of the cemetery (nos 737, 752, 754). These appear to be the latest inhumation graves, have no trench, and their temporal relationship to each other cannot be determined.

c. Hypothetical and "floating" chronological links

Some more observations can be made concerning the chronological situation, which is suitable for drawing consequences but the chronological links allow only the determination of a "floating chronology". This exists between the following features:

345/A – 346 – 345/B:

Ditch no. 346 of burial no. 345/A was not renewed at the time of the burial in grave no. 345/B. The uncorrected line of the ditch suggests that the ditch of the former grave was still visible at the time of the second burial, that is people took care of the grave. But the dead in grave no. 345/B was not buried exactly over the centrally placed

grave, which suggests that the longer time must have passed between burials no. 345/A and 345/B and the pit or the mound of grave no. 345/A was not any more clearly discernible on the surface.

298 – 349 – 350/A – 350/B – 301 – 351:

Cremation burial no. 350/B did not have a grave ditch although it was partially dug over grave no. 350/A and so it lies inside ditch no. 349. The different rite and the irregular (casual) position dates cremation burial no. 350/B to a period after the row of graves with grave ditches (graves nos 350, 347, 364, and 301). It has already been suggested that the rows of graves were started from the eastern edge and they follow one another toward the west in chronological succession. Supposing the same regularity in the case of cremation burials, grave no. 350/B follows grave no. 298 in the chronological order. It should be added that cremation grave no. 298 did not have a grave ditch which supports the supposition that cremation burial no. 350/B was only incidentally placed inside the grave ditch.[59] It has already been mentioned that the link between grave/ditch nos 301 = 351 is younger than that between grave/ditch nos 350/A–349. Including the cremation burials, cremation grave no. 298 is younger than the above-mentioned inhumation graves with grave ditches, while cremation burial no. 350/B is even younger.[60]

Based on the above, the relative chronology of the unearthed cemetery fragment can be illustrated after the stratigraphic sequence with the help of the Harris matrix. Naturally, it only indicates the succession of the features and does not express the absolute chronological differences between the features and does not correlate the sequence with absolute dates. The features of the same "level" illustrated in the figure along a horizontal line, but not joined by a continuous line, cannot be associated with certainty with the same absolute date.

We distinguished between burials that also contained LT A type finds.[61] However, it is not necessarily present that these are earlier. Maybe these items have been in vogue for a long time. It is also conceivable that the immigrants brought it with them. In the latter case, they could also be members of the first generation in Transdanubia.

V. STATISTICAL DATA OF THE CEMETERY

The rite of the cemetery

The structure, the chronological determination, and ritual characteristics of the cemetery used for several generations are not simple. The following table contains the burial rite and the sex of the buried persons.

Grave				Dead	
number	**ditch**	**ríte**	**pit**	**sex**	**number**
298	–	Cremation	+	–	–
350/B	–	Cremation	+	–	–
301	*351*	Inhumation	+	?	1
303.1	*363/653*	Inhumation	+	♀	1
303.2	*363/653*	Inhumation	+	♂	1
307	–	Inhumation	+	♀	1
340	–	Inhumation	+	?	1
342	–	Inhumation	–	♀?[62]	1
343/A	*344*	Inhumation	+	♂(?)	1
343/B		Inhumation		♂(?)	1
345/A1	*346*	Inhumation	+	♂(?)	1
345/A2		Cremation		?	1
345/B1		Inhumation	+	♀(?)	1
345/B2		Cremation		?	1

[59] It can often be observed in Celtic cemeteries that cremation graves were also enclosed by ditches but no cremation burial with a grave ditch was discovered at Ménfőcsanak either during A. Uzsoki's former observations nor during the excavations in 1993–94.

[60] The cremation burials indicate a later phase in the Ménfőcsanak cemetery, and the ritual difference supports the interpretation of the phenomena observed in the cemetery.

[61] VADAY 2006b, Fig. 6.

[62] Based on its spindle button.

Grave				Dead	
number	**ditch**	**ríte**	**pit**	**sex**	**number**
347	*359*	Inhumation	+	♀	1
348	–	Inhumation	+	♀	1
350/A	*349*	Inhumation	+	♂	1
360	*302*	Inhumation?	–	–	–
361	–	Inhumation	+	♂(?)	1
362	–	Inhumation	+	?	1
364	*365*	Inhumation	+	♀?	1
367	–	Inhumation	+	?	1
375[63]	*374*	?	–	–	–
376/A	–	Inhumation	+	?	1
376/B	–	Inhumation	+	♂(?)	1
377	*368=378?*	?	+	–	–
379	–	Inhumation	+	♂(?)	1
464	*450?*	?	+	–	–
465	–	Inhumation	+	?	1
737	–	Inhumation		♂	1
744	*745*	Inhumation	+	♂(?)	1
752	–	Inhumation	+	♀	1
755	*756*	Inhumation	+	♂	1
757	–	Inhumation	+	♀(?)	1
760/A	*759*	Inhumation	+	♂	1
760/B			+	♂	1
–	*306*	?	–	–	–
–	*738*	?	–	–	–

The number of graves is different just like the number of buried persons and the burials. The interrelation and variation of the diverse ritual elements are also different. Some of the graves were enclosed by ditches. Due to this complicated system, the burials will be reviewed in the following in detail in the order of the grave groups.

Few graves were in the excavation area of the cemetery-part. However, it is also clear that the inhumation graves are in a numerical majority. Due to the small number of graves, statistical analysis is not warranted, only trends can be identified.

Regarding the distribution from the aspect of the rite, burials without ditches dominate: 16 pieces, which are completed by the one superposed burials without ditches. Graves with ditches form the next largest group: 13 pieces, completed with another – perhaps trenched – grave. This also means that superposed burials were more frequent at graves with ditches than at graves without ditches.

Grave index, surface index, and content index, grave ditch indices.

The metric data of the graves are diverse. We try to compare the simple documentation data abstractly and correlate them with the data gained from the analysis of the cemetery and the graves to find out if any correspondences can be demonstrated.

The **surface index** can be measured from the metric data. Actually, the data measured on the surface of observations determine it. The secondary surface index calculated from the metric data of the open bottom of a grave completed with the excavated depth determines the three-dimensional shape of the grave. These data, however, are important only if the shape of the grave is not a regular prism.

The **volume index** can be calculated also from the metric data. The problem is that it is calculated from the surface where the graves appeared or from which they were excavated, or mostly from where they are definitely out-

[63] Grave?

lined. We cannot count on the upper parts that were destroyed by ploughing. It means that the content index does not match the original content index, it will always be smaller. Still, it is worth calculating it since the ploughed soil was of approximately the same thickness in most of the sites and so the content indices of the graves can be compared.[64]

Finally, in the case of graves, the **grave index** is the abstract expression of the shapes and proportions of the graves.

In the case of grave ditches, the **index of the territory enclosed by the ditch** can be compared. Complete or incomplete data series of grave ditches could be used in the case of the following graves: 301, ditch no. 306 (without grave), 342(?), 343, 345, 347, 350/A, 360, 364, 377, 464, ditch no. 738 (without grave), 744, 760, 755.

The metric data of the graves and grave elements

There is a wide distribution of the metric data in the cemetery. We used the data collected according to the following aspects of the analysis:

1. Grave index: the proportion of the length and the width of the grave.

2. Surface index: the product of the length and width data measured at the appearance of the regular graves. Where the above data were different on the surface where the grave appeared and on the bottom of the grave, the upper and the lower indices are given in m^2.

3. Volume index: the volume of the grave from the level of the appearance in m^3.

4. Enclosed territory: the territory enclosed by the ditch in m^2.

The data:

grave no.	ríte	grave ditch	grave index	surface index	volume index	enclosed territory
298	cremation	no	–	0.75 m^2	0.075 m^3	-
301	inhumation	yes	2.12	3.06 m^2	2.60 m^3	48.91 m^2
303.1+2	inhumation	yes	1.91	2.53 m^2	1.51 m^3	18.48 m^2
306	?	yes	–	–	–	33 m^2
307	inhumation	no	2,5.	1.23 m^2	0.55 m^3	–
340	inhumation	no	upper: 2.42, lower 2.5	upper: 1.2 m^2, lower 0.62 m^2	0.65 m^3	–
342	inhumation	no	–	–	–	–
343/A+B	inhumation	yes	1.77	3.24 m^2	0.77 m^3	26.73 m^2
345/A1+2	biritual	yes	2.04	2.94 m^2	1.67 m^3	14.62 m^2
345/B1+2	biritual	see 345/A	2.13	2.7 m^2	1.026 m^3	see 345/A.
347	inhumation	yes	upper: 2, lower: 2.63	upper: 3.125 m^2, lower: 2.37 m^2	1.51 m^3	28 m^2
348	inhumation	no	2.47	1.54 m^2	0.24 m^3	–
350	inhumation	yes	265	4.9 m^2	3.92 m^3	19.95 m^2
360	?	yes	?	?	?	37.65 m^2
361	inhumation	no	196	3.06 m^2	1.23 m^3	–
362	inhumation	no	31	1.63 m^2	0.41 m^3	–
364	inhumation	yes	26	2.16 m^2	1.25 m^3	28.32 m^2
367	inhumation	no	upper: 24, lower: 21	upper: 2.28^2, lower: 1.98^2	1.,54 m^3	–
375	?	yes	–	–	–	14.11 m^2
376/A+B	inhumation	no	upper: 171, lower: 234	upper: 5.25 m^2, lower: 3.1 m^2	3.51 m^3	–
377	empty	yes	287	1.84 m^2	1.23 m^3	–
379	inhumation	no	162	4.16 m^2	1.87 m^3	–

[64] In the individual cases it should be considered if soil erosion had the same effect in the entire territory in the time following the burial.

grave no.	ríte	grave ditch	grave index	surface index	volume index	enclosed territory
464	empty	yes	156	2.07 m^2	0.28 m^3	cca 25 m^2
465	inhumation	no	213	2.46 m^2	1.92 m^3	–
737	inhumation	no	241	2.29 m^2	1.94 m^3	–
744	inhumation	yes	232	1.82 m^2	1.31 m^3	24 m^2
752	inhumation	no	246	1.04 m^2	0.62 m^3	–
754	inhumation	no	182	1.16 m^2	0.91 m^3	–
755	inhumation	yes	2	2.64 m^2	1.98 m^3	18.48 m^2
757	inhumation	no	232	1.38 m^2	0.69 m^3	–
760/A+B	inhumation	yes	276	2.62 m^2	1.71 m^3	21.6 m^2

1. Cremated dead in a simple grave without a grave ditch could be found in graves nos 298 and 350/B. Biritual, cremated, and contemporary inhumation burials were found in graves enclosed by ditches in two cases: in burials nos 345/A1 and 345/A2 and in the superposed later burials nos 345/B1 and 345/B2, which were enclosed by the same grave ditch.

2. Cremation, probably overground burial with a round ditch was no. 375 with ditch no. 374. Since neither archaeological nor anthropological material was the existence of a grave can be deduced only from the measurements and the surface formations.

3. Simple inhumation grave without a ditch containing a single skeleton was found in 13 cases (features nos 307, 340, 342, 348, 361, 362, 367, 379, 465, 737, 752, 754 and 757).

4. There was only one simple inhumation grave without a ditch with a superposed burial: burials nos 376/A and 376/B.

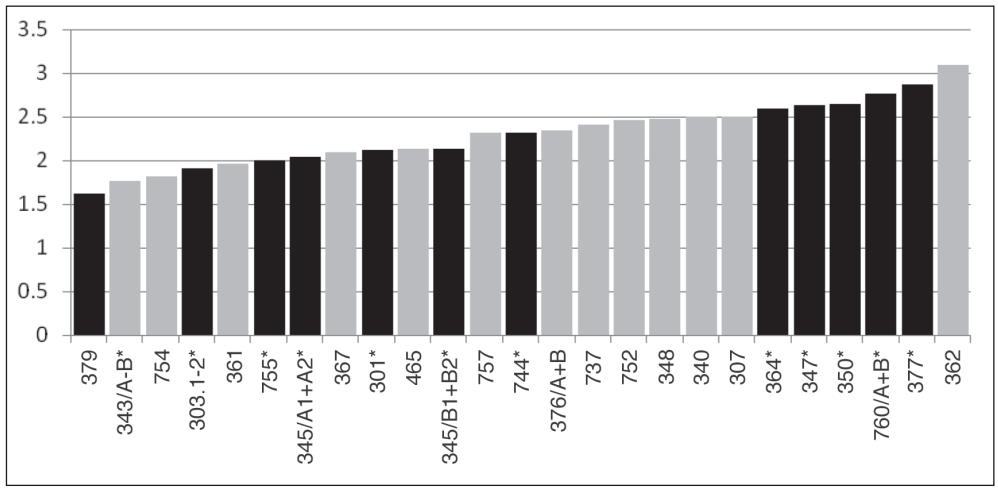
5. There were six instances of inhumations graves with ditches and a single skeleton (features nos 301, 347, 360, 364, 744, and 755).

6. There were two symbolic (?) burials with empty grave shafts: feature no. 377 with a ditch and feature no. 464 without a ditch.[65]

7. There was only one inhumation grave with the grave ditch and two contemporary burials: nos 303.1 and 303.2.

8. Inhumation burial inside a ditch with two contemporary burials occurred in a single case: nos 343/A and 343/B and 760/A and 760/B.

In the first stage the indices of all the inhumation and biritual graves are illustrated in the graph:[66]

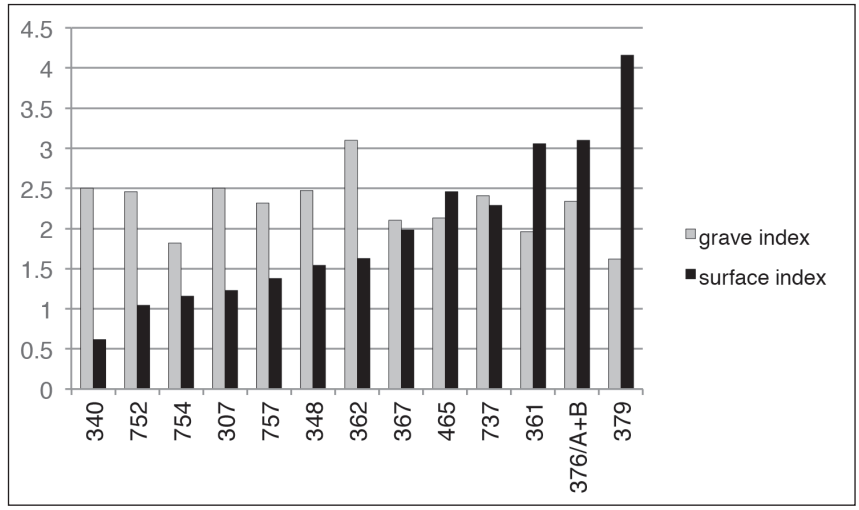


[65] The size and the proportion of both shafts imply skeletons in extended positions.

[66] The graves marked by * in the graph have ditches.

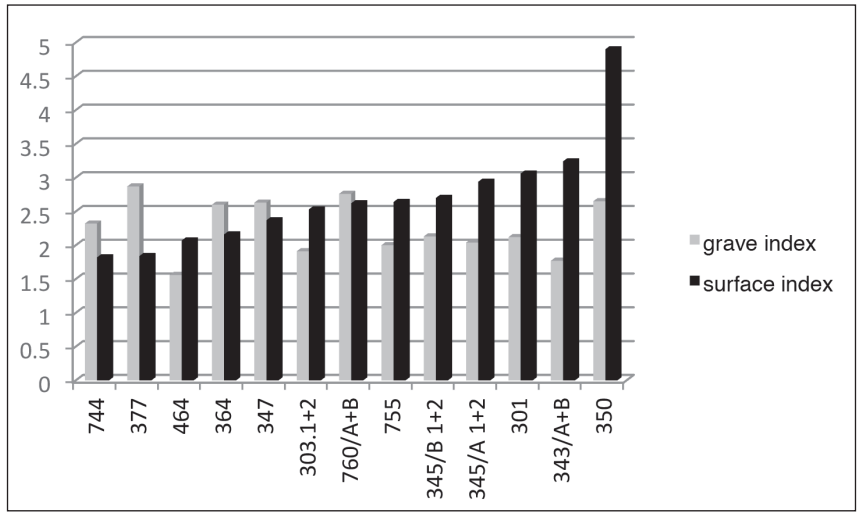
Features with superposed graves have two different grave indices if the grave index of the second burial is different from that of the earlier one. According to the above graph, the grave indices vary between 1.6 and 3.2 at Ménfőcsanak. The distribution is rather even, no great anomaly can be observed. The distribution of the grave indices is not influenced by rite, the graves with ditches and the "unmarked" burials do not compose groups of identical measurements until index value 2.4. Five burials fall between 2.4 and 2.5, none of them have superposed burials. Four graves can be found between 2.6 and 2.9. They are the graves with ditches, which contained single or superposed burials.

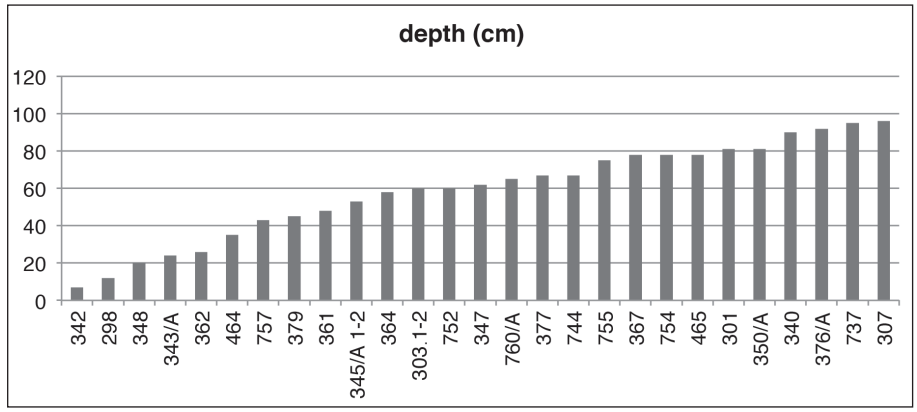
The grave index and the surface index are logically correlated since both are calculated from surface data. Yet they are different, which supports the fact that the grave index is independent of the size of the graves, while it is dependent on the proportions of the measurements and can be proximally evaluated. Consequently, the above illustrated grave indices must be compared to the surface indices to see if there is any correspondence within the groups of the grave types. First, the graves without ditches are listed:



Listing the data in the growing order of the surface index, the grave indices do not show a homogenous distribution. This means that the subjectively chosen population order hinders the evaluation of the data. (The groups are shown in the graph according to the growing order of the surface indices.)

The same can be observed at the graves with ditches:





Finally, the depth of the graves is shown in the following graph:

It is a rather regularly rising curve with a balanced absolute frequency. Similarly to the above instance, it is not worth calculating relative frequency. When several cemeteries can be compared, the curves of relative frequencies could be compared. The only thing one must consider is that the original floor level cannot be observed any more because of agricultural cultivation. Accordingly, the relative frequency of the absolute values on the axis showing the number of samples is modified according to the diverse features of the individual sites.

We have to note, that the grave pits no. 377 with a ditch and no. 464 without ditch were empty, which was not without precedent on this archaeological site because the grave no. 6 excavated by A. Uzsoki in 1967 contained neither skeleton nor ashes.[67] These could be symbolic or robbed burials, which has many known analogies in other necropolises.[68]

It is conspicuous that the inhumation rite unambiguously dominates in the known part of Ménfőcsanak cemetery. 12 individuals were unearthed by A. Uzsoki from 10 inhumation graves between 1967 and 1968.[69] Next to his excavation 29 inhumation burials were found by A. Vaday beside two cremation graves, one uncertain burial and other robbed or empty pits in the excavated section of Road No. 83 between 1993 and 1994. Later as we are informed from preliminary reports at least another 230 La Tène graves were uncovered by I. Egry in more campaigns between 1997 and 2006 in Ménfőcsanak necropolis. This recently excavated part of the cemetery is biritual, where the rites were distributed in as half or cremation and half of the inhumation.[70] Most human skeletons were found in an extended supine position. The only exception is the grave 10, which was lying in a crouched position on the right side with the arms drawn up in front of the face.[71] The inhumation graves are regularly oriented north-south or northwest-southeast. It means particularly that the head oriented to the south and the feet to the north. The standard grave pit for inhumation burials had an oblong rectangular plan with vertical walls and – more or less – flat bottom. The use of wood, perhaps wooden board or coffin was recorded in grave 301 and 760.[72]

Double graves with different funerary rites appear in many La Tène cemeteries in the Carpathian Basin[73] and other regions.[74] In some cases, burials were placed superimposed, like in the double burial from Pişcolt, where an adult was placed above a warrior,[75] or from Szentlőrinc, where a child (boy?) was buried under an adult female (mother?).[76] A temporary succession of the graves could be observed, with cases of disturbance or partial overlapping of the burials and their enclosure in Ménfőcsanak.[77] Various examples of superposition are known in other La Tène necropolises – for example – from Slovakia.[78]

[67] Uzsoki 1987, 29.

[68] Symbolic and totally robbed burials also documented e. g. in Gyöngyös cemetery: Tankó *et al*. 2016, 310.

[69] Uzsoki 1987, 13–29.

[70] Egry 2007, 33–34.

[71] Uzsoki 1987, 20.

[72] Traces of wooden coffin, box or other counstruction were found other La Tène cemeteries in Northeast-Hungary: e. g. grave No. 1057 in Ludas-Varjú-dűlő, see Szabó–Tankó 2012, 71, Fig. 112.

[73] Berecki–Vaida 2017, 28–32.

[74] E. g. in Moravia: Čižmářová 2011, 35–36.

[75] Németi 1992, 97–98, fig. 27.

[76] Jerem 1968, 167, 175

[77] Uzsoki 1987, 29; Vaday 2006a, 598–601, fig. 4; Egry 2007, 34.

[78] Benadik 1963, 340–342.

Tombstone *(Fig. 36)*

Large limestone and a semicircular piece of sandstone were found in the filling of the grave 755. This roughly carved piece of limestone with rounded corners was found in the centre in a vertical position. Under it, a large, carved sandstone with semicircular end lay horizontally indicating the grave. The situation of stones suggests us it could be a stood tombstone which was fallen in the grave pit. The sides of the large tombstone were carved smooth, its bottom was 25–30 cm large. It is rough, prepared with a bushhammer. This part was originally sunk in the earth. The length of its base was 56 cm, its height was 106 cm, its thickness was 9 cm at the bottom, and 7 cm at the roughly carved part. One of the corners of the bushhammered part of the tombstone broke off before being placed on the grave. There are two carved regular grooves on the upper, regular part, which could hold the smaller stone. A darker band could be observed right above the. This band was of uneven thickness. It was thicker above the foundation of the tombstone, which is at the northern part, and narrowed at the arched end. It disappeared 30 cm south of the arched part. It seems that the tombstone was set up at the foot after the dead had been placed in the shaft but not yet covered with earth. After having placed the stone, the humic soil was refilled to the foundation of the tombstone and partly over the body. Later the tombstone fell over the body but by that time the body had already been covered with a 10–12 cm thick, solidified layer of earth. The upper part of the tombstone fell over the larger stone slab and cracked the urn at the foot of the dead. The using a large tombstone in burial rite was not unprecedented in the Eastern Celtic cultural circle. A similar large stone was discovered in two graves in the recent excavation in Göttlesbrunn in Austria.[79] Moreover, one of them from Göttlesbrunn was a similar size to Ménfőcsanak stele, and the other consisted of a stone slab and a structural element such as in Ménfőcsanak grave. Various forms of gravestones and stelae are known from burial sites in the La Tène culture, especially in their western areas,[80] and in individual cases also from the East.[81]

VI. TYPOLOGICAL AND CHRONOLOGICAL CLASSIFICATION OF FINDS

Jewelry and clothing accessories

1. Fibulae

Bird shaped bronze fibulae were found in grave 345.B1 *(Fig. 9.1)* and 367 *(Fig. 16.2)*. Both of these fibulae have similar wide bow and bird head stylized leg with engraved geometrical decoration on it and crossbow type spiral spring. The analogies of these bird head fibulae[82] are known in the Late Iron Age cemetery of Csepel[83] in Hungary, moreover the Early La Tène phase of Szentlőrinc cemetery,[84] where it appears together with either iron Certosa or iron Eastern Alpine Zoomorphic fibulae.[85] Furthermore, more examples of bird-shaped fibulae were found in Sanski most[86] in Bosnia-Herzegovina, Franzhausen[87] in Lower-Austria, and the fortified settlement of Závist[88] in Moravia. A common feature of these analogies that the leg bent above the bow and visualize a stylized bird head.[89] On the other hand, this type has '*paukenartig*' prolate bow and leg, so Thomas Stöllner identified it as an Early La Tène schema of '*Fusspaukenfibel'*.[90] It was stated before that the Early La Tène schema bird head or drum fibulae are developed from the Early Iron Age '*Doppelpaukenfibel'* which was commonly widespread in the territory of Northeast-France, Southwest-Germany, and Switzerland in the Late Hallstatt period.[91] One of the interesting analogy is the fibula from Dürrnberg which has a zoomorphic bird head on the leg and its bow decorated as stylized fish.[92] It seems that this piece is an example of the transition between the Late Hallstatt period drum fibulae and the Early La Tène schema decorated bird fibulae. Summarizing all the closest analogies of the bird head fibulae

[79] Göttlesbrunn grave 11 and 18. Karwowski–Czubak 2019, 72–74, Fig. 4.

[80] Pare 2012, 682.

[81] Ramsl 2011, 29.

[82] The so-called birdhead or bird shaped fibula is a special type of early 'Latène-Scheme' fibulae which form undoubtedly originated and depicted waterbird-heads connect in their form to the Urnfield–Hallstatt visual world. See more in Stöllner 2002, 66.

[83] Horváth 2017, Fig. 2,2a, 4,1a–e, 5,1a–f.

[84] Jerem 1968, 161, Fig. 19.2/2., Pl. 38,3.

[85] See the latest chronological study of the Szentlőrinc cemetery in Schneider 2019.

[86] Fiala 1899, 92–93, Fig. 107, 111.

[87] Neugebauer 1992, 69.

[88] Trefný 2016, 158, Fig. 7,1–2.

[89] Binding 1993, 40–41.

[90] Stöllner 2002, 68–70.

[91] Bergmann 1958, 37–40, Abb. 3/VI, Karte 9–10.

[92] Moser *et al*. 2012, 114, 187–188, Grab 216/49.

uncovered at Ménfőcsanak can be dated to the LT A phase of Early La Tène period[93] and their geographical spread can be localized in southern Germany, Bohemia, and Austria, as well as the north-western part of the Carpathian Basin and Bosnia-Hercegovina in the north-western Balkan.[94]

Bronze plate with geometric punched decoration pendant was in grave 367 *(Fig. 15.3).* We can conclude from the grave context of this find that it was fastened to the spring of above mentioned bird-head fibula *(Fig. 15.2).* Similar trapezoidal bronze plate pendant is known from Celtic burials in Pilismarót-Basaharc[95] and Solymár[96] in Hungary, as well as Mannersdorf[97] and Dürrnberg[98] in Austria. Many analogies are also published from Čurug,[99] Grobnik,[100] and Osijek[101] in the northwestern territory of Balkan. These pendants were usually connected to or discovered in the same context with Early La Tène fibulae, so these are the representative findings of the Early La Tène Period.[102]

Two Early La Tène wire fibulae with symmetrical bow – one of made of iron *(Fig. 13.1)* and the other made of bronze *(Fig. 13.2)* – were found in grave 350/A. These could be identified – at first sight – as Marzabotto fibulae,[103] which chief characteristic is the high and symmetrical bow, the coils are large and two (or four) in number, and the foot runs parallel to the pin.[104] However, many detailed variations are possible within this general formula, especially as far as foot element and final are concerned.[105] This element may take the form of the globe as we can see on the example from Ménfőcsanak. It has to mention that the large coils of the Ménfőcsanak fibulae are similar to the Pottenbrunn–Horný Jatov type,[106] which has a known example in,[107] but the chief characteristic elements of bow and foot of fibulae from Ménfőcsanak are undoubtedly different. On the contrary, it should be noted that the fragment of iron fibula from grave 298 *(Fig. 2.2)* has a large coil and short bow which is somewhat similar to the Pottenbrunn–Horný Jatov type.[108]

The fibula from grave 345/A1 *(Fig. 10.2)* has a well balanced arch-bow profile which is slightly different from the known analogy in Münsingen,[109] but it is similar in form and decoration to the fibulae found in Vícemilice in Moravia.[110] The difference can only realize the character of the foot, and the analogy for this form can be quoted from Tuchomyšl. [111] These analogies are the emblematic types of the so-called **pre-Duchcov horizon,** which was recognized by Czech researchers.[112] It has to refer to they separated a transitional horizon before the emergence of Duchcov – or Dux after the German name of the eponym site – type fibulae, which was defined as La Tène B1a phase before the classical Duchcov horizon, that is La Tène B1b phase.[113] The pre-Duchcov horizon was first detected only in the Czechia and Moravia, but its existence has since been proven in the Rhine region,[114] Bavaria,[115] Austria,[116] Silesia,[117] and also in Slovakia.[118] This chronological stage is distinguishable in burials, where several well-dated artifacts are recorded in contrast to settlements where the ceramic finds are less affected by rapid stylistic changes

[93] Jerem 1996, 106; Stöllner 2002, 70; Moser *et al.* 2012, 188.

[94] Dulęba 2014, 321–322, Fig 12.

[95] Bognár-Kutzián 1975, Pl. 5,1.

[96] Maróti–Kecskés 2008, 55, Fig. 5.

[97] Ramsl 2011, 133, Taf. 79,7b.

[98] Penninger 1972, Taf. 24,B3.

[99] Todorović 1974, T. III.1–3; Bognár-Kutzián 1975, 30.

[100] Ljubić 1889, Pl. 33, 246; Hunyady 1944, Fig. 1,1.

[101] Todorović 1975, Abb. 13.

[102] Jerem 1996, Fig. 2,1–2.

[103] Giessler–Kraft 1944, 38–39: *Drathfibeln mit symmetrisch gebogenem Bügel.*

[104] Dehn–Stöllner 1996, 17.

[105] Hodson 1968, 35.

[106] Ramsl 2002, 73–74.

[107] Hunyady 1944, Taf. 22,7.

[108] This fragment of fibula is similar to another example form Bajč–Vlkanovo: Benadík 1962, 447, Pl. XII, 5.

[109] There is a sharply angled roof-bow profile of fibula 673 in tomb 6, but in an asymmetrical version, and the foot is much longer. Hodson 1968, 35, T. 6.673. Analogy for this form may be quoted from Nebringen: Krämer 1964, Taf. 8,2.

[110] Meduna 1965, Fig. 226, 1a–4b, 227, 2a–b.

[111] Holodňák–Waldhauser 1984, Fig. 4,1.

[112] An early phase before the Duchcov horizon was recognized by J. Meduna at first: Meduna 1965, 819–822.

[113] The pre-Duchcov horizon – Předduchcovský or Vorduxer as they first mentioned – was defined by P. Holodňák and J. Waldhauser when they analysed thoroughly some Early La Tène graves in Czechia and Moravia. They emphasized that an early archaeological horizon can be identified before the hiding of the Duchcov treasure and it is represented by the slowly disappearing La Tène A (e. g. bird head) fibulae as well as the just emerging La Tène B types (typologically the most archaic fibulae found in the Duchcov treasure): Holodňák–Waldhauser 1984, 31–48. Similar to the history of the Duchcov-type fibulae, it has been identified a developmental phase by J. Bujna, which is correspond to the pre-Duchcov horizon in the typological classification of Münsigen fibula and it is primary detectable in Switzerland: Bujna 1998, 185–186.

[114] Möller 2000, 409–413.

[115] Tappert 2007, 183; Bagley *et al.* 2010, 73.

[116] Ramsl 2011, 140.

[117] Dulęba 2019, 378–381.

[118] Bartík–Čambal 2014, 98.

and well-dated assemblages are barely available.[119] An exception to this – for example – the rural settlement at Szajk in Hungary where a characteristic LT B1a type fibula was found.[120] Good analogies of it are known from Szentlőrinc,[121] as well as Sisak and Velika in the North-Balkan.[122] Based on the known distribution of objects it is not surprising that it is a new example for pre-Duchcov type fibula which uncovered in grave no. 345/A1 in Ménfőcsanak.

The other fibula from grave 345/A1 *(Fig. 10.2)* has a good analogy in the cemetery of Hostomice. The shape of the bow, the construction of coils, and the spherical element on bent feet meet the typological criteria of the pre-Duchcov horizon.[123] The bronze fibula from grave 345/A2. *(Fig. 10.11)* also belongs to the pre-Duchcov types.[124] Its exact analogies are known from Nova Ves[125] and Mannerdorf.[126] The existence of pre-Duchcov type fibulae in Ménfőcsanak is not a surprising thing nowadays, because this chronological horizon is precisely proved in the necropolis of Mannersdorf in Austrian Burgenland.[127] It is important to mention, that the two fibulae were chained in grave 345/A1 *(Fig. 10.1–2)*. Similarly, thin bronze chain connected fibulae were also found in the Mannersdorf cemetery,[128] where these were documented – in a similar way to Ménfőcsanak – on the neck of the skeletons.[129]

Two beaded-bow fibulae from tombs 362 *(Fig. 11.15)* and 376/B *(Fig. 16.7)* share the same regularly curved bow profile, small globe element, and short catch plate. In F. R. Hudson opinion the general shape of 'classical' Duchcov type derived from an earlier beaded-bow variety.[130] These are early – probably pre-Duchcov[131] – variations of the fibulae with widely differing bow decoration but all possessing six coiled springs with internal cords, small, globular foot-elements, and similar profiles. The Duchcov or Dux type firstly identified by R. Beltz in 1911. The primary criteria of the definition were globular foot-elements and its variety.[132] More than a half-century after the first publication of the treasure V. Kruta analyzed the stylistic differences between Duchcov fibulae based on the contents of female graves in Central European La Tène cemeteries. Later he defined generation time segments.[133] Duchcov type fibulae were formerly found in Ménfőcsanak grave nos 9, 10, and 16[134] which have known close analogy from Neunkirchen.[135]

Disc-footed Münsingen type fibulae were found in tomb 360 *(Fig. 14.5)* and 379 *(Fig. 17.2)*. The disc-footed fibula was also identified by R. Beltz at first.[136] Characteristics of the type are high-arching, thickened bow, short disc foot with the short catch plate, and six-coiled spring. The disc feet usually may have beaded or inlaid coral decoration but in some cases, it lost or decomposed in soil. P. Jacobsthal, in fact, highlighted a series of fibulae which he regarded as representing a Münsingen class,[137] however, deficiency noted by L. Pauli[138] and G. Kaenel[139] when dealing with relevant fibulae from Dürrnberg and Western Switzerland respectively. Within this overall class has many variations of the type.[140] A valid classification of all relevant La Tène disc-footed fibulae suggested being F. R. Hodson at Münsingen-Rain cemetery, where he realized different chronological stages in changing of the fibula fashion.[141] The typology of disc-footed fibulae carried out by J. Bujna in recent decades.[142] On the disc foot of fibula from Ménfőcsanak grave, 360 is not found inlay, only the empty hole of the rivet is observed. The closest analogies of this fibula are known from Mannersdorf[143] and others found in cemeteries in Czech and Moravian territory.[144] However, it should be noted that the Münsigen fibula is comparatively rare in Czechia and Moravia[145] because the core area of this type can be localized in Swiss territory.[146] It has to mention to the unique find in

[119] Dulęba 2019, 373.

[120] Gáti 2009, 66. fig. 4/20.

[121] Jerem 1968, fig. 29, 65/2.

[122] About the problematics and chronological aspects of Early La Tène period between the Pannonia and North-Balkan: Popović 1996, 105–125.

[123] Holodňák–Waldhauser 1984, Fig. 2,7–9.

[124] Holodňák–Waldhauser 1984, Fig. 2,6, 2,23.

[125] Holodňák–Waldhauser 1984, Fig. 3,3.

[126] Ramsl 2011, Taf. 24,4.

[127] Ramsl 2011, 140–141.

[128] Ramsl 2011, Taf. 34,4, 80,5, 88,9–10, 142,4a–b.

[129] Ramsl 2011, 34–36, 76–77, Taf. 34,4, 142.

[130] Hodson 1968, 35–36.

[131] The beaded-bow fibulae reserved Horizon D and E (see Hodson 1968, Pl. 123) and it have identifed as pre-Duchcov type in Bohemia (see Venclová *et al*. 2013, 112–114).

[132] Beltz 1911, 679. The well-known "Duchcov treasure" is a hoard containing several thousand bronze fibulae, torques, bracelets, finger rings were deposited in bronze cauldron in the territory of Obří Pramen thermal spring in Lahošť near Duchcov (named Dux in German). Berger 1882; Kysela–Venclová 2019, 133–134.

[133] Kruta 1971; Kruta 1979, 81–91.

[134] Uzsoki 1987, Pl. 6,2–4, 10,1, 18,4–5.

[135] Schiel 2015, Taf. 18, Inv.-Nr. 11202., Taf. 25, Inv.-Nr. 11240.–11241.

[136] Beltz 1911, 678,

[137] Jacobsthal 1944, 129.

[138] Pauli 1978, 125.

[139] Kaenel 1990, 239.

[140] Hodson 1968, 36–37.

[141] Hodson 1998, 34–35.

[142] Bujna 1998, 171–203; Bujna 2003, 52–55.

[143] Ramsl 2011, Taf. 126,9–10, 129,5a.

[144] Čižmář 1995, Abb. 1, 6–9; Sankot 1998, Abb. 1, 2–3.

[145] Čižmář 1995, 69.

[146] Kaenel 1990, 238–239.

Ménfőcsanak grave 4, which is an especially beautiful iron fibula with inlaid coral decoration on the disc foot, and relief motif design in the Continuous Vegetal, or so-called Waldalgesheim Style[147] on the bow. This is type 1B in J. Bujna's classification, which belongs to the younger phase of La Tène B1.[148] Furthermore, there is one another disc-footed fibula in grave 14 excavated by A. Uzsoki in 1968.[149] The closest analogies of inlaid coral decoration from the tomb 14 are known from the Swiss plateau.[150] It has to mention that disc-footed bronze fibula (Bujna BF-D1-A type)[151] also found as a stray find at the Ménfőcsanak settlement near the cemetery.[152]

Zoomorphic fibula with stylized griffin head was found in Ménfőcsanak grave 345.B1. *(Fig. 9.3)* The foot of these fibulae is ring-shaped and ornamented with a stylized dragon or griffin head with an open wide mouth.[153] This type of fibula mainly occurs in the Carpathian Basin, and the distribution is concentrated in the area of northern Transdanubia and Danube Bend,[154] but it has also spread to the North-Balkan,[155] Banat, and Transylvania.[156] A commonly cited object is the stray find from Szentendre which is attached by a chain to a Duchcov type fibula.[157] Therefore, it is proved that the zoomorphic fibula with stylized griffin head has to connect to the Duchcov horizon that is the La Tène B1 period.[158] Finally, it has to shortly refer another fibula with stylized griffin head which was found in Ménfőcsanak grave 888 in the excavation year 2006.[159]

An Early La Tène Scheme bronze fibula with wide arc bow is from Ménfőcsanak grave 752 *(Fig. 12.9)*. This is the BF-A3-C type in J. Bujna's classification.[160] It has good analogy from the cemetery Gumefens–Pra Perry in Switzerland, where this type was found together with La Tène B2 variations of disc-footed, coral inlay decorated fibulae.[161] Another example of it is also known from Dubnik in Southwest-Slovakia, which was dated by J. Bujna to La Tène B2 phase, as well as the BF-C1/C2 type[162] bronze fibula with globular foot element, which was also found in Ménfőcsanak grave no. 752 *(Fig. 12.8),* and the wearing of it can be stated in the same period.

The iron fibulae were usually unearthed in fragmented and strongly corroded in Ménfőcsanak. This circumstance largely restricted the determination of the type, variation, and also chronological position. Such iron fibulae were found in poor condition in grave nos 301 *(Fig. 3.6–7),* 303 *(Fig. 4.9, Fig. 5.1–2,6),* 350 *(Fig. 13.2),* 367 *(Fig. 15.4,9),* 376/A *(Fig. 16.1)*, 379 *(Fig. 17.1,3)*, 465 *(Fig. 18.1),* 737 *(Fig. 19.6)*, 760/A *(Fig. 22.2)*, and 760/B *(Fig. 22.1)*. However important to note, because it seems that these iron fibulae have unbounded foot, which can be referred to as its chronological positions. Traditionally the unbounded fibulae with globular foot element – like the special variations of Duchov-type – emerged in the La Tène B1 phase,[163] and later, the bounded variations firstly appeared in the same grave context together with unbounded variations in La Tène B2 period. This statement applies to both of the bronze and iron fibulae.[164]

Neck-rings

The rings worn around the neck are usually distinguished primarily by their material (iron, bronze, silver, or rarely gold), the method of closure (e. g. hook-and-eye), and the type of decoration (incised, inlayed or plastic). According to the generally accepted view, the different neck-rings were typical of the Early La Tène period.[165]

[147] Müller 1998, 81. The "Continuous Vegetal Style", also known as the "Waldalgesheim Style" is based mainly on plant motifs which are also used intricate fantastic images that depict human or animal faces, where the ornament is typically dominated by continuously moving tendrils of various types, twisting and turning in restless motion across the surface. The images sometimes can be interpreted in a variety of ways. Kruta 1986, 7–32; Kruta 2000, 111–118 and 429–433; Megaw–Megaw 2001.

[148] Bujna 1998, 182, 189, 195.

[149] Uzsoki 1987, 16, 23–24, Pl. 1,5, 14,1a–b.

[150] Kruta 2014, 693.

[151] Bujna 2003, 53.

[152] Tankó 2010a, 257, Fig. 8.

[153] Szabó 1974; Binding 1993, 39–40; Rustoiu 2008, 118–119; Rustoiu 2012, 359.

[154] Litér: Márton 1933, Taf. 5,2; Pilismarót-Basaharc: Szabó 1974, 72; Püspökhatvan: Márton 1933, fig. 8,8; Sopron-Bécsi-domb: Hunyady 1944, Taf. 18,5; Szentendre: Szabó 1974, Fig. 1–3.

[155] Donja Dolina (Bosnia-Hercegovina): Truhelka 1904, Taf. 81,15; Banjska Stena (Serbia): Sladić 2002, 37–38, Fig. 1; Kostolac (Serbia): Popović 1996, 117, Fig. 12,3; Veliko Târnovo (Bulgaria): Mircheva 2007, 71, Fig. 7.

[156] Pecica, Timişoara–Cioreni, Fântânele–Dealul Popii: Rustoiu 2012, 370.

[157] Szabó 1992, 21, Fig. 2; Binding 1993, Taf. 39,9; Szabó 2015, Fig. 17.

[158] Szabó 1974, 71–86.

[159] Egry 2007, Fig. 9C.

[160] Bujna 2003, 48.

[161] Schwab 1995, 240, Fig. 4; Jud 2009, 81, Taf. 2,1–3.

[162] Bujna 2003, 48–50, Fig. 62.

[163] Bujna 2003, 67, Fig. 38.

[164] Szabó–Tankó 2012, 92–93.

[165] Neugebauer 1992, 72; Moser *et al*. 2012, 191.

Iron wire neck-ring with circular cross-section was worn by female deceased of the double grave 303 in Ménfőcsanak *(Fig. 4.4)*. This hoop was strongly corroded and because of this, the method of closure cannot be reconstructed. However, the textile preserved by the corrosion remained on the surface of the object. Similar to this, iron neck-rings were found in Au am Leithaberge[166] and Mannersdorf. In this latter case, it is questionable that the closed ring with an inner diameter of 12 cm when and by what procedure was placed on the neck of the deceased.[167]

Bronze wire neck-ring with circular cross-section was found in grave 348. This ring is consisting of two parts and fastened its ends *(Fig. 12.1)*. Massive bronze torques with a circular cross-section and simple hook-and-eye fastening on the skeleton determined as male in Ménfőcsanak grave 376.B. There was a little knob on the end of the hook *(Fig. 16.4)*. The simple hook-and-eye fastened neck-rings are known with many examples from the Early La Tène cemeteries. The closest analogies can be mentioned the torques made of bronze from Pilismarót-Basaharc,[168] silver from Budapest-Csepel,[169] and twisted gold from Kósd.[170] Similar to the latter, twisted bronze neck-ring was also found in Ménfőcsanak grave 367. This twisted wire ring has two hooks at the ends *(Fig. 12.1)*. This fastening method is also known from a grave of Petőháza.[171] A similar, but hook-and-eye torques found in Ossarn bei Herzogenburg in Austria.[172] Four fragments of a neck-ring made of bronze were also uncovered in Ménfőcsanak grave 4. It has a hook clasp at the two ends too.[173]

Thin bronze chains

The thin bronze chain was found in Ménfőcsanak grave no. 303 *(Fig. 4.1A–1B,10)*. Two bronze fibulae were connected with a thin bronze chain in the grave no. 345/A1 *(Fig. 10.1–2)*. These chains are a serial assembly of connected pieces, called links, small wire rings were made of bronze. The occurrence of fibulae connecting with the chain is not unique in the Carpathian Basin. These chains were usually worn by females and generally found on the neck of the deceased in the graves. It has many analogies in Eastern Austria,[174] Northwest Slovakia,[175], and also in the middle zone of the Carpathian Basin.[176] It has to emphasize that a thin bronze chain were uncovered together with an amber ring in many cases in Ludas and also Sajópetri.[177] The closest analogies of it are known from the necropolis of Maňa in Southwest Slovakia.[178] A similar situation could be shown at Ménfőcsanak in grave 303, where was not amber, but the bronze ring was chained on the neck of the deceased. Chronologically, it seems that the thin bronze chain was commonly worn in the La Tène B2–B2/C1 phases,[179] however, the earliest examples appeared – as it proved by many graves in Pottenbrunn[180] and Mannersdorf[181] – in the La Tène B1 phase.

Glass, amber and coral beads

There were glass beads in three graves in Ménfőcsanak. Transparent blue glass beads twisted in spiral coils, biconical large, transparent, turquoise blue glass beads *(Fig. 4.8),* and hyacinth blue globular and a disk-shaped also hyacinth blue glass beads *(Fig. 5.4)* were found in the grave 303. Small, biconical, and ring-shaped dark blue glass beads have been described by A. Uzsoki in grave 9 at Ménfőcsanak.[182] The closest analogies of biconical turquoise blue glass bead are known from Pottenbrunn,[183] Dubník,[184] Mannersdorf,[185] Au am Leithaberge,[186] and also Solymár[187] and Dürrnberg.[188]

Transparent, white, amphora-shaped glass bead *(Fig. 11.3)* was in grave 347 in Ménfőcsanak. The amphora-shaped beads were produced between the end of the 5th century and the beginning of the 3rd century BC.[189]

[166] Nebehay 1973, 6.
[167] Ramsl 2011, 111–112, Abb. 81:46/1.
[168] Bognár-Kutzián 1975, 36, Pl. VI/2d.
[169] Horváth 2016, 145, Pl. 5/2.
[170] Kovács–Raczky 1999, 109, Kat. 74.
[171] Bella 1892, 346–347, Fig. 10.
[172] Neugebauer 1992, 72–73, Abb. 26/6.
[173] Uzsoki 1987, 15, Pl. I/1a–b.
[174] Pottenbrunn: Ramsl 2002, Taf. 28,5, 43,3, 51,5, 62,3; Mannersdorf: Ramsl 2011, Taf. 34,4, 37,11, 142,4a–b.
[175] Horný Jatov and Dvory nad Žitavou: Benadik 1957, Taf. 4,6, 5,16, 27,2.
[176] e. g. Gyoma: Hunyady 1944, Taf. 13,9; Vác: Hellebrandt 1999, Pl. 28,6, 77,6.
[177] Ludas: Szabó *et al*. 2012, Pl.1,2, 20,7; and Sajópetri: Szabó *et al*. 2018, Pl. 10,9, 16,12, 35,4, 36,2, 58,12, 59,11.
[178] Benadik 1983, Taf. 45,11, 47,9, 47,13, 55,11–12.
[179] Szabó–Tankó 2012, 103; Szabó–Tankó 2018, 166–167.
[180] Ramsl 2002, Taf. 39,6, 70,5.
[181] Ramsl 2011, 133–134, Taf. 27,17, 98,3, 104,1, 105,5.
[182] Uzsoki 1987, 34, Pl. 7,3b.
[183] Ramsl 2002, 63, Abb. 58, Taf. 49,4.
[184] Bujna 1989, Taf. 24,8a–f.
[185] Ramsl 2011, 131, Abb. 105.
[186] Nebehay 1973, Taf. 24, 2.
[187] Maróti–Kecskés 2008, 55, Fig. 4.
[188] Moser *et al*. 2012, 198–199.
[189] Meduna 1970, 231, 235; Venclová 1990, 59; Rustoiu 2015, 365.

These special types of beads were usually made of translucent glass paste and from a Black Sea region located Mediterranian workshop circulated to the north reaching the north-western Balkans, the Carpathian Basin, and Moravia.[190] The nearest analogy of Ménfőcsanak find is known from Mannersdorf in Austria, where this type of bead was found together with amber beads.[191] The wearing of this jewelry in Budapest-Csepel seems similar to Ménfőcsanak because transparent, white, amphora-shaped glass beads, transparent blue biconical glass beads, and also amber beads of various sizes as well as amorphous coral and white calcite beads were found in a grave.[192]

Two of the graves which contained glass beads also contained amber beads in Ménfőcsanak. Six amber beads of various sizes were found in grave no. 303 *(Fig. 4.18, Fig. 5.3)* while ten pieces were in grave no. 347 *(Fig. 11.2–5)*. It has to be mentioned that A. Uzsoki found similar amber beads in grave 9 at Ménfőcsanak formerly.[193] Such amber finds in different shapes and sizes are also known as an analogy from Pottenbrunn[194] and Mannersdorf.[195]

Beside the glass and amber 43 + 11 amorphous coral and white calcite beads *(Fig. 4.3–7; Fig. 5.5)* were in the grave no. 303 and one coral bead *(Fig. 11.1)* in the grave 347. Corals were previously published by A. Uzsoki from grave nos 9 and 16.[196]

The distribution of the glass and coral beads indicates the presence of major areas of circulation. One of these is the western area of the Carpathian Basin. Here the finds come from graves usually dated to the La Tène B1 in eastern Austria, south-western Slovakia, and northern Hungary. In all of the published beads made of coral were sometimes accompanied by amphora-shaped and other types of glass beads. This and the contemporaneity with the chronology of the amphora-shaped glass beads indicate that in general coral beads arrived in the Carpathian Basin from the Adriatic coast and the north-western Balkans together with glass beads.[197]

Rings, bracelets, and anklets

The jewelry of fingers, arms, and ankles collectively referred to as hoop jewelry. It can be classified functionally as rings, bracelets and anklets, and hoops that cannot be specified. The rings were the most popular jewelry beside the fibulae in the material of La Tène culture.

The first classification of Celtic rings was developed by Ilona Hunyady in the Carpathian Basin.[198] Her summary work defined the Hungarian research for a long time, despite the jewelry typology of the monograph left unfinished and raises several problems due to the author's career change in time the Second World War. On the one hand, some of the newer finds cannot be classified in Hunyady's typological system at all. On the other hand, the chronology outlined by her is no longer applicable without a critical approach today.[199] Therefore, an important development for the research was the summary of the ring jewels of the unarmed graves in Slovakia. J. Bujna's publication extensively examined fingerings, bracelets, neck rings, and anklets of the La Tène period.[200] However, this collection of grave goods – as already mentioned during the processing of the findings of the Ludas cemetery[201] – was limited to the territory of present-day southwestern Slovakia, moreover problematic both typologically and chronologically at some points. Thus the Bujna's system can be used with caution in Hungary.

There were found 42 different ring jewels wearing on arms and ankles in 18 graves in the recently excavated part of Ménfőcsanak cemetery. This 2.3 : 1 grave per pcs rate is common in the Carpathian Basin.[202] The rings of the arms and ankles were usually made of bronze and iron. However, precious metal – such as silver and gold – glass or sapropelit ring was not found in Ménfőcsanak cemetery.

It was a lucky position due to the condition of the metals because it generally remained in good condition in Ménfőcsanak graves. There was no heat effect causing burns or deformation which is common during the cremation process. Only the organic decomposition of the human body and the corrosion caused by chemical processes in the soil can be expected in the inhumation graves.[203] On the other hand, the position of wearing elements can also serve as a good reference for the way how to wear them. For example, the arm rings and anklets can be separated

[190] Rustoiu 2015, 365.
[191] Ramsl 2011, 131, Abb. 105, Taf. 81,8.
[192] Horváth 2016, Pl. 2,1–8; Horváth 2018, Pl. 2,1–7; Horváth 2019, 59–60.
[193] Uzsoki 1987, 34–35, Pl. 7,1.
[194] Ramsl 2002, 64, Abb. 58.
[195] Ramsl 2011, 131, Abb. 105.
[196] Uzsoki 1987, 35, Pl. 7,2, 18,2.
[197] Rustoiu 2015, 367–368.
[198] Hunyady 1944, 91–101.
[199] Szabó 2009, 85–100.
[200] Bujna 2005.
[201] Szabó–Tankó 2012, 97.
[202] The rate is 3.22 : 1 in Southwest Slovakia (Bujna 2005, 6–7), and 2 : 1 in case of Sajópetri necropolis (Szabó–Tankó 2018, 148).
[203] Further information about it: Szabó–Tankó 2018, 149.

based on size from well-documented excavation observations. It can be mentioned as an example that the generally measurable inside diameter of finger rings was 18–22 mm, bracelets were 50–90 mm and the anklets were 80–90 mm in the Ludas cemetery.[204] These measured values more or less corresponded to the observed dimensions of rings in the cemeteries in Southwest Slovakia.[205] Therefore in a reverse case, from the measured data, we can even deduce the way of wearing in an uncertain finding situation.

The simplest hoop jewelry is the circular or oval shape, open or closed rings with a circular or oval cross-section in Ménfőcsanak. For example, a closed bronze ring with circular cross-section was found in grave 361 *(Fig. 14.1)*. Two pieces of this type with a semicircle and oval cross-section were in pairs in the grave 367 *(Fig. 15.5–6)*. This simple form was determined as type BR-L1-A by J. Bujna[206] and it has uncountable analogies, for instance, Győr-Újszállás,[207] Mannersdorf,[208] Bučany,[209] Hurabanovo[210] and Maňa[211] in the nearest regions, but also occurred e.g. in the Ludas cemetery in Northeast Hungary.[212] Saddle shape bronze ring with circular cross-section was found in the grave 303 in Ménfőcsanak. This is the BR-L2-C type, which has good analogies in Sv. Michal in Slovakia[213] and Au am Leithaberge[214] and Dürrnberg in Austria.[215] A close ring with a knot was in grave 376/B in Ménfőcsanak *(Fig. 16.10)*. This form was identified as type BR-L2-B by J. Bujna[216] and a similar, but with tree knot, the bronze ring is known from Palárikovo cemetery.[217] The hoop with an oval cross-section and the same diameter at the ends from grave 350/A in Ménfőcsanak is a simple wire bracelet *(Fig. 13.7)*. This is very similar to the examples have known from Au am Leithaberge,[218] Mannersdorf,[219] and Dürrnberg[220] cemeteries in Austria. Typologically, the pair of bracelets from grave 303/1 in Ménfőcsanak very similar to the previously mentioned pieces, but here the open ends slightly thickened *(Fig. 4.11–12*). On the contrary, the pair of bracelets in grave 354 have thinning pointed ends *(Fig. 10.3–4*). This is a common occurred simple form which can be found at Dürrnberg,[221] but also in recently investigated necropoleis at Ludas and Sajópetri in Northeast Hungary.[222] This type of bronze wire rings was determined as type BR-A1-AA or BR-A4-A by J. Bujna[223] and he mentioned some analogies from Hurbanovo[224] and Dubník in Southwest Slovakia.[225] In this point of view, the open bracelet with the hexagon cross-section and thickening ends form Ménfőcsanak grave 737 *(Fig. 19.7)* seems a unique variant of this type.

The simple open wire bracelets frequently have profiled ends. Such a pair of bracelets were in the grave 348 *(Fig. 12.2–3)* and was also found in the grave 12 excavated by A. Uzsoki in Ménfőcsanak.[226] These made of solid bronze wire of circular cross-section, which has decorated with multiple articulated discs and buttons at the ends. Similar to these – however it is not precisely the same in decorating the ends – the J. Bujna's BR-A2 type[227] which has known form Maňa[228] in Slovakia, but also found Au am Leithaberge[229] and Dürrnberg[230] in Austria.

A pair of simple hook-and-eye fastened bracelets were found in grave 303 in Ménfőcsanak. Both of them made of solid bronze wire of oval cross-section which has a flattened eye at the one and hook at the other end *(Fig. 4.16–17)*. This type is not classified in Bujna's system,[231] however, it has known a good analogy in grave 6 in Mühlbacher in East-Austria.[232]

Four examples from three burials solid, ribbed body, an open bronze ring with profiled ends were found in grave nos 301, 307, and 379 in Ménfőcsanak. These are the type BR-B in Bujna's system[233] and although they

[204] Szabó–Tankó 2012, 97.
[205] See detailed in Bujna 2005.
[206] Bujna 2005, 82–84.
[207] Hunyady 1944, Taf. 29,10.
[208] Ramsl 2011, Taf. 58,4, 183,2.
[209] Bujna–Romsauer 1983, Taf. 2,6–7, 4,2 and 4.
[210] Benadik 1957, Taf. 24,1.
[211] Benadik 1983, Taf. 7,3.
[212] Szabó–Tankó 2012, 96–97, Fig. 152.
[213] Bujna 2005, 82–86.
[214] Nebehay 1973, Taf. 9,3.
[215] Tiefengraber–Wiltschke-Schrotta 2015b, 60, Grab 317/40.
[216] Bujna 2005, 82–86, Fig. 69.
[217] Gardelková-Vrtelová 2016, 153, Fig. 5.
[218] Nebehay 1973, Taf. 27,1–2.
[219] Ramsl 2011, Abb. 82, Taf. 40,15, 78,4a–b. 161,5a–b.
[220] Moser *et al*. 2012, 114, Grab 216/50.
[221] Tiefengraber–Wiltschke-Schrotta 2012, 163, 165. Grab 144/12.
[222] Szabó–Tankó 2012, Pl. 31,3; Szabó–Tankó 2018, 148–149, Fig. 116, Pl. 40,2, 59,4.
[223] Bujna 2005, 12–13, 17–18.
[224] Benadik 1957, Taf. 26,1,4.
[225] Bujna 1989, Taf. 24,5.
[226] Uzsoki 1987, Pl. 12,2–3.
[227] Bujna 2005, 14–15.
[228] Benadik 1983, Taf. 17.9,11, 26.7–8.
[229] Nebehay 1973, Taf. 1,3.
[230] Moser *et al*. 2012, 165, Grab 221/13; Tiefengraber–Wiltschke-Schrotta 2012, 91, Grab 39/42, 152, Grab 159/13, 261, Grab 327/19.
[231] Bujna 2005.
[232] Nebehay 1971, 143–144, Taf. 2,5.
[233] Bujna 2005, 18–29.

belong to the typologically same group differ slightly from each other in the decoration and formation of ribbing. For example, the bracelet form grave 301 *(Fig. 3.4–5)* cannot be integrated into the Bujna's system in all aspects. In this case, according to German terminology named *"Geperlt"*[234] product definitely different from presented by J. Bujna.[235] It seems, the nearest analogies of this bracelet are known Almásfüzitő grave 1 in Hungary[236] while this was particularly commonly occurred in Austria, where similar finds were found in Pottenbrunn,[237] Neunkirchen,[238] Mannersdorf,[239] and Dürrnberg.[240] Some analogies of this type were also published from Moravia.[241] The solid open ring with ribbed body and sealed ends was found in grave 307 in Ménfőcsanak *(Fig. 6.1)* was identified by J. Bujna as variant BR-B4-Ab.[242] Similar to the pieces from tomb 301, the closest analogies of the bracelet from grave 307 are known from Pottenbrunn[243] and Mannersdorf.[244] Some nearer examples also can be mentioned from Sopron-Bécsidomb in West-Hungary[245] and Dubník in Southwest-Slovakia.[246] The bracelet form Ménfőcsanak grave 379 *(Fig. 17.6)* can be considered a transitional type which corresponds in part to the Bujna BR-B1Aa variant,[247] while the profiled endings of it rather have a relation to the bracelets with sealed ends discussed above.

A pair of simple circular cross-section bracelets with a biconical pin-and-hole fastened ending was discovered in Ménfőcsanak grave no. 345/B1 *(Fig. 9.6–7)*. The closest analogies of these rings were in grave 4 and 9 excavated by A. Uzsoki. The observable differences are that the fastening is not conical but profiled on the hoop from tomb 4,[248] and the findings found in tomb 9 have a rectangular cross-section.[249] On the other hand, despite being similar fastened and beaded *(Geperlt)* bracelet appropriates the BR-B2-Bb type[250] the simple solid circular cross-section wire bracelet cannot be found in J. Bujna's classification. Contrary it can be mentioned as close parallels the finds from Győr-Újszállás, Baj and Oggau[251] with the proviso that cannot be known from published photos, whether they were made of solid wire or with a hollow interior.

The endings of wire bracelets form Ménfőcsanak grave no. 347 were not profiled, but it has also pin-and-hole fastening. The two barrel-like parts facing each other decorated by engraved lines *(Fig. 11.6–7)*. A similarly fastened bracelet is the BR-L3-B type in J. Bujna's system[252] which has only one representative analogy known from Maňa.[253]

The hollow bracelets and anklets made of iron or bronze sheet form an independent group beside the solid wire rings in Ménfőcsanak. Two hollow bronze anklets were in grave nő. 379 *(Fig. 17.7–8)*. One of these was decorated with engraved geometric motifs. Triangular fields at the ends framed by a double line and filled with hatches and several point-circles are at the apex of the triangle *(Fig. 17.8)*. This is a special composition that also occurred in Mannersdorf[254] and Dürrnberg[255] cemeteries. The other hollow bronze anklet from grave 379 was undecorated and fastened by a rivet at the end *(Fig. 17.7)*. This method of fastening is also discernible in the case of another hollow bronze anklet in grave no. 347 *(Fig. 11.8)*, and has some analogies in Almásfüzitő[256] and Mannersdorf.[257]

The iron rings from grave nos 340 *(Fig. 6.4)*, 350/A *(Fig. 13.5)* and 754 *(Fig. 19.2)* were strongly corroded, therefore, we refrained from their typological definition.

14 fingerings and small rings were found in 35 graves in Ménfőcsanak. In some cases, more than one small rings were in the same grave. For example, five pieces were in the grave no. 376/A *(Fig. 16.6 8,11–12)* and four different were in the grave no. 303 *(Fig. 4.5–6,13–14)*. However, there was only one-pieces in the grave nos 307

[234] Ramsl 2002, 61.
[235] Bujna 2005, 19, Fig. 8.
[236] Vadász 1987, 238, Pl. IX,1–2.
[237] Neugebauer 1992, Abb. 23, 8–19; Ramsl 2002, 61–63, Taf. 41,6–9, 62,8.
[238] Schiel 2015, Taf. 22. Inv.-Nr. 11221.
[239] Ramsl 2011, Taf. 40.4,7, 106.2a–b.
[240] Penninger 1972, Taf. 33A,10; Tiefengraber–Wiltschke-Schrotta 2012, 75, Grab 37/6.
[241] Čižmářová 2011, Tab. 2.4, 3.1.
[242] Bujna 2005, 25–26.
[243] Ramsl 2002, 61–62, Taf. 35,4.
[244] Ramsl 2011, Taf. 27,11–12, 162,5.
[245] Hunyady 1944, Taf. 27,6.
[246] Bujna 1989, Taf. 33,4.
[247] Bujna 2005, 19–21.
[248] Uzsoki 1987, Pl. 2,2.
[249] Uzsoki 1987, Pl. 8,3–5.
[250] Bujna 2005, 21–24. The only mentioned example is from Dubník: Bujna 1989, Taf. 4,9.
[251] Hunyady 1944, Taf. 27,1–3.
[252] Bujna 2005, 86–87.
[253] Benadik 1983, Taf. 8,8.
[254] Neugebauer 1992, Abb. 20; Ramsl 2011, Fig. 84, 101, Taf. 43,19a, 51,1b–2b, 55,9a, 56,8a, 174.
[255] Moser *et al*. 2012, 97, grave 213/2–3, 149, grave 219/4–5; Tiefengraber–Wiltschke-Schrotta 2012, 30, grave 16/4–5, 51, grave 20/3–4, 61, grave 28/16–17, 75, grave 37/11, 132, grave 65/3–4; Tiefengraber–Wiltschke-Schrotta 2015a, 93, grave 240/7–8.
[256] Vadász 1987, Pl. 8,1–2.
[257] Ramsl 2011, Abb. 84, 101–102.

(Fig. 6.3), 379 *(Fig. 17.4),* 744 *(Fig. 20.3),* 752 *(Fig. 12.10)* and 760 *(Fig. 23.3).* Most of the fingerings and small rings were made of bronze, but only the pieces from no. 303 *(Fig. 4.14)* and no. 752 *(Fig. 12.10)* were made of iron. It is important to note here that the rings which were found beside the scabbard of a sword cannot be classified as wear items. These most likely were components for suspending the weapon (*Fig. 13.4* in grave no. 350/A; in grave no. 755; *Fig. 21.3* and *Fig. 22.3* in grave no. 760/B).[258]

The fingerings and small rings are closed and have a simple circle, oval or rectangular cross-section in the largest number in Ménfőcsanak *(Fig. 4.6, Fig. 12.10, Fig. 16.8, Fig. 16.11, Fig. 17.4, Fig. 20.3).* A similar image unfolded before us in recently published Ludas[259] and Sajópetri necropoleis, where was inferred the general habit of wearing objects while typologically only minimal differences could be detected.[260]

The bronze plate closed ring from grave no. 307 has a simple design *(Fig. 6.3)* which was identified as J. Bujna's BR-K2-3 type with some analogies from Southwest Slovakia[261] and Pottenbrunn from Austria.[262]

The open bronze fingering with stacking ends and oval cross-section from Ménfőcsanak grave no. 376/A *(Fig. 16.6)* is slightly different from the above-mentioned examples. It has analogies in Ludas[263] and other cemeteries in the Carpathian Basin.[264] The closed bronze ring with the sealed design was found at the neck of the deceased in grave no. 303 *(Fig. 4.5).* It is questionable in this situation whether it was a fingering or a pendant functionally. A similar type of ring is known from the cemetery in Les Jogasses in France.[265] Here we have to mention the closed bronze ring with also sealed design from grave 760 in Ménfőcsanak *(Fig. 23.3).*

Belts and buckles

The Ménfőcsanak graves yielded five buckles with rectangular belt-plaques made of iron. (grave no. 303**:** *Fig. 4.15;* grave no. 307: *Fig. 6.12;* grave no. 345/A1: *Fig. 10.6;* grave no. 345/B1: *Fig. 9.4;* grave no. 379: *Fig. 17.5*). The other three pieces were formerly published by A. Uzsoki from this cemetery.[266] It seems, that there are significant differences in the size of the rectangular iron plaque which is fastened to the hook by a massive rivet. In other words, larger and smaller plates also occur among them. So in terms of size, there is a large from grave no. 303 *(Fig. 4.15)*, two middle-sized from grave no. 307. and no. 345/B1 *(Fig. 6.12, Fig. 9.4)* and also two pieces from grave nos 379 and 345/A1 *(Fig. 10.6; Fig. 17.5).* According to the construction, we can assume that iron plate was fixed to a belt made of organic material, probably leather. It can be established empirically that the dimensions of belt mainly could be 4–6 mm thick and 25–35 mm wide.[267] In other respects, it was also be observed that these buckles typically belonged to women's wear in Ménfőcsanak.

It can be stated on the basis of the general examination of buckles with rectangular belt-plaques (in German term *kästchenförmige Beschläg*) made of bronze and iron that it was mainly produced together with the openwork buckle[268] in the Eastern Alpine territory in the Early La Tène Period.[269] On the other hand, these finds are remarkable and one of the earliest examples of the 'Celtisation' as the typical product of La Tène culture in the Eastern Alps region and the Carpathian Basin.[270] However, it must refer to that these artifacts are traditionally connected by some researchers to the La Tène A phase,[271] but it was found also in the context of La Tène B1-B2 phases.[272] It has also been suggested that there are differences in the size of hooks, that is, the buckles made with shorter hook seems older.[273] This statement was also confirmed by Ludas example, where a buckle made of iron was found with long hook and small plate in a La Tène B2 grave.[274] The buckles in Ménfőcsanak were produced with a short hook without exception, so these can be early types. The closest analogy to this was found Inzersdorf, [275] Pottenbrunn,[276] Kuffern,[277] Au am Leithagebirge,[278] and Bučany.[279]

[258] Rapin 1999, 55, Fig 9,A–B.
[259] Szabó–Tankó 2012, 102, Pl. 47,2.
[260] Szabó–Tankó 2018, 152–153, Pl. 40,8.
[261] Bujna 2005, 78, 80–81.
[262] Ramsl 2002, 59–60, Abb. 55.
[263] Szabó–Tankó 2012, 102, Pl. 49,7–8.
[264] Hunyady 1944, 102.
[265] Roualet 1991, 121.
[266] Uzsoki 1987, Pl. 1,4a–b, 6,5a–b, 12,5a–b.
[267] Uzsoki 1987, 37.
[268] Frey 1991, 101–111; Frey 1996, 193–199.
[269] Frey 1996, 200–207.
[270] For example in Bučany: Bujna–Romsauer 1983, 299–300.
[271] Guggisberg–Stöllner 1996, 122.
[272] Dürrnberg: Moser *et al.* 2012, 182–183; Pottenbrun: Ramsl 2002, 58.
[273] Ramsl 2002, 58.
[274] Szabó–Tankó 2012, Pl. 27,7; about the chronological position: fig. 187.
[275] Neugebauer 1996, Taf. 14,3, 19,5.
[276] Ramsl 2002, Abb. 54; Taf. 26,3, 27,6, 29,6.
[277] Nebehay 1993, Taf. 15,3.
[278] Nebehay 1973, Taf 2,5.
[279] Bujna–Romsauer 1983, Pl. 5,1a–b, 6,9, 7,3, and 8,5.

Knife

Three examples of slashing knife (also called hewing or cutting knife as well as *Hiebmesser* in German term) were published by A. Uzsoki from Ménfőcsanak formerly.[280] It is surprising in light of this, that only a corroded fragment of the iron blade was found from 35 burials in the recently investigated part of the cemetery *(Fig. 190.4)*. This blade is so corroded and fragmented that it is impossible to class typologically.

Weapons

It seems from the analysis of graves in the Carpathian Basin that members of the Celtic elite considered themselves mainly as warriors in the period of the Great Historical Migration to Balkan expansion of the Celts (4th and 3rd century BC).[281] There are seven warrior graves in the recently excavated part of the Ménfőcsanak necropolis. In other words, only 20 % of the 35 persons buried in the cemetery were armed. This corresponds to the 15–25 % commonly typical rate of the Carpathian Basin,[282] even if in the present case we can only talk about a specific detail of the Ménfőcsanak cemetery. Spearhead was found in grave no. 303 and lance in the grave no. 760 *(Fig. 5.13; Fig. 23.1)*. Five warriors equipped by sword and spearhead or lance were laid in grave nos 343/B, 350/A, 744, 755, and 760/B.

Swords and scabbards

Five iron swords *(Fig. 27)* were found in this part of Ménfőcsanak cemetery.[283] The swords were complete and placed in the scabbard in all situations. These were unbent, i.e., there was not deliberately caused deformation and the bending of swords was not part of the burial rite. Both of the swords and the scabbards were heavily corroded. As a result of rust, the iron sheets of scabbards have generally remained in a rather poor or even fragmented condition. Therefore, there was no possibility to observe traces of engraved decoration on the surface of scabbards. Some of the swords were analyzed by X-ray and microscope, however, these methods did not lead to evaluable results. Unfortunately, engraved decorations were not discovered on surfaces of the iron plate of scabbards in Ménfőcsanak. The chape as a protective fitting at the bottom of a scabbard was mostly fragmented or just recognizable in corrosion due to poor conditions. Thus the types of chapes were not or only uncertainly definable *(*grave no. 343/B: *Fig. 7.4b*; grave no. 744: *Fig. 20.6c;* grave no. 755: *Fig. 21.4b*; grave no. 760/B: *Fig. 21.5b)*. The only exception was the chape of the scabbard from grave no. 350/A *(Fig. 13.8c)*, which was also strongly corroded but it can be certainly identified as Kósd D type.[284] This type was named after the characteristic form of chape of the sword scabbard was found in Kósd grave 15, and also grave nos 2 and 10.[285] There are some analogies in a Ruma-Borkovac,[286] Beograd-Karaburma,[287] and Rezi-Rezicseri.[288] It probably can be classified here as a fragmentary example from Pottenbrunn.[289] The occurrence of known some finds is mainly localized in the Middle Danube Region.[290] A recent find was also found Monte Bibele in Italy[291] and Cetina near Trilj in Croatian Dalmatia.[292] However, the latter is a less typical example and rather forms a transition to the Hatvan-Boldog type swords.

Shields

Clear evidence of shield use has rarely been found in this part of Ménfőcsanak cemetery. Iron *umbo* was not found. The presence of shields made primarily of organic material could only be inferred from a few minor iron parts in the funeral rite. Edge ironing was found in warrior grave no. 350/A *(Fig. 13.9a–b)* and perhaps the wrought iron nail reinforced also a shield too *(Fig. 13.6)*. Probably, the massive iron nails from grave no. 760/B should also be considered as parts of a shield *(Fig. 22.4)*. The small number of parts is not surprising if we are considering that the shield published and reconstructed by A. Uzsoki in 1970 consisted only of small iron components, like edge

[280] Uzsoki 1987, 38, Pl. 5,1, 14,5, 20,4.

[281] Szabó 2014, 71–113.

[282] Szabó 2005, 31; Szabó–Tankó 2018, 169.

[283] Grave no. 343/B: *Fig. 7.4a–b;* grave no. 350/A: *Fig. 13.8a–c;* grave no. 744: *Fig. 20.6a–c*; grave no. 755: *Fig. 21.4a–b*; grave no. 760/B: *Fig. 21.5a–b.*

[284] Szabó–Petres 1992, 80, Fig. II.

[285] Petres–Szabó 1986, 267.

[286] Guštin 1982, Abb. 5.1; Szabó–Petres 1992, 241, Pl. 123.1.

[287] Blečić Kavur–Kavur 2010, 71.

[288] Horváth 1987, Pl. XVII,5; Szabó–Petres 1992, 175, Pl. 57.

[289] Ramsl 2002, 78–79, Abb. 74, 80.

[290] Ramsl 2003, 256, Fig. 12.

[291] Lejars 2008, 213; Blečić Kavur–Kavur 2014, Fig. 29.3.3.

[292] Blečić Kavur–Kavur 2014, 266, Fig. 29.2.

ironings, wrought iron nails, and iron reinforcements.[293] These and the organic remains of the oval shield covered the skeleton.[294] A similar situation of the position of iron and preserved organic remains of the shield was documented in Velká Maňa and also Palárikovo in Southwest Slovakia where the elements of the shield also covered human body during the overall reconstruction of the warrior grave.[295] In light of this, the suggestion seems logical that the edge ironing from grave no. 350/A. *(Fig. 13.9b)* and the iron nails form the same grave and the grave no. 760/B *(Fig. 13.6; Fig. 22.4)* were parts of shields. Perhaps, the iron reinforcement *(Fig. 5.7)* found beside spearhead was also an iron component of a shield in grave 303. Fragments of edge ironing were also found in grave no. 465 *(Fig. 18.3–6),* however, another weapon was not discovered in this grave.

Spearheads and lances

Spearhead or lance was found in seven graves in the recently investigated part of Ménfőcsanak cemetery. Lance, shield, and sword were found in grave no. 350/A *(Fig. 13.3,6,8a–c,9a–b),* lance or spear and sword equipped warrior was in grave no. 343/B *(Fig. 70.2,4a–b),* no. 744 *(Fig. 20.1,6a–c)*, no. 755 *(Fig. 21.1,4a–b)* and 7 no. 60/B *(Fig. 21.3,5a–b)*, furthermore lance was in grave no. 303 *(Fig. 5.13)* and no. 760 *(Fig. 23.1)*.

Because of their versatility, high effectiveness, easy to use a simple form, and cheap cost, polearms led to many variants and were the most frequently used weapons of the Celts on the battlefield. The typology of these pole weapon is based on the characteristical form and size of the leaf.[296] Polearms can be divided into two main categories. One part of these designed for extended reach and thrusting tactics such as pike or phalanx combat or against the cavalry attack. These are usually too long, heavy, and slow to be effective against opponents in a melee – assuming the lance survived intact in the first initial impact of the combat. Another group is the light throwing spear or javelin. Essentially, we can deduce the function by considering these criteria. The long and heavy lances were used extended reach and thrusting tactics, and less in hand-to-hand combat, while the light spears were suitable for throwing and close combat too.[297] It has to be mentioned that the classification based on formal criteria developed for sanctuary finds in Gournay in France[298] is not directly applicable to the finds of the Eastern Celts in the Carpathian Basin.[299] On the other hand, the polearms cannot be determined chronologically on the basis of formal criteria.[300]

Pottery

73 pottery were found in 26 graves in Ménfőcsanak. There were significant differences in the number of backed clayware in burial rite. One vessel was in eight graves, two were in five graves, three in four graves, and four in three, five in five, and six different vessels were unearthed in grave no. 379. On the other hand, only one vessel was in one-third of the burials, while 2–6 ceramics were in most of the graves. Only in the grave nos 340, 362, and 752 has not been found pottery in Ménfőcsanak.

The analysis of the position of the vessels within the graves is primarily based on the undisturbed skeletal burials. It is conspicuous that the ceramics were mostly deposited around the deceased's foot. Less frequently, they were placed on the lower or upper leg, possibly next to the hip region. Any deviation from this generally considered habit is observed in only a few cases. A vessel was placed next to the human skull in the grave 379, while another was discovered on the chest of deceased in grave no. 343/B. A vessel was in the left arm of one of the skeletons in the double grave no. 303. It can also be considered different from the general burial habit, that all of the five ceramics were deposited in one group next to the left hand of the deceased in grave no. 342 *(Fig. 28)*. The position of vessels is correlated with the deposited situation of animal remains in graves in many cases *(Fig. 29)*. This is understandable because food or drink was also placed in the pots next to the dead.[301] Meat dishes could still be put in wooden jars, but it is also possible that they were packaged in textiles. However, the organic matter has been destroyed, so even without a vessel, meat remains can be found in the graves. In the cemetery of Ménfőcsanak, there were animal bones in 11 inhumation graves, referring to the custom of giving food attachments and the funeral feast associated with the funeral ceremony. The custom is typical of both the graves with ditches and the simple graves.

[293] Uzsoki 1970b.
[294] Uzsoki 1987, 23, Pl. 15–16.
[295] Benadík 1954, 320, Fig. 131–132; Benadík 1963, 349, Fig. 3; Horváth–Gardelková-Vrtelová 2015, 70–71, Fig. 5.
[296] Brunaux–Rapin 1988, 133–134.
[297] Szabó–Tankó 2012, 119–123.
[298] Brunaux–Rapin 1988, 85ff.
[299] Szabó–Tankó 2012, 119–120, Fig. 167.
[300] Hunyady 1944, 118–121; Szabó–Tankó 2018, 174–175.
[301] Except, of course, the vessels containing the ashes.

It occurs in the graves of both adults and children too. With the exception of one case (350/A), edible and good quality animal parts are found next to the dead.

The 73 vessels were largely discovered intact and only a smaller part was fragmented or destroyed by the pressure, humidity, and chemical processes of soil during the more than two thousand years. In other words, most of the ceramic finds have come to light in good condition, which resulted from the particularly advantageous properties of the soil. Only eight ceramic vessels (only 11 %) were totally destroyed and unable to make the conservation process with them. Compared to recently studied cemeteries this is a significantly better ratio than, for example, was observed in Ludas where the ceramic material was particularly poorly retained.[302] However, this lags behind Sajópetri, where ceramic finds have generally remained in better condition.[303] It seems likely that, this discrepancy was not primarily due to the quality of the pottery, but rather to the different soil and hydrological conditions of the sites.

The classification of burial ceramics in Ménfőcsanak is primarily based on the examination of technological and formal features. For this, we have taken into account the recent research of La Tène ceramology. The recently published monograph of the Celtic settlement of Sajópetri is a significant step forward in terms of Late Iron Age ceramic typology.[304] The technological and typological system developed there also serves as a starting point in the present work.[305]

Considering the technology of production for the first time, it can be stated that the proportion of wheel-thrown ware was outstanding in Ménfőcsanak. Of the 65 vessels that can be analyzed 63 were wheel-thrown made, while only two were certainly produced by hand made *(Fig. 12.11* and *Fig. 18.11)*. So 97% of the burial ceramics were wheel-thrown ware. Based on surface examinations, differences were observed in the quality of producing. In four cases, it could not be clearly decided whether it was hand-built and then throwed or whether it was formed by throwing on a slow wheel (e.g.: *Fig. 8.2,5–6, Fig. 12.7*).

The bowl with S-profile (type II.1.1.) occurred in the largest number (17 pcs) in the classification typologically in Ménfőcsanak. *(Fig. 2.5, Fig. 3.12, Fig. 5.11, Fig. 8.1, Fig. 10.5, Fig. 11.11–12, Fig. 12.5–6, Fig. 13.11, Fig. 14.3, Fig. 16.3, Fig. 17.13, Fig. 18.7,15, Fig. 19.8,11)*. These bowls were usually undecorated *(Fig. 12.5, Fig. 17.13, Fig. 19.8),* except for the rib *(Fig. 2.5, Fig. 3.1., Fig. 5.11, Fig. 10.5, Fig. 11.12, Fig. 12.6, Fig. 13.11, Fig. 14.3, Fig. 16.3)* or the single *(Fig. 18.7,15)* and double trench running around horizontally on the shoulder of the vessel *(Fig. 8.1., Fig. 11.11, Fig. 19.11)*. The smoothed bands and wavy lines combined decoration in the inner part of the bowl *(Fig. 19.11)* was a unique and special find, which has analogies in the excavated part of the cemetery published by A. Uzsoki formerly.[306] This unique wavy line decoration is particularly interesting because it is similar on the shoulder of the pot found in Dürrnberg grave 15, [307] on the shoulder of the clay chalk belonging to grave 50, [308] and on the shoulder of the S-profile bowl of grave 53.[309] These findings may suggest a strong relationship between the two sites, for which further research is needed in the future.

Pots (type II.3) occurred graves frequently. 14 of them were found in Ménfőcsanak *(Fig. 2.4, Fig. 3.14, Fig. 5.12, Fig. 8.3–4, Fig. 10.8, Fig. 11.14, Fig. 13.10, Fig. 14.2, Fig. 17.12, Fig. 18.9, Fig. 19.10, Fig. 20.5, Fig. 21.6)*. The rib, rib with double trenches, and only trench running around horizontally on the neck and/or shoulder of a vessel are considered common in this type. These decorations can be observed on 90 % of the pots.

Small pots (type II.5) were only found in two graves. There is rib running around horizontally on the neck of both vessels *(Fig. 3.12; Fig. 15.10)*.

A large number of the flask (type II.8) of different sizes and shapes is remarkable in Ménfőcsanak. Within this, the lens-shaped bottle, so-called *Linsenflasche* form a separate group, which has many examples been found in this cemetery *(Fig. 2.3, Fig. 3.11, Fig. 5.10, Fig. 14.8, Fig. 19.12, Fig. 23.1, Linsenflasche: Fig. 6.7, Fig. 15.11, Fig. 17.10)*. This type required briefly to discuss here. As early as 1944, I. Hunyady attempted to develop a classification for the lens-shaped bottle and to determine its chronological boundaries. In her opinion the *Linsenflasche* was one of the characteristics find of *"LT A Ostgruppe"*, however, it occurred in the northwest part of Hungary in the La Tène B phase and spread to the east of Danube and south of Balaton in La Tène C phase.[310] T. Voigt analyzed

[302] Szabó–Tankó 2012, 131.
[303] Szabó–Tankó 2018, 197.
[304] Szabó 2007.
[305] Szabó *et al*. 2007, 229–252.
[306] Uzsoki 1987, Pl. 19,1, 20,1.
[307] Penninger 1972, Taf. 14,25.
[308] Penninger 1972, Taf. 56,10; Tiefengraber–Wiltschke-Schrotta 2014, 45, Garb 50/13.
[309] Penninger 1972, Taf. 61,16; Tiefengraber–Wiltschke-Schrotta 2012, 124, Grab 53/11.
[310] Hunyady 1944, 133–134.

it from a completely different perspective in 1969. He summed up everything he could have known until then. There are rib, rib with double trenches, and only trench running around horizontally on the neck and/or shoulder of lens-shaped bottles. T. Voigt believed that the decoration or non-decoration of the vessels is an essential classification criterion. Based on this, he defined the pieces decorated with stamped motifs as type 'A' and the unadorned ones as type 'B'. He found that the decorated pieces were specific for the La Tène A phase, while the bottles without decoration were more typical for the La Tène B phase.[311] Today, this theory is almost unacceptable.

Later, F. Schwappach discussed this type as a representative form of Eastern La Tène pottery. He believed that lentil-shaped bottles could be traced back to the local pottery tradition of Hallstatt culture in the Czech-Moravian region. On the other hand, the typical *Linsenflasche* is already particularly relevant to the earliest phase of La Tène culture. F. Schwappach's significant recognition was the formal development that can be detected and defined over time within the type. The point is that the height and maximum width can usually be the same as the earliest bottles. However, over time, the neck of the bottles was extremely elongated especially during the La Tène B phase to which a relatively low, rounded, or biconic rather than the lenticular body was paired in the La Tène C phase.[312] Based on several well-dated graves finds, L. Pauli found that the lens-shaped bottles are known mainly from phases A and B of the Dürrnberg cemetery. Moreover, L. Pauli confirmed F. Schwappach's ascertainments based on the analysis of the necropolis. He also pointed out that, although the motifs made with the various techniques on the sides of the bottles had chronological significance, however, the typology outlined by T. Voigt was not sufficiently substantiated.[313] It is important to point out that this type can also be found in the settlement belonging to the cemetery in Ménfőcsanak.[314] Many *Linsenflasche* are also known from Northwest Hungary and Southwest Slovakia.[315]

The vessel from grave no. 744 deserves special attention. It has stamped triskeles consisting of connected S-motifs running around continuous horizontally on the shoulder of the vessel. The similar continuous decoration is visible on the surface of one of the burial ceramic from Wien-Leopoldau.[316] Different compositions consisting of a stamped S-motif can often be observed on ceramic finds from the Early La Tène period.[317] There are also some ceramic fragments stamped with continuous S-motif among the finds of settlement in Ménfőcsanak.[318]

It is important to highlight that a large number of stamped pottery was found, mainly in the Early La Tène sites in Eastern Austria and Western Hungary.[319] This phenomenon has been noticed by the researcher of La Tène ceramology before. Based on the Sopron-Bécsidomb, F. Schwappach dealt with the spread of the stamped S-motif and the double-lyra compositions in this region.[320] E. Jerem identified convincingly a production circle of pottery based on a horizontal stamped S-motif on the vessels of Sopron, Hidegség, Pöttsching, and Mannersdorf.[321] Today, it seems that extending radii of several pottery workshops can also be identified in the region of Eastern Austria and Western Hungary and these are mainly related to La Tène A and B phases. [322]

CONSEQUENCES

The relative chronology of Ménfőcsanak cemetery is mostly based on female graves, which contain a board assortment of chronologically sensitive jewelry, wearing elements, and dress accessories. Most of all, the fibulae can help us to provide the chronological determination, because – as we could have seen in F. R. Hodson's system

[311] Voigt 1969, 415–436.

[312] Schwappach 1975, 111–112; Schwappach 1979, 18.

[313] Pauli 1978, 293–296.

[314] Tankó 2010, Fig. 8.

[315] For example: Ordód-Babót: Hunyady 1944, Taf. 41,1; Beled: Hunyady 1944, Taf. 38,3; Hunyady 1957, 1–2; Au am Leithagebirge: Hunyady 1944, 133; Nebehay 1973, Taf. 3,3, 17,2, 18,1; Schwappach 1979, Abb. 31; Schwandorf: Hunyady 1944, 133. Sopron-Bécsidomb: Hunyady 1944, Taf. 41,2; Győr-Kálvária: Hunyady 1944, Taf. 41,5; Bakonygyepes: Hunyady 1944, Taf. 41,8; Petronell–Carnuntum: Hunyady 1944, 133; Bajč–Vlkanovo, Veľka Maňa: Benadík 1962, 349, Fig. 3.

[316] Nebehay 1973, Taf 21, Garb 7/1.

[317] Jerem 1976, 45–47, Taf. 14,4.

[318] Tankó 2005, Pl. 12,9.

[319] E.g. Franzhausen (Neugebauer 1996, Abb. 11,9), Balf (Vályi 1983, 101–102., Pl. 4,2), Kloster-Weltenburg (Kappel 1969, Abb. 18,14), Dürrnberg–Ramsaukopf (Hell 1936, Abb. 5,2.), Dürrnberg bei Hallein (Penninger 1972, Taf. 64,10; Moosleitner–Pauli–Penninger 1974, Taf. 135,24), Zemlingi (Fundberichte aus Österreich 14/1975, Abb. 209), Sankt Margarethen (Fundberichte aus Österreich 15/1976, Abb. 182) Stupava (Márton 1934, Taf. 28,5) Cserszegtomaj (Hunyady 1944,Taf. 77,1) Guntramsdorf (Urban 1985, Abb. 28,5).

[320] Schwappach 1971, 142–172.

[321] Jerem 1984, 57–80.

[322] Schwappach 1971, 160; Tankó 2016, 168–170.

[323] Hodson 1968, 34.

at Münsingen – it provides the greatest potential source of 'horizon-markers'.[323] However, fibula could not found in thirteen graves[324] and iron fibulae were destroyed by corrosion in two cases.[325] It also has to mention that many fibulae are typologically undeterminable due to fragmentation.[326] The current overall accepted fibula classification and the other typology of wearing elements have led to the creation of at least four hypothetical chronological horizons in Ménfőcsanak.

The earliest find of Ménfőcsanak cemetery is represented by the fibula with a bird's head in the grave no. 345/B1 *(Fig. 9.1)*. The fibulae with bird's head are traditionally dated to the La Tène A period in the Eastern Alpine area.[327] However, there was another zoomorphic fibula with a stylized griffin head *(Fig. 9.3)* found in the context of grave no. 345/B1. Another fibula with a bird's head was in grave no. 367 *(Fig. 15.2)* together with two iron fibulae, which are typologically undetermined due to fragmentation, but some main features of them suggest dating to La Tène B1 period.[328] This and the zoomorphic fibula with stylized griffin head in context with early type bird head fibula from grave no. 345/B1 suggests to us that there were only some sporadic finds from La Tène A period, however, it is undoubtedly detected a sure La Tène A chronological horizon in Ménfőcsanak cemetery.

The next detected horizon is the La Tène B1a phase which also called pre-Duchcov horizon. This is specified by characteristic fibulae *(Fig. 10.2,* and *Fig. 10.11)*, which generally have a saddle-shaped and parabolic bow, but each of them is unique and there is no evidence of their serial production.[329] Plain bar bronze bracelets *(Fig. 10.3–4)* were also commonly used on this horizon.[330] These characteristic artifacts are also found in nos 345/A1 and 345/A2 burials in Ménfőcsanak. However, it has to mention that a Duchcov-type fibula was connected to pre-Duchcov fibula with a thin bronze chain in the 345/A1 burial *Fig. 10.1–2*). This fact refers to the coexistence of these fibulae in the La Tène B1b phase.

The next is La Tène B1b, or also called the Duchcov-Münsingen horizon, which is mainly represented by globular foot-elements decorated Duchcov-type and disc-footed Münsingen-type fibulae.[331] These Duchcov-type fibulae were found in grave nos 362 and 376/B *(Fig. 11.15, Fig. 16.7)*, while Münsingen-type were in grave nos 360 and 379 *(Fig. 14.5, Fig. 16.2)*. The other wearing elements, for example, the torques are mainly with seal-shaped ends, the bracelets have also seal-shaped ends frequently and the bodies of rings are mostly plain or grooved. Anklets are with fine ribs and the finger rings made form thin wire or wide band. Characterizing the nature of the costume are symmetrically worn bracelets and anklets with a combination of fibulae same size that fastened dresses at the chest and shoulder.[332] The distribution of these artifacts was presumably a consequence of the historical migration of the Celts. Based on an examination of the earliest burials, immigration of a western originated group can be assumed in Ménfőcsanak cemetery in the early 4th century BC.[333]

This community was settled in the vicinity of Ménfőcsanak[334] and buried onward in this necropolis. La Tène B1c phase is characterized by the later variants of Duchcov and Münsingen type fibulae in the grave contexts *(Fig. 12.8–9)*. These have relief decoration in many cases. The costume is represented by a new combination of fibulae, where one large fibula is accompanied with two substantially smaller, mostly bronze fibulae. The inner capacity of the small bronze fibulae radically reduced to 10–20 mm, what is indicating the changing of fashion and wearing new type dresses made of finer textiles. On the other view, this is the first horizon when the so-called "plastic style" appeared.[335]

LT B2a is characterized by fibulae with large globular foot and short drum-shaped bow. This type of fibulae was found in grave nos 737 and 754 in the cemetery *(Fig. 19.1, 5)*.

Based on the history of fibulae, it seems that the spectrum of dateable finds extended from the La Tène A to the La Tène B2 phase, however, the establishment of the Ménfőcsanak cemetery was not earlier than La Tène B1

[324] Grave nos 307, 340, 343/B, 347, 348, 350, 361, 364, 375, 377, 464, 755 and 757.

[325] Grave nos 342, 343/A.

[326] Grave no. 298 *(Fig. 2.1,2)*, no. 301 *(Fig. 2.6, Fig. 3.6–7)*, no. 303 *(Fig. 4.9, Fig. 5.1–2)*, no. 350/A *(Fig. 13.2)*, no. 367 *(Fig. 15.4)*, no. 376/A *(Fig. 16.1)*, no. 379 *(Fig. 173)*, no. 465 *(Fig. 18.1)*, no. 737 *(Fig. 19.6)*, no. 760/A *(Fig. 23.2)* and no. 760/B *(Fig. 22.1)*.

[327] Stöllner 2002, 68–70; Moser *et al.* 2012, 188.

[328] Szabó 2015, 24.

[329] Holodňák–Waldhauser 1984, Fig. 2.

[330] Sankot 2013, 94.

[331] Kruta 1971; Kruta 1979, 81–91; Hodson 1968, 36–37; Szabó 1992, 22; Hodson 1998, 34–35; Bujna 1998, 171–203; Bujna 2003, 52–55; Szabó 2015, 21.

[332] Bujna 2005; Sankot 2013, 94.

[333] Szabó 2015, 21.

[334] Tankó 2004, 105–112; Tankó 2005; Tankó–Egry 2009, 401–416; Tankó 2010, 249–260.

[335] Sankot 2013, 94.

phase – according to our current knowledge and including the tombs were published by A. Uzsoki.[336] It means that the earliest finds can be dated to the second half of 5th century BC, however, the first graves were inhumed in Ménfőcsanak in the beginnings of the 4th century. The excavated youngest tombs were cremated and it perhaps buried in the first half of 3rd century BC, so the necropolis was abandoned in this or a later time. It has to notice that the Ménfőcsanak cemetery is not unearthed and the excavated parts of it are not completely published yet. The burials probably continued in the recently excavated part of the site between 1997 and 2006. After a short report, we can only know that the more than two hundred graves were mostly cremated and they are perhaps later than burials is studied here and were published by A. Uzsoki before.[337]

On the other hand, it still makes sense to connect the community buried in Ménfőcsanak to the so-called Celtic Historical Migration event.[338] This horizon is also discoverable in the cemeteries in Pottenbrunn and Mannersdorf in Austria,[339] as well as Beled, Ordod-Babót, and Sopron-Bécsidomb in West Hungary.[340] The Celtic occupation and the establishment of first settlements can be done for this period in the vicinity of Győr, which is proved by the graves Győr-Kálvária, and Győr-Újszállás too.[341]

Finally, it has to mention shortly that a Celtic rural settlement was investigated next to the here studied cemetery. There was an Early Iron Age settlement of Hallstatt culture in the Ha C–D phases in the 6th–5th century BC before the occupation of the Celts. It has a later phase which was defined as Ha D/LT A transition period and characterized by some new elements of 'Celtization' in the second half of the 5th century.[342] The Celts established a village little west to the Early Iron Age settlement in the LT B phase in 4th century BC. This rural settlement lived continuously from the Early to the Middles La Tène period and it was abandoned in the LT C phase approximately in the first half of 2nd century BC.[343] The graves published from the cemetery until now partly correspond in time with the settlement excavated in the vicinity of Ménfőcsanak. This is also important because we can analyze a Late Iron Age cemetery and a settlement from many aspects together. In the case of Sajópetri, this possibility was already given in eastern Hungary,[344] however, it is the first time in Hungarian Transdanubia, which we can do in the future. All in all, Ménfőcsanak is one of the most significant Late Iron Age archaeological sites in the Middle Danube Region, which needs further research.

[336] Uzsoki 1969a, 69–82; Uzsoki 1970a, 17–57; Uzsoki 1970b, 97–108; Uzsoki 1987, 13–63.
[337] Egry 2007, 32–35.
[338] Szabó 1994, 40–41.
[339] Ramsl 2002; Ramsl 2011.
[340] Bella 1889, 361–366; Bella 1894, 301–305.
[341] Lovas 1939, 88–96.
[342] Ďurkovič 2015, 134–135.
[343] Tankó 2010, 256–258; Tankó–Egry 2009, 401–416; Tankó 2016, 168–169.
[344] Szabó 2007; Szabó–Tankó 2018.

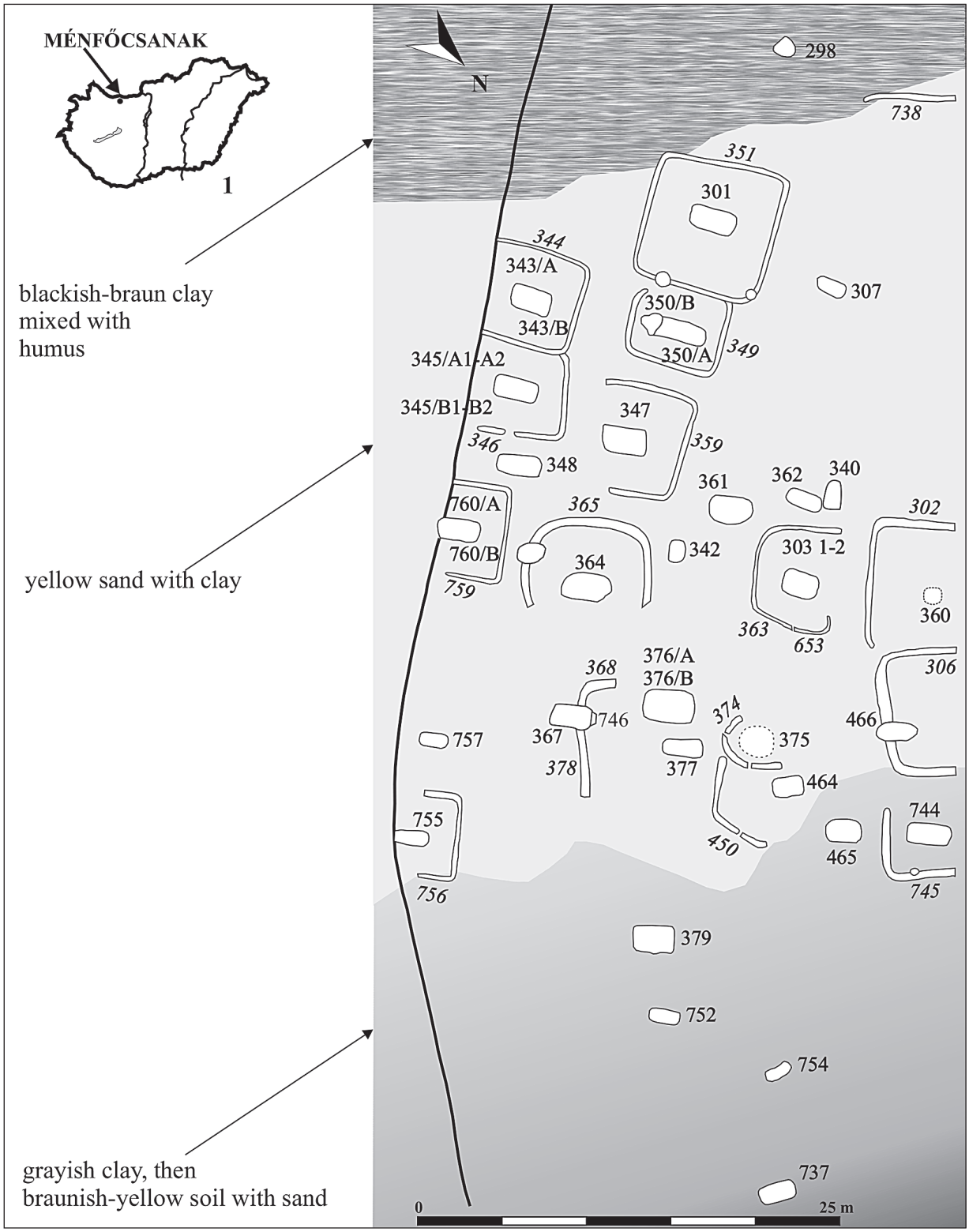


Fig. 1. 1: Location of the site; 2: Celtic cemetery without the other features

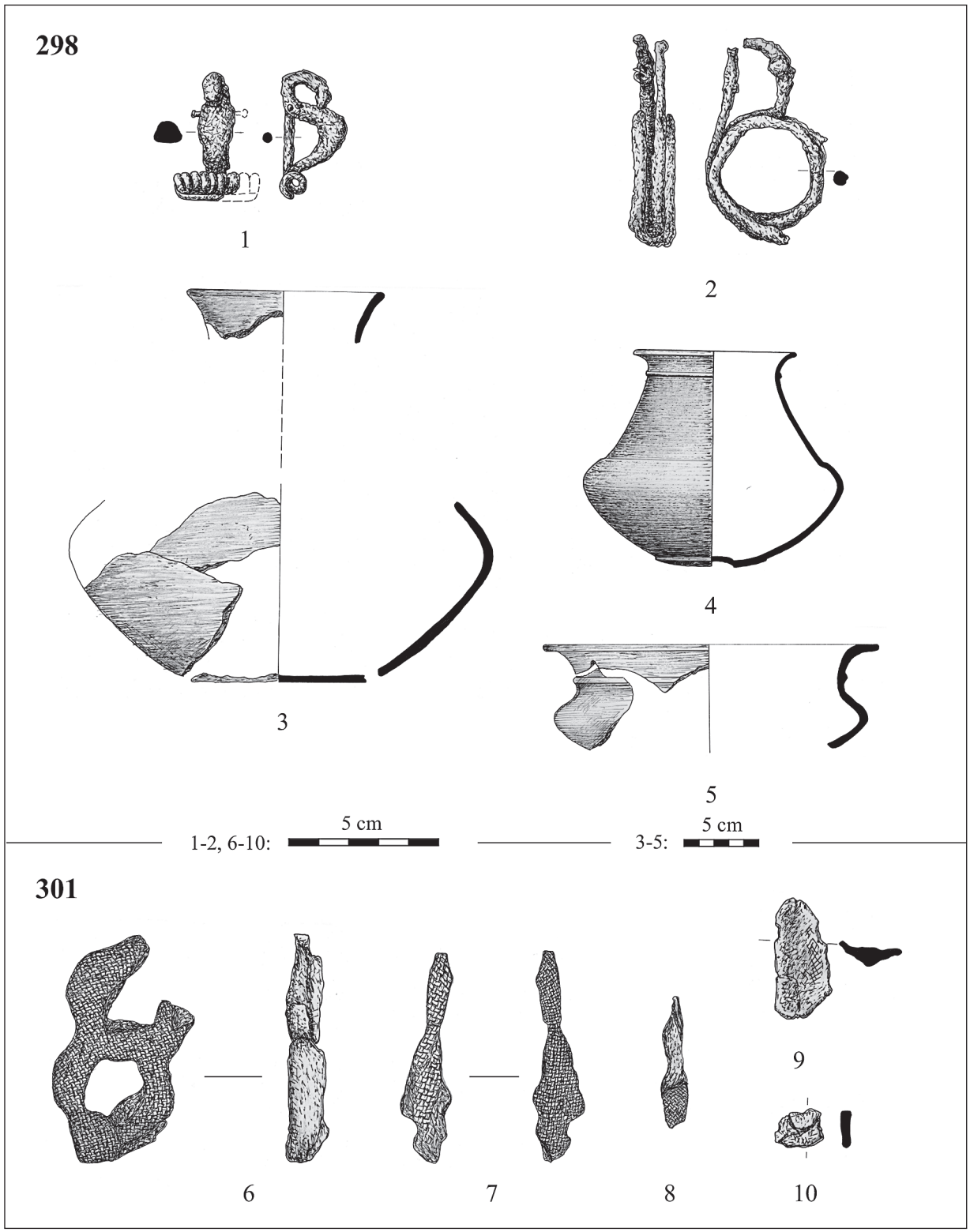


Fig. 2. 1–5: Grave no. 298; 6–10: Grave no. 301

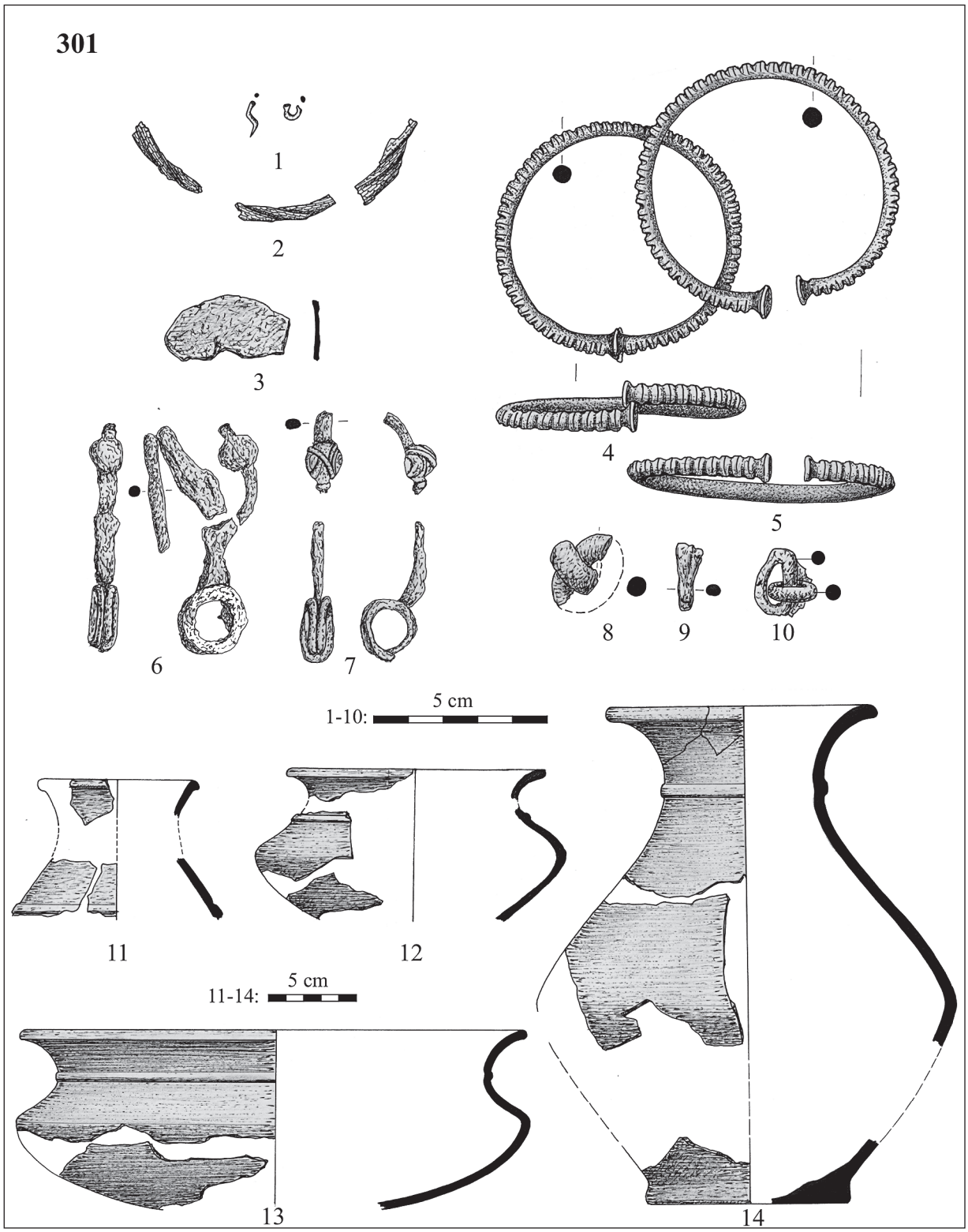


Fig. 3. 1–14: Grave no. 301

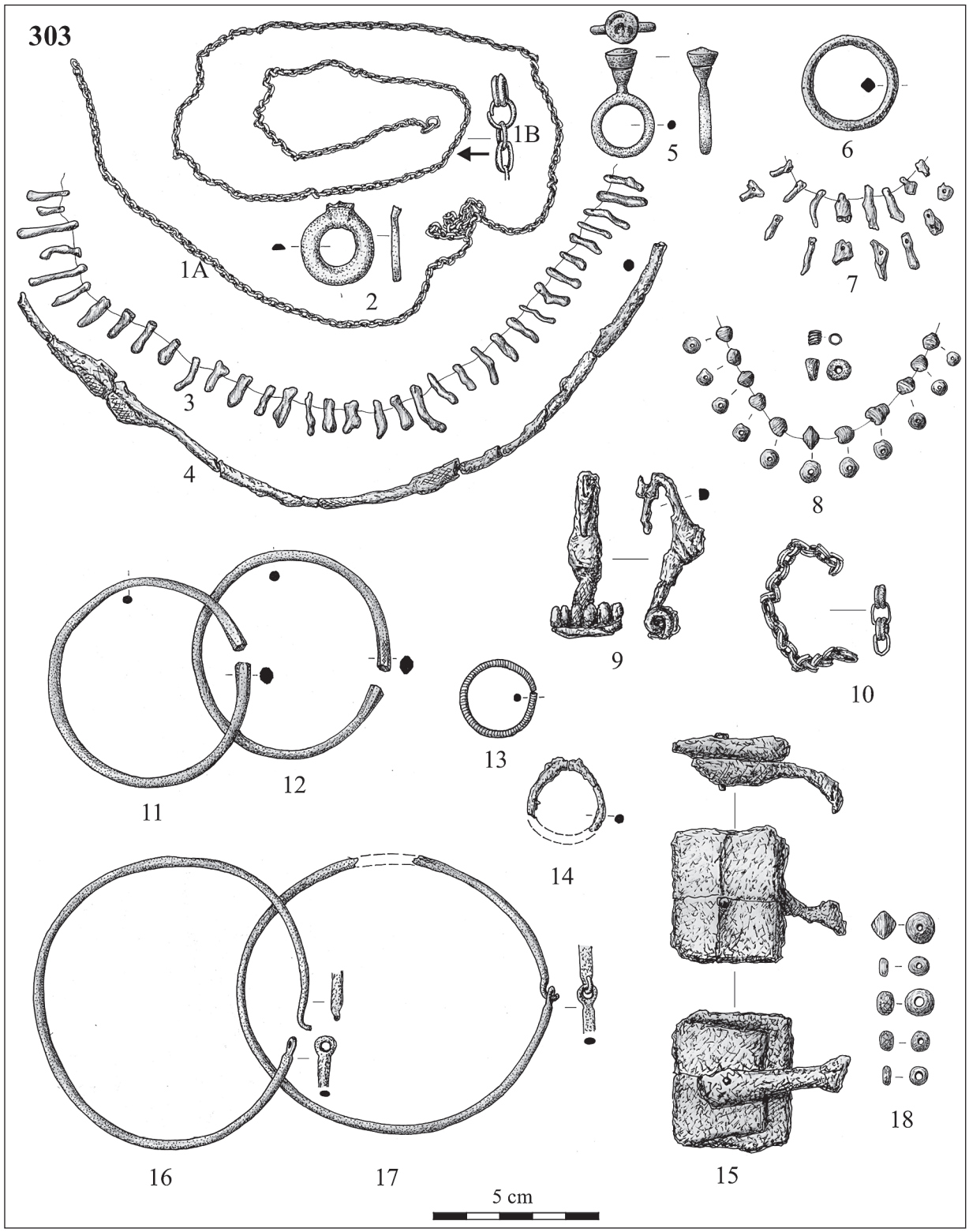


Fig. 4.1–18: Grave no. 303

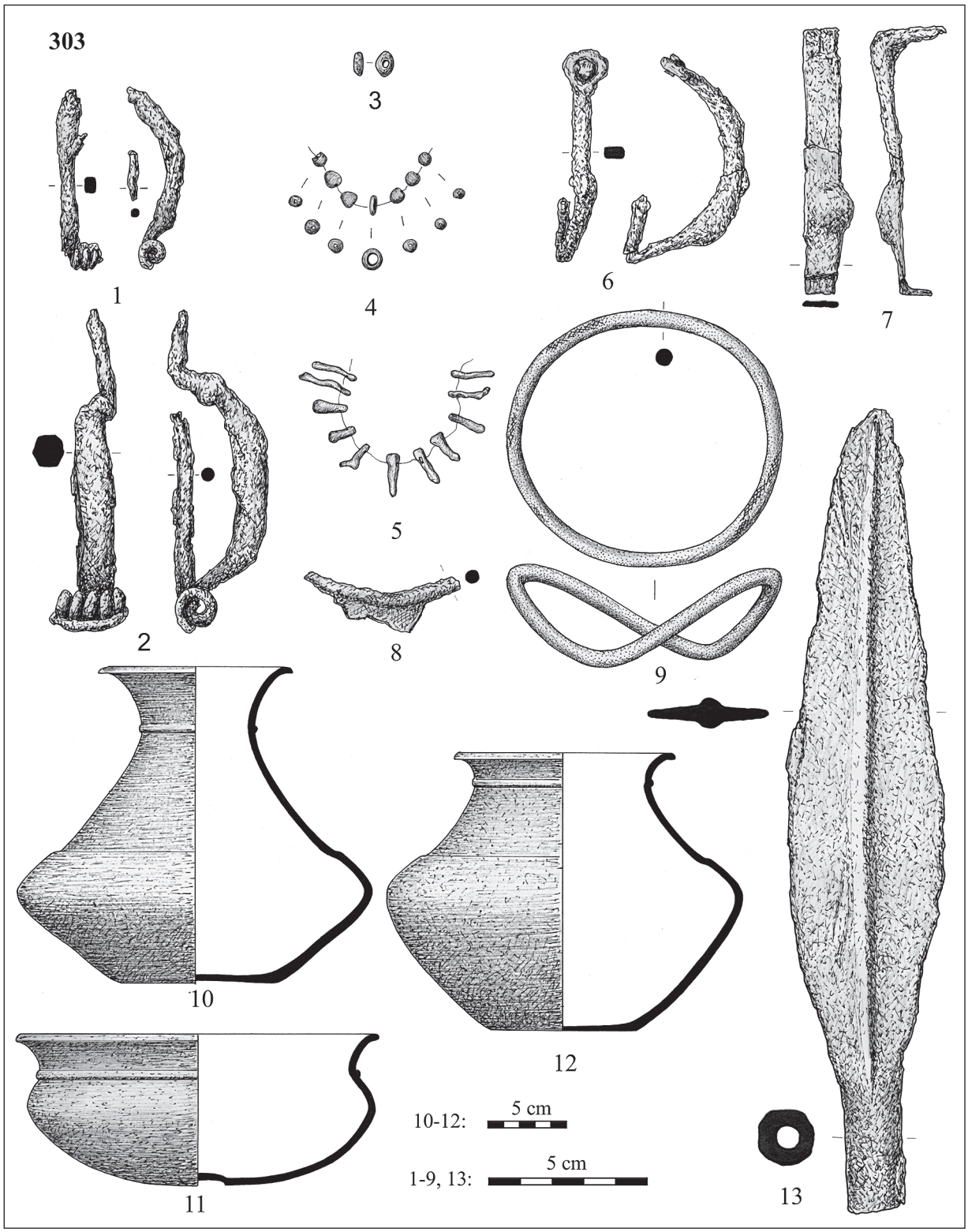


Fig. 5. 1–13: Grave no. 303

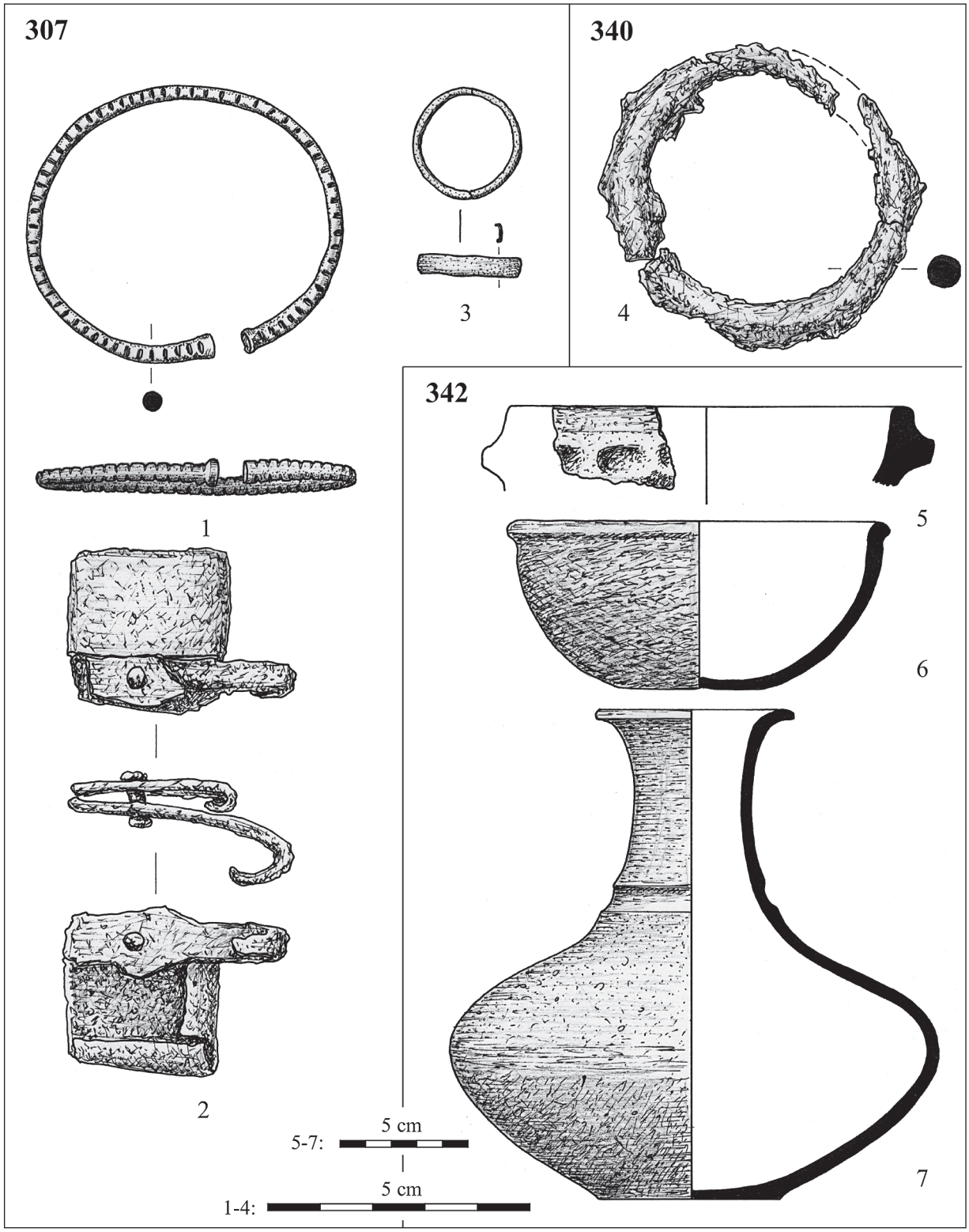


Fig. 6. 1–3: Grave no. 307; 4: Grave no. 340; 5–7: Grave no. 342

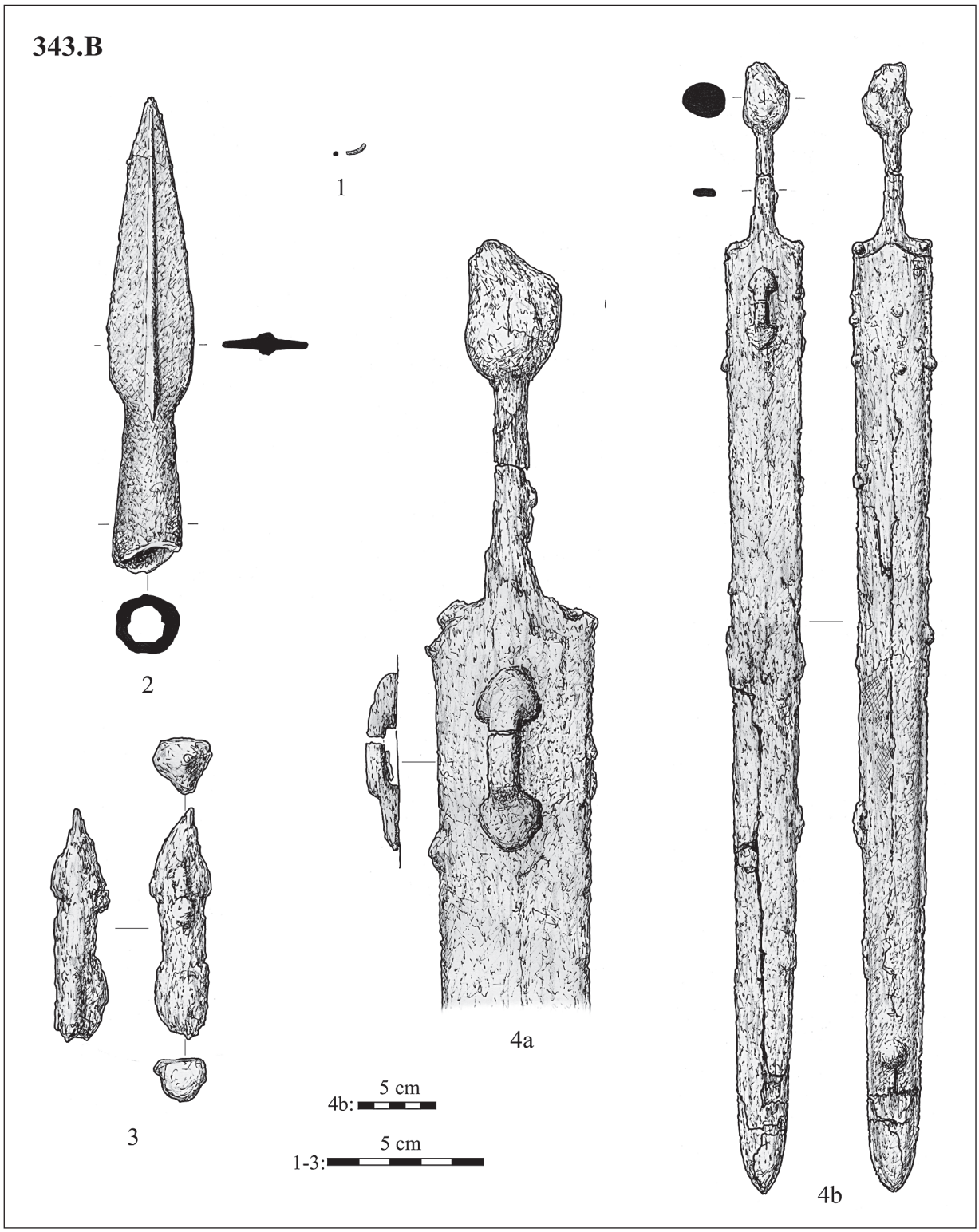


Fig. 7. 1–4: Grave no. 343/B

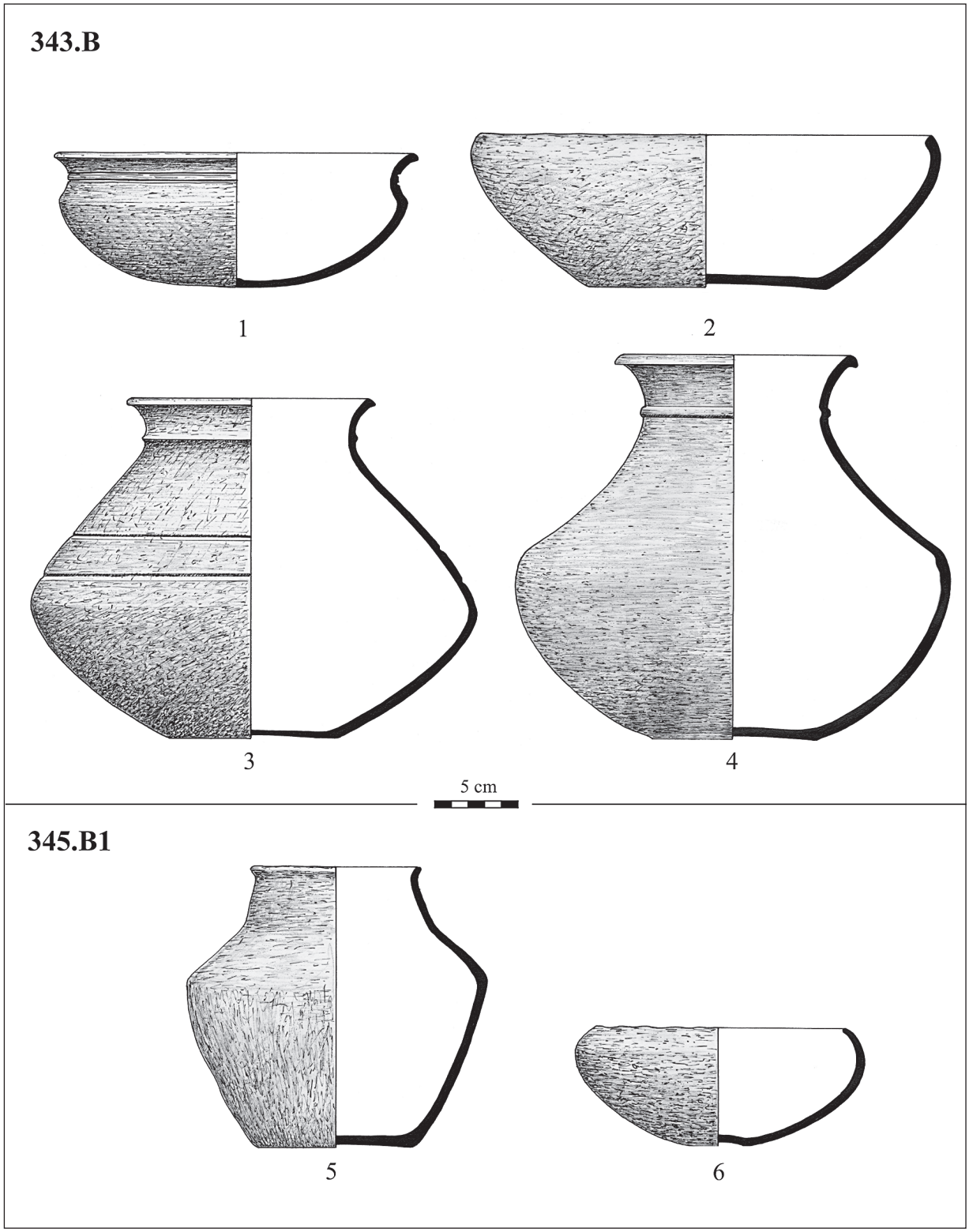


Fig. 8. 1–4: Grave no. 343/B; 5–6: Grave no. 345/B1

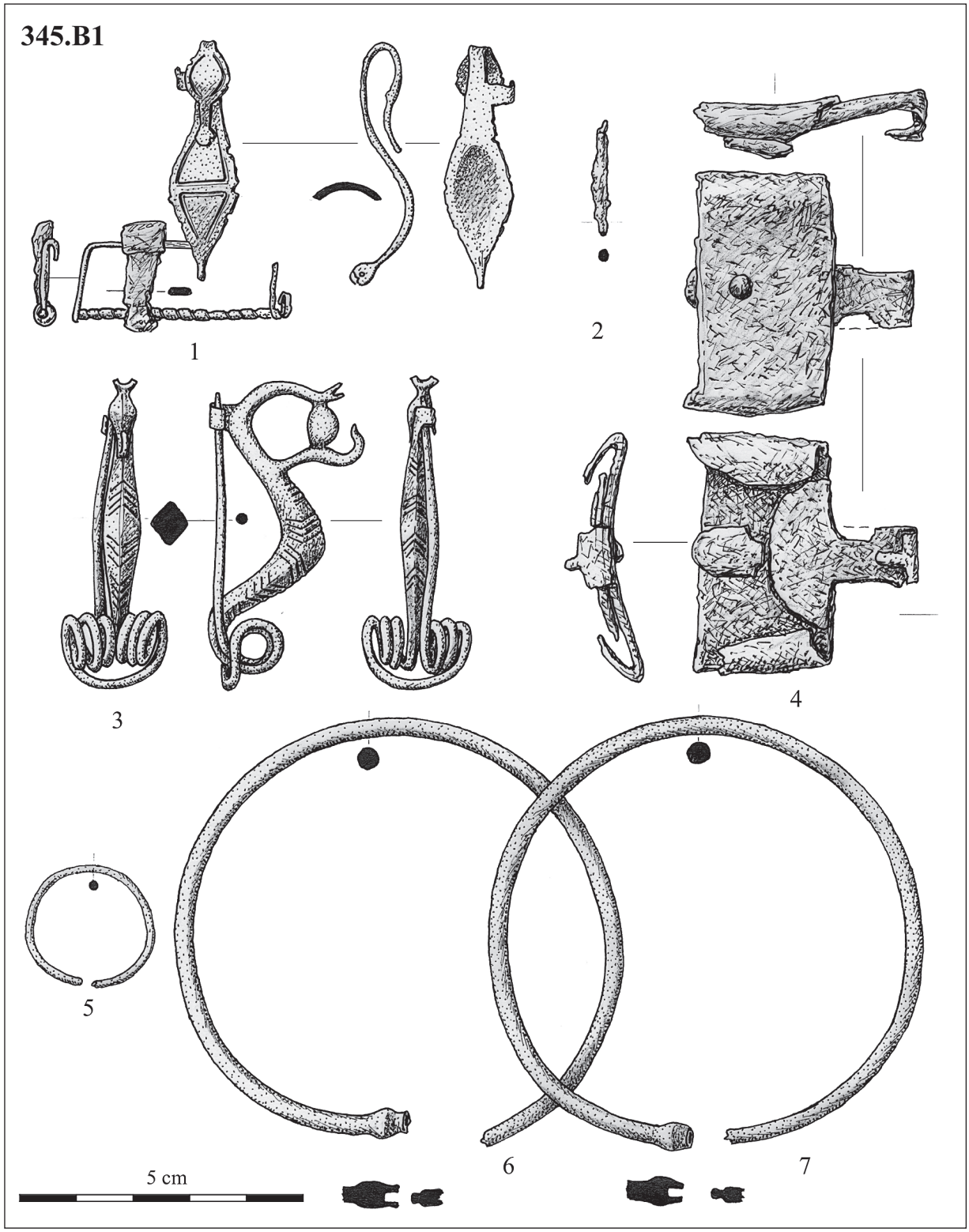


Fig. 9. 1–7: Grave no. 345/B1

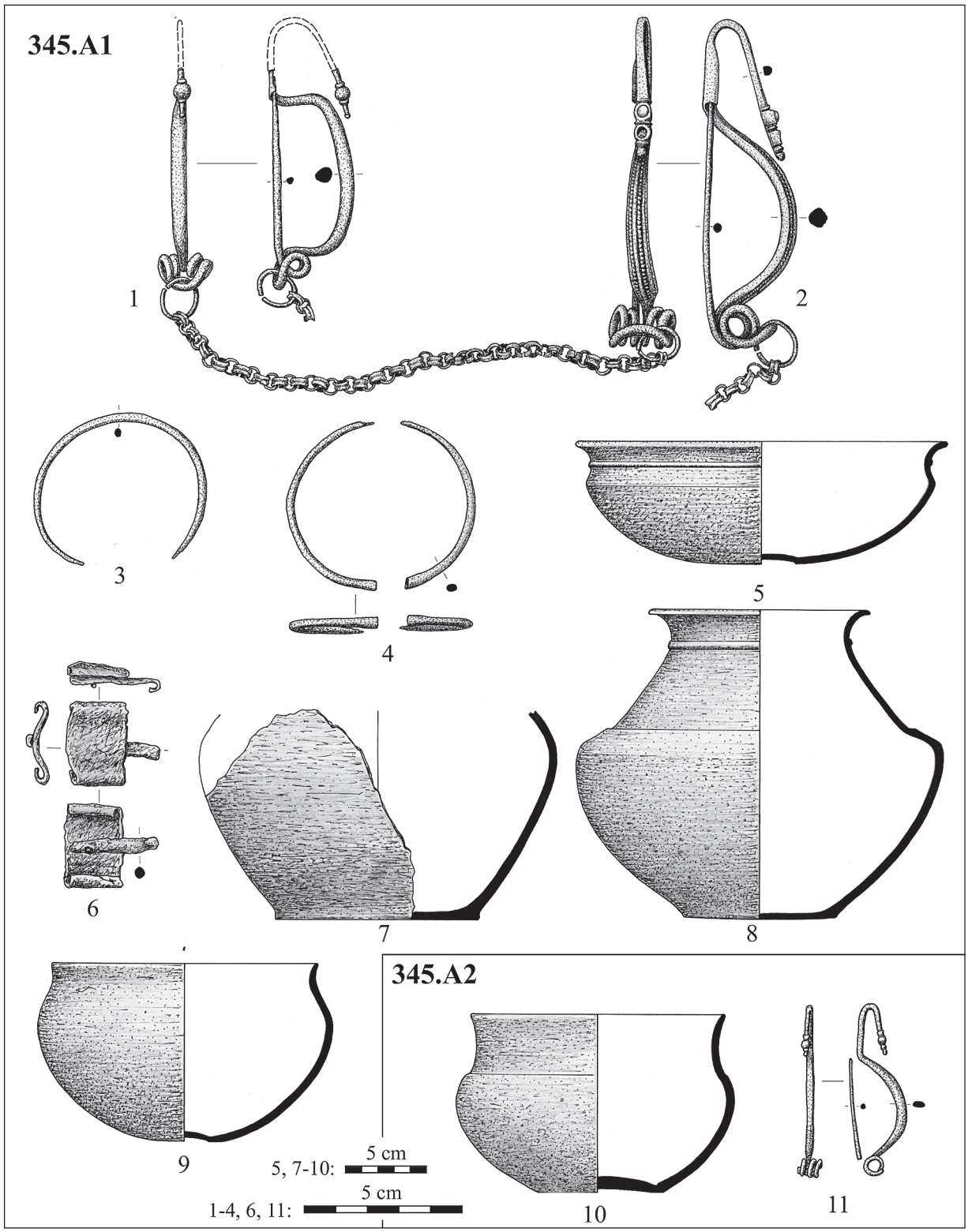


Fig. 10. 1–9: Grave no. 345/A1; 10–11: Grave no. 345/A2

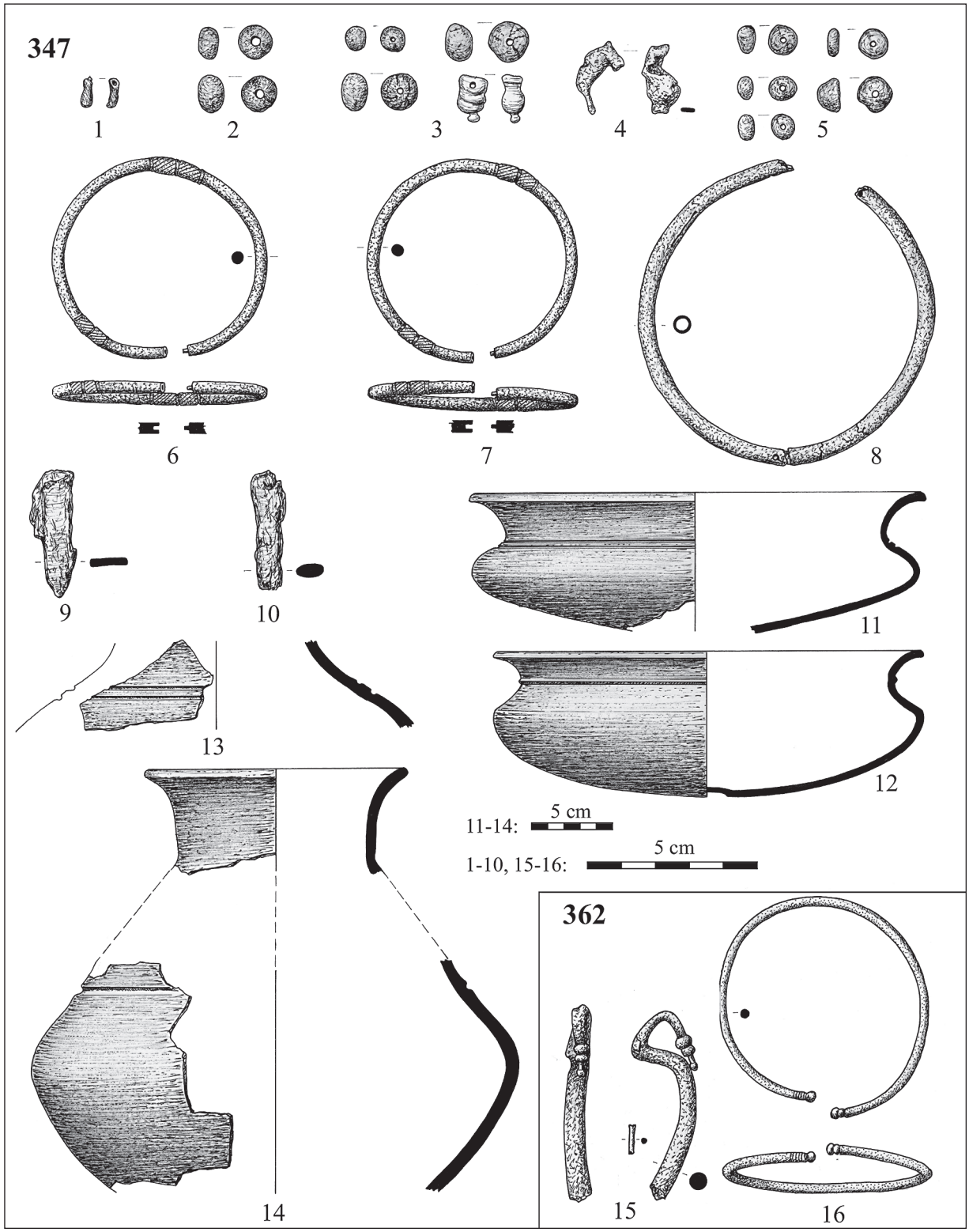


Fig. 11.1–14: Grave no. 347; 15–16: Grave no. 362

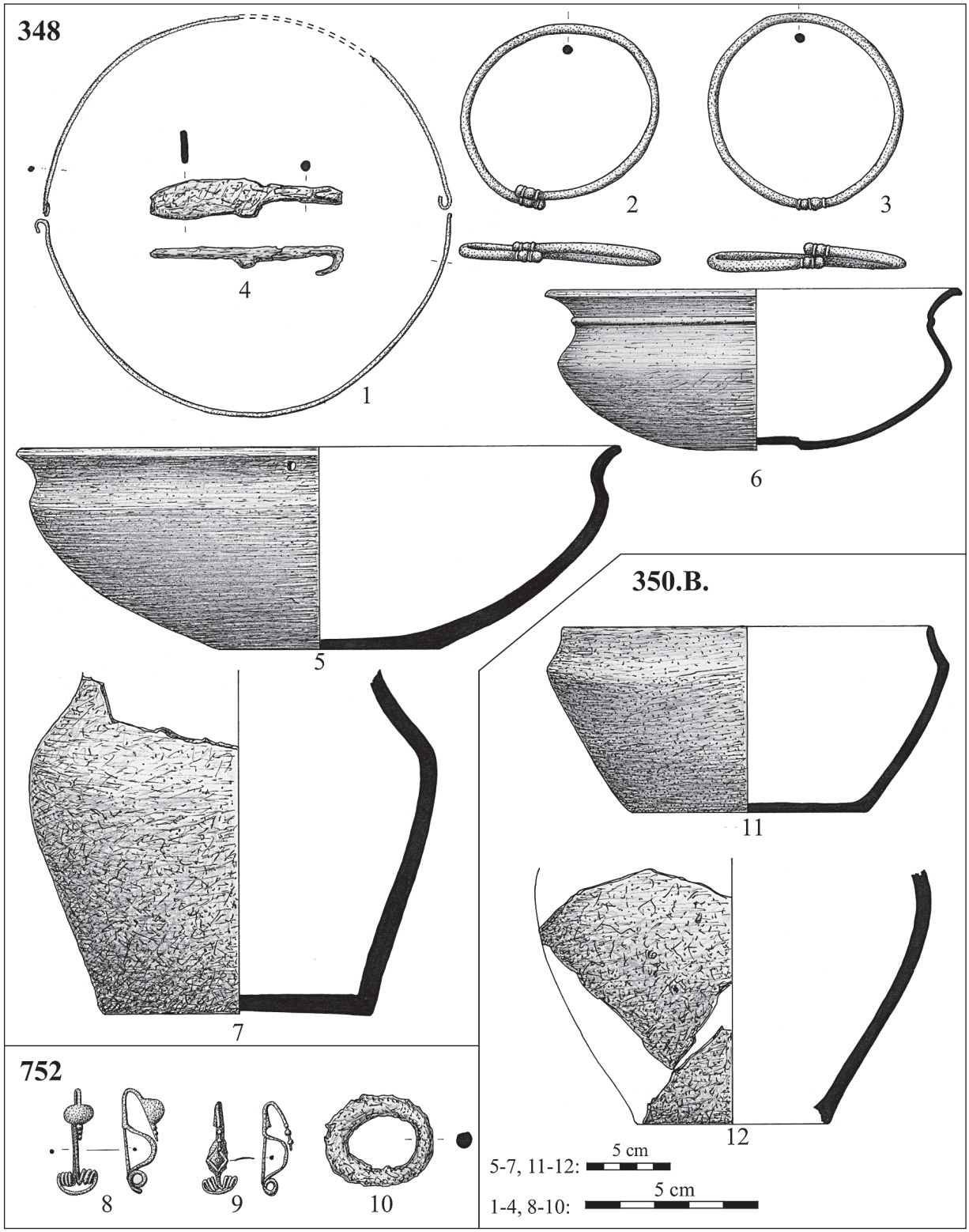


Fig. 12. 1–7: Grave no. 348; 8–10: Grave no. 752; 11–12: Grave no. 350/B

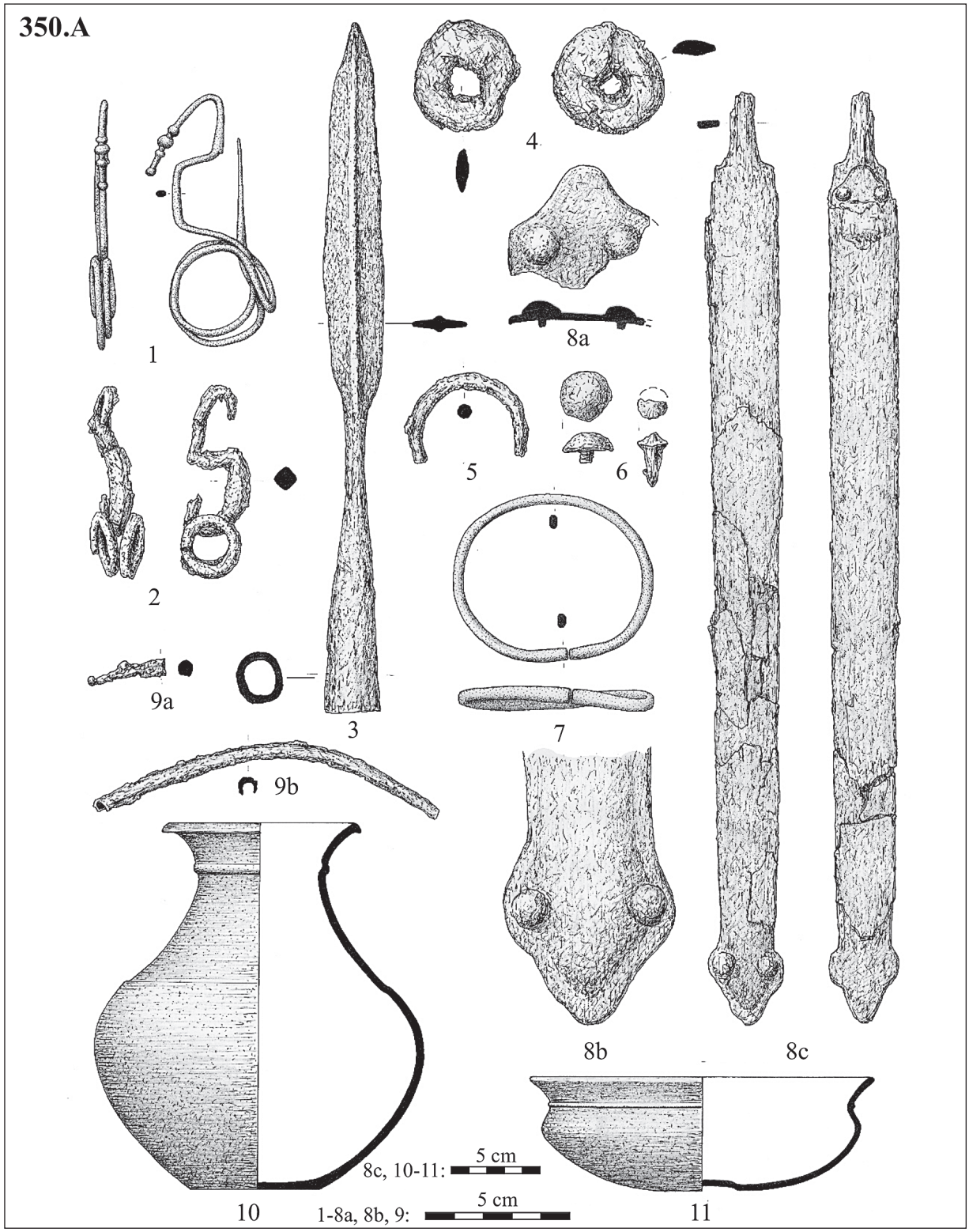


Fig. 13. 1–11: Grave no. 350/A

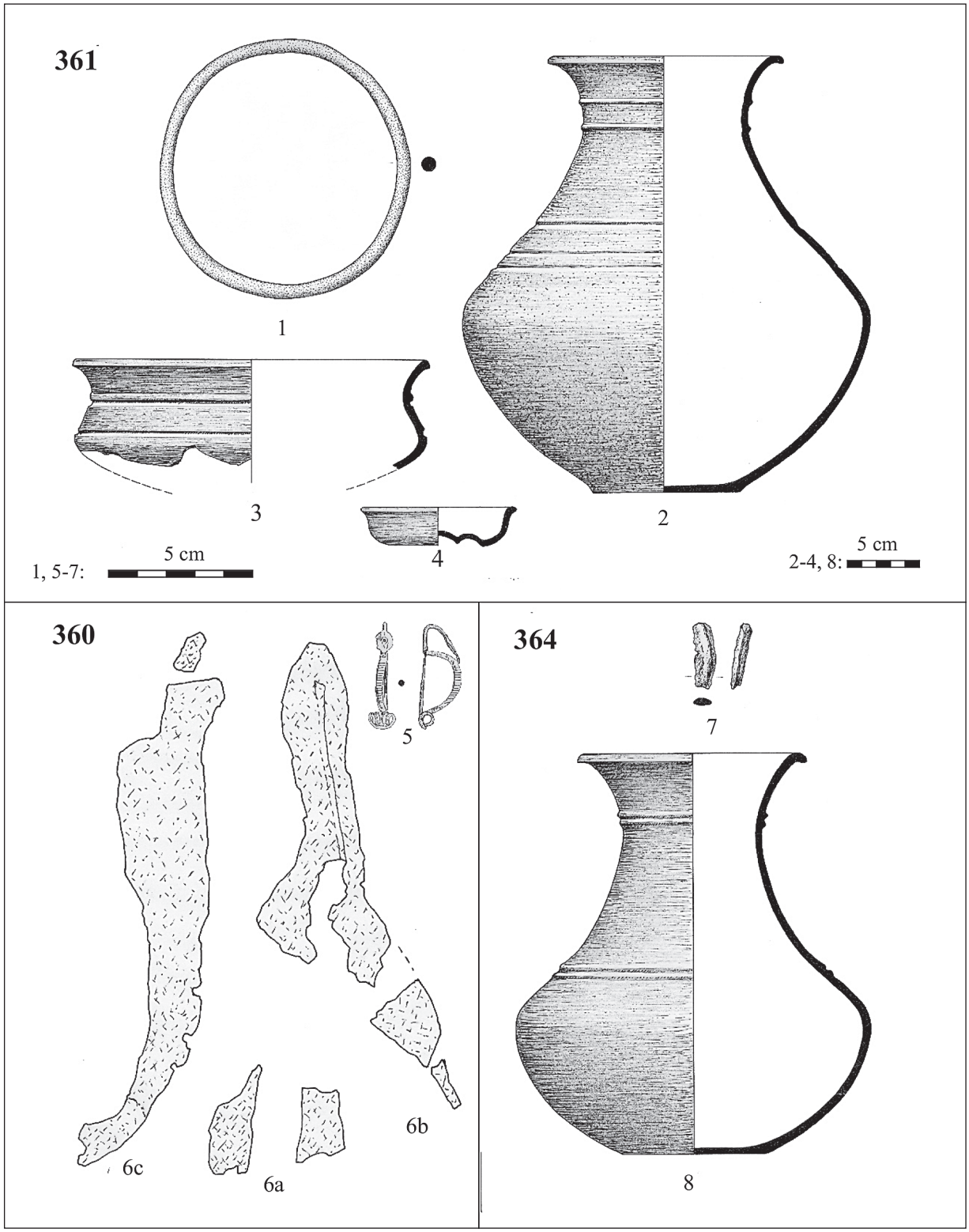


Fig. 14. 1–4: Grave no. 361; 5–6: Grave no. 60; 7–8: Grave no. 364

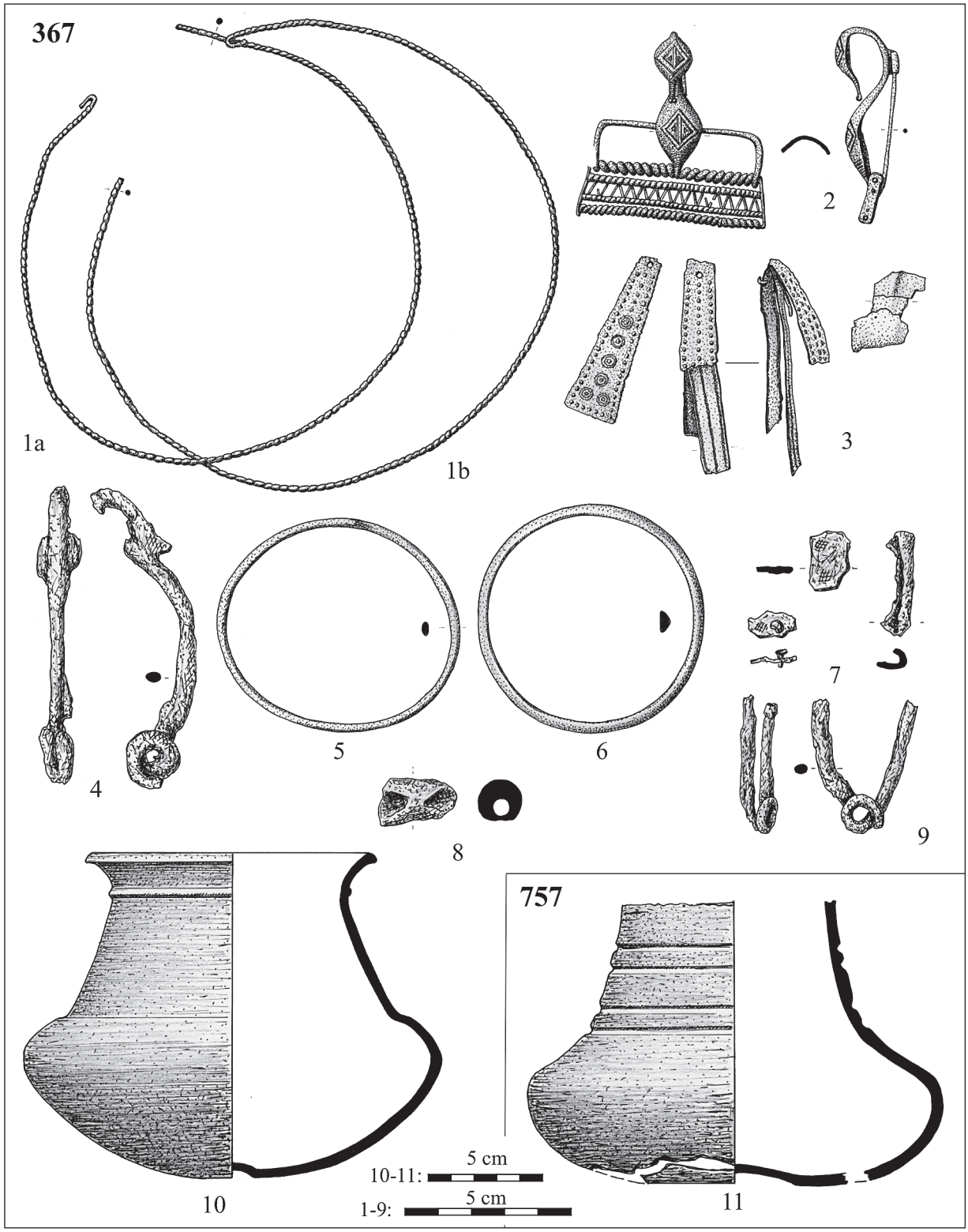


Fig. 15. 1–10: Grave no. 367; 11: Grave no. 757

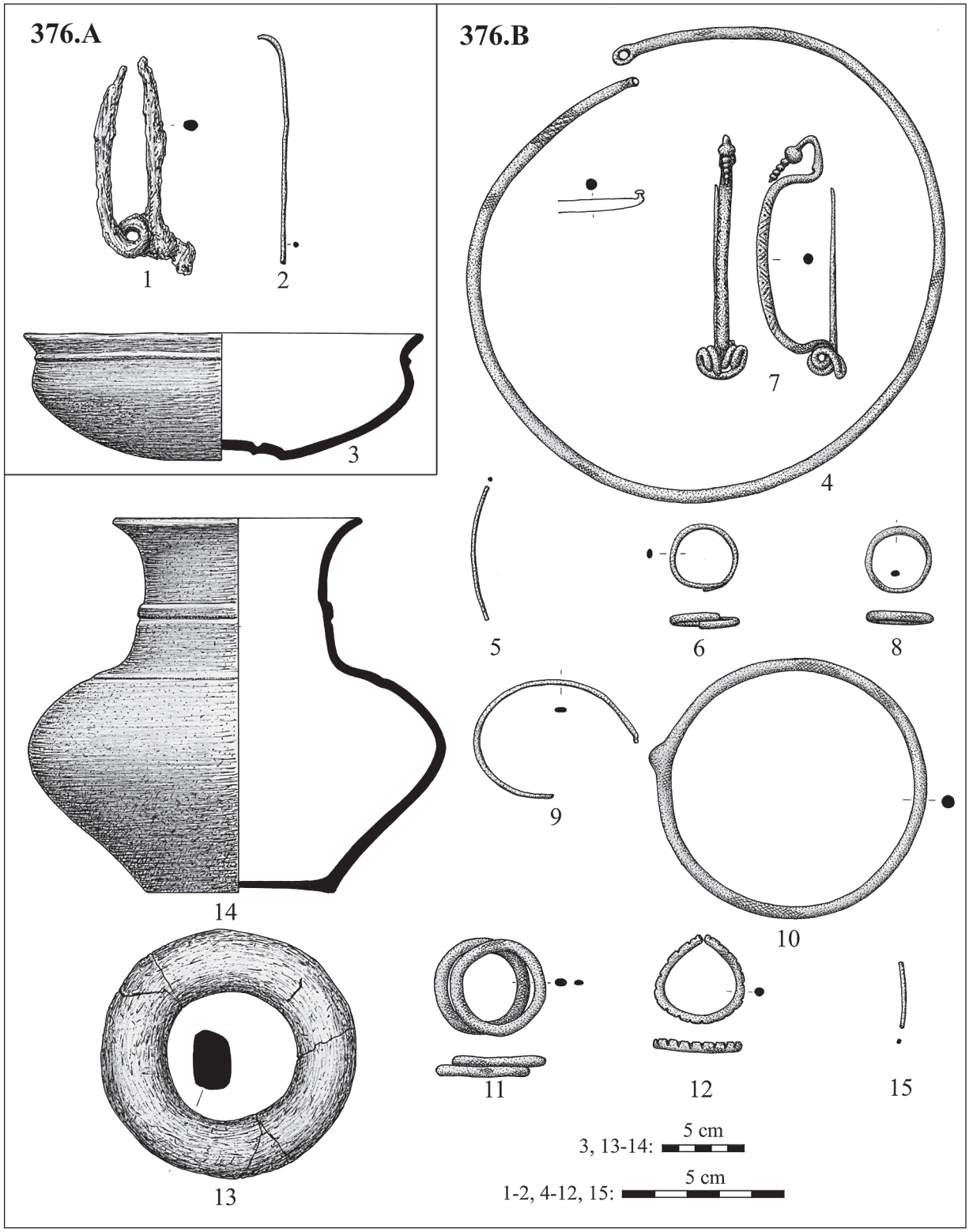


Fig.16. 1–3: Grave no. 376/A; 4–15: Grave no. 376/B

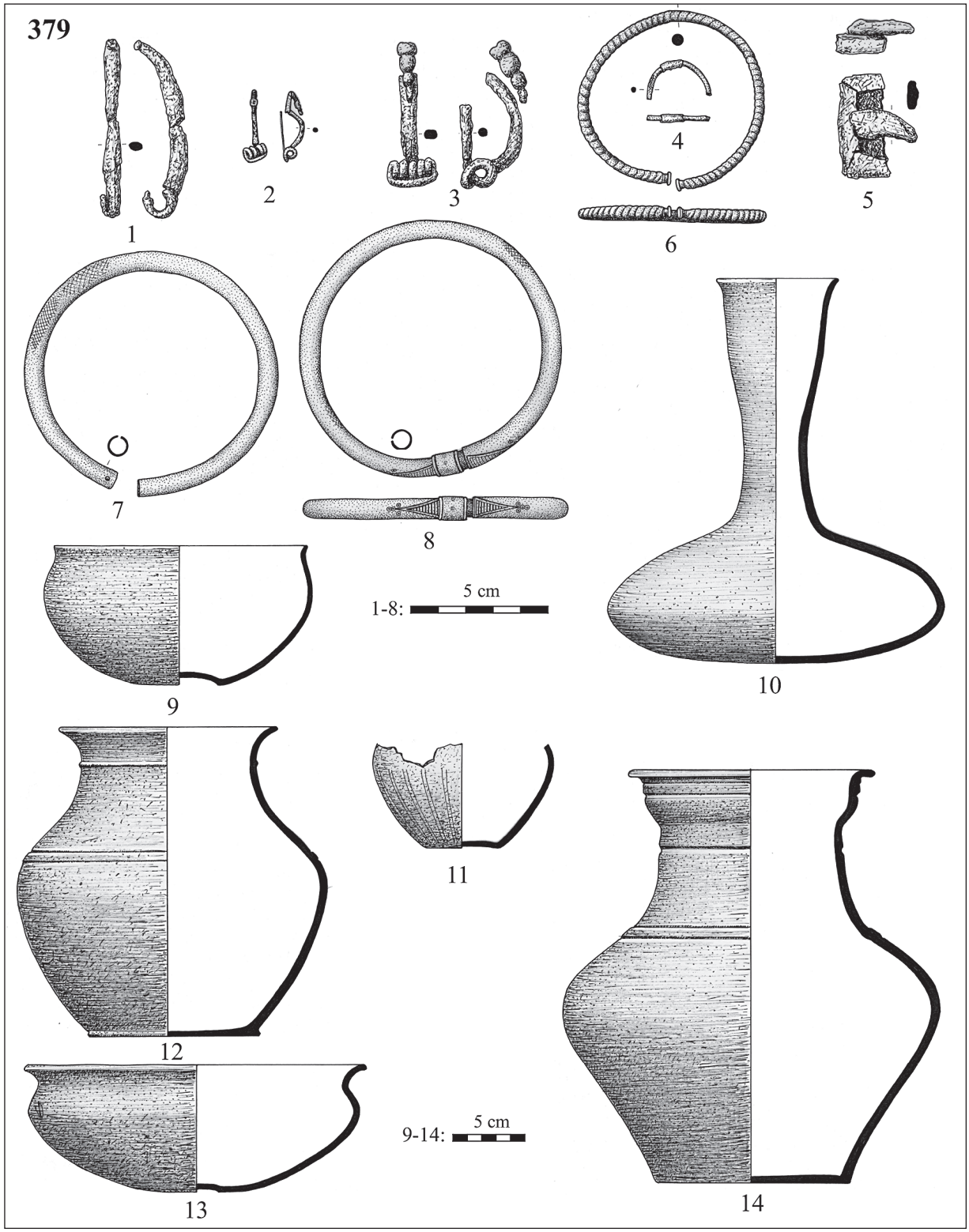


Fig. 17. 1–14: Grave no. 379.

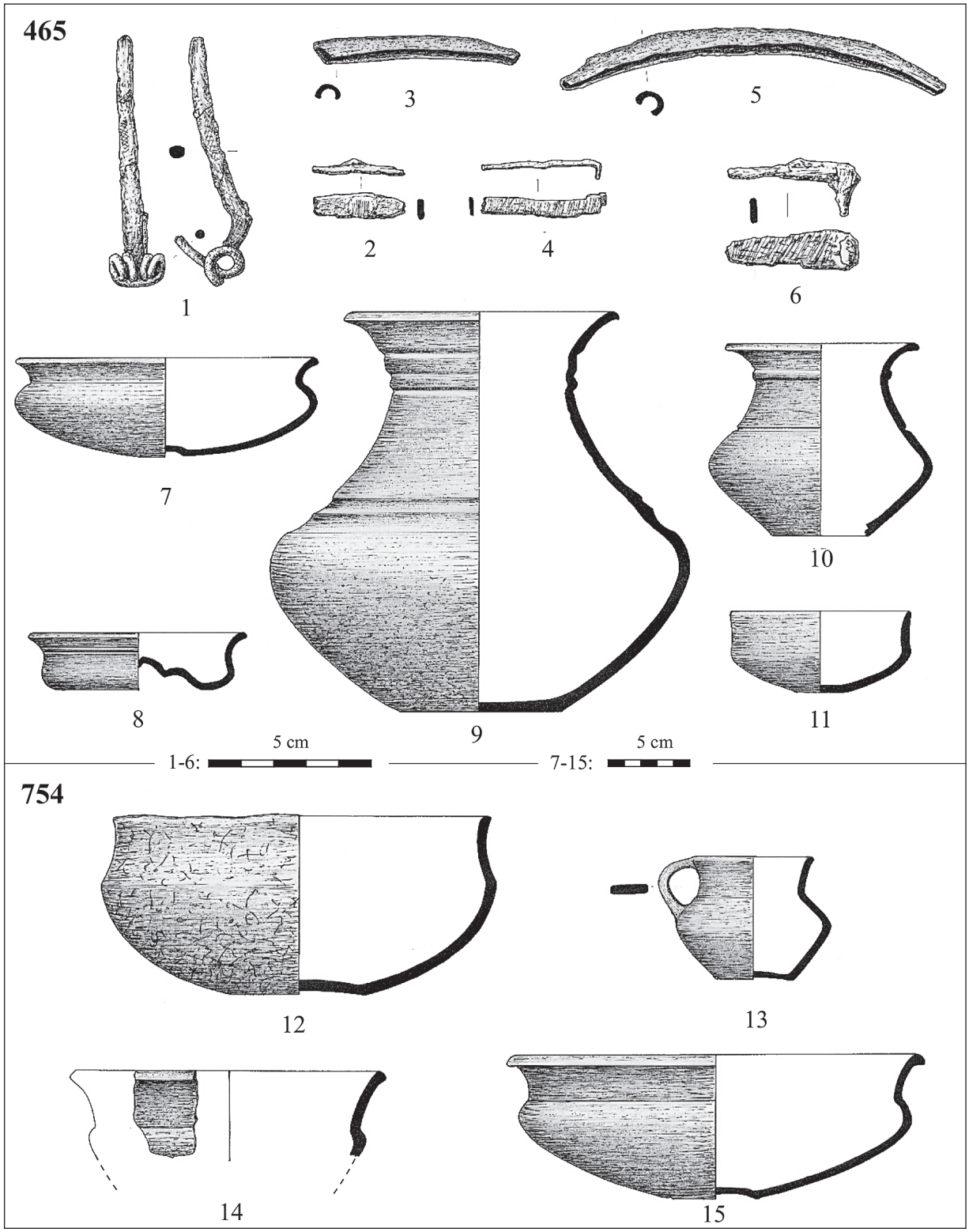


Fig. 18. 1–11: Grave no. 465; 12–15: Grave no. 754

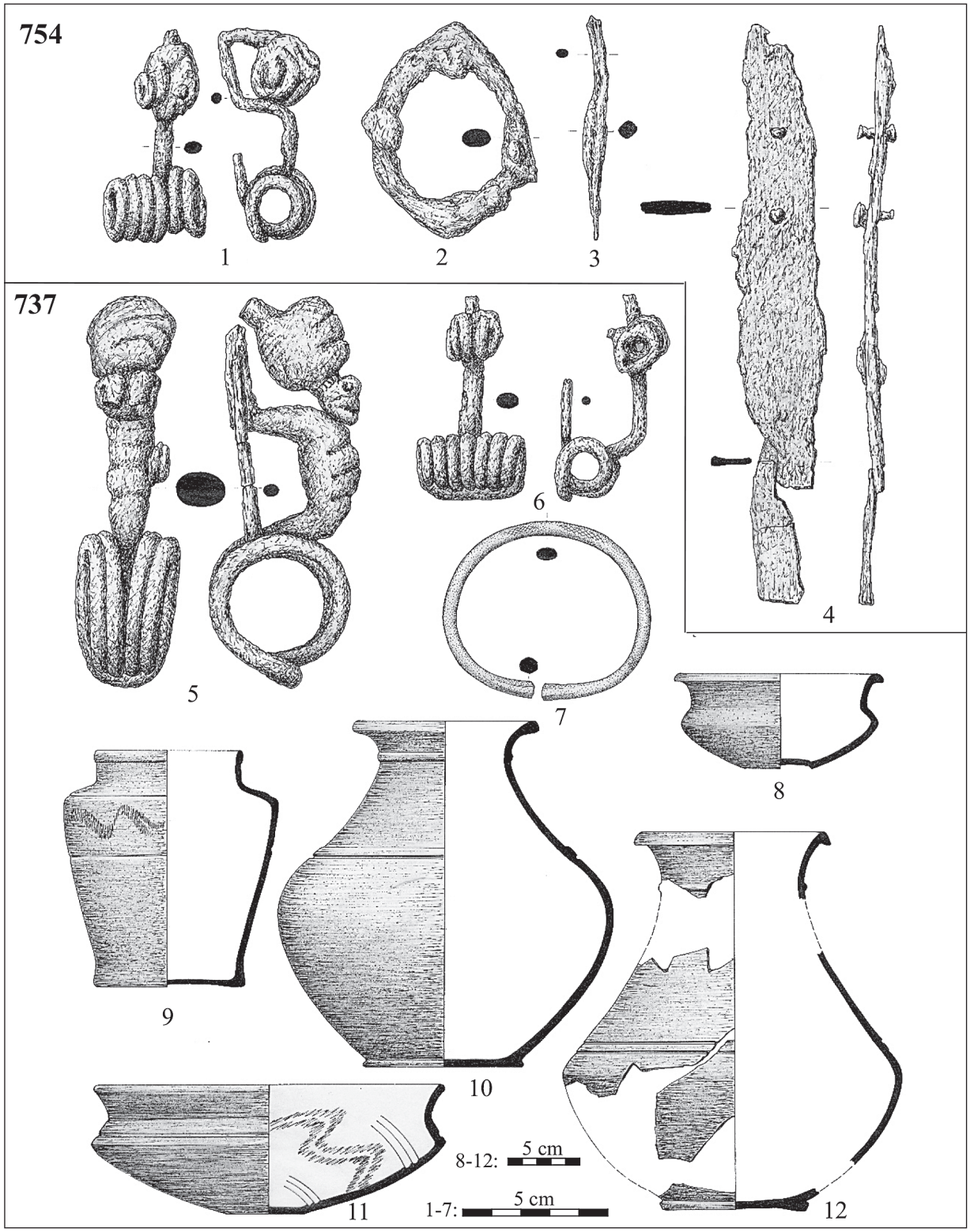


Fig. 19. 1–4: Grave no. 754; 5–12: Grave no. 737

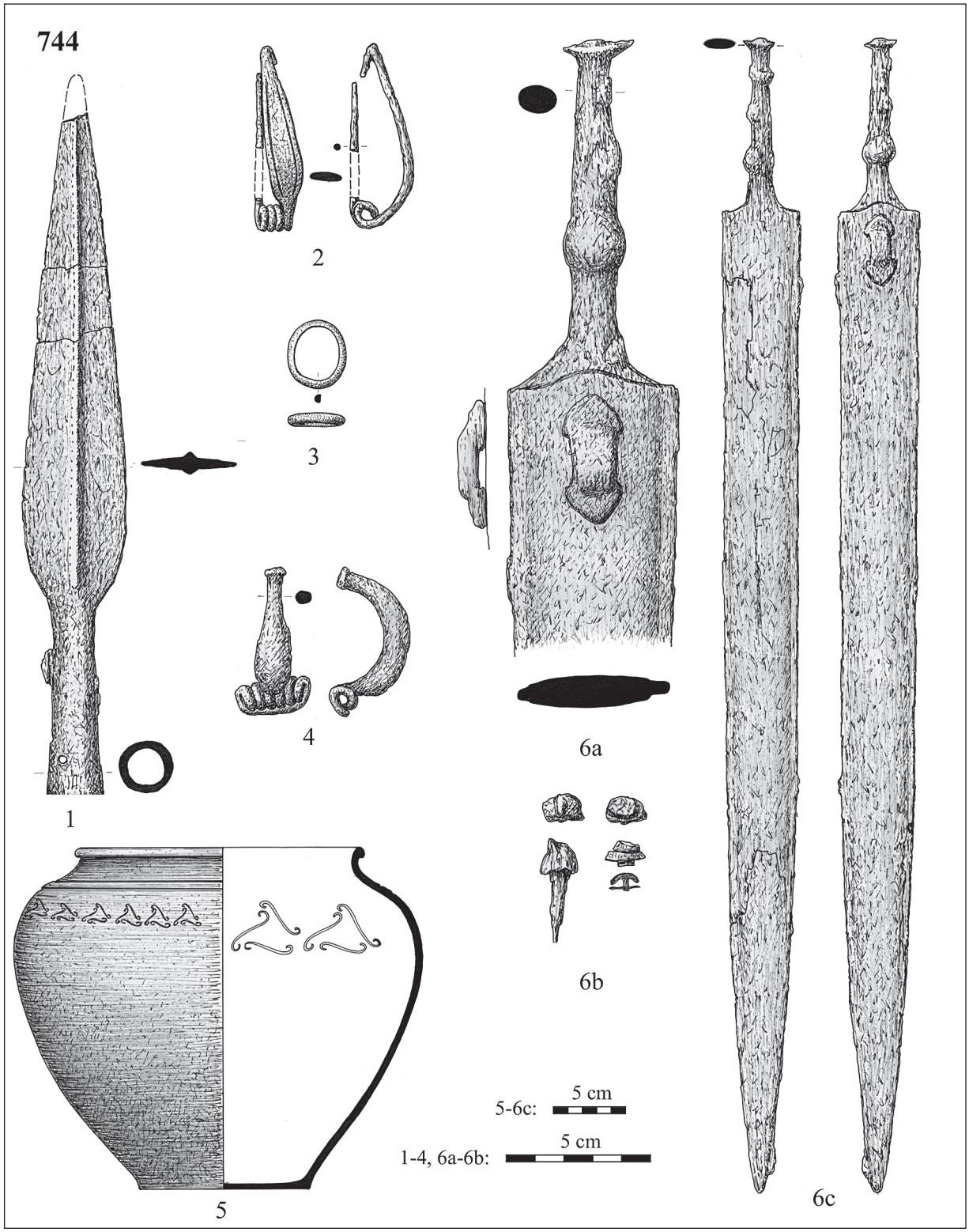


Fig. 20. 1–6: Grave no. 744

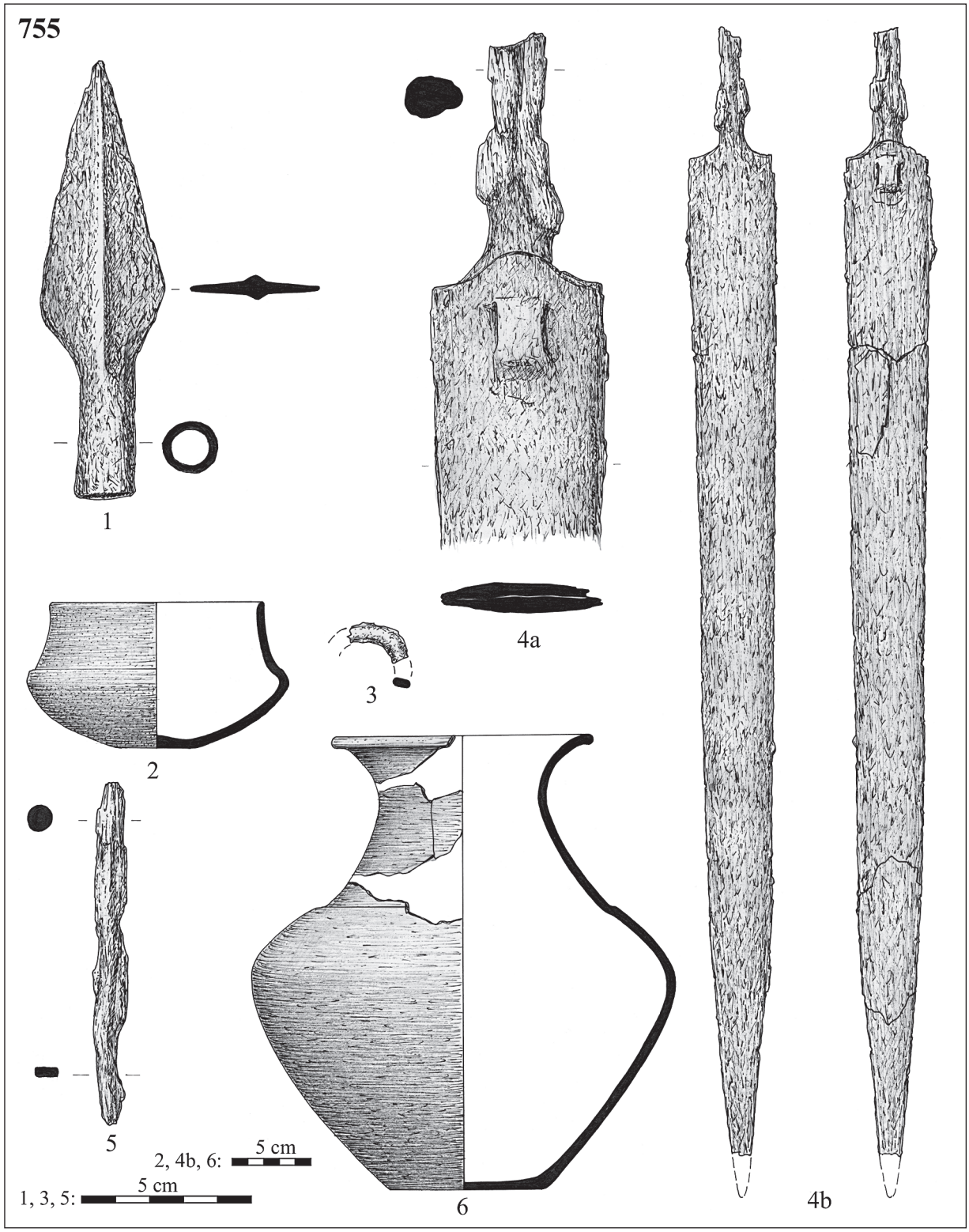


Fig. 21.1–6: Grave no. 755

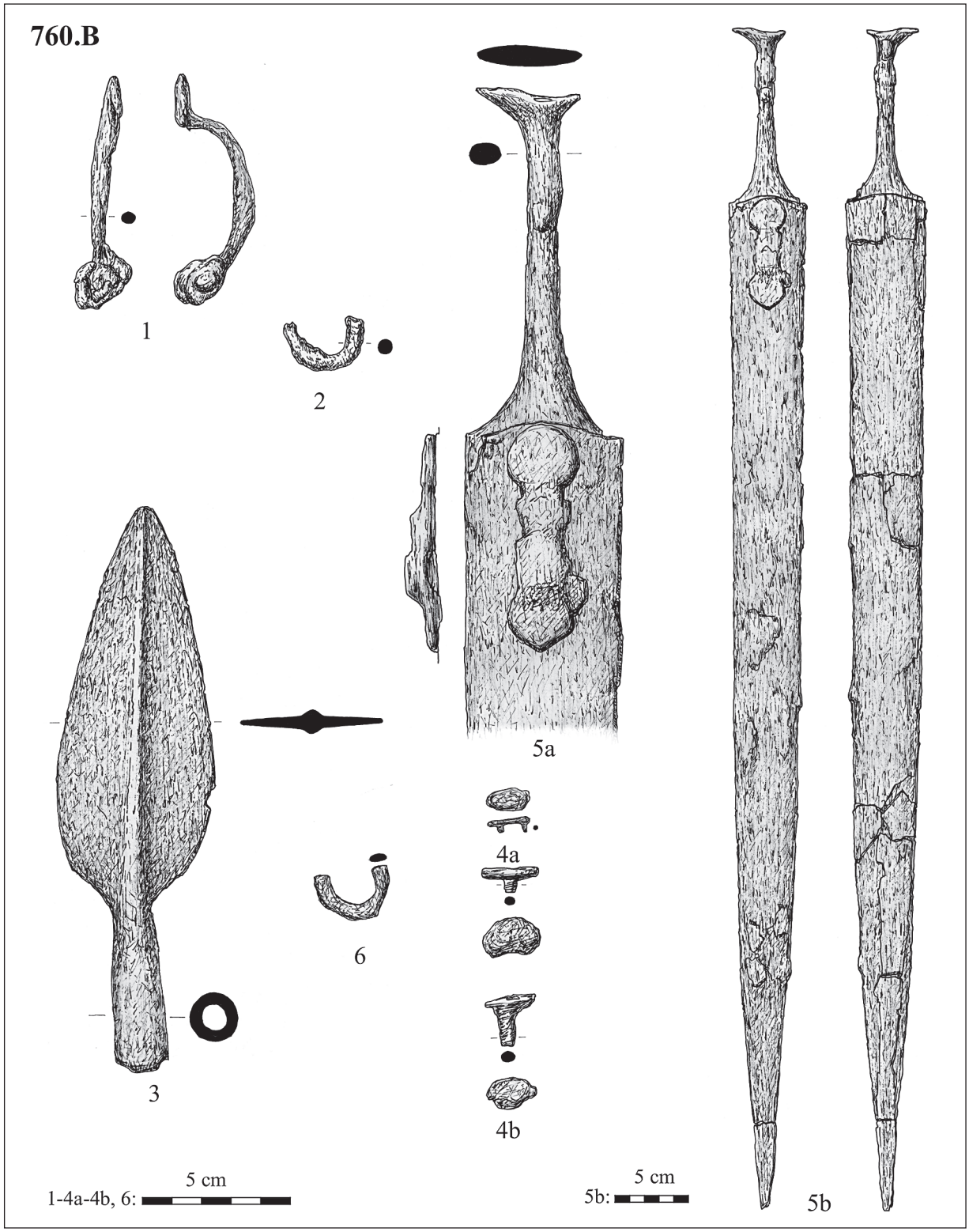


Fig. 22. 1–6: Grave no. 760/B

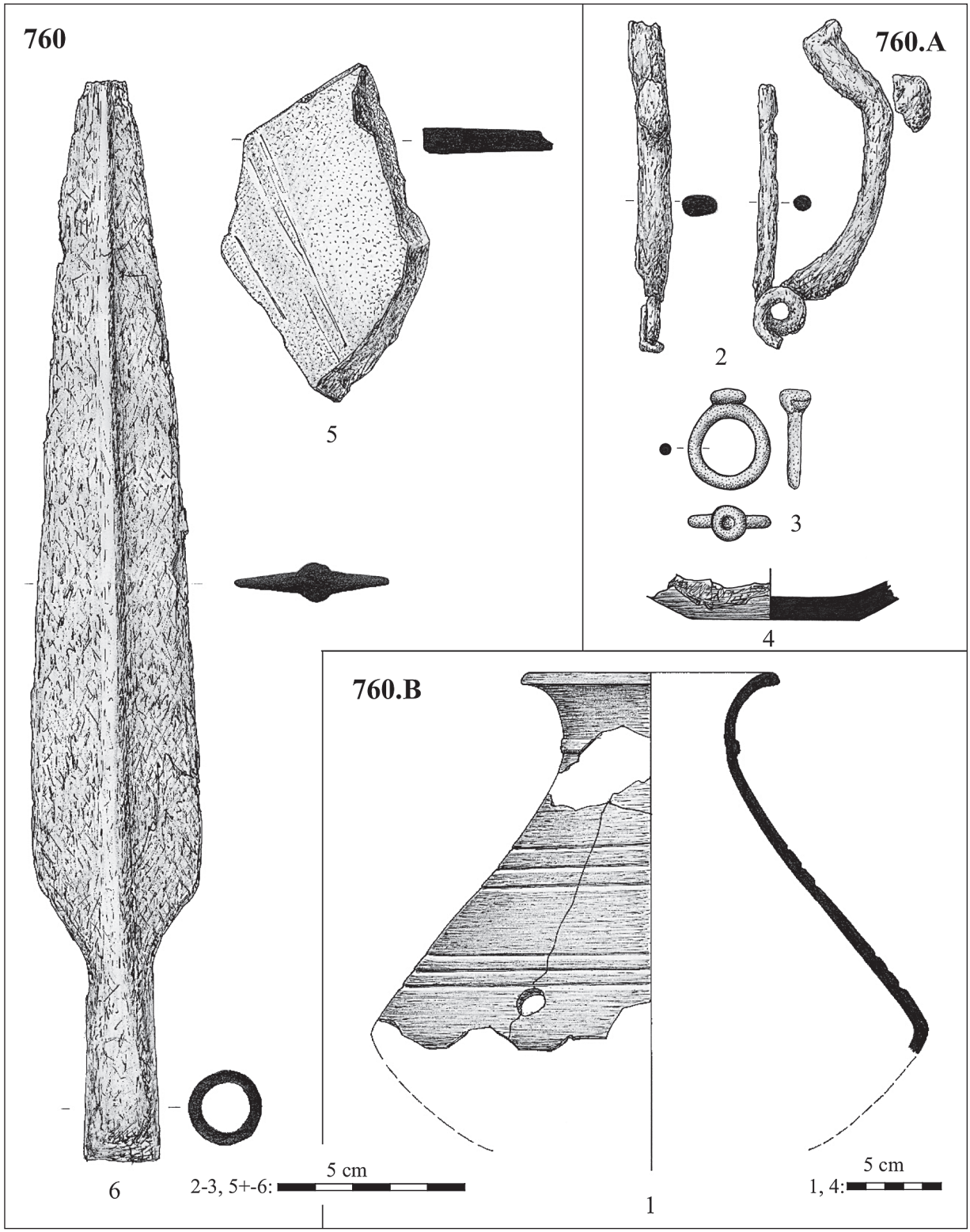


Fig. 23. 1: Grave no. 760/B; 2–4: Grave no. 760/A; 5–6: Grave no. 760

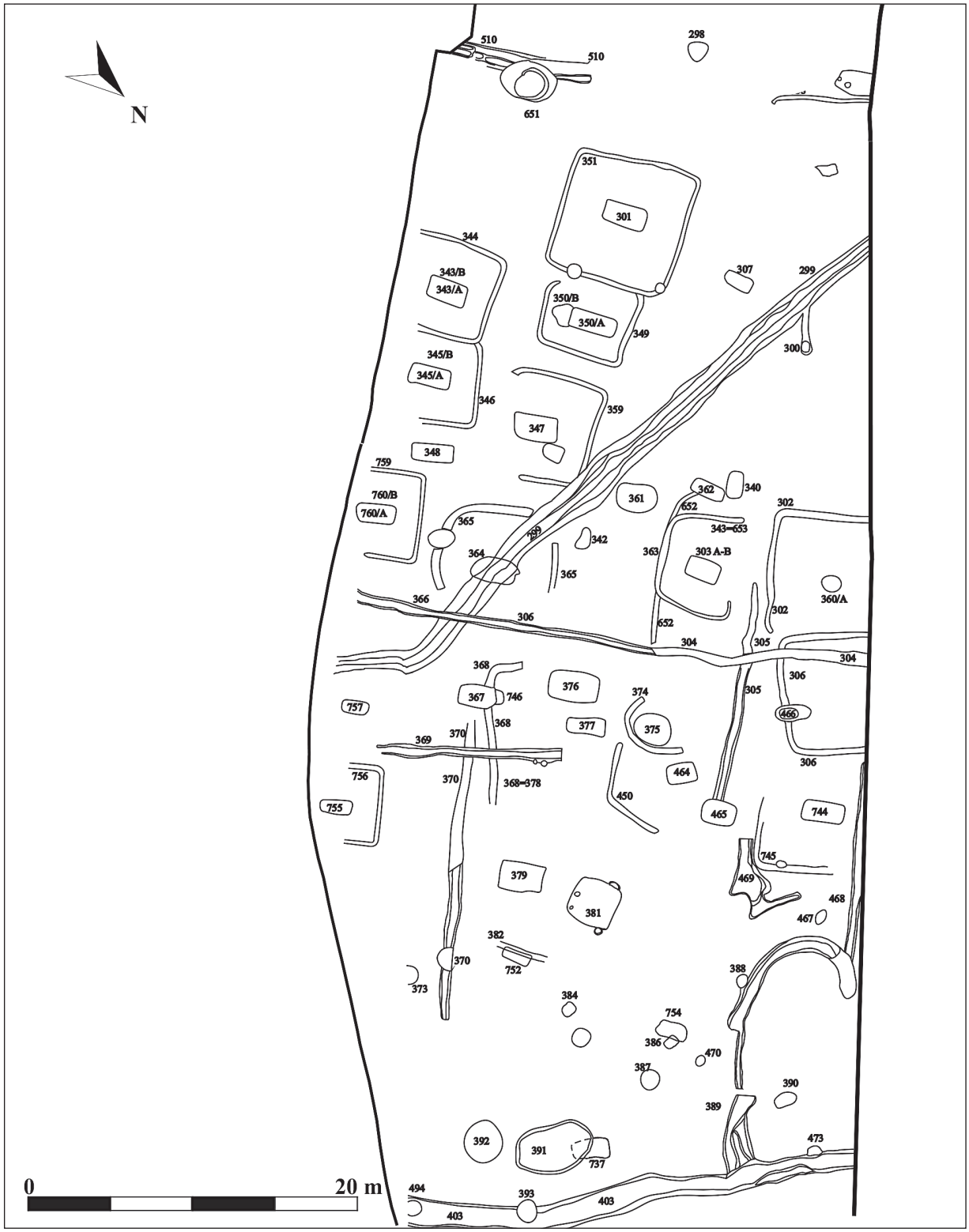


Fig. 24. Features in the territory of the Celtic cemetery

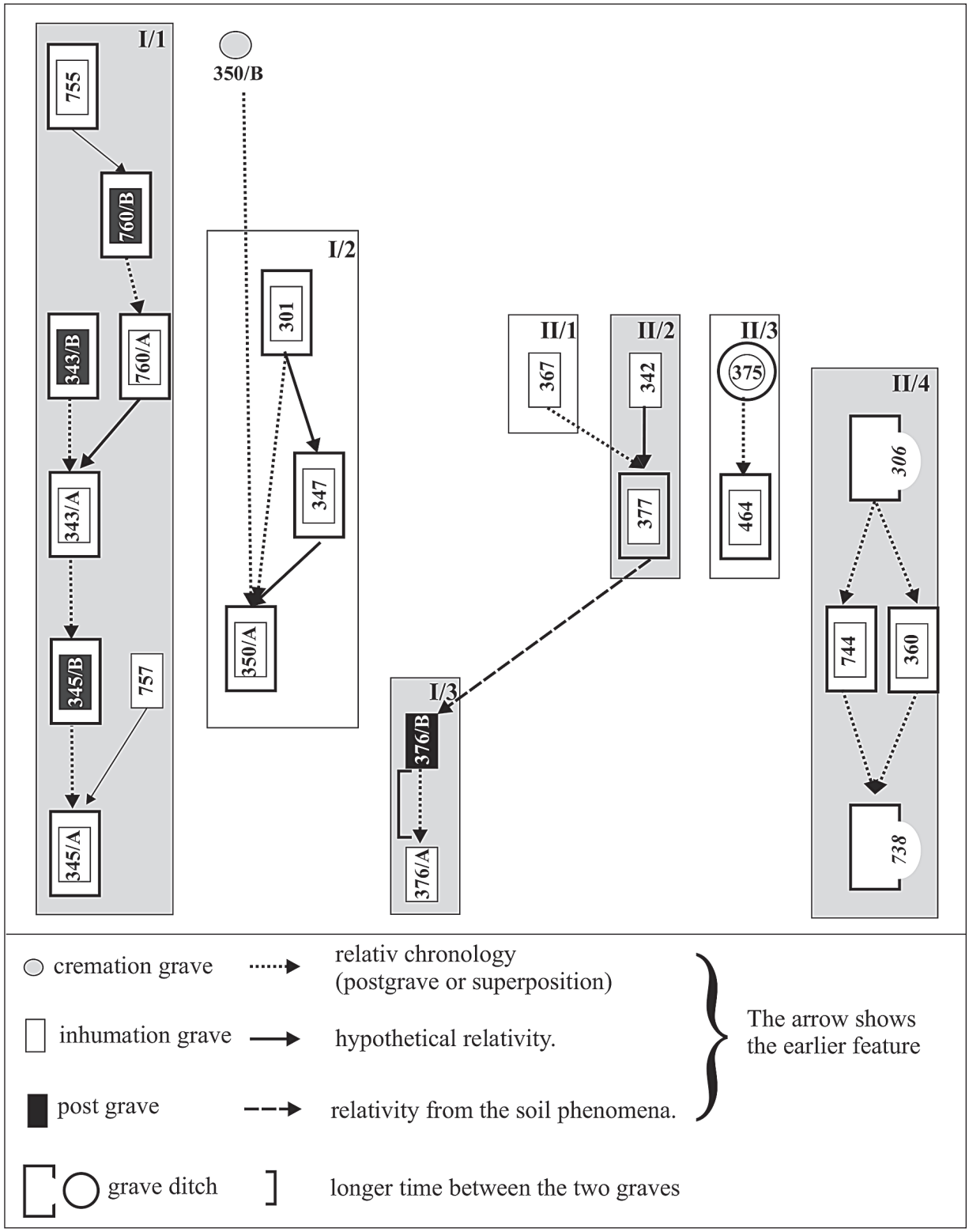


Fig. 25. Chronological position of the graves

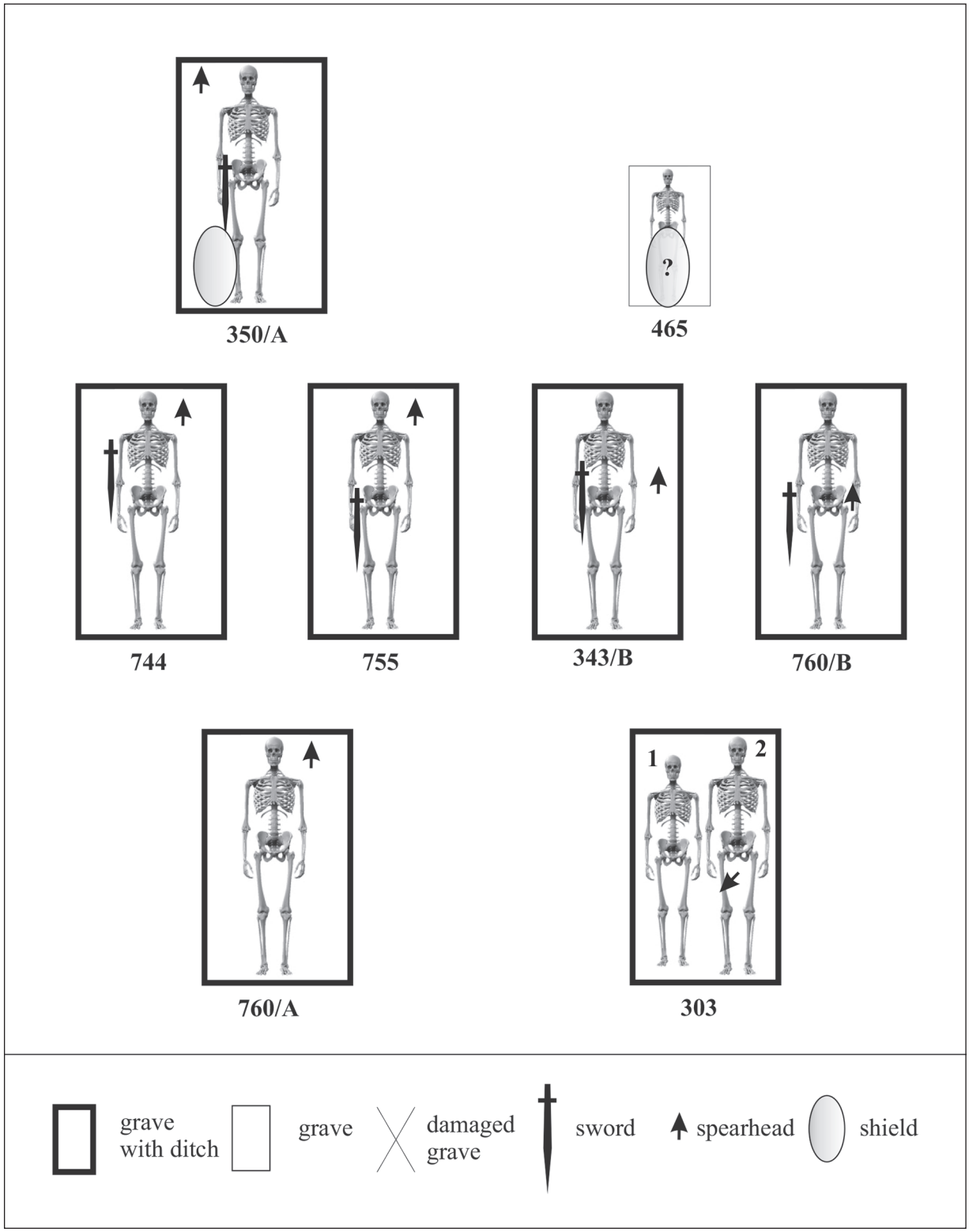


Fig. 26. Position of the weapons in the graves

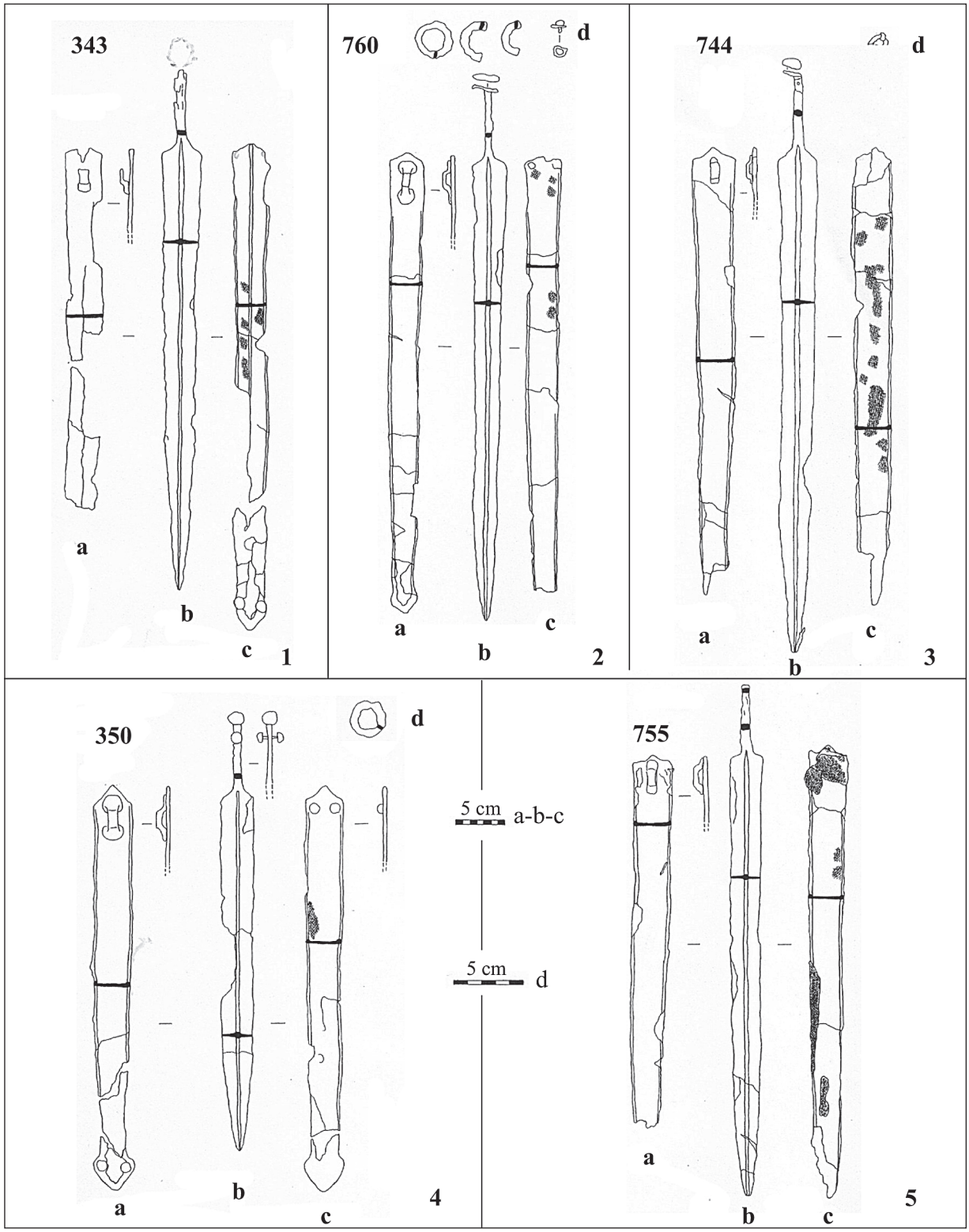


Fig. 27. The swords

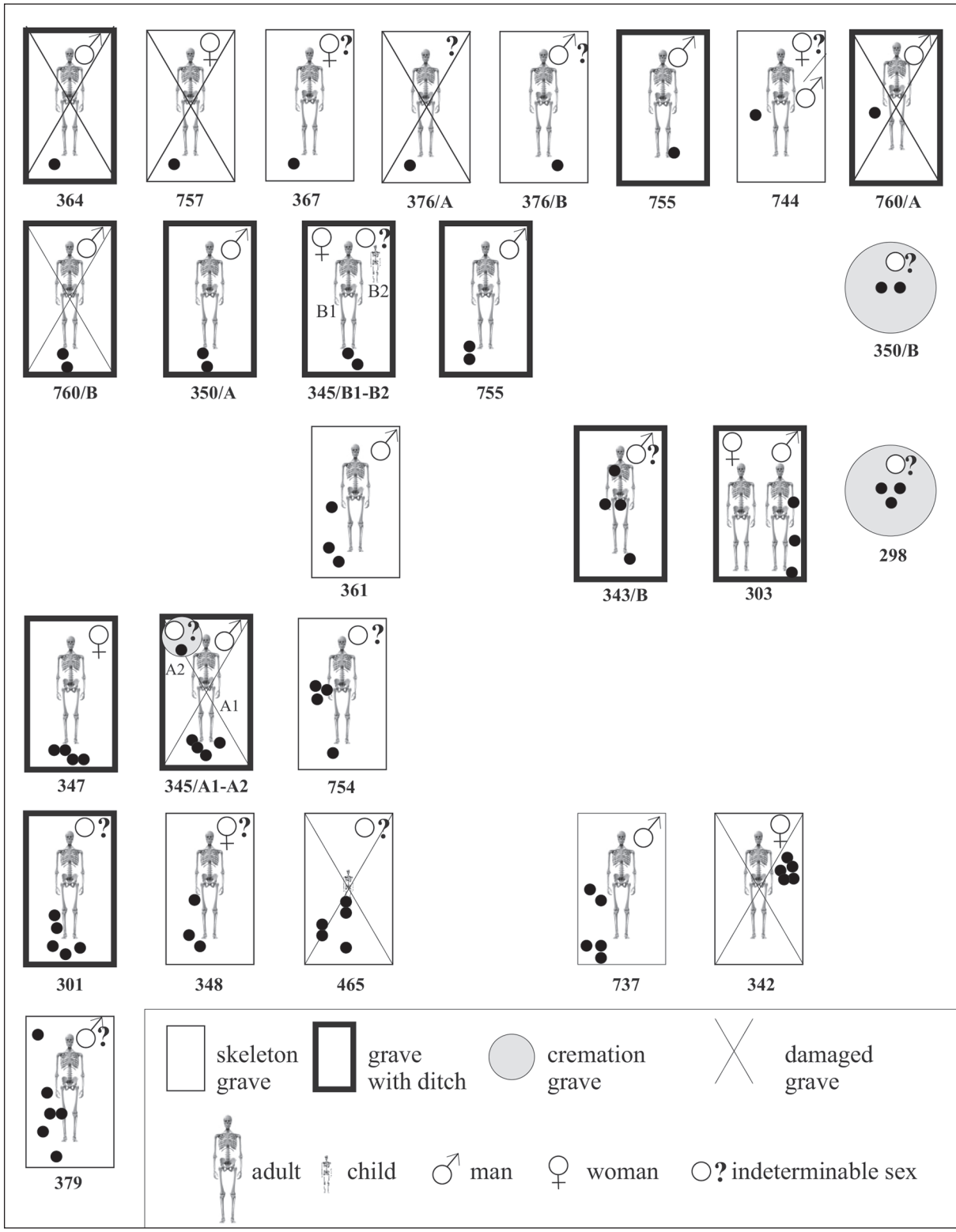


Fig. 28. Position of the vessels in the graves

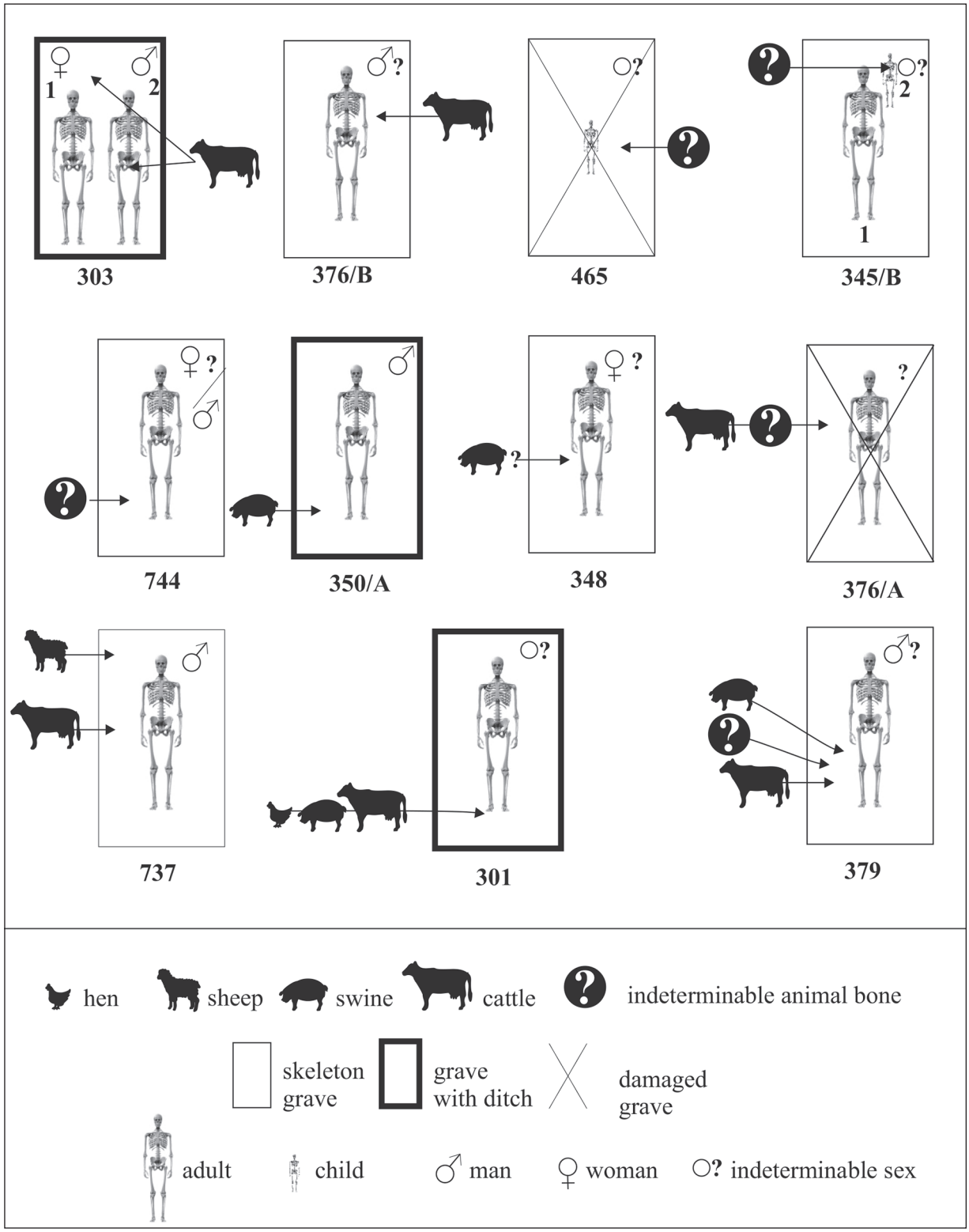


Fig. 29. Position of the animal bones in the graves

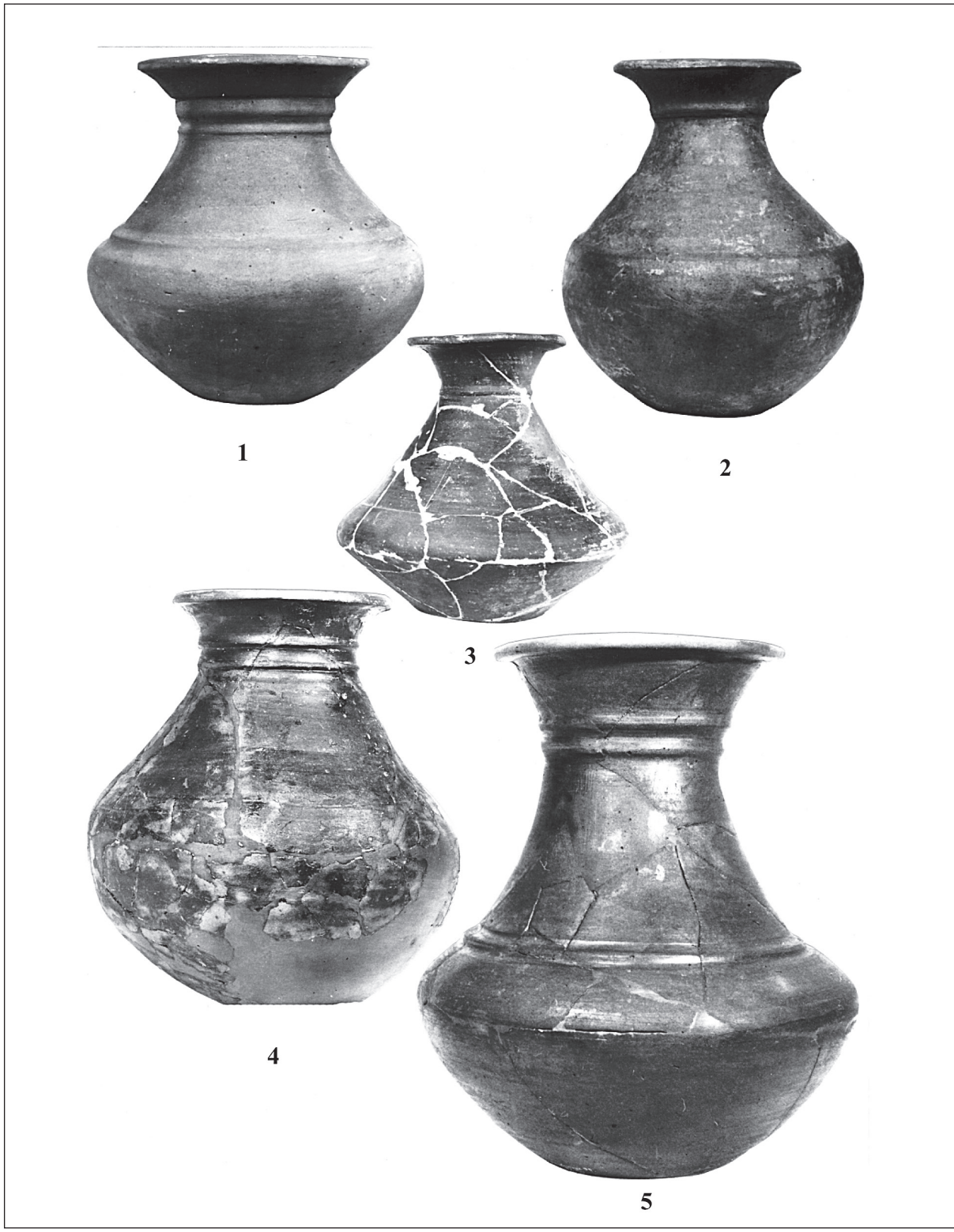


Fig. 30. 1: Grave no. 465; 2: Grave no. 350/A; 3: Grave no. 303.2; 4: Grave no. 361; 5: Grave no. 364

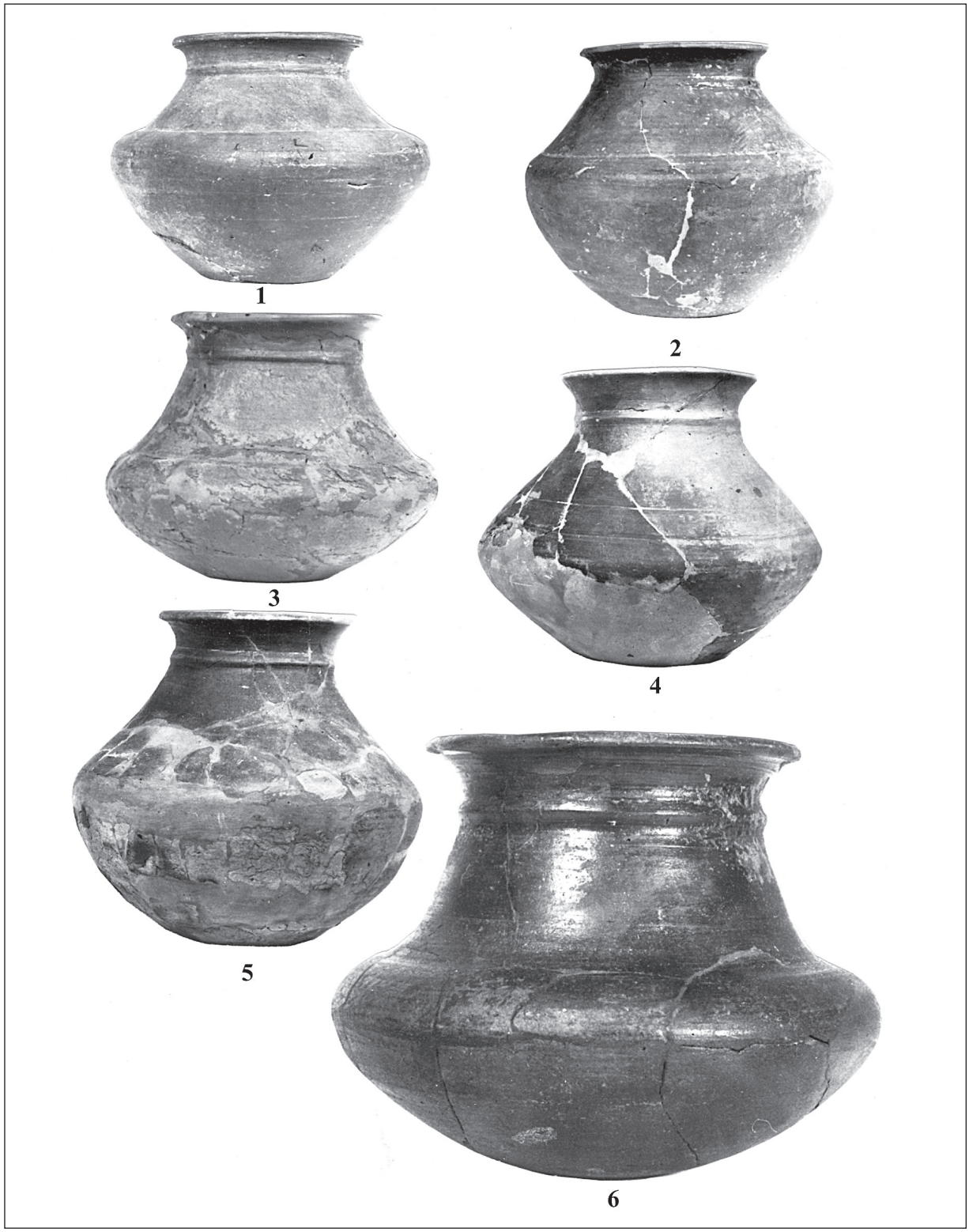


Fig. 31. 1: Grave no. 302.2; 2: Grave no. 345; 3: Grave no. 298; 4–5: Grave no. 343/B; 6: Grave no. 367

Fig. 32. 1: Grave no. 379; 2: Grave no. 342; 3: Grave no. 376/B; 4: Grave no. 379; 5: Grave no. 744

Fig. 33. 1: Grave no. 343/B; 2: Grave no. 350/A; 3: Grave no. 376/A; 4: Grave no. 379

Fig. 34. 1: Grave no. 754; 2: Grave no. 757; 3: Grave no. 737; 4: Grave no. 303; 5: Grave no. 348

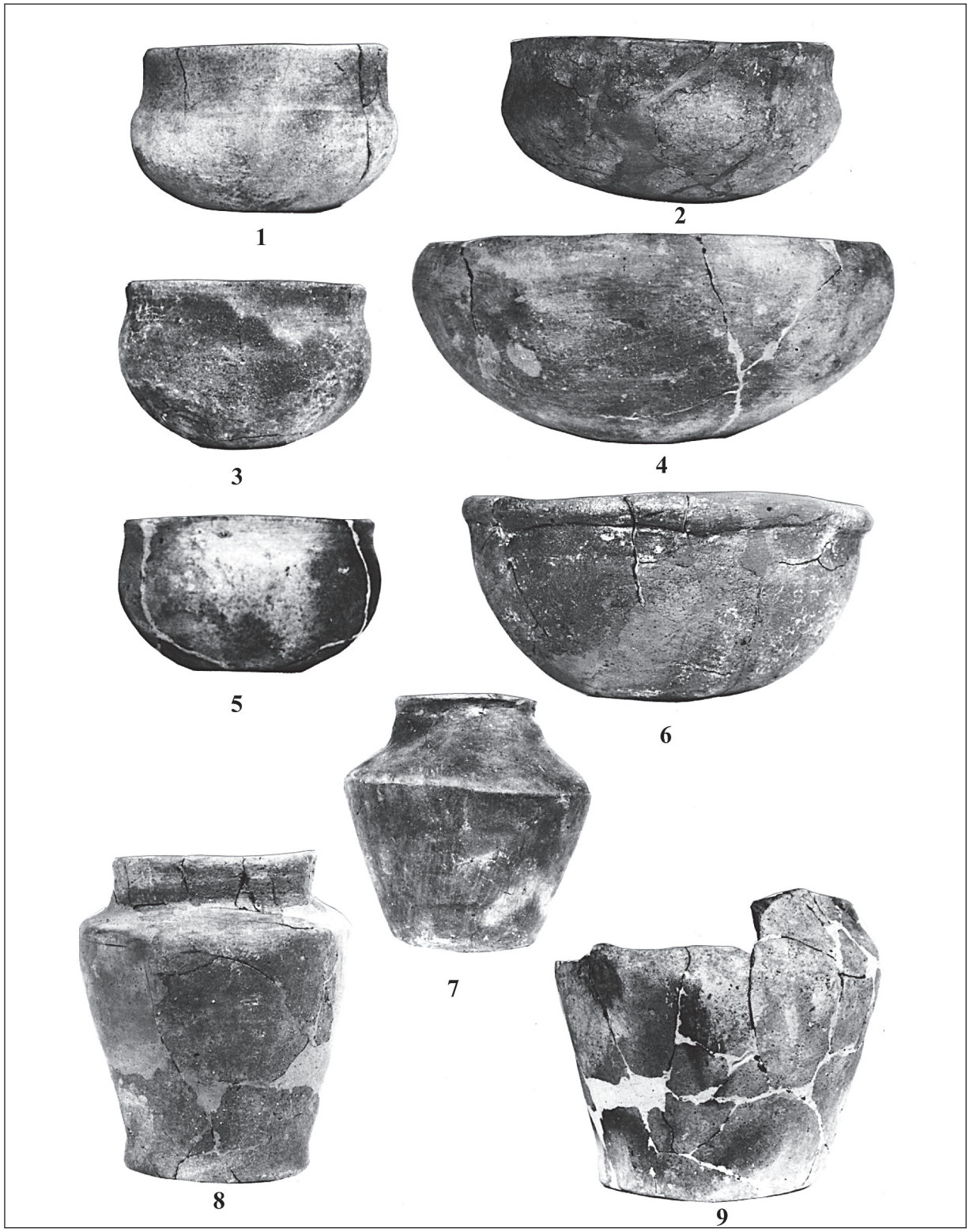


Fig. 35. 1: Grave no. 345/A2; 2: no. Grave 754; 3: Grave no. 345/A1; 4, 7: Grave no. 345/B1; 5: Grave no. 755; 6: Grave 342; 8: Grave no. 737; 9: Grave no. 348

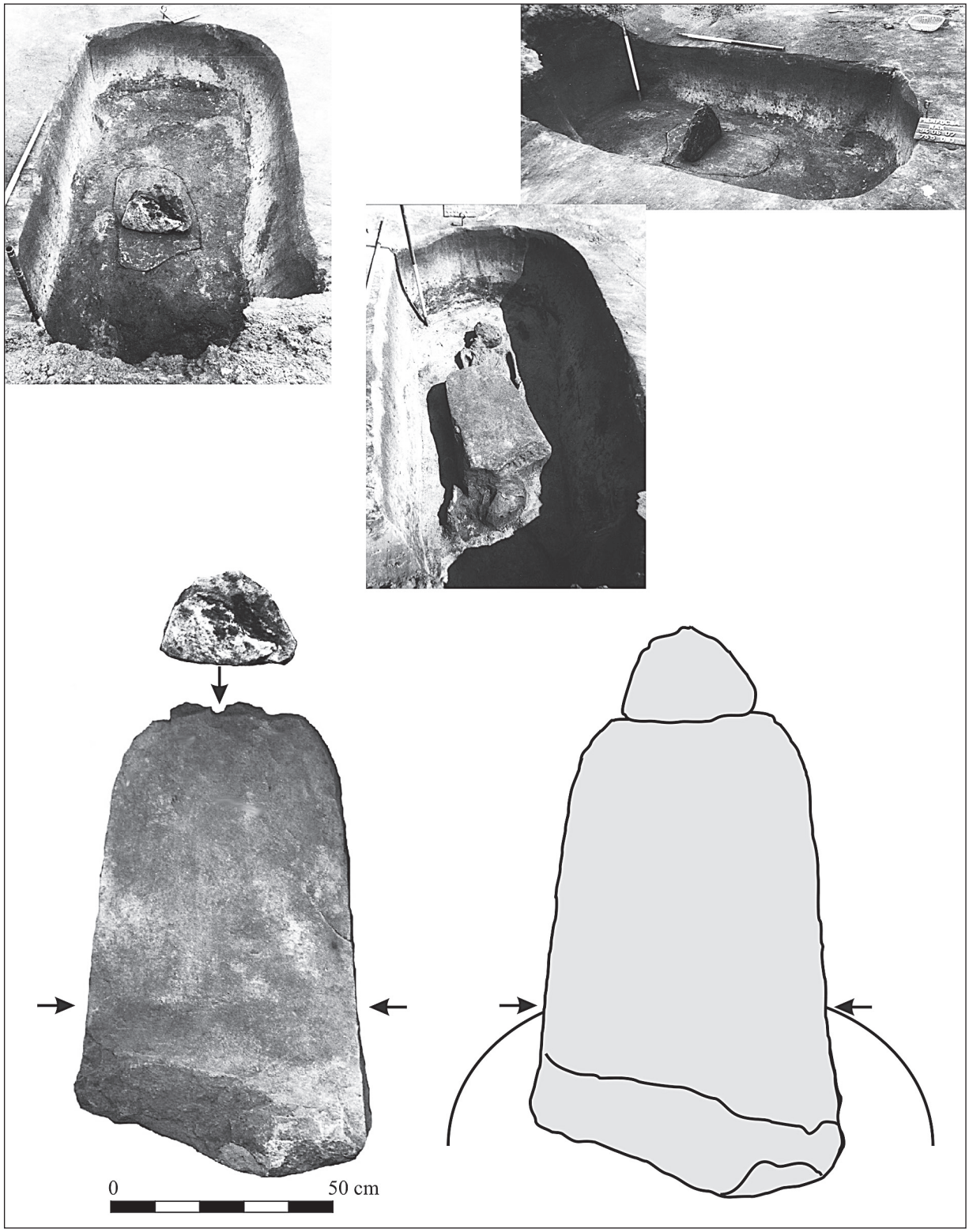


Fig. 36. Grave no. 755

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