Transcendent phenomena in the Late Copper Age Boleráz/Baden settlement uncovered at Balatonőszöd-Temetői dűlő: human and animal "depositions"

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Horváth Tünde, Budapest [1]

Abstract

Animal and human remains were unearthed in 75 features at Balatonőszöd-Temetői dűlő, among them intramural burials and sacrificial pits. It became clear during the analysis that there was a spatial and chronological overlapping between the seemingly separate Boleráz and Baden settlement centres between 3300 and 3100 BC, which was true for the find materials as well. Features with ceremonial paraphernalia, such as vessels came from the surroundings of the pits with animal and human skeletons and they together formed ritual areas of a ceremonial sequence composed of a series of rites.

Zusammenfassung

In Balatonőszöd-Temetői dűlő wurden tierische und menschliche Überreste in 75 Befunden geborgen, unter anderem in Siedlungsbestattungen und Opfergruben. Während der Auswertung wurde schnell deutlich, dass sich die als getrennt erscheinenden Boleráz und Baden Siedlungszentren zwischen 3300 und 3100 BC deutlich zeitlich und räumlich überschnitten, ein Umstand, der sich auch im Fundmaterial niederschlug. Befunde mit zeremonieller Ausstattungen wie z. B. Gefäßen kamen vornehmlich in unmittelbarer Umgebung zu Befunden mit Gruben vor, die menschliche und tierische Knochen enthielten. Zusammengenommen bildeten sie Kultareale und sind als Bestandteil einer zeremoniellen Abfolge von Riten zu verstehen.

Introduction

In 2001–2002, excavations were conducted in the new track of highway M7 at the Balatonőszöd-Temetői dűlő site (fig. 1). About 76 000 m^2 were completely uncovered from the 100.000 m^2 of the future junction and track of the highway, while the rest of the territory was investigated with test trenches. A large, dominantly Late Copper Age settlement was unearthed on a larger part of the site beside other cultures (Balaton-Lasinja/Furchenstich: Middle Copper Age, Somogyvár-Vinkovci: Early Bronze Age, La Tène D: Late Iron Age, 9th century Árpádian period, and medieval and modern period features). About 1000 of the 2800 pit features and close to 100 ovens and hearths can certainly be affiliated with Boleráz / Baden period. The southern part of the settlement along the bank bordered by approximately NE-SW oriented mild hillsides reached beyond the track, while the eastern, the western and the northern borders were clearly outlined during the excavation. We know from field surveys and rescue excavations that a settlement must have lain within a similar geographical environment on the eastern bank. This settlement had

Fig. 1. Map of Hungary with the planned route of M7 motorway, and the Balatonőszöd site.

Abb. 1. Karte von Ungarn mit der geplanten Trasse des Autobahn M7 und die Fundstelle Balatonőszöd.

Fig. 2. The excavated site (Balatonőszöd–Temetői dűlő) and the field-surveyed site (Szólád–Öregaszó) on a google–map.

Abb. 2. Die Ausgrabungsstelle (Balatonőszöd–Temetői dűlő) und die prospektierte Fundstelle von Szólád–Öregaszó auf einer Karte aus google.

1 The study was realised with the help of OTKA grants nos. F-67577 and PD-73490.

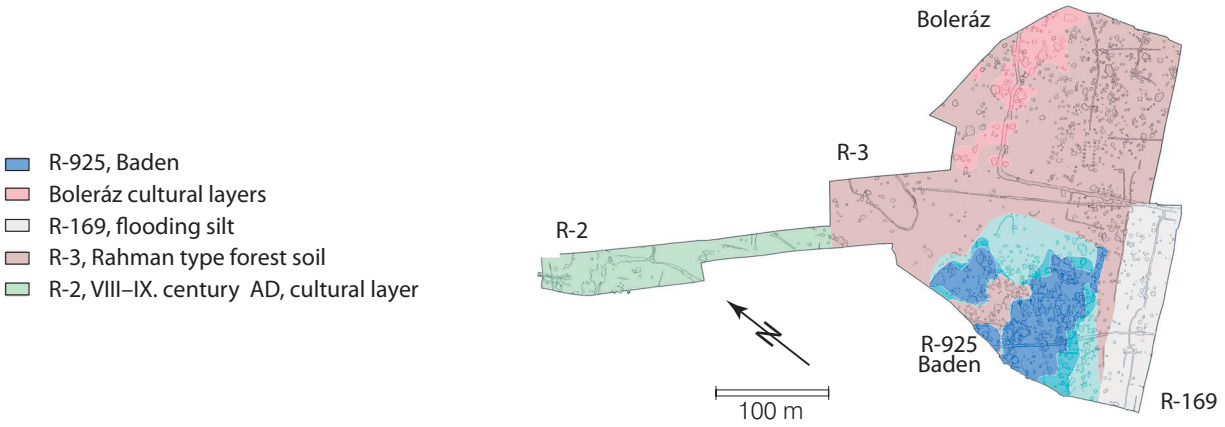

Fig. 3. Soil–type map of Balatonőszöd–Temetői dűlő highlighting artificial and natural soil-types.

Abb. 3. Bodentypenkartierung von Balatonőszöd–Temetői dűlő mit künstlichen und natürlichen Böden.

the same extent according to the surface data, and it was perhaps the continuation or the mirror image of the settlement unearthed on the western bank (Szólád-Öregaszó: settlement fragment or cemetery, fig. 2).

The settlement can be divided into two parts according to the analysis of the find material (fig. 3 and compare also fig. 19). A Boleráz (IB–C phases in Němejcová–Pavúková system) settlement fragment was found on the northern lower territory closer to the Balaton, and the settlement of the older classical phase of the Baden culture (IIB–III phases) stood on the more elevated territory. An empty zone separated the two areas. The majority of the features were pits and especially many individual hearths and ovens of diverse foundation techniques were built on the ground surface or on the bottoms of pits. The surfaces of many archaeological features were covered in varying thicknesses with "in-situ" accumulated non-natural, anthropogenic culture-bearing layers (culture-bearing layer no. 925 of the older classical phase in the southern part of the settlement, and scattered patches of Boleráz culture-bearing layers in the northern part).

Beside the profane elements of the daily life of the inhabitants of the settlement, an unusually large number of the unearthed features and objects belonged to the sacral sphere. Human and/or animal skeletons were found in 75 features. These features - interpreted as intramural burials or bloody sacrifices - will be analysed along with the archaeological material found together with them and in their environment according to the following classification [2]:

1. large communal sacrifices (features that contained more than one animal skeleton or skeletal part often together with human skeletons and other grave-goods);

2. features with human skeletons (bloody sacrifices or intramural burials, sometimes with an animal beside the human skeleton);

3. features with animal skeletons (bloody sacrifices or animal burials) by species (a-cattle, b-small ruminants, c-pig, d-dog).

1. Large communal sacrifices

Two large groups can be differentiated from an excavation technological aspect: features in which the sacrifices were laid in subsequent layers, and ones with a single layer.

In the case of stratified pits it seems possible that the ceremony was repeated and it took a long time to fill up the pit. This supposition is contradicted by the facts that the fillings of the pits were uniform despite the stratification, no definite dividing layer could be ob-

2 The data used in the study were provided by the following people: Zsuzsanna K. Zoffmann and Kitti Köhler determined the human skeletons, István Vörös the animal skeletons, István Vörös and Erika Gál the tools made from animal bones, Imre Nagy the fish remains; Krisztián Zandler described the flaked stone tools, Éva S. Svingor and Mihály Molnár (ATOMKI, Debrecen) and Peter Stadler (VERA, Vienna) carried out the radiocarbon analyses. I am most grateful for their contribution.

served between the levels of the skeletons, and the skeletons and the shards recovered from the subsequent levels could be fit together. The radiocarbon data measured from different layers also stand close to one another. The stratified sacrificial pits can rather be interpreted as subsequent phases of a ceremony-series, which were performed in a winter period / cycle between late autumn and early spring as it can be calculated from the ages and the natural reproduction periods of the animals.

Judged from the high number of human and animal individuals, the features contain large communal sacrifices. The appearance of young, infant human individuals is characteristic of the composition of human skeletons (pits nos. 203, 1085, 1612). The animal skeletons are varied regarding species, age and gender. Cattle (always a bull), sheep (in pits nos. 1036 and 1612 sows with their foetuses or newborn lambs were found) and dogs (in pits nos. 203, 1362, 1497, 1612, 1844) are frequent among the animal species. Wear traces caused by a yoke could be observed on the horn of the old cattle uncovered in pit no. 1612 (Horváth 2010 in print a). The smaller skeletal parts could be the remains of ritual feasts, offerings linked with the sacrifice. Attached firing places and ash depositions at pit no. 1036 indicate the character of the offering (burnt offering?). The animals in pit no. 1036 were killed by wringing their necks. The complete skeletons were placed in the sacrificial pit so only the interior organs and the blood could be used for the burnt offering. Pits nos. 1072-1096 with the half of a male mask (Horváth 2004), three pile-dwellings (Horváth et al. 2007), human burials in pits nos. 744, 981, 1085, 1106, 1334, 1277 and 1489, and pit no 743 with the so-called handled, anthropomorphic suspension vessel belong to its broader environment. The footed goblet in pit no. 1033, further goblet fragments in cuttings 50/9 and 10 from layer 925, the painted-incised female idol in pit no. 1088 and the fragment of a house model in cutting 50/11 could belong to the same sacrificial area (Horváth 2009 a; 2010).

A similar ritual area can be outlined in cuttings 44/6, 7–45/7–46/8, a 48–49/9, 10, 11 in the region of pits nos. 1085, 1228 and 1608 and in cuttings 38–39/4, 5, 6 (six pits with animal sacrifices) and in cuttings 55/30, 31 (burial no. 59 in pit no. 1992, a female idol in pit no. 1988 and an ox–head protomé in pit no. 1998, comp. fig. 19).

According to the archaeological finds, the character of the sacrifices can be affiliated with the collective peace sacrifices mentioned in religious historical descriptions (Kézikönyv a Bibliához 1992, 172–180). This interpretation supposes violence within or from outside the community. The question is if this supposition can be proved with data attesting to atrocities and warfare or violence within or from outside the community.

Catalogue of large communal sacrifices

Pit no. 203, cutting 33-34/4, phase IIA (fig. 4).

Feature: *The beehive-shaped pit appeared as a large regular round discolouration in the forest soil. It was filled in with dark red – greyish brown compact stratified soil strongly mixed with daub fragments. Level 1: the skeleton of a dog lay on the left side with the head in the N. Levels 2–3: combined (artificially separated cleaning phases): the skeleton of human burial no. 66 lay in a crouched position in a NE-SW direction with the face turned to the W, plastered with shards (1.5-year-old infant); skeleton of a 3.5–4 year-old bull; ten sheep individuals of diverse ages (one complete skeleton, the rest are incomplete); the skull and the limbs of a 1–2 months old pig. The animals were probably killed in late autumn / winter.*

Ceramic finds (1.5 kg): *A completed jug, bottom and wall fragments from pots and amphorae.*

*^{14}**C date**: From the bull skeleton: deb-13244, 4440±60 bp: 3130–2990 ±60, 1 σ BC.*

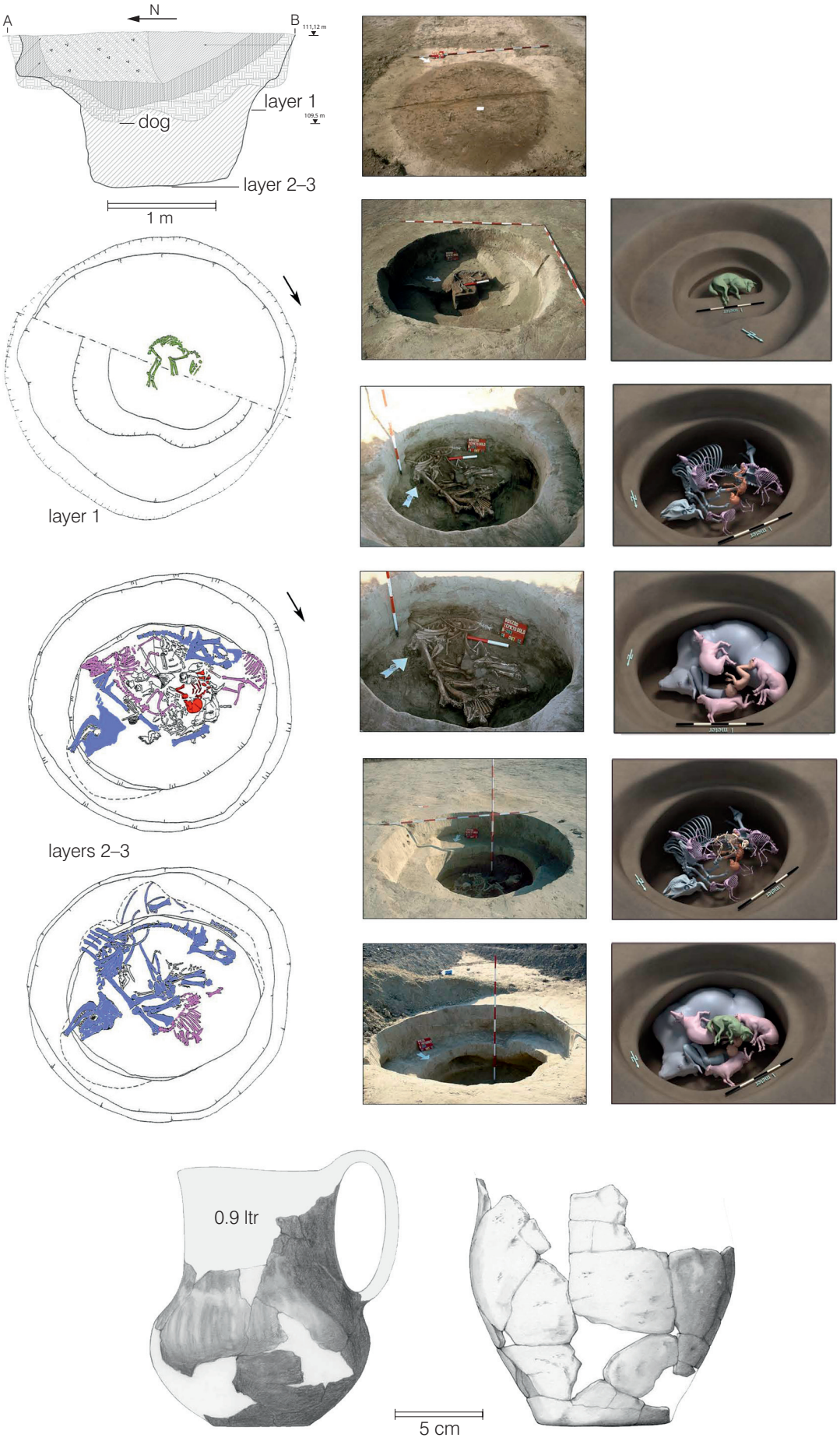

Fig. 4. Pit no. 203 and selected finds.
Abb. 4. Grube Bef. Nr. 203 und ausgesuchtes Fundmaterial.

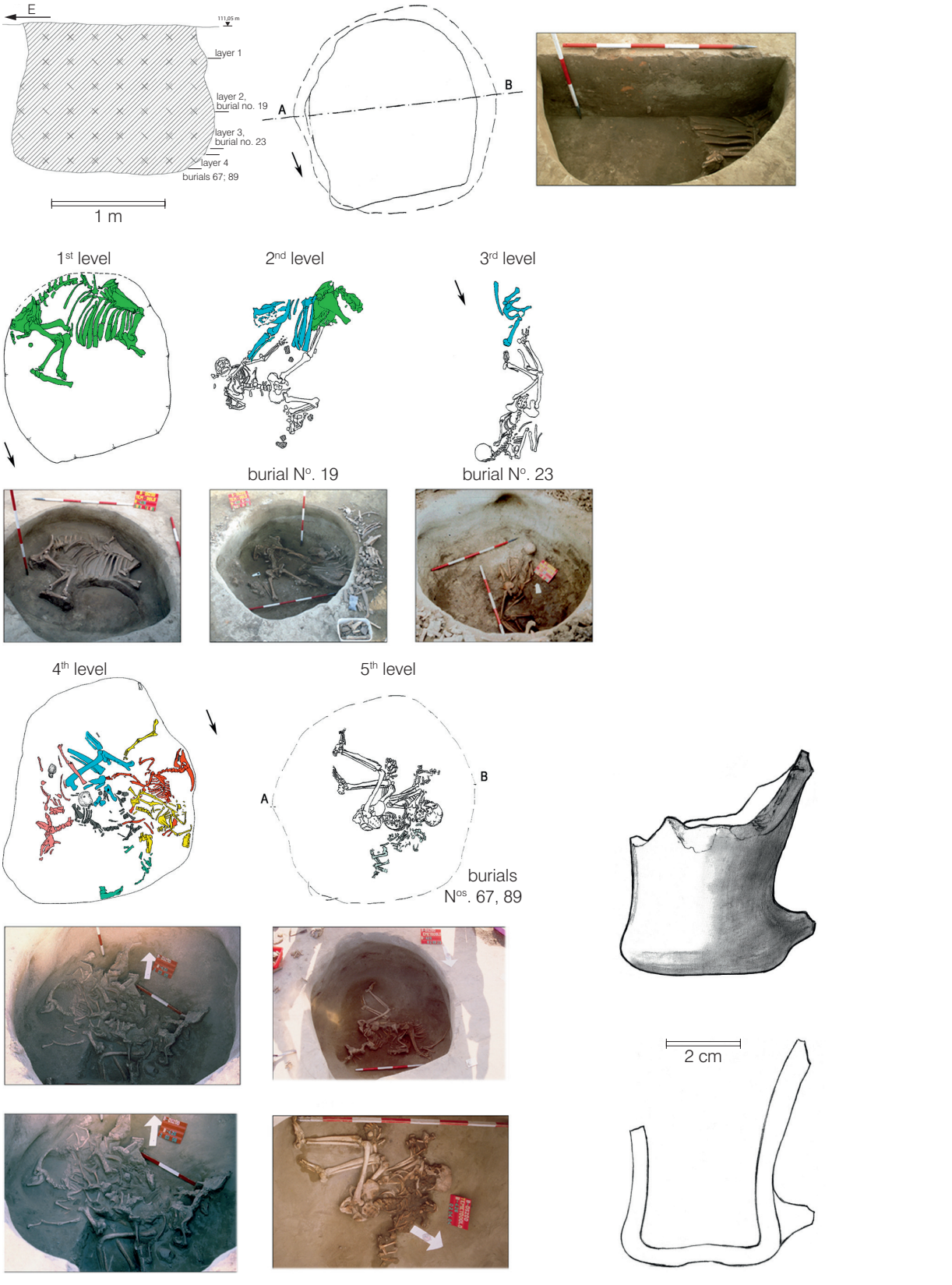

Fig. 5. Pit no. 426 and selected finds.

Abb. 5. Bef.Nr. 426 und ausgesuchtes Fundmaterial.

Pit no. 426, cuttings 56/28 – 57/24, phases IIB-III (fig. 5).

Feature*: The quadrangular pit with rounded corners was filled with dark brown, loose soil mixed with sand and daub, and with skeletons in subsequent layers. Levels of the stratified sacrificial pit: Level 1: partial skeleton of a bull; Level 2: human burial no. 19 with the thrown in body lying on the back in a S-N orientation lying with the face looking up (the right leg was bent back at the knee, the left one was extended) with the skull of a cow; Level 3: human burial no. 23 with the thrown in body lying on the belly in an E-W orientation (the left arm was bent at the elbow in front of the body, the right one was extended under the body, the right leg was slightly bent at the knee, the vertebral column of the extended body was somewhat arched) with parts of the same cow; Level 4: the complete skeleton of a he-goat and skeletal parts of small ruminants; Level 5: human skeleton no. 67 lying in a crouched position on the right side (the arms were bent at the elbows in front of the body, the legs were bent at the knees and pulled up in front of the body, it faced S) and human burial no. 89 (3–4 year-old infant) which was found on the back and in the region of the head of burial no. 67.*

Finds (3 kg): *Fragment of a dipper, damaged on the rim and the handle, ungulated end-scraper.*

Anthropology [3]***:*** *Burial no. 19: 52–58 year-old female. Pathology: both acoustic meatuses ossified and got blocked about 2 cm from the entrance of porus accusticus externus. The fistulae that can be observed on both sides attest to an inflammatory process. The disease most probably resulted in reduced hearing. Minimal osteophytic growths can be observed on the edges of the corpuses of the vertebrae in every region of the vertebral column. Deformations indicating pregnancy can be observed on the surfaces of both ossa pubis.*

Burial no. 67: 33–39-year-old male. The stature of the man of a robust skull can be grouped in the high category.

Zoology*: Level 1: skeletal fragment of a 2–2.5 year-old bull. Levels 2–3: trunk and limbs of a 16–18 months old cow. Level 4: skeleton of an 18–20 months old goat, skeletons of three old sheep, skeletal parts of three young sheep. The animals were probably killed in winter / spring.*

^{14}C data: *From human burial no. 23; Level 3: deb-13277, 4520±60 bp: 3260–3110 ±60, 1 σ BC. From charcoal; Level 4: deb-13387, 4310±50 bp: 2950–2890 ±50, 1 σ BC. From human burial no. 67; Level 5: deb-13292, 4380±45 bp:3040–2920 ±45, 1 σ BC.*

Pit no. 1036, cutting 50/11, under culture-bearing layer 925, phase III (fig. 6).

Feature: *The round pit was filled with solid soil mixed with ash. It contained skeletons in subsequent layers. The related sacrificial area: Hearths nos. 163 and 168 and pits nos. 986, 1103, 1104, 1105, 1126, 1127, 1145, 1146, 1147 and 1176. In cross-section and in horizontal cleaning phases, the sacrificial pit and the features of the area formed a coherent unit.*

Finds (3.5 kg): *Wall fragment of a bipartite bowl with the fragment of the dividing wall; Belly fragment of a jug or a barque-shaped vessel; Profile fragment of a small jug; Fragments of a smaller biconical pot of an everted rim; Atypical triangular arrowhead; Simple scraper of a denticulate edge.*

Zoology: *Skeleton fragment of an adult bull; Sheeps: Two adult skeletons, two skeletal parts, skeletal parts of a 10–12 months old lamb, skeleton of an 18–20 months old sheep, skeleton of a 6–8 months old ram, skeleton of a newborn / foetus lamb and the skeletal part of another one. The animals were probably killed in autumn and spring.*

^{14}C date: *From a sheep skeleton: deb-13374, 4390±60 bp: 3090–2920 ±60, 1 σ BC.*

Pits nos. 1085 – 1583, cuttings 48/9, 10 – 49/10, 11, under culture-bearing layer 925, phase III (fig. 7).

Feature: *Pit no. 1085 was filledwith dark greyish – brown, compact soil with many lime grains and animal bones. Burial no. 91 (the skeleton of a 5–6-year-old infant) was found on the S side of pit no. 1085, which the workers destroyed. Oven no. 183 stood on the other side of the large pit. In pit no. 1583 the skeleton of a 3–3.5 years-old cattle and an adult sheep were excavated.*

Finds (6 kg): *handle of a drinking cup / Ossarn-type cup.*

3 The detailed description of the anthropological material of Balatonőszöd see in K. Zoffmann 2004 a. Here we discuss the pathologic deformations in details and mark the age and the gender.

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Tünde Horváth
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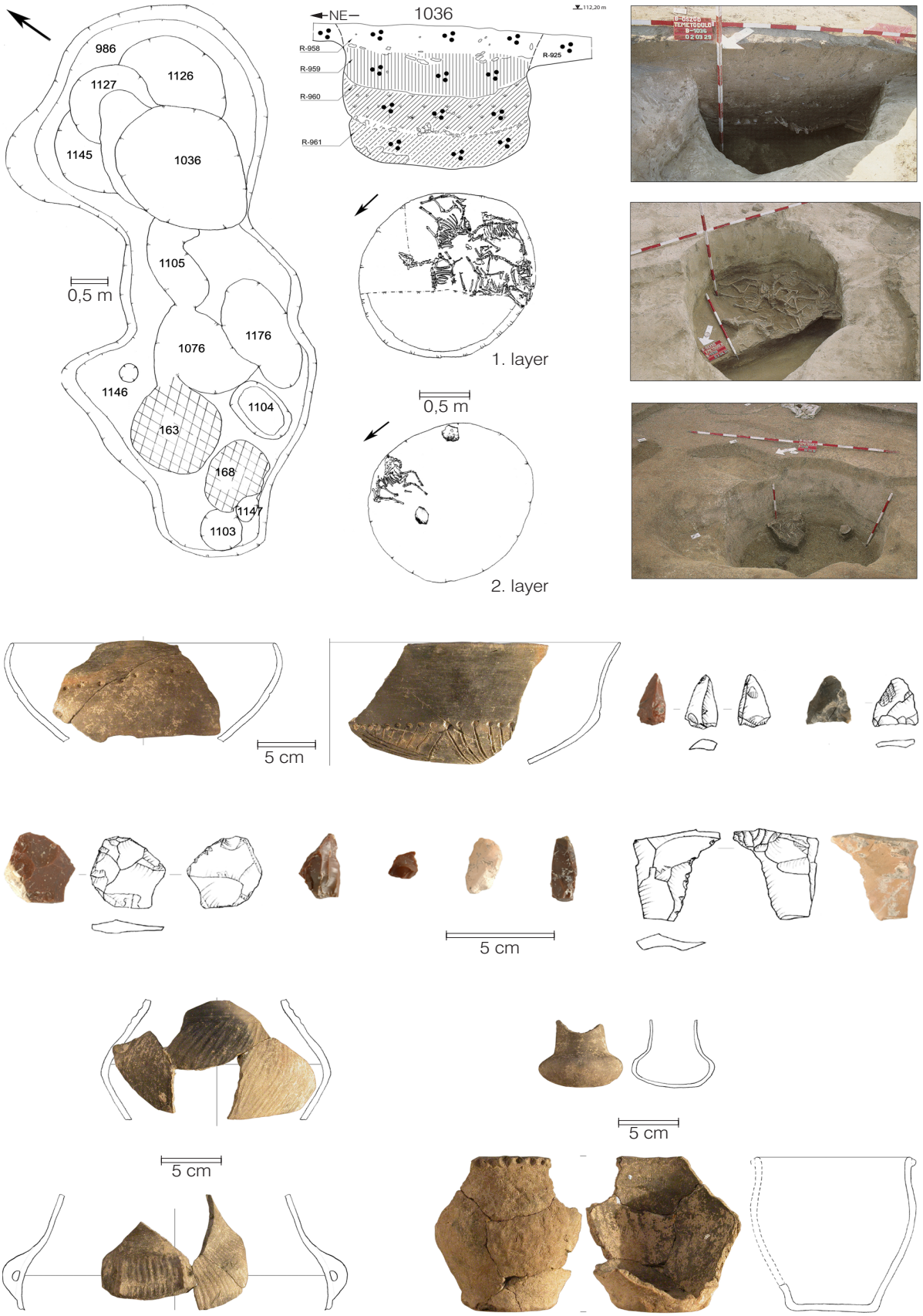


Fig. 6. Pit no. 1036 and its environment, and selected finds.

Abb. 6. Bef. Nr. 1036, seine unmittelbare Umgebung und ausgesuchtes Fundmaterial.

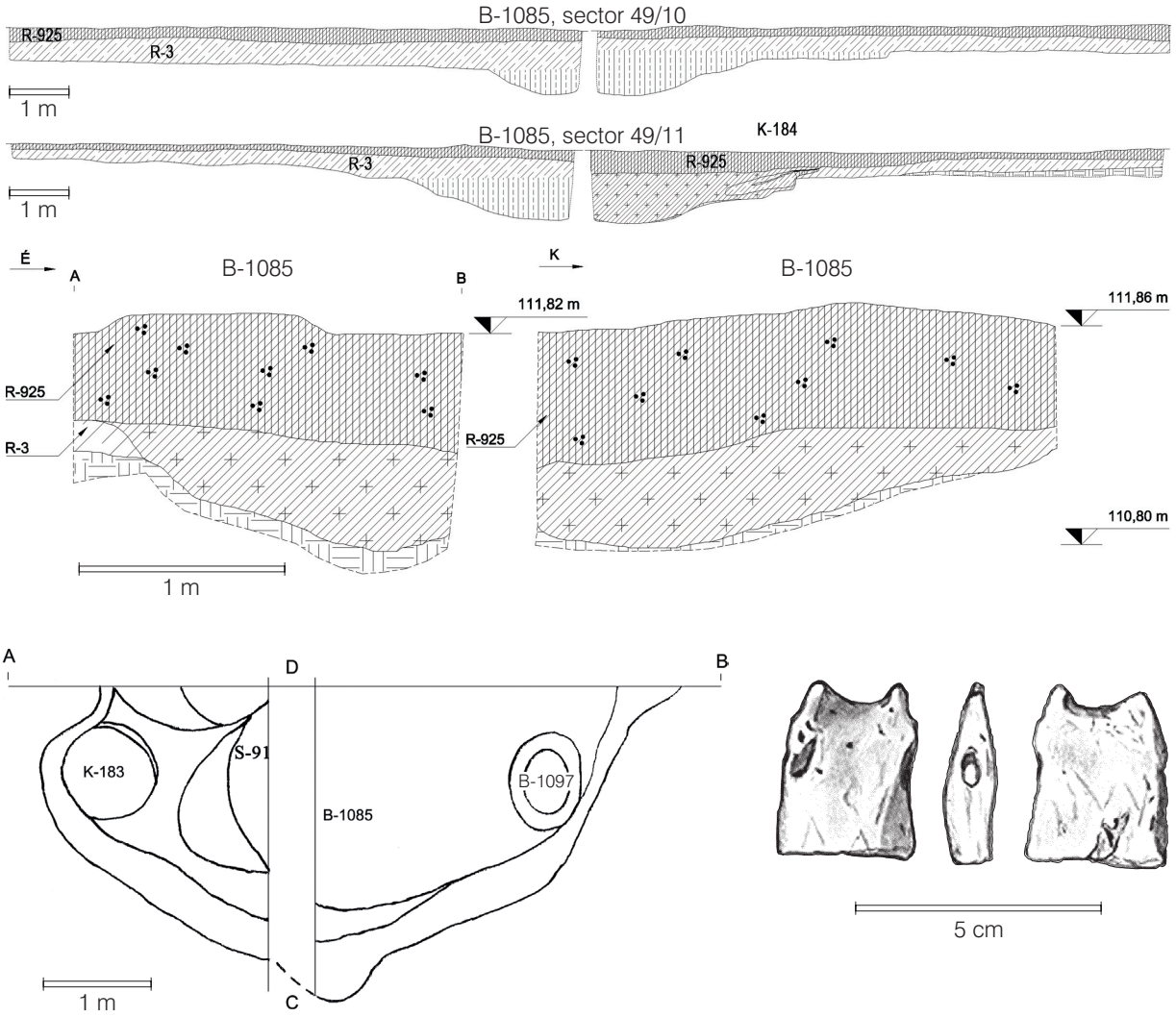


Fig. 7. Pit no. 1085 and its environment, and selected finds.

Abb. 7. Bef. Nr. 1085 und ausgesuchtes Fundmaterial.

Pit no. 1331, cutting 45 / 9, on the border of / under culture-bearing layer 925, indistinctive (older classical?) Baden (fig. 8).

Feature: *A shallow pit filled with compact, dark brown soil mixed with daub and charcoal. There were a few shards on the bottom and a cattle skeleton with the neck twisted back lay in the centre of the pit. The skeleton of a small ruminant was found in the northern wall, the buttock part and the hind legs were injured during cleaning.*

Zoology: *Skeleton of an 8 months old cattle foetus; Skeleton of a 6–8 months old sheep; Limb of an adult sheep; Trunk and limb of a young pig. The animals were probably killed in autumn / winter.*

Pit no. 1362, cutting 45/10, on the border of culture-bearing layer 925, older classical Baden (fig. 9).

Feature: *The oval pit was filled with dark brown soil mixed with shards. Parts of animal skeletons, mostly ribs were uncovered in the W part of the pit – partial animal skeleton, remains of a damaged animal skeleton, or refuse pit?*

Finds (7 kg): *Fragment of a biconical bowl with an everted rim; Awl from the tibia of a small ruminant; Notched transversal scraper; Retouched flake (sickle inlay); Half of a quadrangular oblique quern (pounder); Large, complete quern with working surfaces on both faces (lower part).*

Zoology: *Skeleton of an adult pig; Skeleton of a young dog; End of the leg of a young dog; Fragment of the mandible of an old cattle; Fragment of a tortoise shell; Pharynx arch of a bream.*

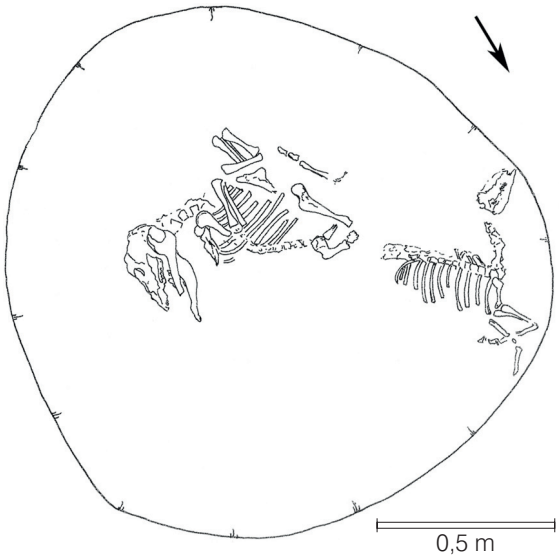


Fig. 8. Pit no. 1331.

Abb. 8. Bef. Nr. 1331.

Pit no. 1497, cutting 49/12, under culture-bearing layer 925, phase III (fig. 10).

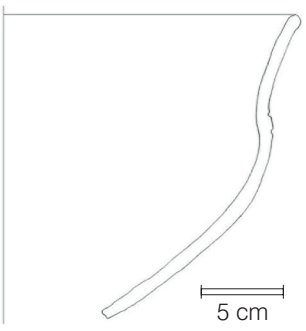
Feature: *The filling of the oval pit was compact, brownish, strongly mixed with lime lumps. The skeleton of a pig was unearthed in the centre of the bottom of the pit. It lay on the left side with the legs pulled up, the front legs crossed. Further animal bones lay over the vertebral column of the pig. It is intersected by pit no. 1496. Oven no. 147 stood above it, pit no. 1588 was beside it.*

Ceramic finds (1 kg): *Wall fragment of a bipartite bowl with a fragment of the dividing wall; Bottom-wall fragment of a dipper.*

Zoology: *Skeleton of an 18–20 months old sow; Limb of an infant pig; Limb of an adult cattle; Mandible and limb of an adult sheep; Skeleton of dog (perished). The animals were probably killed in late autumn.*

Fig. 9 Pit no. 1362 and selected finds.

Abb. 9. Bef. Nr. 1362 und ausgesuchtes Fundmaterial.



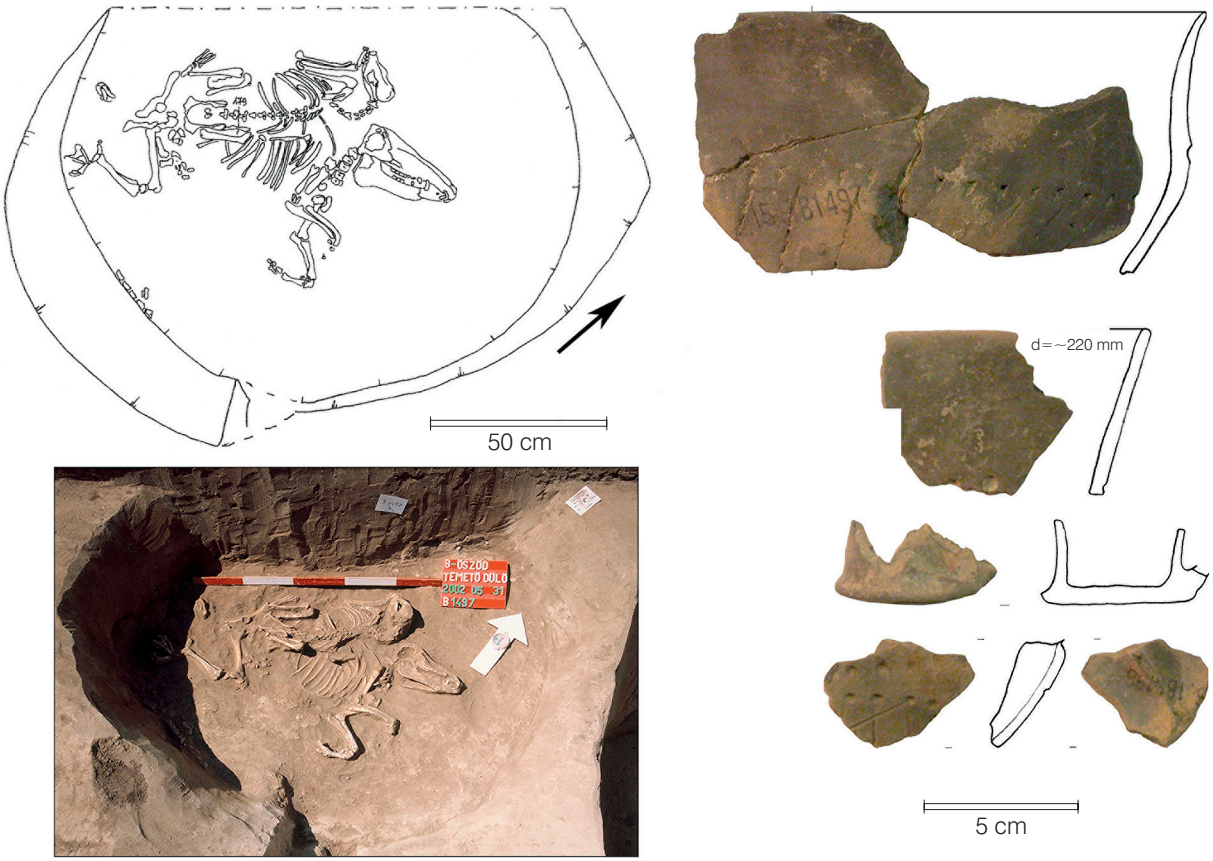


Fig. 10. Pit no. 1497 and selected finds.

Abb. 10. Bef. Nr. 1497 und ausgesuchtes Fundmaterial

Pit no. 1499, cutting 46/8, under culture-bearing layer 925, older classical Baden (fig. 11).

Feature: *Animal skeletons were thrown into the round pit, which downwards widened into a beehive shape. The pit was filledwith dark brown, compact soil sometimes mixed with large lumps of daub and charcoal and loess spots. The skeleton of the dog was incomplete. It lay on the right side on level 1 with the skeletal parts of another animal. The skeleton of another animal lay pressed against the E wall of the pit underneath on level 2.*

Finds (4 kg): *About 1/3 profile fragment of a dipper or a cup, the handle is missing, completed; Profile fragment of a flat cup; Awl made of the tibia of a small ruminant; A handy oval, flat pebble-like sandstone piece; Fragments of stone axes; Strongly eroded basalt.*

Zoology: *Level 1: Skeleton of a 3.5–4-year-old bull; Bone fragments from the skeleton of a dog; Level 2: Partial skeletons of nine sheep of various ages; Six skeletal parts of pigs, further pig bone fragments. The animals were probably killed in late autumn / winter.*

Pit no. 1608, cuttings 44/6–45/7, under culture-bearing layer 925, phase III (fig. 12).

Feature: *The large pit was filled in with a mixed, compact ashy soil with some charcoal. The skeleton of an animal without the skull was unearthed in pit no. 1608. The discolouration of another pit was observed under feature no. 1608: pit no. 1781 contained the partial skeleton of another animal and many shards. Pit no. 1608 intersected feature no. 1621 and culture-bearing layer 925. In cross-section, grey and ashy soil was the upper layer and a brownish grey, dark layer was under it.*

Finds (31 kg): *Fragments of bipartite bowls; Fragment of a biconical bowl of an everted rim, with interior channelling; dipper; half of a spindle-whorl; three awls pointed at both terminals from a fragment of a red deer antler; awl from the metatarsal of a small ruminant; chisel made from the rib of a large ruminant; triangular flaked arrowhead; retouched blade: sickle inlay; retouched flake: sickle inlay.*

Fig. 11. Pit no. 1499 and selected finds.

Abb. 11. Bef. Nr. 1499 und ausgesuchtes Fundmaterial.

Zoology: *partial skeleton of a 16–18 months old cattle; seven incomplete sheep skeletons of various ages; limb of an adult sheep; incomplete skeleton of a 16–18 months old sow; bones of pigs, fish, hamster and red deer. The animals were probably killed in late autumn / winter and in spring.*

Pit no. 1612, cuttings 43/12, 13, on the border of culture-bearing layer 925, older classical Baden (fig. 13).

Feature: *The round pit was dug into culture-bearing layer 925 mixed with forest soil. It was filled with very compact soil mixed with daub, charcoal, animal bones and shards. It contained human and animal skeletons in subsequent layers: upper part (levels 1–4): 8 dog skeletons; level 5: human skeleton no. 45 thrown into the E side of the pit. It lay extended on the left side in a N-S direction (the legs were slightly pulled up at the knees, the hands touched under the chin); level 6: 34 sheep skeletons, partial cattle skeletons, pig, aurochs and red deer bones.*

Ceramic finds (5 kg): *Cup fragment of a goblet with the upper fragment of the hollow pedestal; suspension jug with a horizontally pierced handle, completed; small amphora, completed; about half of a bowl of a rounded truncated-cone shape and an everted rim, completed.*

Anthropology: *Burial no. 45: 6–7-year-old infant. Pathology: uneven surface developed on the interior surfaces of both orbits especially in the left one beside a strong cribra orbitalia, with a bony protuberance on the inside of the right orbit and a bony growth inside the left orbit (impeded sight). An amorphous bony growth can be seen on an 8–10 mm large territory beside the left linea tempo-*

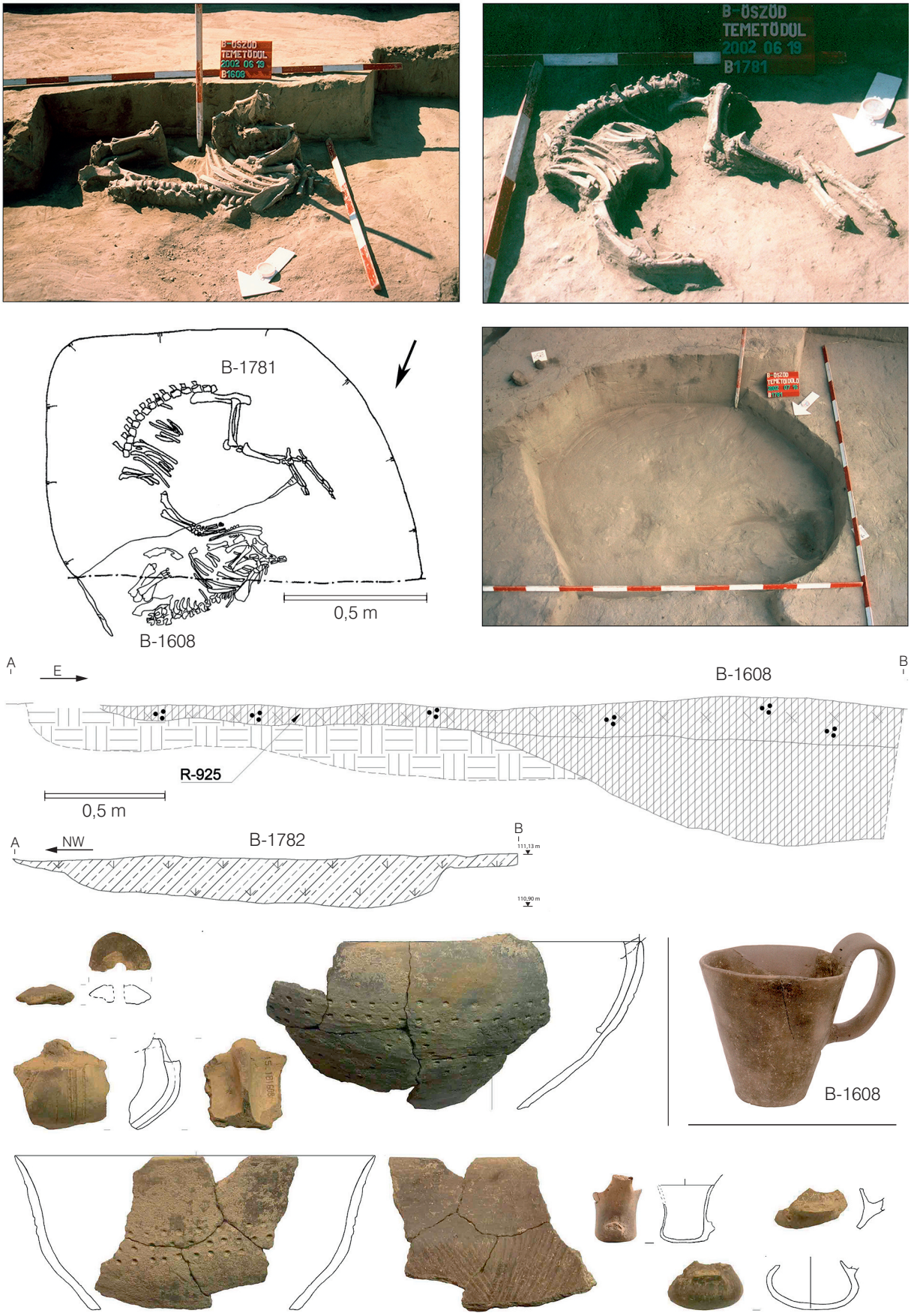


Fig. 12. Pits nos. 1608–1781 and selected finds.

Abb. 12. Bef. Nr. 1608–1781 und ausgesuchtes Fundmaterial.

Fig. 13. Pit no. 1612 and selected finds.

Abb. 13. Bef. Nr. 1612 und ausgesuchtes Fundmaterial.

ralis on the temporal side. Osteoporosis can be observed in a narrow band parallel to the lambda suture, which probably indicates the early stage of "Bürstenschädel".

***Zoology:** Upper levels: skeletons / partial skeletons of 8 dogs; Level 6: skeleton of a 6–8 months old bull; skull and limbs of an adult cattle with deformation on the horn core caused by a yoke; skeletons and partial skeletons of 34 sheep of various ages; limbs of 10 lamb foetuses; limbs of young pigs; limb of an adult aurochs; cranium of a young red deer. The animals were probably killed in late autumn / winter and in spring.*

***^{14}C data:** From a dog skeleton, upper layer: deb-13412, 4440±70 bp: 3140–2990 ±70, 1 σ BC; from a sheep skeleton, lower level: deb-13380, 3550±50 bp:1960–1860 ±50, 1 σ BC (measurement error: the sample must have been contaminated).*

Pit no. 1770, cuttings 39/5, 6, on the border of culture-bearing layer 925, indistinctive Baden (fig. 14).

***Feature:** The pit was dug into forest soil mixed with culture-bearing layer 925. It was filled with compact grey soil with some charcoal. Animal skeletons were unearthed on the southern side.*

***Zoology:** Skeleton of a 3–3.5 year-old bull; mandible of a 2–3 months old cattle; limbs of a 3–3.5 years old cattle; skeleton of an 8–10 months old pig; skeleton of a 2–2.5 years old pig; skull and a vertebra of a pig foetus; vertebrae and limb of an adult ewe; skeleton of an adult dog; limb of a young hare. The animals were probably killed in spring and in autumn.*

Pit no. 1795, cutting 39/5, under culture-bearing layer 925, older classical Baden (fig. 15 a, b).

***Feature:** The shallow, beehive-shaped pit was dug into forest soil mixed with culture-bearing layer 925. It was filled with compact grey soil with some charcoal and loess lumps. The skeletons of two animals were uncovered: an 8–10 years old sow lay on the right ride, the forelegs were extended in opposite directions, the hind legs were side by side. The skeleton of a 2–2.5 years old bull lay beside it. The animals were probably killed in autumn.*

***Finds:** Half of a conical spindle-whorl (fig. 15 c).*

Pit no. 1844, cutting 41/3, indistinctive Baden (fig. 16).

***Feature:** A combined cross-section was made from pits nos. 1844 and 1869: Pit no. 1869 intersected pit no. 1844. Pit no. 1844 was filled with brown soil mixed with some charcoal, daub and loess. A bent cattle skeleton was uncovered on the bottom of the pit together with other animal bones.*

***Zoology:** Skeleton of a more than 4 years old bull; partial skeleton of a 3.5–4 years old cow; skull and limbs of a 4–6 months old sheep; partial skeleton of a bitch; limb of an adult pig. The animals were probably killed in autumn.*

Pit no. 1886, cutting 46/8, under culture-bearing layer 925, phases IIA-B-III (fig. 17).

***Feature:** The round pit was filled in with loose dark brown soil mixed with some loess and daub. A cattle skeleton was uncovered partial skeletons of other animals were found beneath it.*

***Finds (10 kg):** Profile fragment of a bipartite bowl with an inverted rim; dippers; upper fragment of a jug; awl made from the tibia of a small ruminant; flaked blade; back fragment of a bored-through stone axe with a fragment of the arch of the shaft hole; flat, handy stone fragment: pounder or polisher?*

***Zoology:** Skeleton of a 3.5–4 years old cow; limb of an adult cattle; limb and vertebra of a cattle; skeleton of an 8–10 months old pig; limb of an adult pig; limb of a sub-adult pig; limb of a sheep. The animals were probably killed in winter.*

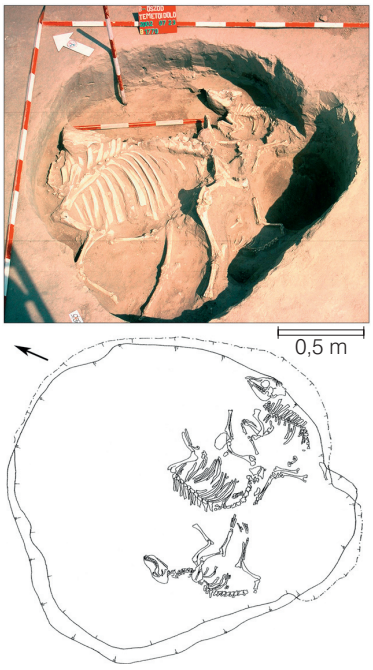


Fig. 14. Pit no. 1770.

Abb. 14. Bef. Nr. 1770.

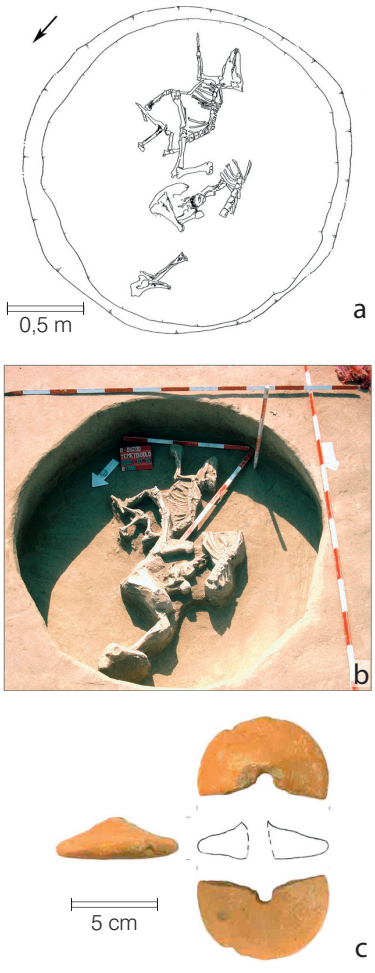


Fig. 15. Pit no. 1795 and selected find.

Abb. 15. Bef. Nr. 1795 und Fund.

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2. Features with human skeletons

a. Human burials at the site

The skeletons of 67 individuals from 38 features can be grouped in the Late Copper Age at the Balatonőszöd-Temetői dűlő site (table 1, p. 43, 44).

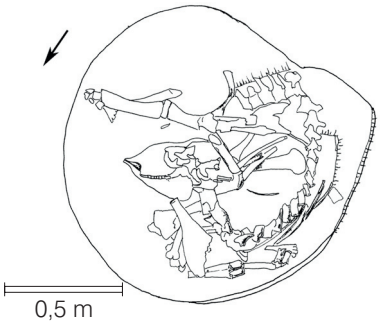
Instead of being buried in a regular cemetery separated from the settlement (extramural), the skeletons were placed / thrown into pits within the settlement (intramural) as separate burials or - in a number of cases - within ritual contexts (in stratified sacrificial pits, together with animal skeletons). In certain cases we can only say that they were found in pits of an uncertain function: refuse pit with a secondary function; ritual pit; grave dug for a burial; punishment pit?

We tried to separate the individuals whom the community treated with special respect and prepared them for the afterlife from the positioning of the human skeletons and the grave furniture. These bodies were arranged in a crouched position, animal companions, food, feast for the otherworld (animal bones) and other objects were placed beside them. In a number of cases they lay in shallow oval or rectangular (grave?)–pits close to the surface. In contrast, a group of individuals did not receive any care, the corpses were evidently thrown into the pit and no grave-goods were placed beside them. Accordingly, three groups could be differentiated:

a bloody sacrifices (multi-component pits with human corpses discussed under point 1 and conditionally skeletons without grave-goods, thrown into the pit): features nos. 203, 411 (?), 426, 744, 981, 1099, 1612, 1085, 1099, 1106, 1236, 1277, 1489, 1649, 1832.

b intramural burials (in a regular crouched position with grave-goods): pits nos. 442 (?) 962 (?), 1617 (?), 1657, 1823, 1896 (?), 1992, 2019, 2058 (?), 2102, 2116, 2344, 2363, 2614, 2635, 2800.

c instances of post-mortem (sacral?) manipulations: features nos. 1228, 1334, 1915, 2236, 2327, 2480, 268.



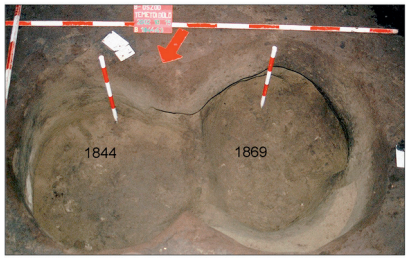


Fig. 16. Pit no. 1844.

Abb. 16. Bef. Nr. 1844.

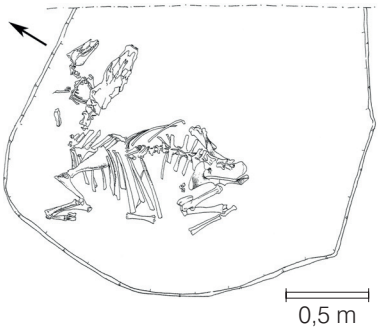
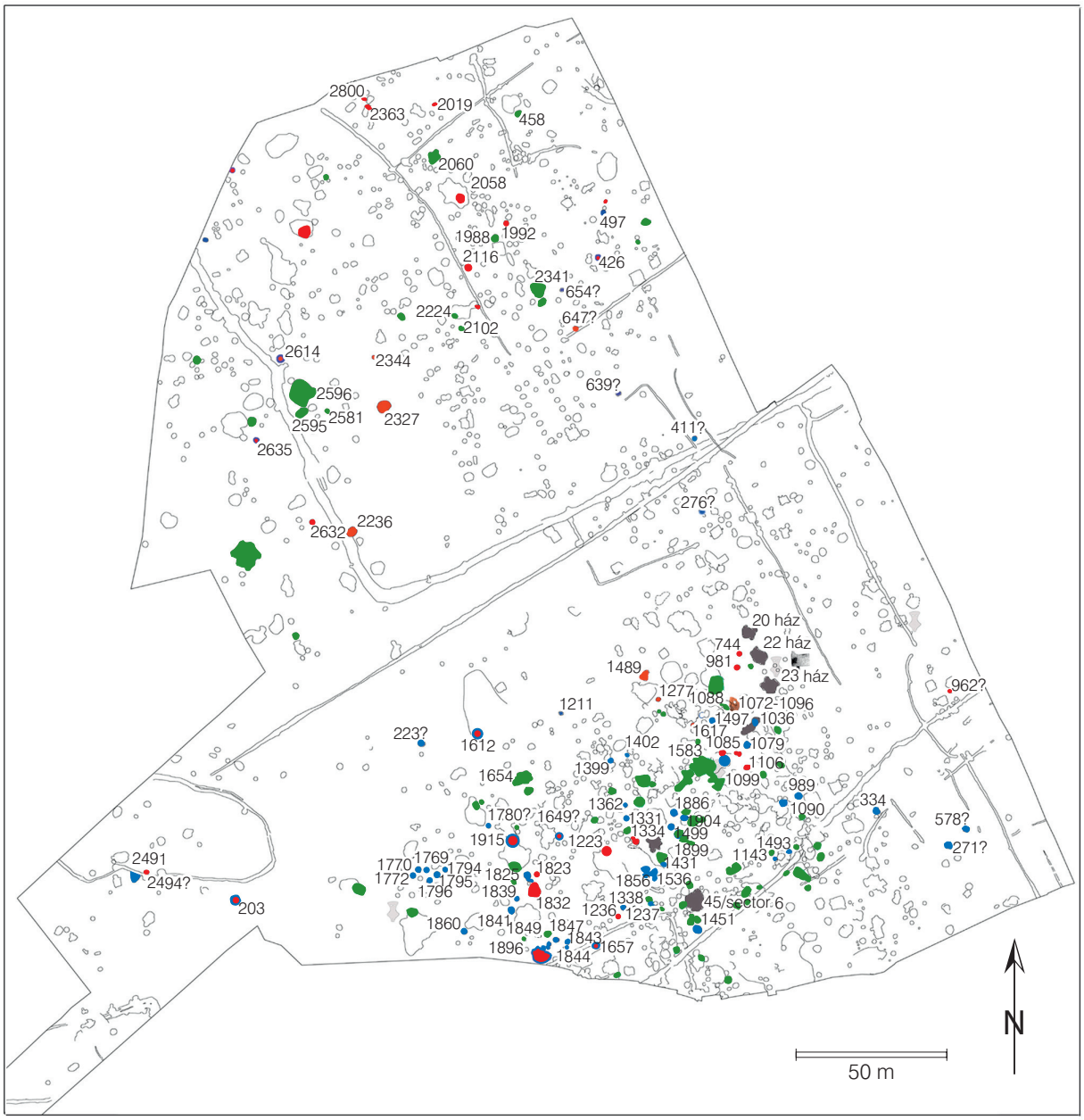


Fig. 17. Pit no. 1886.

Abb. 17. Bef. Nr. 1886.

The classification made on the base of logical reasoning shows certain overlapping: e.g. crouched and thrown in skeletons can occur in the same pit (pits nos. 426, 744, 1236, 1277, 1489), and partial skeletons can be found beside complete skeletons (pits nos. 744, 981).

The more exact dating of the features with human skeletons has demonstrated that the distribution of the pits generally matched the situation that was sketched for the entire settlement: the pits of the Boleráz phase were dug in the northern part of the settlement in the Boleráz settlement centre, while the pits dated from the older classi-



cal Baden were found in the southern part of the settlement, in the centre of the classical Baden settlement (fig. 18).

There are, however, a few exceptions. Pit no. 426, which according to the finds and the radiocarbon measurements dates from the older classical phase, was found in the Boleráz centre, and the burials of pits nos. 2019, 2058, 2116, 2236 were also discovered there. The radiocarbon measurement of skeleton no. 70 uncovered in well no. 1099 demonstrated that it could rather be grouped in the Boleráz phase, while the feature itself was dug at the time of the Balaton–Lasinja culture on the territory of the settlement of the later classical phase. These few examples illustrate that there existed a spatial and chronological overlapping between the Boleráz and the Baden settlement areas in the chronological time-span between 3300 and 3100 cal BC, which suggests that two independent communities of Boleráz and Baden identities lived side by side in this period (Horváth 2009b). When the pits did not contain valuable finds and we did not have the opportunity to carry out a ^{14}C-dating, the position of the features was not considered sufficient for a more exact dating because of the above listed exceptions.

In the following, we try to identify and classify the regularities observed in the burials by various aspects:

Fig. 18. Balatonőszöd–Temetői dűlő: map of the sacrificial features. Key: Red - human burial, blue: animal burial, green: sacral vessel or object.

Abb. 18. Balatonőszöd–Temetői dűlő: Kartierung der Opfergruben. Legende: rot - Menschengrab, blau - Tiergrab, grün - sakrales Gefäß oder Objekt.

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According to the position of the skeleton:

a laid – crouched: burials nos. 4, 32, 35, 37, 39, 41, 42, 48 (?), 50, 53, 56, 58, 59, 60, 62 (?), 66, 67–89, 74, 79, 85, 91. (?).

b laid – legs in a frog position: burials nos. 20, 26, 28

c thrown in: burials nos. 2, 10, 19, 21, 23, 24, 25, 27, 29, 31, 38, 43, 44, 45, 46–47, 52 (?), 63, 69, 70, 72, 75, 81, 82, 83, 84, 86, 87.

According to the condition of the skeletons at uncovering:

a lack of cervical vertebrae between the head and the vertebral column observed in situ during cleaning: burials nos. 27, 35, 53.

b only skulls: burials nos. 22, 33, 36, 64–65, 71 (skull of a baby: the skeletal bones were absorbed by the soil or was the skull originally separated?).

c skull fragments: burials nos. 34, 68, 73, 88, 93.

d human limb fragments without any connection: burials nos. 90, 92.

Skull fragments occurred only in the early (IB–C–IIA) phases apart from pit no. 1334, while individual skull and limb bones were found only in the older classical phase.

According to phenomena related to the burials:

a oven/hearth next to the feature with a human skeleton, in direct connection with it: pits nos. 1085, 1106, 1228.

b the skeleton was found with traces of burning, under or in an ashy layer together with burnt ceramic fragments: burials nos. 27, 35, 36, 37, 38, 39, 41, 48–71, 58, 66, 74, 79, 88.

c a posthole can be found beside the pit with a human skeleton: pit no. 1106 – burial no. 27, posthole: no.1122.

d a shallow pit filled with ashy soil beside the pit of the burial, starting from the same level: pit no. 1489 – pit no. 1495.

e cattle burial in the direct vicinity of a human burial: pits nos. 1085 – 1583; 1236 – 1237; 1334 – 1331; 1832 – 1839, 1841.

Number of burials according to individuals / feature:

a a single individual in one feature: burials nos. 2, 4, 10, 26, 27, 41, 42, 44, 45, 48. + skull no. 71 (two skeletons in a single pit?); 50, 52, 53, 56, 58, 59, 60, 62, 66, 74, 79, 85, 91 [4].

b two individuals in one feature: skeletons nos. 20–21 + skull no. 22; skeletons nos. 24–24 + limb bone no. 90; skeletons nos. 28–29; skeletons nos. 31–32 + skull no. 33; skeletons nos. 43–63 + skulls nos. 64–65; skeletons nos. 46–47.

c four individuals in one feature: burials nos. 19–23–67–89 in subsequent levels in pit no. 426.

d five individuals in one feature: skeletons nos. 35–36–37–38–39 (there could be seven skeletons (+ 95), only skull no. 36?).

e ten individuals in one feature: burials nos. 69–70–72–75–81–82–83–84–86–87.

4 The cases where only the skeletal parts of another individual were found beside a complete human skeleton are also grouped here. The same aspect was followed in the case of multiple burials.

Burials by gender and age:

a newborn babies: burials nos. 38, 71.

b infants: burials nos. 21, 25, 29, 32, 33, 35, 36, 39, 43, 45, 46, 47, 48, 52, 56, 62, 63, 66, 70, 83, 84, 85, 86 (?), 87 (?), 89, 91.

c only infants lay in pits nos. 203, 1612 in subsequent layers, with animal corpses; in pit no. 2058, in pits nos. 1915 and 1832 each two infant skeletons; in pits nos. 2102 and 2800.

d females: burials nos. 19, 20, 24, 26, 28 (?), 31, 37 b, 42, 44, 50, 59, 64, 69, 74, 79, 81, 82, 88.

e males: burials nos. 27, 37a, 41, 53, 58, 67, 72, 75, 95.

f adults of undeterminable gender: 29, 34, 65, 68, 73.

g missing skeletons: burials nos. 2, 4, 10, 23, 60, 86, 87.

Burials according to the grave-goods:

a animal skeleton together with a human skeleton in the same feature (accompanying or totem animal): pit no. 1106: male with sheep?; pit no. 1896: female with a calf; pit no. 2344: male with a pig; well no. 1099: dog and other animal bones.

b animal bones next to a human skeleton (remains of a feast in the otherworld?): pits nos. 1106 (?), 1649, 1657, 1915 (perhaps accompanying sheep skeleton?), 2614 (perhaps accompanying cattle and sheep?), 2635; fish bones: 1362, 2327.

c ceramic packing over the human skeleton: burials nos. 41, 53, 66.

d shards were found beside human skeletons in features nos. 203, 426, 981, 1085, 1106, 1334, 1489, 1612, 1617, 1649, 1657, 1823, 1832, 1896, 1915, 1992, 2019, 2058, 2102, 2116, 2236, 2327–2346, 2344, 2363, 2480, 2614, 2635, 2668.

e ladle: in features nos. 2102, 2327.

f ochre lump beside a human skeleton: pit no. 2363, 2058, 2327–2346.

g spindle whorl grave-good: in features nos. 1489 and 2480.

h flaked stone tools: in features nos. 426, 744, 1489, 1823, 2019, 2614.

i polished stone tools: stone axes: in features nos. 1085, 1228, 1915, 2102; querns in features nos. 1106, 1334, 1832, 2327; polishers: in features nos. 1832, 2058, 2327; pounders in feature no. 2058; weight in feature no. 1228; pitch soldering stone in feature no. 2327.

j bone tools: in pits nos. 1085, 1649, 2236, 2327 .

A number of workshop finds (cores, waste, bore core of a shaft-hole axe) found in the pits among the flaked and polished stone tools suggest that the tools used during the ceremonies were prepared on the sacrificial scene and after they had been used, they were placed into the sacrificial pit: they were not used for other purposes.

According to the finds uncovered in the pits: fine dating of the burials (Fig. 19):

a 4 features are grouped in the Boleráz phase IB / C (1099 (?), 2102, 2327–2346, 2614);

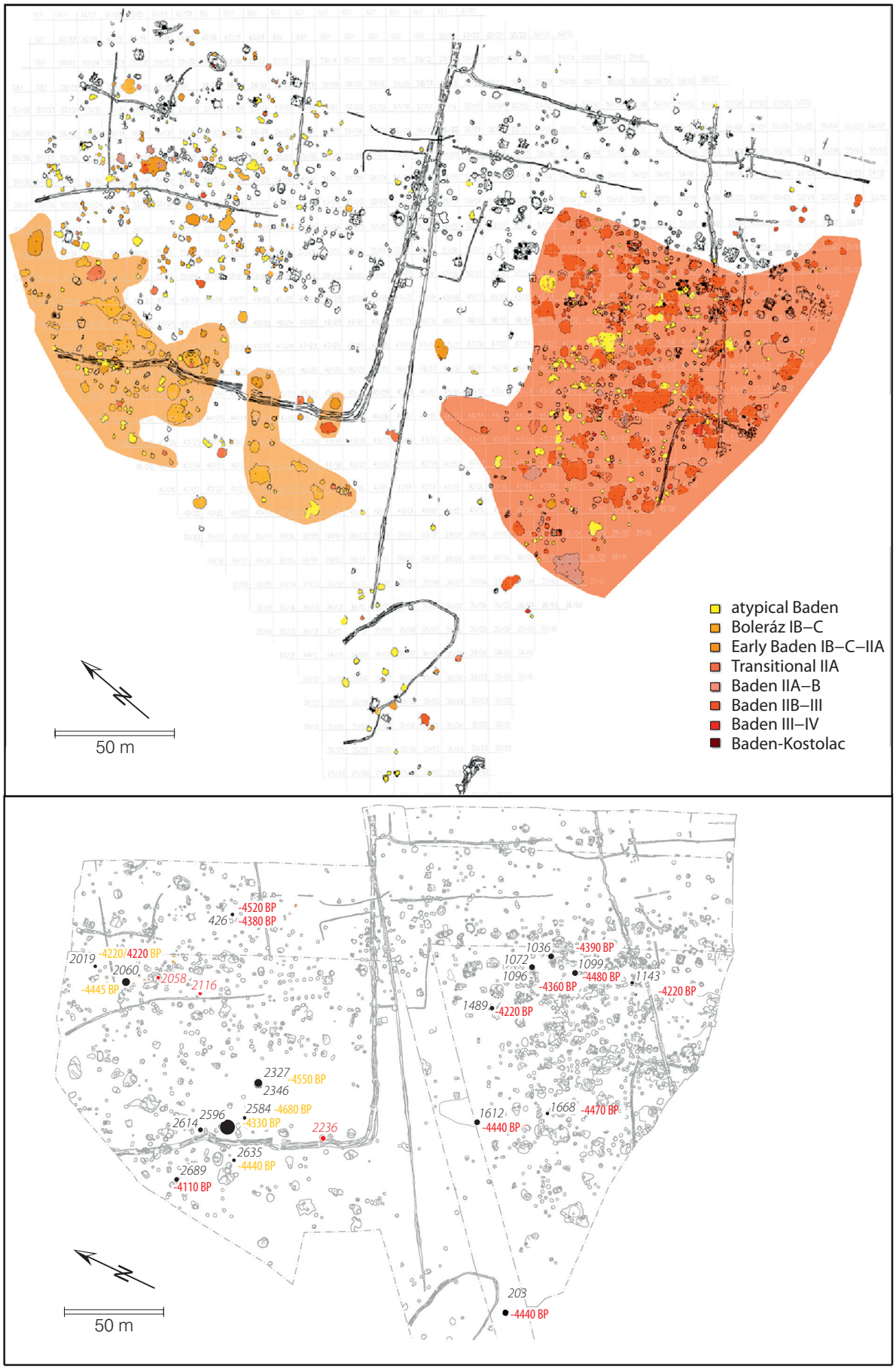


Fig. 19. Balatonőszöd–Temetői dűlő. Map of the site with the Boleráz / Baden periodisation and ^{14}C-data.

Abb. 19. Balatonőszöd–Temetői dűlő. Kartierung der Boleráz / Baden-Zeitstellung und ^{14}C-Daten.

b 7 more pits are conditionally grouped here owing to their locations (411, 442, 2344, 2363, 2635, 2668, 2800; most of them seem to be regular intramural burials)

c 5 pits are grouped in phase II A (203, 1823, 1992, 2236, 2480);

d 11 pits are grouped in the older classical phase IIB/III (426, 981, 1085, 1106, 1228, 1334, 1489, 1612, 1649, 2019, 2116);

e 8 more pits are conditionally grouped here (744, 962, 1236, 1277, 1617, 1657, 1896, 1915);

f 2 pits are grouped in phases II A-B (1832, 2058).

Catalogue of features with human skeletons

Pit no. 411, cutting 55/21, Baden culture? (fig. 20).

Feature: *The oval pit was filled with dark brown, compact soil with some charcoal and much daub. The N-S oriented human burial no. 2 lay beside a few indistinctive shards and animal bones. The thrown in body lay on the belly with the face looking forwards, the head turned to SW. The left arm was bent under the body, the right arm was extended along the trunk, the legs were strongly pulled up.*

Pit no. 442, cutting 58/22, Baden culture? (fig. 21).

Feature: *The oval pit was filled with light brown soil mixed with loess. Human burial no. 4 lay crouched on the right side in a W-E direction with the face to the N. The arms were bent at the elbows, the legs were strongly pulled up, the thighbones lay over the legs. No other valuable finds were uncovered.*

Pit no. 647, cutting 54/27, Baden culture? (fig. 22).

Feature: *The filling of the pit contained shards from the late Migration Period, which had probably come from trench no 383 of the same age, which intersected feature no. 647. The round pit no. 647 was filled in with dark brown compact soil mixed with loess. The thrown in human skeleton no. 10 lay on the back. The trunk was twisted to the left, the two arms were bent and pulled up in front of the face, the legs were bent to the right and pulled up higher than the trunk, the left leg was bent, the right one was extended. Animal bone fragments lay close to the head.*

Pit no. 744, cutting 51/13, under / on the border of culture-bearing layer 925, indistinctive (older classical?) Baden (fig. 23).

Feature*: The round beehive-shaped pit was filled with compact brown soil mixed with charcoal grains. Human burial no. 20 was W-E oriented with the head facing S. The skeleton lay on the back. The legs were pulled up in a frog-position. The right knee rested on human skull no. 22 found under it. Burial no. 21 lay on the belly in an extended position in a S-N direction facing E. Burial no. 22 was a single skull. No other valuable find material was uncovered beside the human bones. Pit no. 743 beside it contained an anthropomorphic suspension amphora.*

Anthropology: *Burial no. 20: 17–22 years old female. Pathology: the right auditory passage was ossified, the surface became porous on an about 1.5 cm x 1.5 cm large area on the interior surface of the bone above the petrous bone. The disease probably caused impairment of hearing on the right side. Burial 21: 9–11 years old infant. Pathology: premature fusion can be observed on the cranial sutures: at the edges of the coronal suture, in the entire length of the sagittal and lambdoidal sutures, the ectocranial fusion is phase III. A strong cribra orbitalia can be seen on the right side, the left orbit is missing.*

Pit no. 962, cutting 56/9, Baden culture? (fig. 24).

Feature: *The round pit was filled with brown, compact, uniform soil and it did not contain finds apart from the skeleton. Human burial no. 26 (40–46 years old female) lay on the bottom of the pit with flexed legs and the hands bent on the chest. It had a W-E orientation, the face looked to the N. The legs were bent under the thighbones. It lay on the back.*

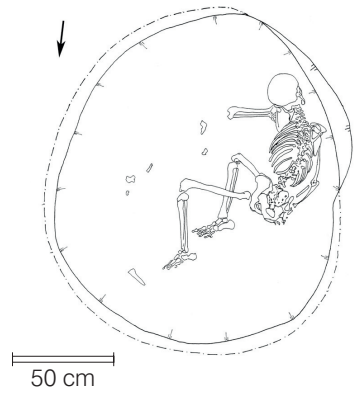


Fig. 20. Pit no. 411.

Abb. 20. Bef. Nr. 411.

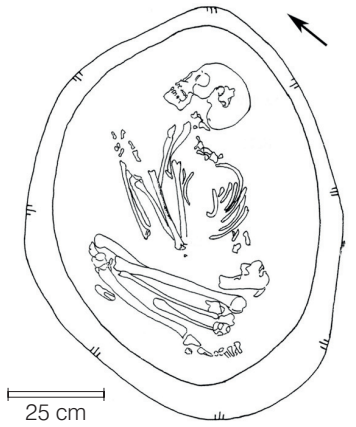


Fig. 21. Pit no. 442.

Abb. 21. Bef. Nr. 442.

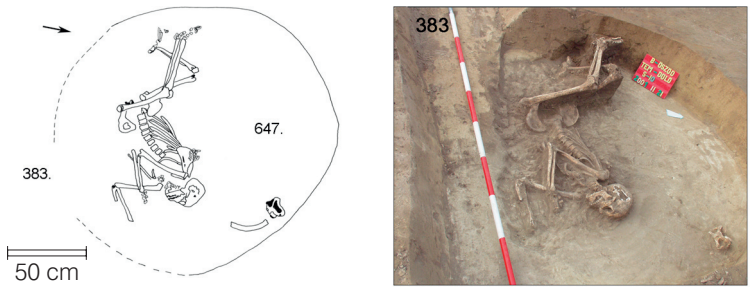


Fig. 22. Pit no. 647.

Abb. 22. Bef. Nr. 647.

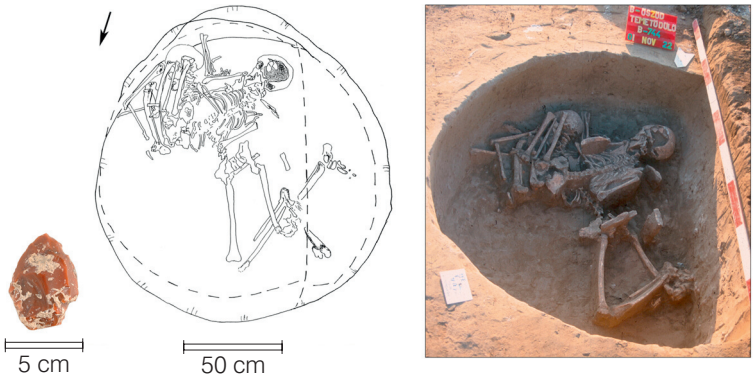


Fig. 23. Pit no. 744.

Abb. 23. Bef. Nr. 744.

Pit no. 981, cuttings 51/12, 13, under culture-bearing layer 925, older classical Baden (fig. 25).

Feature: *The round pit was filled with brown soil mixed with some daub. The thrown in human burial no. 24 (16–18 years old female) lay on the belly in a SE-NW orientation. Human burial no. 25 (2–3 years old infant) lay on the left side under the female skeleton, in the region of the chest. The head was found in the area of the nape / back of the woman. No more skeletal parts were found with the human thighbone no. 90.*

Finds (2 kg): *Small, complete pot.*

Pit no. 1099 – well no. 1, cutting no. 49/10, under culture-bearing layer 925, older classical Baden? (fig. 26).

Feature: *The amorphous pit was filled with brown soil with loess grains. The feature and its ceramic material (7 kg) can be grouped in the Balaton-Lasinja culture. The well shaft was re-opened at the time of the Baden culture: animal bones and partial skeletons were placed in it on the top and human sacrifices and a dog were put on the bottom. The uncovered 10 burials got entangled in three layers (layer 1: nos. 69, 70, 72; layer 2: nos. 75, 81; layer 3: nos. 82, 83, 84, 86, 87) in the narrow shaft.*

Anthropology: *Burial no. 69: adult (25–34 years old) female. Pin-shaped bony growths can be observed on both calcanei, which were probably generated by overstress.*

burial no. 70: infant of infans II age (ca. 13–14 years old).

burial no. 72: adult-mature male (34–43 years old).

burial no. 75: mature male (44–52 years old). The pin-shaped bony growths on the patellae and the calcanei were probably caused by overstressed muscles.

burial no. 81: adult (34–40 years old) female. The stature is high even according to Pearson, Bach and Sjøvold.

burial no. 82: mature (48–56 years old) female.

burial no. 83: infant of infans II age (8–9 years old).

burial no. 84: infant of infans I age (ca 5 years old).

burial no. 86: the human skeleton could not be lifted.

burial n. 87: the human skeleton could not be lifted.

^{14}C date: *from human skeleton no. 70: deb-13379, 4480±70 bp: 3340–3090 ±70, 1 σ BC.*

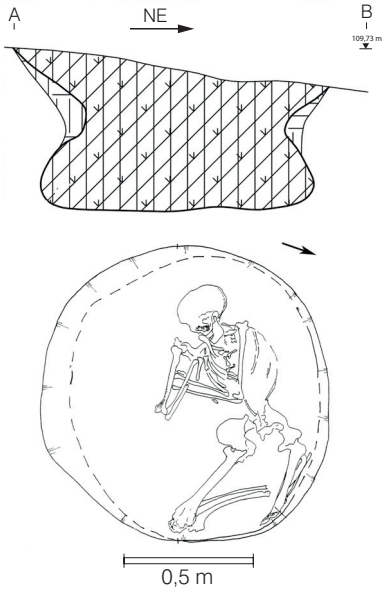


Fig. 24. Pit no. 962.

Abb. 24. Bef. Nr. 962.

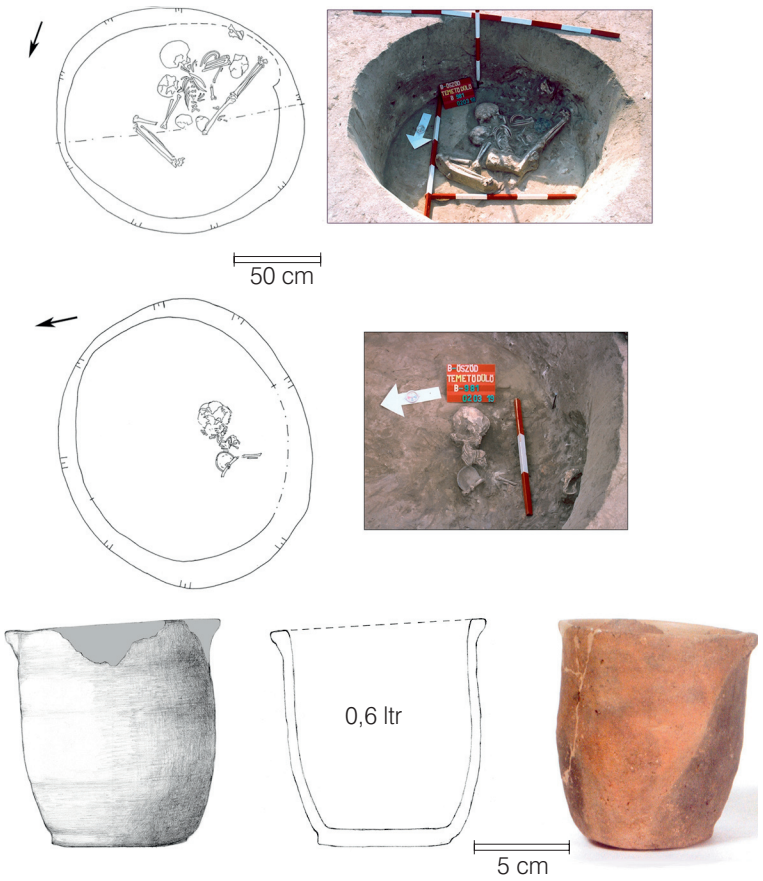


Fig. 25. Pit no. 981 and selected finds.

Abb. 25. Bef. Nr. 981 und ausgesuchtes Fundmaterial.

Pit no. 1106, cutting 49/10, under culture-bearing layer 925, older classical Baden.

Feature (fig. 27 a–d): *The round, beehive-shaped pit was filled in with grey, ashy soil. In cross-section, the upper layer of the pit was brownish-yellowish grey humus mixed with organic matters and loess, while the lower layer, which contained the skeleton, was ashy with charred bones. Human burial no. 27 lay on the belly in a S-N orientation in a thrown in position with the face to the N and definite traces of burning around the head. The legs were crouched, the arms were bent at the elbows and opened at a right angle. The cervical vertebrae were missing. There were animal bones around the head. A shallow posthole was discovered on the NW side of the pit (1122). Pit no. 1106 intersected oven no. 162, and posthole no. 1122 intersected pit no. 1106.*

Finds (1.5 kg): *Lower fragment of a handled jug decorated by channelling (fig. 27 b 1); hemispherical bowl of an inverted rim with a double row of stabbed dots on the shoulder and incised oblique lines on the belly (fig. 27 b 2).*

Anthropology: *Burial no. 27: 23–27 years old male. Teeth (fig. 27 c): The upper two M3 are rudimentary. Abrasion is stage 2 apart from the much more abraded incisives, the strong abrasion of which is probably due to some kind of a work process. Pathology: A bony protuberance surrounded by a depression can be seen on the frontal edge of the right tibia without superficial traces of inflammation. Long eroded surfaces can be seen on the frontal and the medial sides of both femurs, especially the right one, with definite, sometimes vague outlines but always with uneven and coarse surface. On the right femur, the erosion is ca 7 cm long on the frontal side, 2 cm along the interior edge and 2.8 cm long somewhat lower. On the left femur, two touching 1.6 cm x 1.6 cm and 1.4 cm x 1.4 cm large traces can be found on the frontal edge and a longitudinal 6 cm long trail runs on the lateral side of the bone. A face reconstruction (fig. 27 d) has been made of the excellently preserved skull (by Ágnes Kustár).*

Zoology: *skeletal part of an about 2 years old cattle; skull and limbs of a subadult sheep; mandible and limb of a 4–6 months old pig; part of a dog skeleton. The animals were probably killed in spring.*

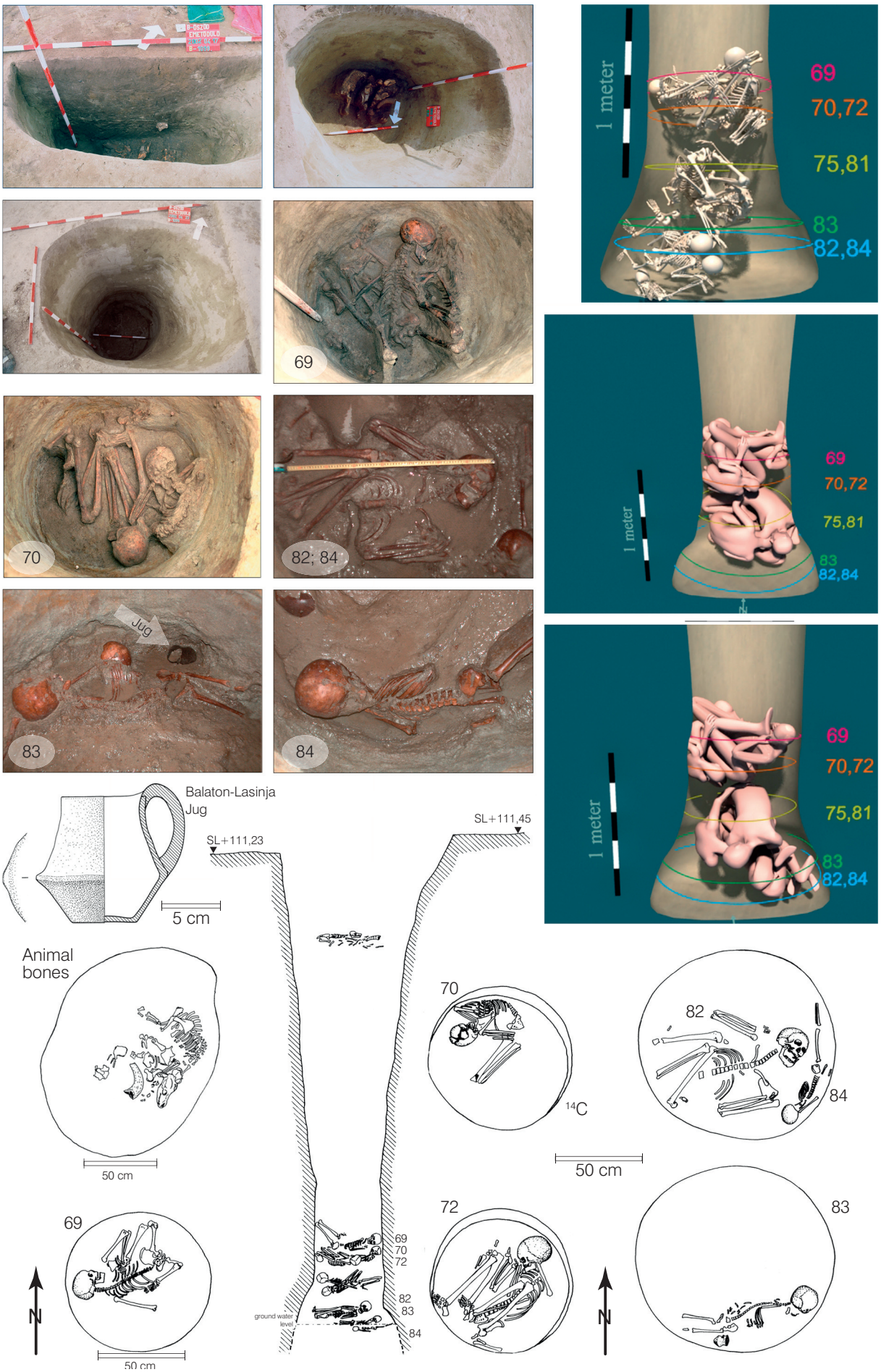


Fig. 26. Pit no. 1099 – Well no. 1. *Abb. 26. Bef. Nr. 1099* – Brunnen Nr. 1

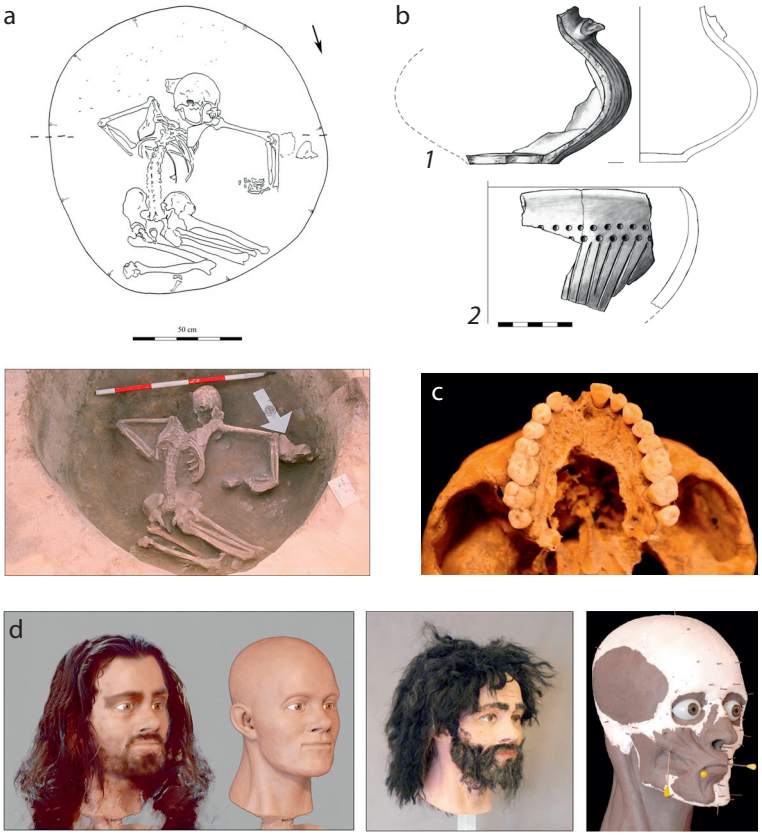


Fig. 27. a Pit no. 1106; b finds of pit no. 1106: 1 fragment of handled jug, 2 bowl; c burial no. 27: photograph of upper jaw., d burial no. 27: face reconstruction.

Abb. 27. a Bef. Nr. 1106, b Funde aus Bef. Nr. 1106: 1 Scherbe einer Henkelkanne, 2 Schüssel; c Grab 27: Fotofgrafie des Oberkiefers; d Grab 27: Gesichtsrekonstruktion.

Pit no. 1228, cutting 44/9, under culture-bearing layer 925, older classical Baden.

Feature: *The amorphous large pit intersected pit no. 1270. Beside many finds of the Baden culture, it contained an anthropomorphic weight, a human thighbone (human burial no. 92, adult male) and a heap of small river pebbles of identical sizes and rounded surfaces. The filling was dark reddish – black, compact, with daub, ash and charcoal. Features nos. 1258, 1259 and 1263 were found under the discolouration of pit no. 1228. Ovens nos. 190-191 and pits nos. 1228, 1256, 1258, 1259, 1263, 1266, 1270 and 1271 form a unit.*

Finds (6 kg): *Fragment of a small jug with missing areas in the rim and the handle; fragment of a small handled cup/bowl; edge fragment of a shaft-hole stone axe; small anthropomorphic weight.*

Pit no. 1236, cuttings 42/4-43/5, indistinctive Baden (fig. 28).

Feature: *The round pit was filled with dark reddish black compact soil mixed with charcoal and loess grains. It contained no finds apart from two human skeletons lying across one another. Human burial no. 28 was thrown into the pit. It lay on the back in a S-N direction. The trunk was extended, the face looked up, the feet were in a frog position. Human burial no. 29 was found under the pelvis of burial no. 28. It was also thrown into the pit. It lay on the back in a NE-SW direction. The face looked up, the legs were pulled up. A cattle burial was uncovered in pit no. 1237 next to pit no. 1236.*

Anthropology: *Burial no. 28: 16–18 years old female(?). Anatomical variation: a sharp bony growth can be found on the lateral edge of the left humerus at the start of the lower quarter. Pathology: a strong cribra orbitalia can be observed on the left orbit, while the right orbit is fragmentary. Each two parallel, very deep vein impressions can be observed on the interior surfaces of both orbits.*

burial no. 29: 15–17 years old infant. Pathology: the porosity observed on the walls of the cranium marks the early phase of the so-called "Bürstenschädel", which is characteristic of a variant of anaemia.

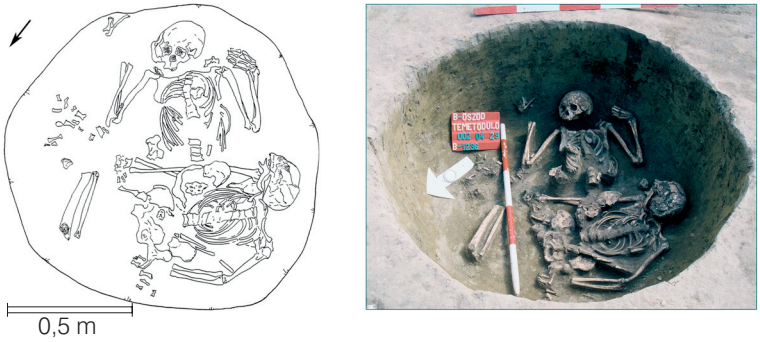


Fig. 28. Pit no. 1236.

Abb. 28. Bef. Nr. 1236.

Pit no. 1277, cutting 48/13, under culture-bearing layer 925, older classical Baden (fig. 29).

Feature: *The oval pit was filled with dark grey soil mixed with ceramics, daub and charcoal. Human burial no. 31 was a thrown in skeleton lying on the belly in a W-S direction with the face looking toward the earth. The left leg was flexed, the right was pulled up. Human burial no. 32 (8 years old infant) lay in front of it in the S in a W-E direction facing S. Human burial no. 33 (3 years old infant) lay on the N side of skeleton no. 31.*

Finds (2 kg): *Wall fragment of a bipartite bowl with a fragment of the dividing wall.*

Anthropology: *Burial no. 31: 34–40 years old female. The calculated stature of the very gracile individual belongs in the extremely low category. Pathology: abrasion can be observed on the surfaces of the lumbar vertebrae, which cannot be observed on the thoracic region of the vertebral column.*

Pit no. 1334, cuttings 45/8, 9, under culture-bearing layer 925, phase IIB (fig. 30 a).

Feature: *The amorphous pit was filled with compact soil mixed with lime lumps. It intersected pit no. 1372. A common cross-section was left of the two shallow features, which could be a single pit since their filling was uniform. Shards, animal bones (parts of cattle and sheep) and human skull fragment no. 34 lying on the top of the skull lay in a small heap on the bottom of pit no. 1334.*

Finds (2.5 kg): *Fragment of a pot-shaped handled jug, the wall, the rim and the handle are missing; completed pot-shaped handled jug, the bottom and the handle are damaged, very worn, completed bowl, more than half of it is complete, the rim is thinned, strongly everted, the belly is rounded truncated-cone-shaped; about half fragment of a large quern with a raised terminal, sandstone.*

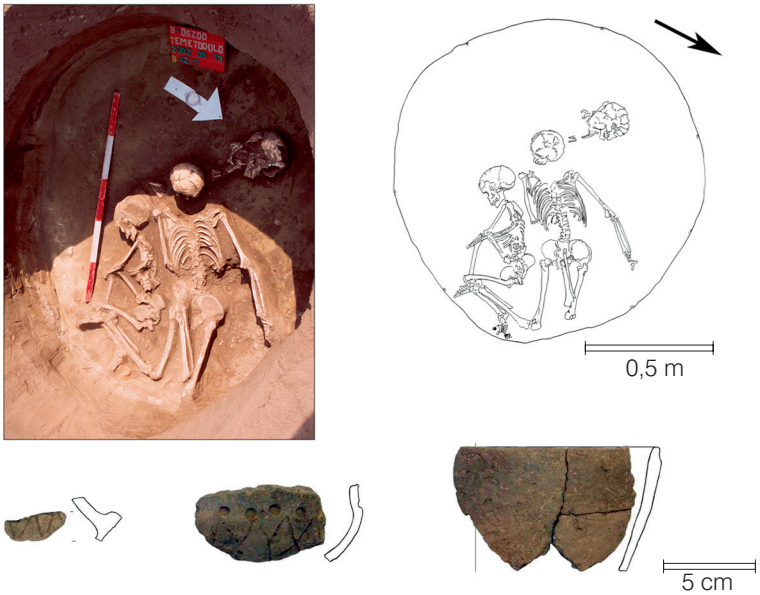
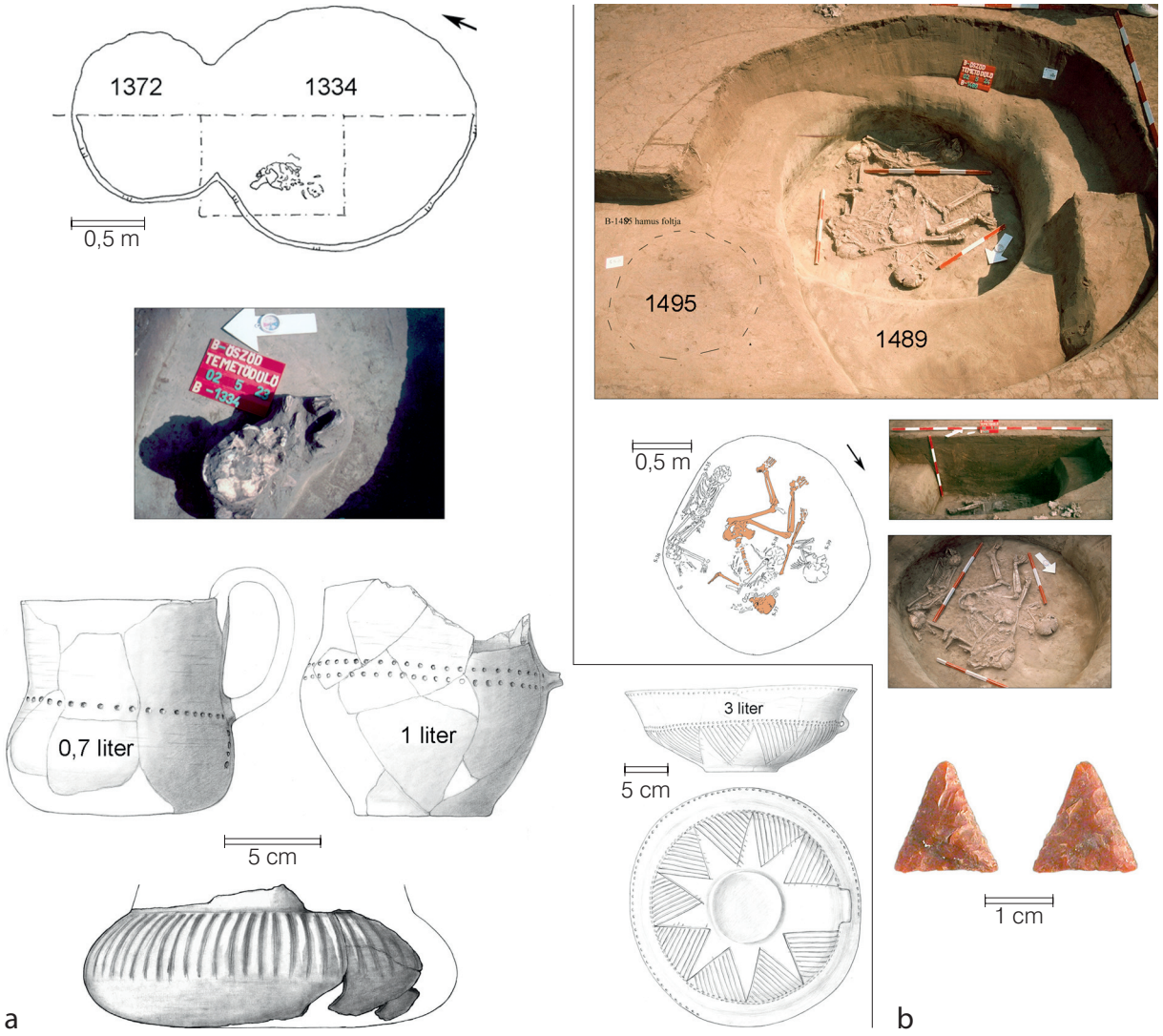


Fig. 29. 1277 and ceramic finds.

Abb. 29. Bef. Nr. 1277 und Keramik.



Pits nos. 1489-1495, on the border of culture-bearing layer 925, cuttings 48/13 – 49/14, phase IIB (fig. 30 b).

Feature: *The round, beehive-shaped pit was dug in forest soil. It was filled with compact greyish brown soil. Round pit no. 1495, which was dug on its E side, was filled with compact grey soil mixed with charcoal. The upper layer of the pit was compact, light brown with some loess, charcoal and daub grains mixed with shards. Underneath, the filling was compact grey with loess and a few daub grains. Human burial no. 35 followed the S side of the pit. It lay on the right side/back as it was thrown into the pit, the legs were pulled up at the knees, the head was strongly tilted back, the cervical vertebrae were incomplete. The arms lay extended along the trunk. Human burial no. 36 was at its knees: the fragments of a skull with the face to the N, toward the bottom of the pit. The bones of the fingers and the cervical vertebrae were also found (had the skeleton been removed or had it originally been defective?). A thick burnt layer was petrified on it. Human burial no. 37 was found at the knees of burial no. 35: it was strongly burnt. It lay on the back, the legs were strongly pulled upon the right side, it faced S, the legs were turned to the N, opposite direction to the face, the arms were opened to the sides. The E-W oriented skeleton lay in the centre of the pit. After the cleaning of the bones, a microlithic arrowhead was found wedged in a vertebra. Human burial no. 38 had a W-E orientation. The extended skeleton lay on the back facing S. The arms lay along the trunk, the legs were pulled up on the right side. It lay over skeleton no. 37, on its chest. Human burial no. 39 had a N-S orientation facing W. It lay on the right side in a strongly crouched position. The hands embraced the pulled up knees. It was found under skeleton no. 37 in the N part of the centre of*

Fig. 30. a Pit no. 1334, b pit no. 1489 and selected finds.

Abb. 30. a Bef. Nr. 1334, b Bef. Nr. 1489 und ausgesuchtes Fundmaterial.

the pit. The anthropological analysis differentiated the remains of 7 individuals (1 newborn baby, 3 infants, 1 female and 2 males) in the pit.
***Finds (1 kg):** about half of a spindle-whorl; slightly barbed, triangular flaked arrowhead of a slightly concave base from the vertebra of skeleton no. 37 b.*
***Anthropology:** Burial no. 35: 10–12 years old infant.*
burial no. 36: infant of infans I age.
burial no. 37: 23–27 years old male (a) and 26–32 years old female (b): the skull of a male, the skeletal bones of a female and fragments of the skeletal bones of infant no. 36 were packed together in a package marked "37". Description: The skull of the male (37 a) was so scaled and incomplete that neither a reconstruction nor an analysis could be carried out. The skeletal bones of the female (37 b) were better preserved and afforded the calculation of the stature, which belonged to the average category.
burial no. 38: ± 0,00 year old infant; burial no. 39: 6–7 years old infant.
burial no. 95: A mature male: it is composed of the fragments of skeletal bones. The cervical vertebrae prove that they could not belong to the skull of burial no. 37. Pathology: a healing fracture can be observed close to the sternal terminal of one of the lower ribs. The ends of the fractured bone were not displaced and no inflammation developed during healing. The fracture of the bone could be contemporary to other wounds that caused the death of the individual.
***^{14}C date:** from the skeleton of female no. 37 b: deb-13389, 4200±35 bp: 2810–2750 ±35, 1 σ BC.*

Pit no. 1617, cutting 49/12, under culture-bearing layer 925, indistinctive (older classical?) Baden (fig. 31).
***Feature:** Human burial no. 62 lay in a crouched position in a W-E direction facing E. It was found in a damaged condition.*
***Anthropology:** Burial no. 62: 14–15 years old infant. Pathology: a slight cribra orbilatia can be observed on both sides.*

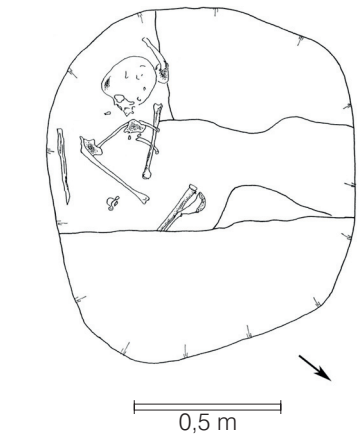
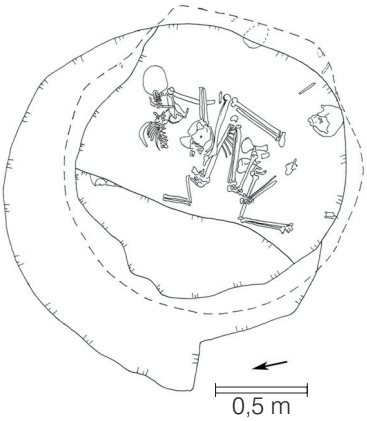


Fig. 31. Pit no. 1617.

Abb. 31. Bef. Nr. 1617.



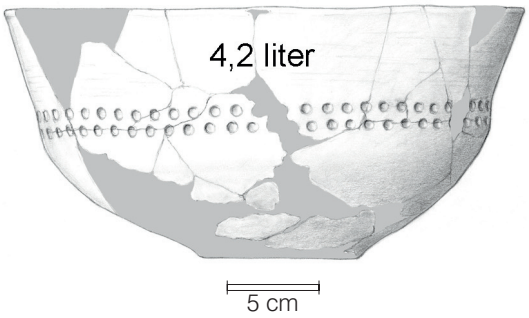


Fig. 32. Pit no. 1649 and selected finds.

Abb. 32. Bef. Nr. 1649 und ausgesuchtes Fundmaterial.

Fig. 33. Pit no. 1657.

Abb. 33. Bef. Nr. 1657.

Pit no. 1649, cutting 43/8, phase IIB (fig. 32).

Feature: *The oval beehive-shaped pit was filled with dark brown soil mixed with daub. Human burial no. 43 in the N part of the pit was a thrown in body. It lay in a totally twisted position with the head downwards. It lay on the left side/the belly, the legs were pulled up, the left leg lay over the right one. Human burial no. 63 was found beneath burial no. 43. It was N-S directed, it lay on the belly, the legs were in a crouched position. Human skulls nos. 64 and 65 lay on the S side of the pit.*

Finds (1 kg): *Half of a bowl of an everted rim, completed; awl made from the metacarpal of a small ruminant; awl made from a cattle ulna.*

Anthropology: *Burial no. 43: 14–16 years old infant. Pathology: a strong septal deviation can be observed in the face of the well preserved skull.*
burial no. 63: infant of infans II age.
burial no. 64: mature female of a robust build.
burial no. 65: adult male.

Zoology: *Limb of an adult bull; mandible of an adult sheep; limb of a dog.*

Pit no. 1657, cutting 41/3, indistinctive Baden (fig. 33).

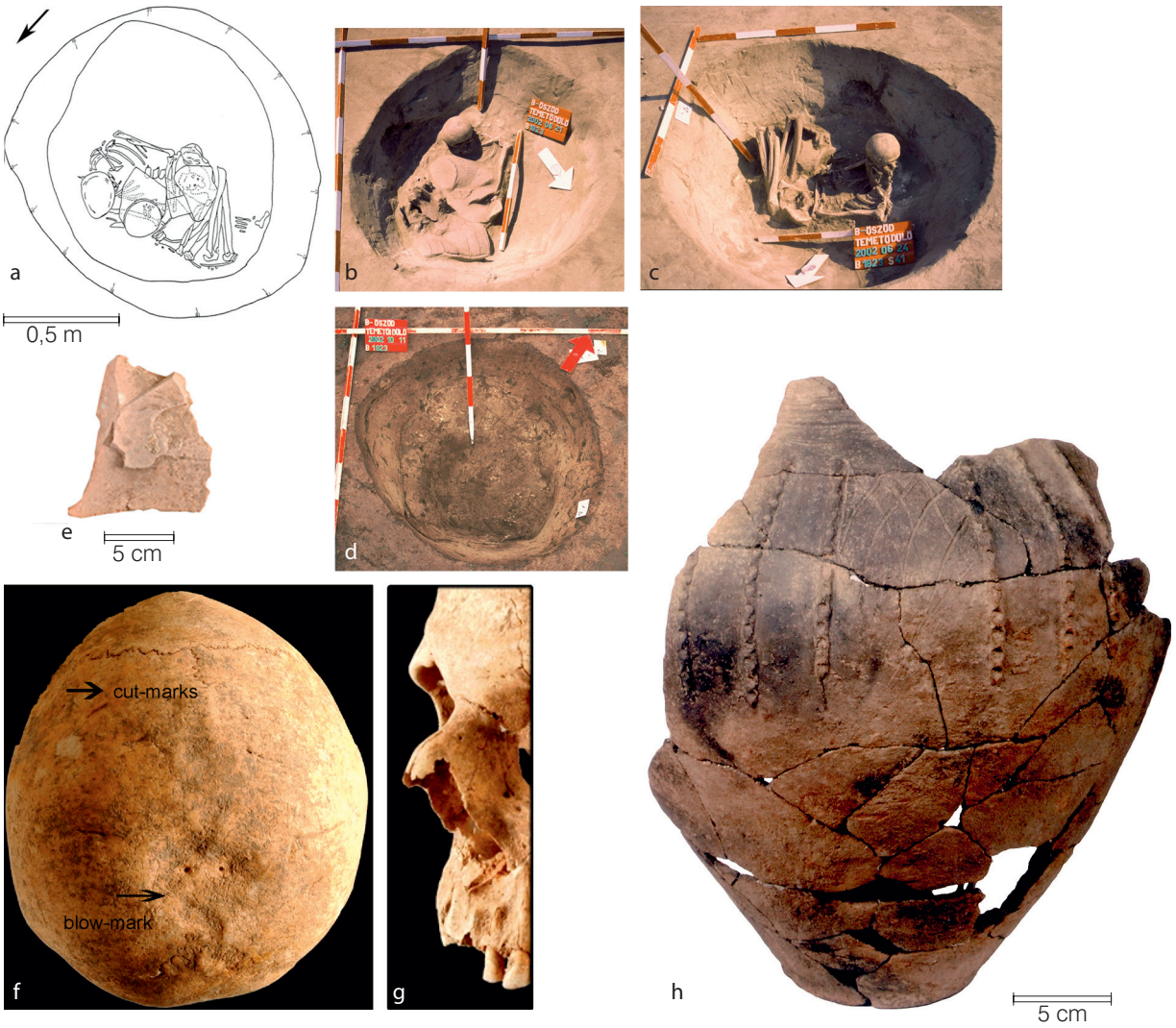
Feature: *The oval pit was dug into forest soil. It was filled with dark brown soil mixed with charcoal and loess grains. Only human and animal bones were found. Human burial no. 42 was thrown in the pit. The W-E oriented skeleton was extended, tilted to the left side facing N. The left hand was at the skull, the right as well, under the left lower arm. The legs were slightly bent at the knees. After the lifting of the human skeleton, parts of cattle were uncovered under the legs.*

Anthropology: *Burial no. 42: 39–43 years old female. The calculated stature is in the low average category. The adhesion reliefs of the muscles are characteristically very strong on the bones of the arms of the otherwise gracile individual, which was probably due to a work process. Pathology: A ca. 0.5 cm long triangular bony growth can be found on the base of the occipital on the interior edge of the left condylus occipitalis starting from the articulation surface, which hangs over the foramen magnum. A similar bony growth started on the right side. Deformations caused by pregnancy can be observed on the os pubis.*

Zoology: *Four distal limb bones of an 18–20 months old cow; four distal limb bones of an adult bull; bone fragments of cattle, sheep and wild cat. The animals were probably killed in late autumn / winter.*

Pit no. 1823, cuttings 41/6, 7, under culture-bearing layer 925, Baden phase IIA (fig. 34).

Feature: *The oval pit was filled with compact, brown soil mixed with burnt daub lumps. Human burial no. 41 lay in a W-E direction crouched on the right side, facing N. The legs were pulled up. The chest and the legs were covered with the fragments of a large storage jar. A sheep skeleton was uncovered beside it in pit no. 1825–1826.*



Ceramic finds (5 kg): *Nearly complete profile fragment of a large amphora, the rim is missing, it is secondarily burnt, the interior surface is smoothed and strongly peeling (corroded by the content).*

Anthropology: *Burial no. 41: 55–59 years old male. According to the estimated stature, the very robust man must have been high to medium high. Pathology: Parallel cut marks caused by the same tool/weapon can be found on both parietals along the sagittal suture close to each other. The length of the edge was 11.5 mm in every wound. The direction of the wounds closes a right angle to the sagittal direction running in the line of the foramen parietale, while the angle becomes smaller farther toward the coronal suture. Five cut marks can be observed on the right parietal and 4 on the left one. Two of the latter ones run in nearly the same direction, they touch at the ends. The depth of the cut marks is a fracture of a millimetre, it never reached the corticalis and they could heal fast and easily, the skull bone was not cracked and the wounds were not inflamed. The man survived the cuts. A double blow wound can be seen on a slightly oval, 42 x 30 mm large territory on the two parietals just above the lambda measurement point. The common longitudinal axis closes 45° with the sagittal suture. The force of the blow indented the wall of the skull and so the relevant area got endocranially elevated, yet no fissure could be observed in the region of the scar either endo- or ectocranially. The two deepest points of the depression are 18–20 mm from each other. The healing proceeded without any visible trace of inflammation. Another blow hit the nasal bone of the man, the arch of which definitely broke at the start of the lower third of the nasal bone. This time, however cracks can be seen on the interior surfaces of the bones. It healed without inflammation. The man seems to have survived every wound but it cannot be told if he received them at the same time.*

Fig. 34. Pit no. 1823: a–d burial No. 41, e burnt daub, f blow and cut marks on the parietal, g broken nasal bone, h amphora.

Abb. 34. Bef. Nr. 1823: a–d Grab 41, e Brandlehm, f Schnitt- und Schlagspuren auf der Schädeldecke, g gebrochenes Nasenbein, h Amphore.

Pit no. 1832, cuttings 41/5, 6, under culture-bearing layer 925, Baden phase IIA (fig. 35).

Feature: *The oval pit was filled with compact grey soil mixed with some charcoal and refuse. Human burial no. 46 (4–5 years old infant) was thrown in, it lay on the left side, the right arm was missing, the left leg was extended, the slightly flexed right leg lay on the left leg. The skeleton had a S-N orientation facing W. Human burial no. 47 (7–8 years old infant) was found on the left of burial no. 46. It had a S-N orientation. The thrown in skeleton was extended with the face toward the earth, the left arm was bent over the chest, the right arm was under skeleton no. 46, the legs were extended and crossed above the ankle. The find material of the pit was secondarily strongly burnt. Pits nos. 1830, 1831 and 1832 form a unit. Pits nos. 1830 and 1831 are in superposition with pit no. 1832. Pit no. 1831 is under pit no. 1830. A number of animal burials were uncovered in the vicinity of the pit (pits nos. 1839, 1841).*

Finds: *End fragment of a small quern in two fitting pieces, fine-grained sandstone of strongly corroded surfaces; fragment of a whetstone/polisher, flat, thin, handy end-side fragment with a deep grinding groove in the middle.*

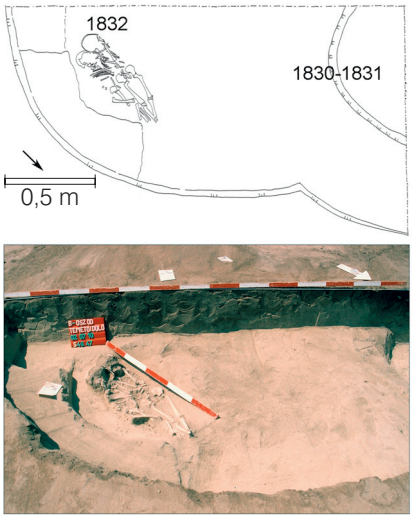


Fig. 35. Pit no. 1832.

Abb. 35. Bef. Nr. 1832.

Pit no. 1896, cutting 40/3, indistinctive Baden (fig. 36).

Feature: *It contained only human and animal skeletons. Human burial no. 44 was S-N oriented. The thrown in skeleton was extended facing W. It lay on the left side/belly, the arms were along the trunk bent at the elbow, the right leg was slightly pulled up at the knee. Animal bones were found at the pelvis. The human skeleton lay on the W side of the pit on the same level as the animal skeletons. A number of animal burials were uncovered in its vicinity (pits nos. 1843, 1844, 1847, 1849).*

Anthropology: *Burial no. 44: 22–28 years old female. The calculated stature of the definitely gracile woman was high medium high. Anatomical variation: the manubrium and the corpus, two components of the breastbone, fused together at an angle causing a depressed chest. Pathology: deformities linked with pregnancy can be seen on the surfaces of the two ossa pubis.*

Zoology: *1.5–2 months old cattle skeleton; mandible of a young cattle; partial skeleton of and adult sheep; mandibles of young pigs, 2 items. The animals were probably killed in late autumn/winter.*

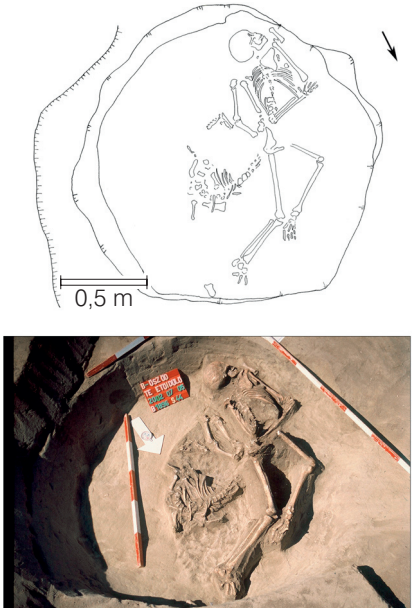


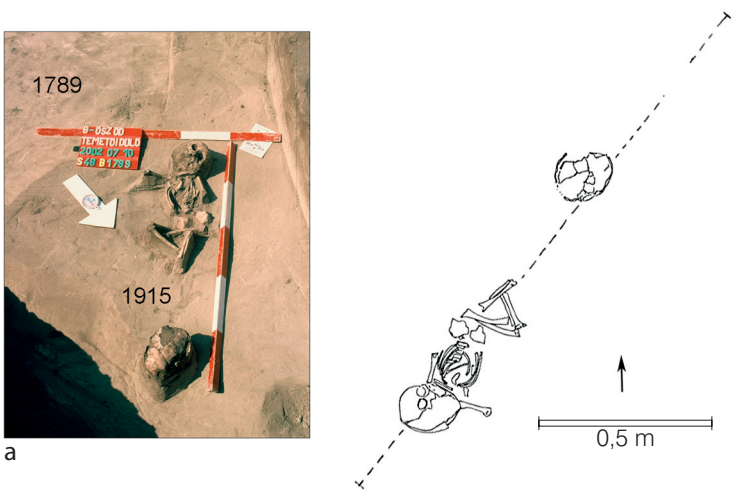
Fig. 36. Pit no. 1896.

Abb. 36. Bef. Nr. 1896.

Pit no. 1915, cutting 42/8, under culture-bearing layer 925, indistinctive (older classical?) Baden (fig. 37).

Feature: *The oval pit was filled in with compact grey soil mixed with ash and charcoal. Human burial no. 48 lay on the right side with crouched legs. It had a W-E orientation facing upwards. Human burial no. 71 was found close to the legs of burial no. 48. It only contained an infant's skull (were the limb bones absorbed by the soil?). The ceramic material uncovered in the pit was secondarily burnt.*

Finds (3 kg): *fragments of stone axes; bore core of the shaft hole of a shaft-hole stone axe.*



a

Fig. 37. Pit no. 1915: a Burial no. 48, b axe fragment.

Abb. 37. Bef. Nr. 1915: a Grab 48, b Axtfragment.

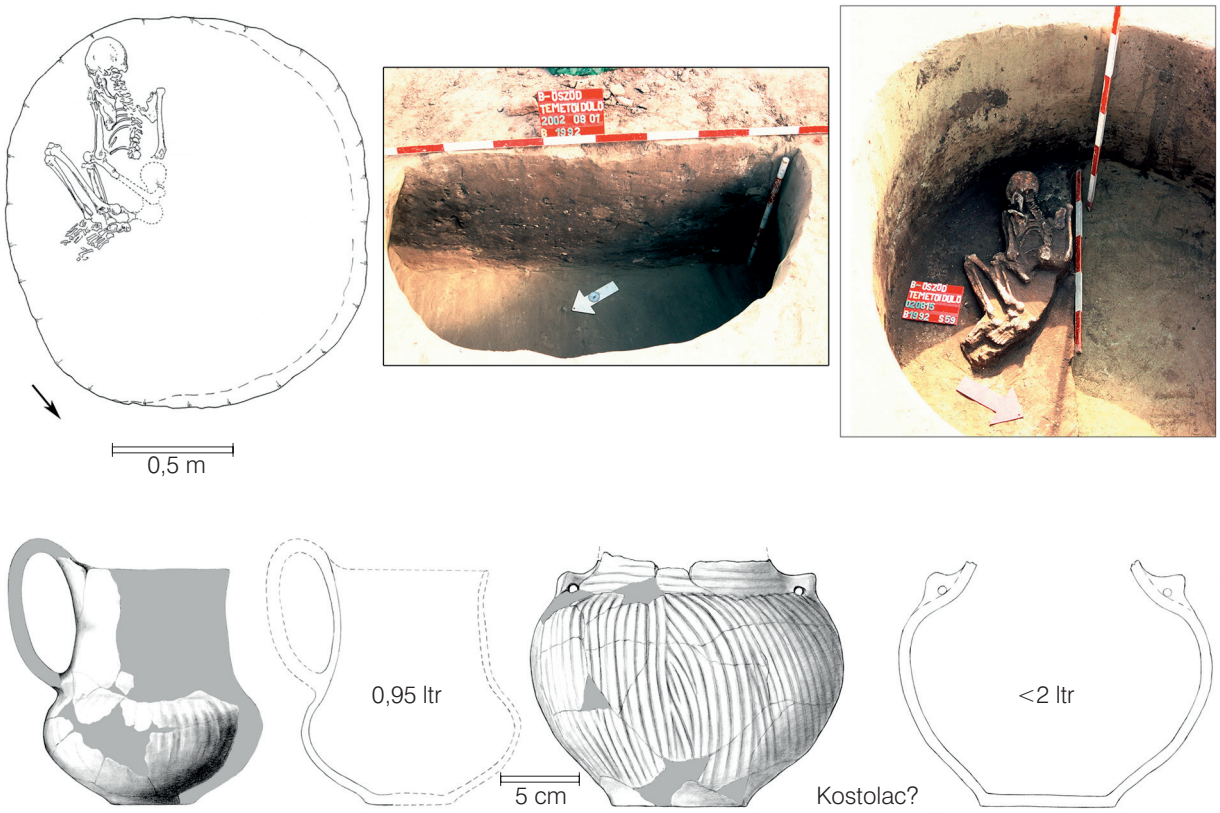


Fig. 38. Pit no. 1992 and ceramic finds.
Abb. 38. Bef. Nr. 1992 und Keramik.

Anthropology: *Burial no. 48: 1.5–2.5 years old infant. Pathology: significantly large cribrae orbitalia can be observed on both sides.*
Zoology: *Skull and limb of a 2.5–3 years old cattle; skull, vertebra and limb of a 12–20 months old sheep; limb of a 4–6 months old pig. The animals were probably killed in late autumn.*

Pit no. 1992, cuttings 55/30, 31, Baden phase IIA (fig. 38).
Feature: *The round, deep, beehive-shaped pit was filled in with brown soil mixed with daub and loess grains. In cross-section, the upper layer of the pit was loose, brown, humic soil underlain by black, loose soil with daub and spots of charcoal, and loose, light brown soil lay on the bottom with some daub and spots of loess. Human burial no. 59 had a NE-SW orientation with the face looking upwards. It lay on the right side in a crouched position.*
Ceramic finds (2 kg): *Suspension amphora, incomplete from the neck upwards; small jug, completed in about 1/3; jug, completed in about its half.*
Anthropology: *Burial no. 59: 43–47 years old female. Pathology: the position of os palatinum indicates a strong septal deviation.*

Pit no. 2019, cutting 56/35, according to the ^{14}C analysis it is older classical Baden (fig. 39).
Feature: *The round pit was filled with light brown soil mixed with loess. Human burial no. 50 (17–19 years old female) lay on the right side in a W-E orientation facing S. The arms were bent at the elbow, they touched under the chin. The legs were bent at the knees, they lay parallel to the thighbones.*
Ceramic find: *Fine, thin, grey wall fragment, polished on the inside and decorated with short notches on the outside. Stab-and-drag ceramics?*
^{14}C date: *From human burial no. 50: deb-13245, 4220±50 bp: 2910–2850 ± 50, 1 σ BC.*

Pit no. 2058, cuttings 54 -55/33, Baden phases IIA-B-III (fig. 40).
Feature: *it was an oval pit within a larger pit complex. It was filled with compact dark brown soil with charcoal and refuse. It was intersected by pits nos. 2057 and 2237 of the Somogyvár–Vinkovci culture. The find material is mixed. Human burial no. 56 lay on the bottom of the pit crouched on the right side.*

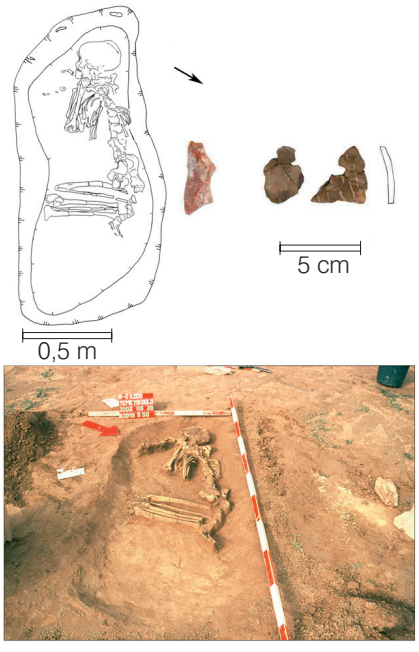


Fig. 39. Pit no. 2019 and selected finds.
Abb. 39. Bef. Nr. 2019 und Fundmaterial.

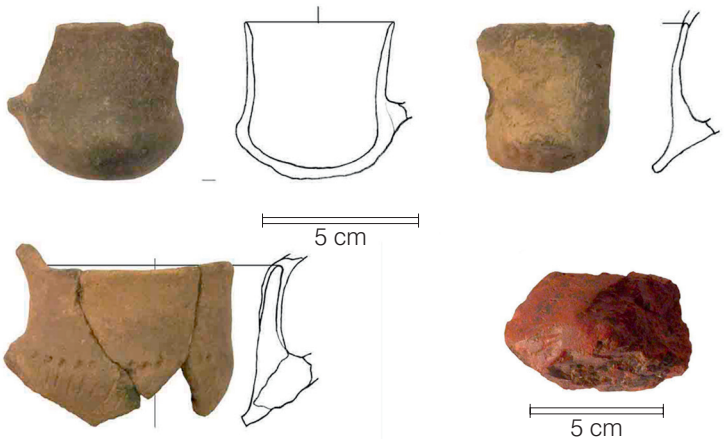


Fig. 40. Pit no. 2058 and selected finds.

Abb. 40. Bef. Nr. 2058 und Fundmaterial.

The arms were extended along the trunk, it faced S. Somogyvár–Vinkovci pit no. 2237 cut it off from the pelvis downwards.

Finds (3 kg): *Rim fragment of a bipartite bowl with an ornamental knob; fragment of a small cup; fragment of a cup; fragment of a small bowl, it can be completed; large, hard, handy, red pigment lump with polishing traits on the surfaces; fragment of a handy, discoid pounder or hammerstone, strongly weathered and broken.*

Anthropology: *Burial no. 56: 7–8 years old infant. Pathology: horizontal grooves caused by insufficient nourishment can be seen on the enamels of the teeth.*

Pit no. 2102, cutting 52/28, Boleráz phase (fig. 41).

Feature: *Human burial no. 52 (13–14 years old infant) lay on the belly, the arms were opened but bent at the elbows. The skeleton was destroyed from the pelvis downwards – Celtic pit no. 2101 intersected it. It had a W-E orientation? Two small spherical vessels were uncovered at the arms during the cleaning of the skull and chest region.*

Finds (1 kg): *Belly fragment of a jug with a vertical, horizontally pierced handle, a profiled bottom decorated by rickrack-shaped channelling; rim fragment of a biconical bowl of an everted rim; body of a ladle with a short fragment of the handle; trapezoid stone axe, transversally broken, from a pebble, the edge is worn and blunt.*

Pit no. 2116, cutting 53/29, older classical Baden (fig. 42 a–e).

Feature: *The round pit was filled in with greyish brown soil mixed with daub and ash. Human burial no. 53 was packed with shards: densely at the head and more loosely on the body. It lay in a crouched position on the right side in a N-S orientation facing W. The left leg was strongly pulled up at the knees, the cervical vertebrae were missing.*

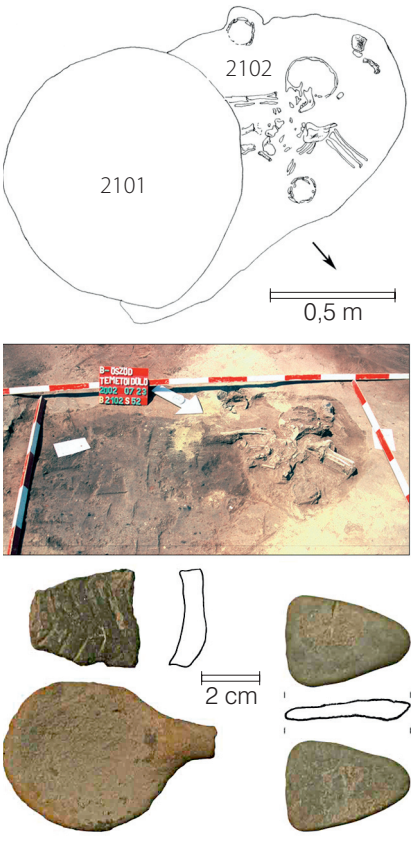
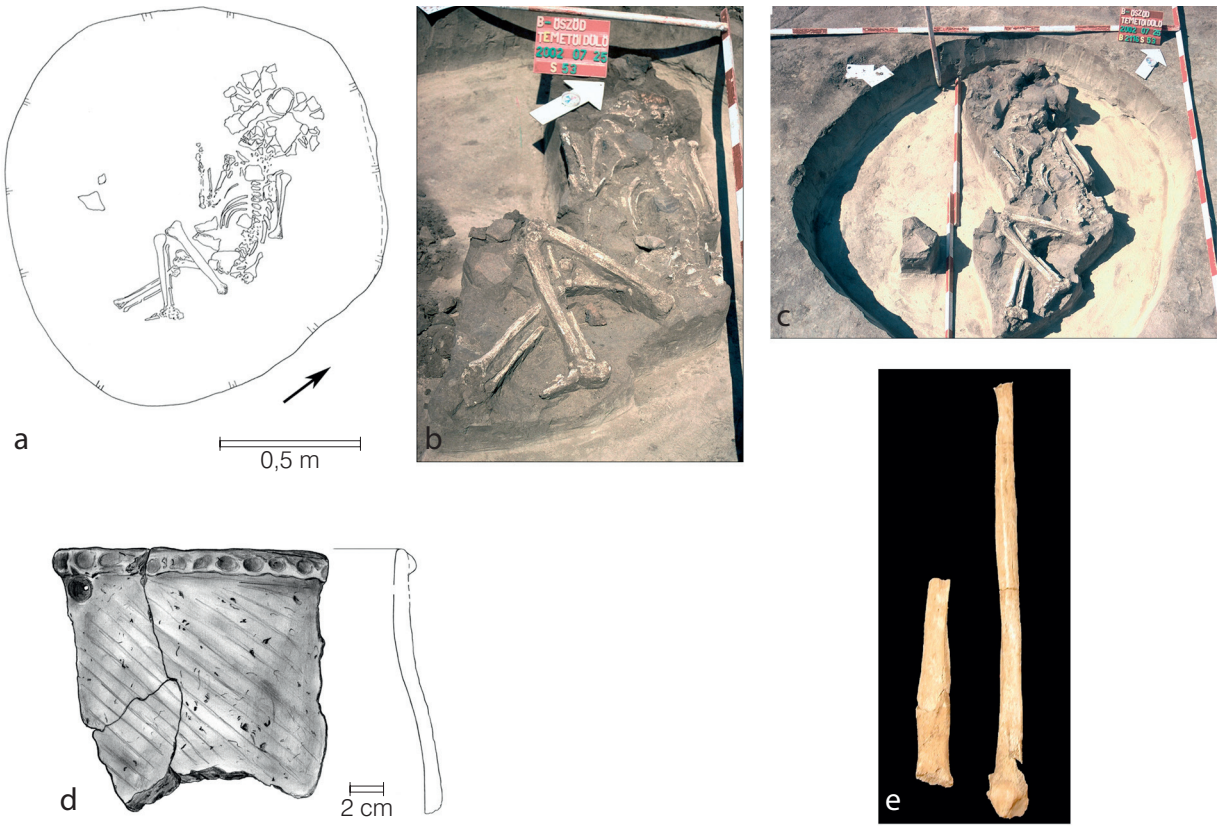


Fig. 41. Pit no. 2102 and selected finds.

Abb. 41. Bef. Nr. 2102 und Fundmaterial.



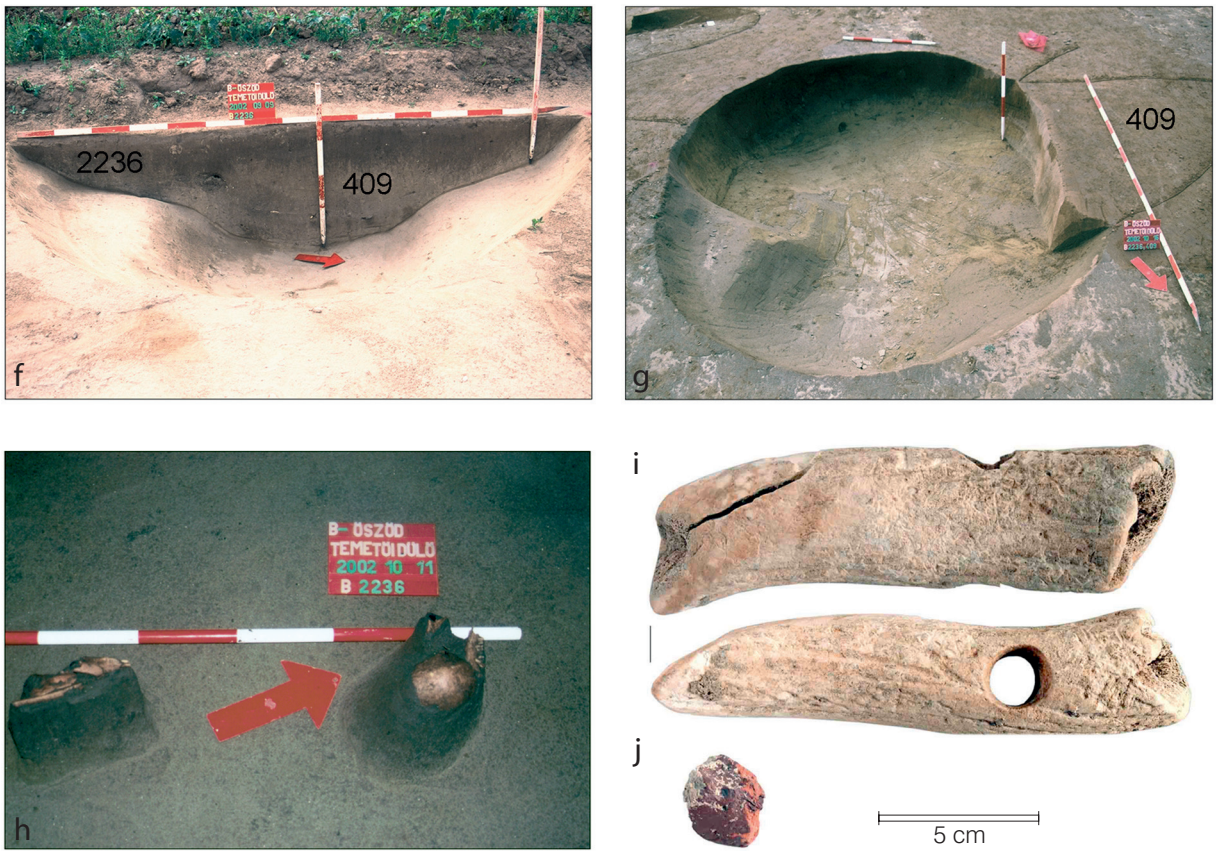
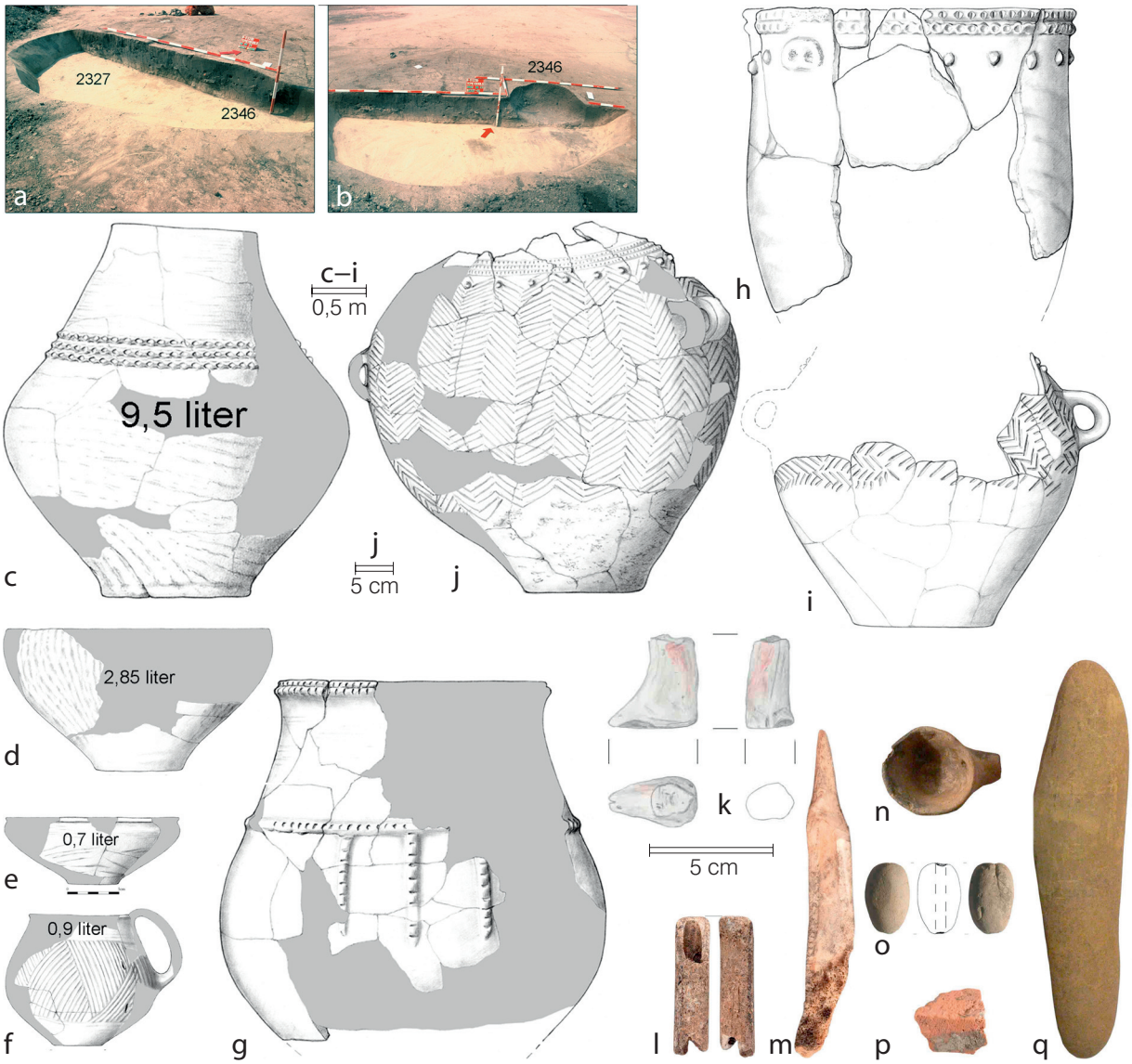


Fig. 42. a–e Pit.no. 2116: a–c Burial No. 53, d wall fragment, e deformation of fibula. f–j Pit.no. 2236: f profile, g pit during excavation, trench no. 409 on the right, h cranium no. 73 and animal bones, i antler axe, j polished ochre lump.

Abb. 42. a–e Bef. Nr.. 2116: a–c Grab 53, d Wandscherbe, e deformierte Fibula. f–j Bef. Nr. 2236: f Profilschnitt, g Grube während der Grabung mit Graben Nr. 409 auf der rechten Seite, h Schädel Nr. 73 und Tierknochen, i Hornaxt, j polierter Ockerklumpen.



Ceramic finds (5 kg): *Wall fragments of a pot and an amphora.*
Anthropology: *Burial no. 53: 23–29 years old male: the stature was calculated first of all from the femur measurements: it belonged in the average category. Pathology: a slight osteophyta-growth can be seen on the edges of the bodies of the lumbar vertebrae. A deformation probably caused by a fracture can be observed on one of the fibula fragments. The bone is flattened in one direction and became twice as thick in the other one yet no trace of inflammation is visible on the exterior surface of the bone.*

Pit no. 2236, cuttings 44/21 – 45/22, Baden phase II (fig. 42 f–j).
Feature: *The filling of the round pit was stratified in cross-section. Human cranium no. 73 (an adult) lay on the bottom of the pit beside shards, animal bones and an ochre lump of polished surfaces. It was in superposition with trench no. 409.*
Finds (3 kg): *Handled antler axe from the main tine of a red deer antler with a regular perforation.*

Pits nos 2327–2346, cuttings 48/25, 26, Boleráz phase (fig. 43).
Feature: *The oval pit was filled with dark brown soil mixed with burnt shards, animal bones and charcoal grains. Pit no. 2327 was intersected in the east by pit no. 2346. In cross-section, the upper layer of pit no. 2327 was compact brown soil. Underneath, a light grey layer followed with charcoal, ash and fragments*

Fig. 43. Pits nos. 2327–2346: a, b excavation photographs, c–j vessel and vessel fragments (e, f, j are described in the catalogue), k painted miniature clay feet, l handle, m awl, n ladle, o oval weight, p pigment lump, q pebble with use wear.

Abb. 43. Bef. Nr. 2327–2346: a, b Befundfotos, c–j Gefäße und Gefäßscherben (e, f, j werden im Katalog beschrieben), k bemalte Miniaturfüße aus Lehm, l Handhabe, m Ahle, n Kelle, o Gewicht, p Pigmentklumpen, q Feldsteinen mit Abnutzungsspuren.

of daub and ceramics at the edge. A larger spot of daub can be observed on the eastern side of the filling of pit no. 2346. The fragment of a human cranium (human burial no. 93) was found in the pit among a large number of finds. Many of the numerous animal bones seemed to have been ad hoc tools.
Finds (41 kg): *Painted miniature clay objects representing human feet (2 items); handled cup-shaped jug of a broad mouth, completed; profile fragment of a small bowl with an everted rim, completed; profile fragment of a bowl with an inverted rim, completed; fragment of an amphora, the lower part is completed; small, deep ladle, the short handle is pierced until its jointing to the head; oval weight, vertically pierced; handle made from the tip of a red deer antler; awl from the metatarsal of a small ruminant; long, narrow, handy, worn pebble with vaguely visible incision-like use wear on the surface, without traces of hammering, a blackish greasy matter is stuck to it: pitch soldering stone; fragment of a flat quern, the grinding surface was discoloured to a black shade, it was worn smooth, it shows parallel straight striates, fine-grained purplish sandstone; pink pigment lump with polished surfaces.*
^{14}C date: *from an animal bone: deb-13291, 4550±80 bp: 3370 – 3110 ±60, 1σ BC.*

Pit no. 2344, cutting 49/28, indistinctive Baden (Boleráz phase?) (fig. 44).
Feature: *The oval pit was filled with compact dark brown soil mixed with spots of loess and some charcoal. Human burial no. 58 (16–18 years old male) was found in the ashy filling in the centre of the pit. It was W-E directed facing S, crouched on the right side. The excavator disturbed it. The right arm was missing, the left arm was along the trunk bent at the elbow, pulled up to the height of the shoulder. A few shards and ashy, charred animal bone fragments were found at the legs.*
Zoology: *Skull and skeletal parts of an 8–10 months old pig (perished). It was killed in winter.*

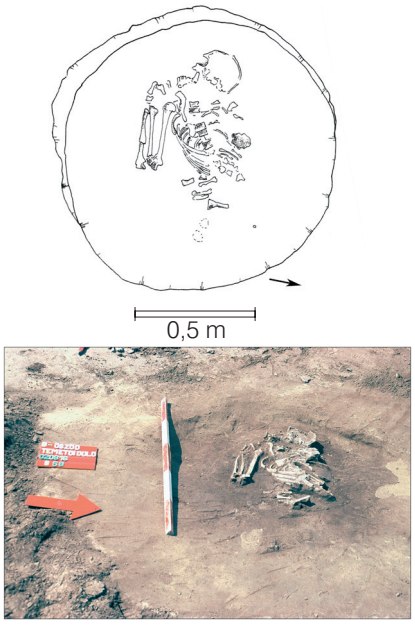


Fig. 44. Pit no. 2344.
Abb. 44. Bef. Nr. 2344.

Pit no. 2363, cutting 54/37, indistinctive (early?) Baden? (fig. 45).
Feature: *Features nos. 2361, 2362 and 2363, which intersected one another, were cleaned with leaving a common cross-section. Animal bones and a few indistinctive shards were found in pit 2361, while pits nos. 2362 and 2363 did not contain finds. Pit no. 2362 was in the middle, it intersected features nos. 2361 and 2363. Shards and crumbling red ochre lumps were found in pit no. 2361 beside human burial no. 60, which lay in a W-E direction facing S, crouched on the right side. The arms were bent at the elbows and pulled up under the chin, the legs were pulled up to the hip.*

Pit no. 2480, cuttings 50/32, 33, under layer 1281 of the Boleráz culture, Baden phase IIA (fig. 46).
Feature: *The quadrangular pit was intersected by feature no. 2472. It had a stratified filling: under a grey ashy soil, a reddish filling followed mixed with daub and animal bones. The top of a human skull of a mature individual (no. 68) lay on the bottom of the pit.*

Pit no. 2614, cuttings 46/28 – 47/29, Boleráz phase (fig. 47).
Feature: *The round pit was filled with brown soil mixed with large blocks of daub and charcoal, and compact, grey burnt soil on the level of the skeletons. Human burial no. 74 was found in the SE corner of the pit. It lay in a W-E direction facing E, crouched on the right side. The bones were burnt. Animal bones lay beneath the skeleton.*
Finds (0.5 kg): *rim-wall fragment of a large, coarse bowl-pot; retouched blade: sickle inlay.*
Anthropology: *Burial no. 74: an adult-mature female. The definitely gracile woman was low according to the stature calculated from the only bone find. Pathology: the thickening of the bone indicates a healed fracture in the lower third of the left ulna. Apart from callus development, neither the trace of inflammation nor an axial deviation can be observed on the bone. A deformity linked with pregnancy / childbirth can be seen on the pelvis.*

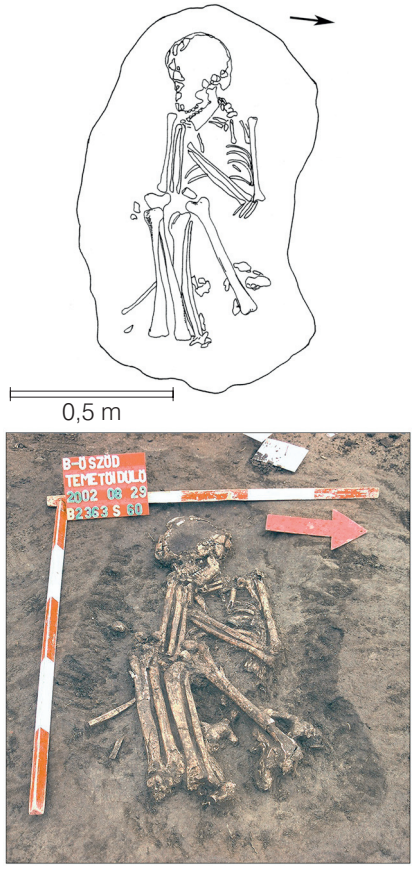
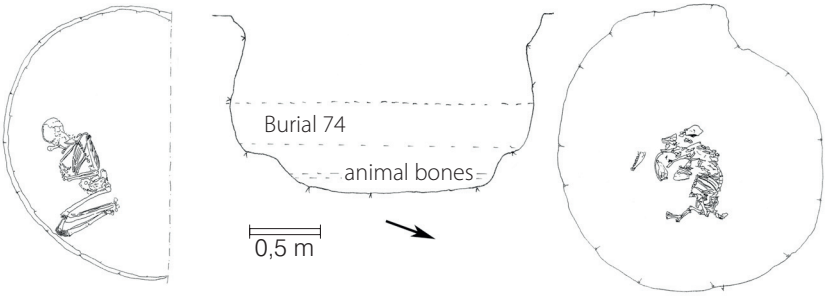


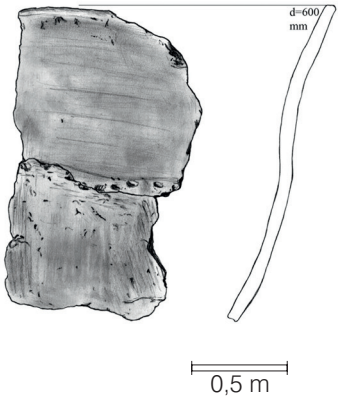
Fig. 45. Pit no. 2363.
Abb. 45. Bef. Nr. 2363.

Zoology: *skeletal part of a young cattle; mandible of a young cattle; sheep: limb of a foetus / newborn lamb, skeletal part of an 8–10 months old lamb, limb of a 16–18 months old sheep, mandible and limb of an adult sheep; vertebra and limb of an 18–20 months old pig. The animals were probably killed in late autumn / winter.*
^{14}C date: *from human skeleton no. 74: deb-13395, 4460±50 bp: 3330–3220 ±50, 1 σ BC.*

Pit no. 2635, cuttings 44/26 -45/27, indistinctive (early?) Baden (fig. 48).
Feature: *the filling of the oblong-shaped angular pit was compact greyish brown soil mixed with loess and pebbles. Human burial no. 79 lay in a N-S direction facing W, crouched on the right side. The legs were pulled up high to the chin, the arms lay along the trunk, the lower arms were extended at a right angle. After the lifting of the skeleton, an animal horn and animal bone fragments were found in an ashy filling under the left shoulder.*

Fig. 46. Pit no. 2480.
Abb. 46. Bef. Nr. 2480.





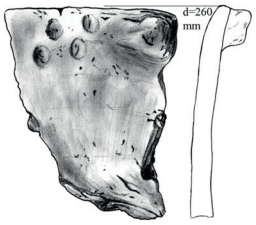


Fig. 47. Pit no. 2614 and ceramic finds.
Abb. 47. Bef. Nr. 2614 und Keramik.

Anthropology: *Burial no. 79: 59–70 years old female. The calculated stature is in the low category. The robustness of the adhesion surfaces of the deltoid muscles on the humeri and the ulnae is striking (work process?). Pathology: the surface of the fovea dentis of the 1st cervical vertebra, the atlas, is perforated and the articulation surface became discoid. This arthritic deformation could inhibit the motion of the neck, more exactly the head.*
Zoology: *Cranium and horn core of an adult aurochs.*
^{14}C date: *From human skeleton no. 79: deb-13286, 4440±45 bp: 3130–3000 ± 45, 1 σ BC.*

Pit no. 2668, cutting 49/36, early Baden (fig. 49).
Feature: *The round pit was filled with greyish brown soil mixed with daub and loess grains. The skull and skeletal parts of a cattle and the facial part of the skull of human burial no. 88 (an adult-mature female) were found at the wall of the pit.*
Zoology: *Skeletal parts of a 2.5–3 years old bull; limb of a young sheep. The animals were probably killed in winter.*

Pit no. 2800, cutting 54/37, indistinctive (Boleráz?) (fig. 50).
Feature: *Human burial no. 85 (a ca 10 years old infant) lay close to the surface, it was badly damaged. The grave was shallow, oblong-shaped with rounded corners. The skeleton had a W-E orientation, it was crouched on the right side facing upwards, perhaps slightly tilted to the N. The skull was injured, only the skull base and half of the mandible were preserved.*

b. Human burials in the settlements of the Boleráz/Baden culture

We do not intend to collect and evaluate all the burials of the Boleráz/Baden cultures: it has already been done (Sachsse 2008, 2009), we shall rather concentrate on intramural burials similar to the ones uncovered at the Balatonőszöd site.

Only about 5% of the Late Copper Age sites in Hungary are cemeteries (Bondár 2002, 13), and this trend is valid on the entire occupation territory of the Baden/Boleráz cultures (comp. e.g. Austria: Lenneis et al. 1999, 145–176). Various burial rites (cremation and/or inhumation) and varied burial methods can be observed both at the graves of the "regular cemeteries" in the strict sense and among the so-called "intramural burials" uncovered within the settlements.

There is only a single instance that convincingly attests to the relationship between the settlement and its separate cemetery: the sites Balatonlelle–Felső–Gamász and –Országúti dűlő uncovered in the track of highway M7 (Sófalvi 2004, 18–23) [5]. It cannot, regrettably, be told if the phenomena uncovered at Balatonlelle are generally characteristic of the entire culture. There is e.g. a separate cemetery that contained only five graves (Balatonmagyaród: a surface of 40 000 m^2 was uncovered yet neither more graves nor coherent related settlement phenomena were discovered (Bondár 1987).

The interpretation of burials at the edge or in the abandoned areas of settlements as cemeteries is suggested in cases (e.g. Bešeňov, Budapest–Káposztásmegyer, Budapest–Békásmegyer, Andocs–Nagytoldipuszta) where there are no certain data about the extent of the settlement, so these suppositions can be misleading.

At Balatonőszöd it could be demonstrated that the classical Baden features were located in the Boleráz settlement area not because people intended to make use of the abandoned settlement region (e.g. as a burial ground): according to the radiocarbon dates the classical Baden features were contemporary to the Boleráz settlement area, so the coexistence of two populations of diverse cultures can be supposed at the same time and in the same area (Horváth 2009 b)!

It seems possible that the assimilation of the new Baden population in the Boleráz basic community was not peaceful and certain human burials were the results of this intra-communal conflict (exterior aggression and then interior conflict). Regrettably, the anthropological justification and the separation of the two communities is not yet possible: as opposed to the Baden population, which is certainly of a Southeast European origin, the anthropological material of the Boleráz burials, which most probably had northern central European FBC roots, could not be studied because of the low number and the cremation rite of the burials.

So if we disregard the phantom data, only a few real data remain from which we can start. Cemeteries that could definitely be separated from the perhaps nearby settlements (e.g. Pilismarót–Basaharc, Alsónémedi, Budakalász, Fonyód (?), Ózd–Center alja, Méhi/Včelínce, Szentsimon, Balatonlelle–Felsőgamász–Országúti dűlő) and the supposedly more "ancient" custom of intramural burials existed at the same time.

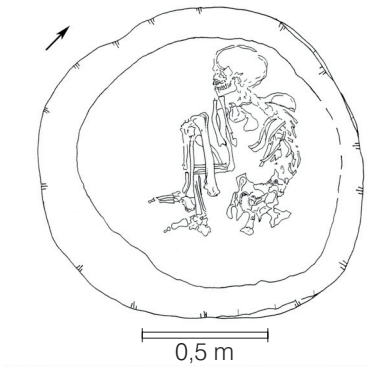


Fig. 48. Pit no. 2635.

Abb. 48. Bef. Nr. 2635.

Fig. 49. Pits no. 2668.

Abb. 49. Bef. Nr. 2668.

5 Borbála Nagy analysed the cemetery fragment in her thesis work. (Nagy 2006) She will also analyse the settlement fragment in her PhD dissertation.

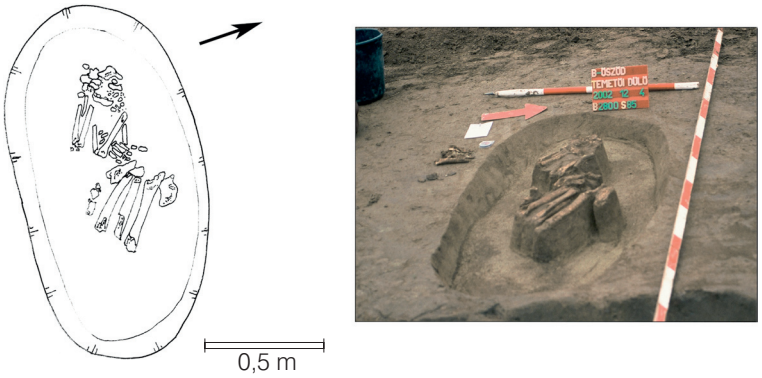


Fig. 50. Pit no. 2800 and selected finds.
Abb. 50. Bef. Nr. 2800 und Fundmaterial.

Why do two different customs with probably different theoretic backgrounds exist in this period? What differences and what similarities can be demonstrated between the two customs? Did this duality have roots in the periods preceding the Late Copper Age in the Carpathian Basin?

Let us review the comments on the evaluation of the intramural human burials of the Baden culture.

> *"Those members of a kinship-based community who were economically not of a full value and individuals coming from other alien communities (captives, enemies), who stood at the bottom of the contemporary social ladder were buried within the settlements",*

wrote J. and E. Neustupný (Neustupný / Neustupný 1960, 131).

> *"The mass character of the graves that belong in the above-mentioned category can imply a strong differentiation within the lineage-based society of the Baden culture",*

argued the authors.

A. Točík interpreted these burials as sacrifices (especially on the basis of Nitriánsky Hrádok–Zámeček), which served the protection of the families and the clan, and which were performed by the inhabitants of the huts or groups of huts at the construction of the dwelling (Točík 1979, 82).

According to G. Nevizánsky, the burials in the settlement pits should always be regarded as special manifestations of cults and rites (Nevizánsky 1985, 361).

Generally, there occurred a few intramural graves beside the "regular" cemeteries in the prehistoric periods and even later until the end of the Middle Ages (probably individuals who were for some reason rejected by the community).

The clearly separated rite of regular cemeteries can be demonstrated in the period preceding the Late Copper Age in the Tiszapolgár and the Bodrogkeresztúr cultures (comp. B. Kutzián 1963, 1972; Patay 1961). So few burials are known from the final phase of the Middle Copper Age just preceding the Late Copper Age (Balaton–Lasinja, Ludanice, Furchenstich, Hunyadihalom/Laznany cultures) that they are difficult to interpret even together, but they seem to have been linked with settlements.

The differentiation of the so-called "intramural burials", the real burials and individuals who fell victim to various ceremonies with the methods of archaeology is considered very difficult or impossible (Bánffy 1990–1991, 225).

A hypothesis can be set up in the case of the Late Copper Age sites uncovered in the past decades along the southern bank of the Balaton, which is a kind of modelling of the earlier observations (Horváth 2008). Accordingly, the settlements can be found along both sides of

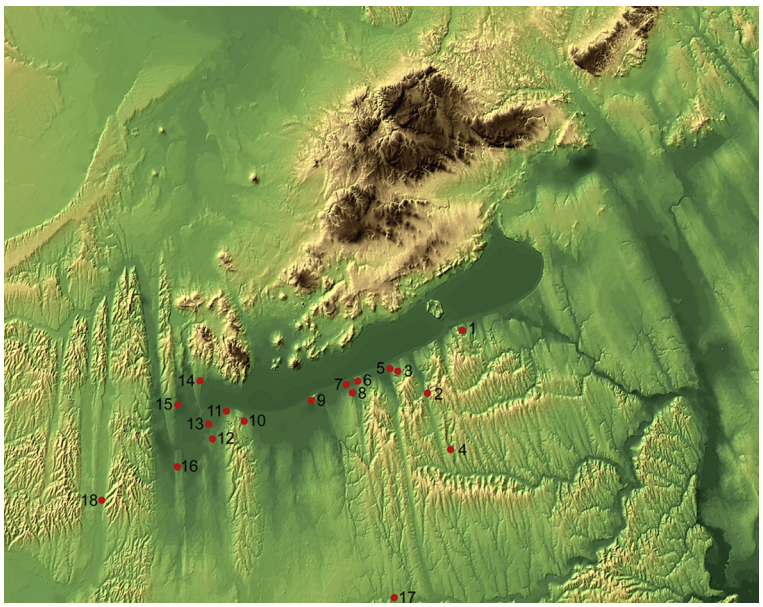


Fig. 51. The southern part of Lake Balaton with the Boleráz / Baden sites:

Abb. 51. Der südliche Teil des Plattensees mit bekannten Boleráz / Baden Fundstellen:

1 Zamárdi, 2 Szólád, 3 Balatonőszöd, 4 Andocs, 5 Balatonszemes, 6 Balatonelle, 7 Balatonboglár, 8 Ordacsehi, 9 Fonyód, 10 Balatonkeresztúr, 11 Balatonberény, 12 Tikos, 13 Vörs, 14 Keszthely, 15 Sármellék, 16 Balatonmagyaród, 17 Kaposújlak, 18 Nagykanisza.

the contemporarily active watercourses that ran perpendicularly to the Balaton. They show a dense chain-like distribution from the bank of the Balaton to the sources of the streamlets, sometimes they even reach into one another (fig. 51). These settlements could long survive, yet they were seasonal, temporary ones. A few of them could be more permanent or centrally located – this is supposed in the case of the settlements that generally stood on elevated territories close to the Balaton. The chain-like linear settlement pattern that followed rivers or watercourses in the occupation territory of probably the same community (a lineage, a large family, village communities organised by economic interests), the regular change of settlements favoured the economic system of the culture based on large-animal keeping (the changing of the pastures and the continuous water supply was vital for the herds). The permanent burial grounds of the communities were probably at a definite point along a linear line – most probably in the direct vicinity of the central or permanent settlement. According to the order of values of the community, certain dead individuals were buried here, while others were buried where they died or where the community had to carry out the vegetation and other rites (and needed sacrifices for it).

The basis of this social selection could be a fixed differentiation perhaps on a totemic base. The individuals buried within the settlements were supposedly not equal to the rest of the inhabitants of the settlement, they did not have the same rights and could not take part in the initiation rites that were approved and accepted by the community: they were not fully "initiated". This conclusion was drawn from the anthropological analyses: astonishingly many females and infants, and many disabled (deaf, blind, crippled, paralysed, pigeon-breasted, humpbacked) individuals were found in every age group and gender in the Balatonőszöd burials, while the same was not so evident in the materials of the cemeteries (comp. K. Zoffmann 1987–1988, 2004, 2006; Horváth et al. 2010 in print).

It must be supposed that the treatment of the dead generally followed certain regulations that were commonly accepted by the community, although there could be exceptional, unique situations (spontaneous rites). It can also be supposed that the funeral ceremonies were obviously connected with a segment of the worldview, the beliefs and the religious system of the community, so a single burial method and occasion mirrored the conceptual system of the whole community.

Ancestor worship can practically be identified with the cult of the dead: they overlap in the main features. The cult of the dead is not based on the belief in the soul: instead, it is a "feeling of becoming dreadful", which is composed of disgust from the dead, fear of and respect toward death. Actually, the respect paid to the dead and the cult of the dead cannot be regarded a religion, they are social institutions. Ancestor worship differs from the cult of gods, creative demons, cultural heroes in that they are respected solely for the fact that they have died. While living, they were just like other people but death lent them a power that affords them to direct or at least influence the fate of the living (Otto 1997, 143–144).

The rites used within the frames of the cult of the dead can be studied by archaeological methods only with the help of the analysis of the finding circumstances, the positioning of the grave furniture and the typological and morphological traits of the finds, through comparing them with all that we know of the given culture. The study of the rites, beside that of the finds and phenomena of the daily life, can be especially important in a settlement like the one at Balatonőszöd, which shows uncommonly many and complex rites: they are indispensable for getting a real or more realistic picture of the whole of the settlement (comp. Wilson 1954, 251).

The 67 burials uncovered at Balatonőszöd would quantitatively be enough for a "regular" cemetery (comp. the 40 graves of the completely unearthed Alsónémedi cemetery).

The question is if all the individuals can be grouped in the community living at Balatonőszöd since the individuals buried within the settlement could belong to an alien population group, village community or family group (captives, enemies, people from outside the community). This is especially probable in the case of the ten human skeletons uncovered in pit no. 1099 – well no. 1 because of the especially uncommon, extreme situation, and where water dominated in contrast to the dominant use of fire at the rest of the burials.

As opposed to the earlier idea of the peaceful, organic interior Boleráz/Baden evolution, the data from Balatonőszöd suggest a (violent?) takeover of power, which gradually re-stratified the Boleráz community.

In the Balatonőszöd settlement, a smaller part of the burials can be grouped in the Boleráz horizon, where, as far as it could be observed, cremation rite was characteristic (comp.: Pilismarót–Basaharc: Torma 1973 b; Ipolydamásd, Vác, Szob–Verbiček: Kővári 1994; Fonyód–Bézsenypuszta: Banner 1956, 28–32; Balatonlelle–Felsőgamász: Sófalvi 2004). Cremation sometimes appeared in the classical Baden period as well (e.g. Budakalász–Luppacsárda: Banner 1956, T. XCII/3–4, Leobersdorf, grave no. 2: human ashes beside the skeleton: Willvonseder 1937, 23).

Despite the above, only inhumation burials were found in the Balatonőszöd settlement both from the Boleráz and the classical Baden period.

The human skeletons uncovered at Balatonőszöd-Temetői dűlő have already been analysed according to their positions and grave furniture. In general, recurrent motives can be demonstrated yet no real rigorousness could be observed. We tried to find irregularities in the traits and the distribution of these burials considering also the data and the suppositions published in the archaeological literature.

We must call attention to the fact that despite the uncovered 76 000 m^2 and the investigated territory of 100 000 m^2, we could not unearth the entire settlement of Balatonőszöd. According to the excavation data, it further extended a short distance to the south, while on the eastern bank of the waterlogged territory, the excavation and

field walking data indicate a site of a similar size as the one uncovered on the W side, which could perhaps contain the cemetery of the settlement (Szólád-Öregaszó, fig. 2).

The burials appeared in every part of the settlement, both at the edges and in the centre. It stands out, however, from the comprehensive map that they form smaller and larger clusters or bands (fig. 19). In these areas, other phenomena and objects linked with sacral life appeared more intensively beside human burials (male mask, female idols, footed goblets, seals, building models, cattle protome (comp. Horváth 2009 a; 2010). They could be ceremonial areas where the interrelated rites were carried out.

Pit no. 426 and human burials nos. 59, 56, 88, 68, 74, 79, 73, 66, 44 can be found on the border of the uncovered settlement fragment (in a semicircle anticlockwise from the north), while human burials nos. 4, 2, 26 were found on the bank (in a straight line from the north to the south). Ritual pits with not only human but also with animal skeletons are distributed along the border zone. Were the borders of the settlement marked by sacrificial pits? It seems also probable that these pits were dug at the edges of the settlement area simply because of the economic use of the territory or hygienic etc. reasons: that is practical settlement development causes.

Regarding the age and the gender, infants and women dominate among the burials although robust adult males also occur (8 instances are certain). The analysis of the proportions at the Balatonőszöd site supports the long proved observation that usually women and infants were buried within settlements (K. Zoffmann 2004 b; 2006), persons who did not have a full social status.

The anthropologist ascribed the deformations (strong abrasion) in the teeth of the male skeleton no. 27 with a working process (e.g. weaving and spinning). The same is supposed in the case of female skeletons nos. 42 and 79 where strikingly strong arms were found beside a gracile build.

Owing to the poor preservation of the bones, the kinship between the individuals found in the same pit (e.g. pits nos. 426, 744, 981, 1236, 1277, 1489, 1617, 1649, 1832) could regrettably not be determined with traditional physical anthropological methods, although it seems probable (perhaps DNA analyses will be able to demonstrate it, comp. Haak et al. 2008; Wiltschke-Scrotta et al. 2008).

Generally, no exterior wounds that could attest to a violent death or a sacrificial role can be detected on the unearthed individuals. Yet the possibility of abuse, homicide, perhaps cannibalism cannot be excluded especially in the cases of burials where the lack of the cervical vertebrae was observed during cleaning (burials nos. 27, 35, 53). The anthropological report mentions wounds (cut and blow marks on the skull) that can be linked with fighting, perhaps an accident, or, at male no. 41, the superficial cut marks on the skull could come from ritual marking. A similar skull wound or marking is known from pit no. 1985/3 of Vučedol-Streim Vineyard (early Vučedol culture, Durman 2000, 44–46). Physical injuries can also be found on the skeleton of the mature male no. 95 from pit no. 1489. The wedged in flaked triangular arrowhead found during washing among the vertebrae of the skeleton of woman no. 37 b from the same pit also indicates a violent death. Similar traces of aggression were found in grave no. 407 of Balatonlelle: here a harvesting knife (sic!) was found in a male during washing wedged between the lumbar vertebra and the left pelvic bone.

The traces of fire can be demonstrated in many features: on the bones, on the surfaces of the finds, or the filling of the pit contains ash, charcoal and daub. M. Milićević–Bradač suggested in connection with the burials of the Vučedol site that the corpses were per-

haps treated with a special (conserving?) desiccating-smoking method (Milićević–Bradač 2001, 215–216).

On the basis of the analysis of the graves of regular cemeteries (first of all by the grave furniture), persons of diverse social statuses, ranging from the poor ones to the tribal leaders, were buried there.

The evident proofs of the colourful and varied cult of death are the fragmentary skulls and the two separated human limb fragments that were found in the pits of the cemetery. They obviously prove that parts of the bodies were submitted to various treatments between death and the primary burial, some of which were definitely linked to the skull and the limbs (legs). A connection can be observed between the idol fragments and the partial burials: the post mortem manipulations. The shapes of the Baden idols, their deliberate breakage and the missing parts mostly concentrated on the head and the limbs: the hands and the feet – just as the post mortem manipulations affected the head and the legs (Horváth 2010). In the Baden culture, people manipulated with the grave-goods as well: in grave no. 407 of Balatonlelle not all the vessels were placed in the grave at the same time (Sófalvi / Nagy 2007, 162–164). In grave no 291 of the regular cemetery of Felső-Gamász, the burial was cut off from the pelvis down, and the still attached (meaty?) body part was placed in pit no. 117 dug beside the regular grave.

There could be various reasons why animal skeletons were placed beside human corpses. The choice of the species of the "accompanying animal" could be connected with animal species that possessed death "aspects" in the cults of the dead (like dogs and horses). It is also possible that a former pet was placed beside the dead or an animal that marked something for the community or the individual (totem animal) or one that reflected the person's social status: a symbol of power, status or occupation. Pigs occur the most frequently beside human skeletons (swineherds? Nitra: Němejcová-Pavúková 1970, 194; Nitriánsky Hrádok: Točík 1981, 25; Vučedol–Streim: Jurisić 1989; Balatonőszöd, pit no. 2344).

I am convinced that not all the human corpses uncovered within the settlement can and should uniformly be interpreted as ritual phenomena. We are more correct and prudent if the individual cases are analysed in details one by one. The starting point that should certainly be respected is that not selected phenomena and elements should be evaluated at the "intramural burials" but all the burials, the settlement structure, the uncovered find material and the anthropological data must be analysed together (comp. table 1).

3. Features with animal skeletons

a. Cattle burials at the site

The archaeozoological analysis (comp. tables 2–3) identified 20 bulls and 14 cows from the 72 individuals (36 complete or partial skeletons, bone remains of the same number of individuals, 2 perished ones) uncovered in 44 pits. The distribution of the analysed individuals by age: the bulls are generally of a juvenile / sub-adult age (8), 4 items were of a sub-adult / adult age, 6 were adults, and one individual each belonged in the infant, foetus and mature categories. Sub-adult / adult individuals dominated among cows (6) followed by 3 juvenile and each a sub-adult, an adult/mature and a mature individual. From among the individuals whose gender could not be determined, adult individuals dominated (16 items), although most of them were represented by only a few bones.

Tab. 1. Human skeletal remains from the Balatonőszöd-Temetői dűlő site

Feature	Burial	Skeleton	Chronology	Finds	Position	Age, Sex	Character	
203	66	Total	IIA	Animals, vessels	Contracted	1.5 yrs.	Sacrifice	
426	19	Total	IIB–III	Multilayered pit	Thrown	52–58	Sarifice	
426	23	Total	IIB–III.	Multilayered pit	Thrown	?	Sacrifice	
426	67	Total	IIB–III	child	Contracted	33–39 yrs.	Grave	}
426	89	Total	IIB–III	male	Contracted	3–4 yrs.	Grave	}
1085	91	Total	III	Tools, animals	?	5–6 yrs.	Grave	
1612	45	Total	IIB–III	animals	Thrown	6–7 yrs.	Sacrifice	
411	2	Total	Baden?	–	Thrown	adult	Sacrifice	
442	4	Total	Baden?	–	Contracted	adult	Grave	
647	10	Total	Baden?	–	Thrown	adult	Sacrifice	
744	20	Total	IIB–III	–	Contracted	17–22 yrs.	Grave	
744	21	Total	IIB–III	–	Thrown	9–11 yrs.	Grave	}
744	22	Skull	IIB–III	–	–	–	Post mortem	}
962	26	Total	Baden?	–	Thrown	–	Sacrifice	
981	24	Total	IIB–III	Vessel	Thrown	16–18 yrs.	Sacrifice	
981	25	Total	IIB–III	Vessel	Thrown	2–3 yrs.	Sacrifice	}
981	90	Femur	IIB–III	Vessel	Thrown	–	Post mortem	}
1099	69	Total	Boleráz/Baden?	Dog/animal bones	Thrown	–	Sacrifice	
1099	70	Total	Boleráz/Baden?	–	Thrown	–	Sacrifice	
1099	72	Total	Boleráz/Baden?	–	Thrown	–	Sacrifice	
1099	75	Total	Boleráz/Baden?	–	Thrown	–	Sacrifice	}
1099	81	Total	Boleráz/Baden?	–	Thrown	–	Sacrifice	}
1099	82	Total	Boleráz/Baden?	–	Thrown	–	Sacrifice	
1099	83	Total	Boleráz/Baden?	–	Thrown	–	Sacrifice	
1099	84	Total	Boleráz/Baden?	–	Thrown	–	Sacrifice	
1099	86	Total	Boleráz/Baden?	–	Thrown	–	Sacrifice	
1099	87	Total	Boleráz/Baden?	–	Thrown	–	Sacrifice	
1106	27	Total	IIB–III	Animal bones	Thrown	23–27 yrs.	Sacrifice	
1228	92	Femur	IIB–III	Refuse pit	Thrown	–	Post mortem	
1236	28	Total	Uncharacteristic	–	Thrown	16–18 yrs.	Sacrifice	}
1236	29	Total	Uncharacteristic	–	Thrown	15–17 yrs.	Sacrifice	}
1277	31	Total	IIB–III	Vessel	Thrown	34–40 yrs.	Sacrifice	
1277	32	Total	IIB–III	Vessel	Thrown	8 yrs.	Sacrifice	}
1277	33	Total	IIB–III	Vessel	Thrown	3 yrs.	Sacrifice	}
1334	34	Skullfragment	IIB	Refuse pit	Thrown	adult	Post mortem	
1489	35	Total	IIB	–	Thrown	10–12 yrs.	Sacrifice	
1489	36	Total?	IIB	–	Thrown	Infans I	Sacrifice	
1489	37a	Skull?	IIB	–	Thrown	23–27 yrs.	Sacrifice	
	37b	Body?	IIB	arrowhead	Contracted	26–32 yrs.	Sacrifice	
1489	38	Total	IIB	–	Contracted	0.00 yr	Sacrifice	
1489	39	Total	IIB	–	Contracted	6–7 yrs-	Sacrifice	
1489	+	Body?	IIB	–	Contracted	Maturus	Sacrifice	
1617	62	Total	IIB–III?	–	Contracted	14–15 yrs.	Grave	
1649	43	Total	IIB	Vessels, tools	Thrown	14–16 yrs.	Grave	
1649	63	Total	IIB	Vessels, tools	Thrown	Infans II	Sacrifice	
1649	64	Skull	IIB	Vessels, tools	Thrown	Maturus	Sacrifice	
1649	65	Skull	IIB	Vessels, tools	Thrown	Adultus	Sacrifice	
1657	42	Total	Uncharacteristic	Animal bones	Thrown	39–43 yrs.	Sacrifice	
1823	41	Total	IIA	Vessel	Contracted	55–59 yrs.	Grave	
1832	46	Total	IIA	Tools	Thrown	4–5 yrs.	Sacrifice	}
1832	47	Total	IIA	Tools	Thrown	7–8 yrs.	Sacrifice	}

} supposed members of one nuclear family (child/children, husband, wife)

Tab. 1 continued. Human skeletal remains from the Balatonőszöd-Temetői dűlő site

Feature	Burial	Skeleton	Chronology	Finds	Position	Age, Sex	Character	
1896	44	Total	Uncharacteristic	Animal bones, calf-skeleton	thrown	22–28 yrs.	Sacrifice	
1915	48	Total	IIB–III?	Stone axe, animal bones	Contracted	1–1.5 yrs.	Grave	}
1915	71	Skull?	IIB–III?	Vessels	-	0.00 yr.	Grave	
1992	59	Total	IIA	Vessels	Contracted	43–47 yrs.	Grave	
2019	50	Total	IIB–III	Vessels	Contracted	17–19 yrs.	Grave	
2058	56	Total	IIA, B–III	Vessels, tools	Contracted	7–8 yrs.	Grave	
2102	52	Total	IB–C	Vessels, tools	Thrown	13–14 yrs.	Sacrifice	
2116	53	Total	IIB–III	Vessels	Contracted	23–39 yrs.	Grave	
2236	73	Skullfragment	II	Antler-axe	Thrown	Adult	Post mortem	
2327–2346	93	Skullfragment	IB–C	Pit with sacral refuse	Thrown	?	Post mortem	
2344	58	Total	IB–C?	Pig skeleton	Contracted	16–18 yrs.	Grave	
2363	60	Total	IB–C–IIA?	Vessels, animal bones, ocker	Contracted	?	Grave	
2480	68	Skullfragment	IIA	Vessels, animal bones	Thrown	Maturus	Post mortem	
2614	74	Total	IB–C	Vessels, animal bones, tools	Contracted	Adult–maturus	Grave	
2635	79	Total	IB, C–IIA,	Aurochs skull	Contracted	59–70 yrs.	Grave	
2668	88	Face-skull fragment	IB, C–IIA?	Refuse pit?	Thrown	Adult–maturus	Post mortem	
2800	85	Total	IB–C?	Chipped stones	Contracted	10 yrs.	Grave	

} supposed members of one nuclear family (child/children, husband, wife)

Tab. 2. Zoological data

Species	Sum of features	Sum of individuals			Sum of bones	perished
		Total	Skeleton/Part of skeleton	others		
Cattle	44	72	36	36	2602	2
Sheep	37	134	71	63	3572	1
Goat	1	1	1		84	.
Pig	31	52	22	30	1266	2
Dog	16	24	13	11	660	3
Horse	2	6	2	4	4	.
Domesticated animals	.	287	145	144	8188	8
Aurochs	2	2	.	2	2	.
Deer	2	2	.	2	4	.
Roe	2	2	.	2	2	.
Wild cat	1	1	.	1	4	.
Rabbit	1	1	.	1	5	.
Game	.	8	.	8	17	.
TOTAL	51	295	145	152	8205	8

Tab. 3. Species found in features.

Pit.No	Cattle		Sheep		Pig		Dog		Other
	Total / part.	other	Total / part.	other	Total / part.	other	Total / part.	other	
334	1	.	.	.	.	.	.	.	.
1493	1	.	.	.	.	.	.	.	.
1839	1	.	.	.	.	.	.	.	.
2491	1	.	.	.	.	.	.	.	.
1431	.	.	1	.	.	.	.	.	.
1781	.	.	.	.	1	.	.	.	.
2058	.	.	.	.	1	.	.	.	.
578	.	.	.	.	.	.	1	.	.
2635	.	.	.	.	.	.	.	.	Aurochs 1
1272	.	1	.	1	.	.	.	.	.
1334	.	1	.	1	.	.	.	.	.
1339	1	.	.	1	.	.	.	.	.
1583	1	.	1	.	.	.	.	.	.
1860	1	.	.	1	.	.	.	.	.
1899	1	.	.	1	.	.	.	.	.
2668	1	.	.	1	.	.	.	.	.
426	2	.	6	.	.	.	.	.	Goat 1
1657	2	1	.	1	.	.	.	.	Wild cat 1
1795	1	.	.	.	1	.	.	.	.
1796	1	1	.	.	1	2	.	.	.
1856	2	1	.	.	.	.	.	1	.
1849	.	.	.	.	2	.	.	1	.
1882	.	.	.	.	1	.	.	1	.
203	1	.	10	.	.	1	.	.	.
1143	1	1	.	2	.	2	.	.	.
1237	1	1	.	1	.	1	.	.	.
1331	1	.	1	1	.	1	.	.	.
1402	.	1	.	1	1	.	.	.	.
1769	.	1	.	1	2	.	.	.	.
1794	.	2	.	1	1	.	.	.	.
1825	.	1	2	1	.	1	.	.	.
1841	1	1	.	1	.	1	.	.	.
1886	1	2	.	1	1	2	.	.	.
1896	1	1	1	.	.	2	.	.	.
1915	.	1	.	1	.	1	.	.	.
2614	.	2	1	4	.	1	.	.	.
1608	2	1	.	9	1	2	.	.	Deer 1; Fish 1
1772	1	1	.	1	1	.	.	.	Horse 1
1904	1	1	.	1	.	1	.	.	Roe 1
1847	.	1	1	.	.	.	1	1	.
1079	.	1	1	1	.	.	1	.	.
1649	.	1	.	1	.	.	.	1	.
1843	1	4	.	.	.	1	.	1	Horse 3
1036	1	.	9	.	.	2	.	1	.
1106	.	1	.	1	.	1	.	1	.
1497	.	1	.	1	1	1	1	.	.
1499	1	1	4	9	5	2	.	1	.
1844	2	.	.	1	.	1	1	.	.
1451	1	1	.	4	.	.	.	.	Roe 1
1770	1	2	.	1	2	1	.	1	Rabbit 1
1612	1	1	34	10	.	2	8	.	Aurochs 1; Deer 1
TOTAL: 51	36	36	71	63	22	30	13	11	14

The nine infant, five juvenile, a newborn and a foetus individuals can be identified as firstling sacrifices (foetus: pit no. 1331, younger than half a year old calves: pits nos. 1090, 1143, 1493, 1772, 1856, 2614).

The methods of the killing of the animals can be studied on the animals of pits nos. 1841 (mandible injury), 334, 1090, 1331, 1841, 1843, 1860, 1899 (breaking of the vertebral column at the neck – cause of death or post mortem manipulation?), 1583, 1608 (separation of the head and the trunk - cause of death or post mortem manipulation?). The traces of yoking can be observed on the horn of the cattle in pit no. 1612 (Horváth 2010 in print a). The animal sacrifices lay in pits nos. 426, 1839 as they had been thrown in, while the rest of the animals were positioned. Generally, a single animal lay in a pit, a pair was found in pit no. 1856, and they were found together with a pig in pit no. 1795. Aurochs were found in pits nos. 1612 and 2635.

The animals were generally killed in autumn, sometimes in winter/early spring, in two cases in summer.

Cattle burials in the Baden culture

Cattle (Bos Taurus L. 1758) served various functions at the time of the Boleráz/Baden cultures: the meat, the marrow and the milk were directly consumed, the bones, the horns and the skin were used for preparing tools, weapons, clothing and vessels. The draught power of the living animals was exploited in transportation and traffic (trading) and also in cultivation (ploughing, sowing, harrowing, treading-threshing). The manure was probably used for fertilising the soil and other purposes (firing, daubing etc.). The manifold process in which the further exploitation of the animals that had primarily been domesticated for their meat in the Neolithic started is called the revolution of secondary products (Sherratt 1983; 1997: The Secondary Exploitation of Animals, Secondary Products Revolution; Benecke 1994, 132–133).

Only a few cattle representations are known in the Carpathian Basin. A fragmentary figurine probably of cattle was uncovered in apsidal house no. 1 at Vučedol–Gradac (Baden or Kostolac: Schmidt 1945, 29, Taf. 3). A few similar ones were unearthed among the graves of the Pilismarót–Basaharc cemetery (under grave no. 359 with a stone packing: Torma 1973 a, 24), which were perhaps symbolic sacrificial offerings to honour the dead. The animal figurines of Pilismarót are special due to their size (fig. 52.1) At Vác, they appear in the form of a zoomorphic vessel (Kővári 1993, 483–484): this is the most complete and the most delicately elaborated zoomorphic vessel of the culture (fig. 52. 2). In another genre, they can be met as components of cart models (fig. 52. 3: Balatonőszöd, pit no. 1998, Horváth 2010 in print a) [6].

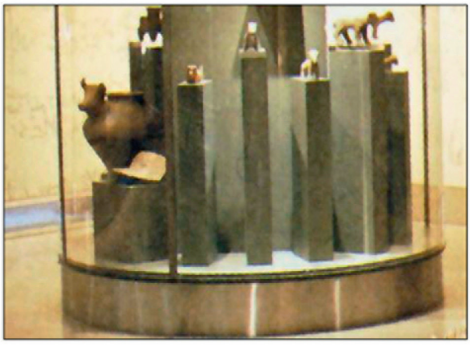
The prehistoric cattle sacrifices cluster in the centre of the Danube region within Europe (fig. 53), and although they appear in various periods and cultures between 3600–2200 cal BC, most of them can be affiliated with the people of the Funnel-Beaker, the Baden, the Globular Amphorae and the Corded Ware cultures (Behrens 1964; Pollex 1999; Jeunesse 2006; Szmyt 2006; 2008) [7]. It is supposed on the basis of the latest cases uncovered with amber disc grave-goods that the "deposits" can be linked with the sun cult (Pollex 1999).

It was supposed in knowledge of grave no. 3 of Alsónémedi and grave no. 3 of Budakalász (Korek 1951) that cattle skeletons found in pairs belonged to cart burials. This supposition can be refuted: it is impossible according to cases uncovered in regular cemeteries and also in settlements that any kind of a cart structure from any materi-

6 Radošina, Boleraz phase (Němejcová-Pavúková / Bárta 1977, 442–443, Abb. 6. – zoomorphic vessel; 444. Abb. 7. – cart model). Other cart-models decorated with animal protomés: Boglárlelle (Ecsedy 1982, Taf. 8/9. a, b). Similar depictions with the places of protomés: Jennyberg I, Pleissing–Holzfeld, and Pilismarót–Basaharc? (Enăchescu 2004, 52).

7 They appeared in the Middle Copper Age: Altmärkische Tiefstichkeramik, and then FBK: Wartburg, Walternienburg, Elba–Havel, Bernburg, Salzmünde–complex, and remained characteristic until the end of the early Bronze Age: CWC, its Schönfeld complex, GAC, and Mierzanowice culture.

1



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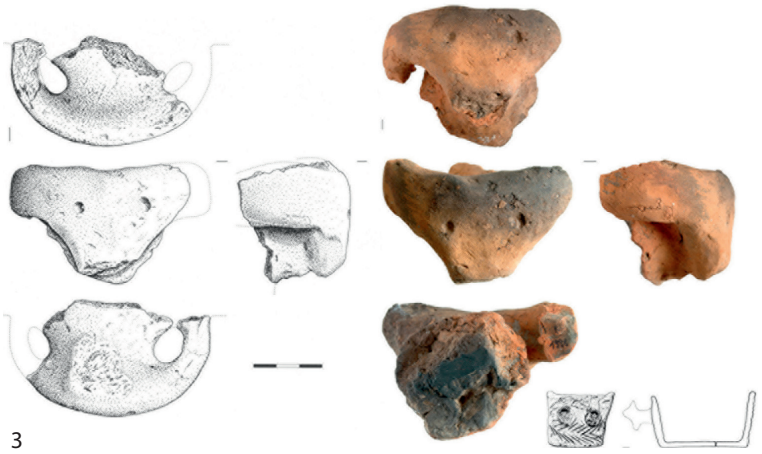


3

Fig. 52. 1 Zoomorphic figurines, Pilismarót–Basaharc, after Kovács 2002; 2 Cattle-shaped zoomorphic amphora, Vác-Kisliliom Str., after Kelet és Nyugat határán 2002; 3 Balatonőszöd–Temetői dűlő, Pit no. 1998, ox–protome broken off from a cart–model.

Abb. 52. 1 Zoomorphe Figurinen, Pilismarót–Basaharc, nach Kovács 2002; 2 wie ein Rind geformte Amphore, Vác-Kisliliom Str., nach Kelet és Nyugat határán 2002; 3 Balatonőszöd–Temetői dűlő, Bef. Nr. 1998, von einem Wagenmodell abgebrochenes Ochsenprotomen.

al could have been placed beside the animals in the narrow pits. Besides, the genders and ages of the individuals of the double burials (generally a cow and a young calf were buried together) are inconsistent with a trained draught unit[8].

Nevertheless, their distribution, the time and the frequency of their appearance really shows connection with the sudden advance of cattle breeding in the northern hemisphere between 4000 and 3000 cal BC, and with the multifactorial unfavourable climatic deterioration, which was most probably due to the change of the Sun's activity between 3900, 3550, 3250 and 2900 cal BC (Piora oscillation, Magny 2004; Maghy / Haas 2004; Arbogast et al. 2006, in the lake regions of Switzerland).

8 Paired cattle burials in the settlements of the Baden culture (Fig. 53 b): Budapest/Káposztásmegyer/Farkaserdő, Dunaszentgyörgy, Hódmezővásárhely/Bodzáspart, Kaposújlak/Várdomb dűlő, Mezőkövesd/Nagy–Fertő, Pilismarót/Szobi rév, Vučedol/Streim (Horváth in print).

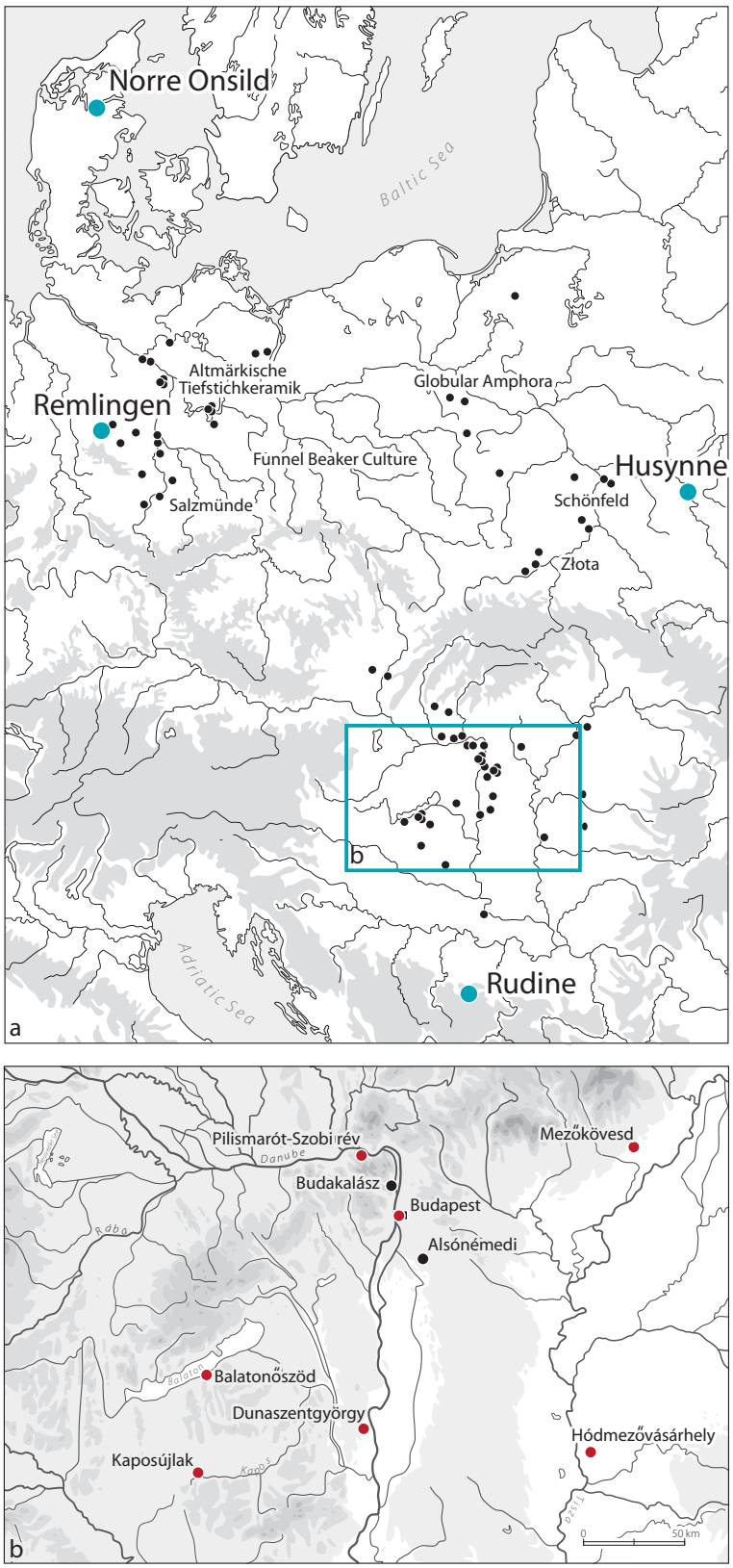


Fig. 53. **a** Map of cattle burials, Europe, between 3600–2200 BC. black dots: cattle burials, blue dots: peripheral find places of cattle burials; **b** Map of double cattle burials in Hungary (Baden culture), red dot: in a settlement, black dot: in a cemetery.

*Abb. 53. **a** Kartierung der Rinderbestattungen in Europa zwischen 3600–2200 v. Chr. (schwarze Punkte), blauer Punkt: periphere Fundplätze von Rinderniederlegungen; **b** Kartierung von Rinder-Doppelbestattungen in Ungarn (Badener Kultur), roter Punkt: in einer Siedlung, schwarzer Punkt: in einem Gräberfeld.*

The stature of Baden cattle is extremely heterogeneous according to the archaeozoological analyses, and they can be grouped in various types (pigmy, low, medium, high medium, high, gigantic statures can equally be found: Vörös 1983, 38). The animals selected for sacrifices generally belonged to the so-called Bos taurus primigenius Rütimeyer 1862 type, which can be identified from the shape of the skull.

Regarding the animal burials of the Boleráz/Baden culture, cattle burials show the greatest variety regarding the killing and the posi-

tioning of the animals and the completeness of the skeletons.

Incomplete, partial skeletons are often unearthed, which supposes the existence of ritual maiming or butchering.

The method chosen for the butchering of the animals could serve profane or ritual purposes (dividing the animals to body parts: head, trunk, meaty limb, dry limb, digits/bones remaining in the skin).

In certain cases, the head was cut off from the body at the cervical vertebrae before burial, while in other cases the vertebral column was cut in the lumbar region. Separated skulls, skulls with vertebrae, vertebral column/vertebrae in an anatomical order and associated hind limbs were also placed in the pits. Sometimes the horns were sawed off from the head. The practical reason of the removal of the horns can be linked with the secondary exploitation of cattle: the animals become more manageable during milking and yoking. In phase IV of the Baden culture, cattle were characteristically laid on the back with the legs spread apart in a frog position (e.g. Ecser 6 site, and Budapest–Káposztásmegyer: Endrődi 2004, fig. 49). In a few cases the hock joints were missing (in consequence of felling or skinning). The animals were probably killed next to the pits (they fell into the pits when the hock joint was cut). The wound marks on the skeletons suggest that they were certainly deliberately slaughtered and did not die in a natural way (the observed wounds were the smashing of the skull – pole-axing, mandible wound – knocking down, rarely perhaps a stab in the chest or the shoulder-blade) [9].

A relatively limited assortment of tools and methods could be used for killing animals (stone axes, flaked stone tools, bone tools, wooden clubs, putting one's hand in the opened chest and stopping the blood circulation with the rupture of the artery, comp. Vörös 1979, 24; Bartosiewitz et al. 2008). According to the Balatonőszöd cases, the animals could be stunned before killing (knock on the head with a stone axe) and the blood could be let out (blood was probably necessary for the offering). The partial skeletons attested to a skill in butchering and skinning, while no cut marks could be observed on the animal bones.

Traces of burning can often be observed on the animal bones (just like on human sacrifices) and they are often found in a layer of ash and daub (e.g. Pilismarót-Szobi rév, Vörös 1979, 190, 197). They could get in contact with fire (burnt sacrifice?) before being placed in the pits since only the surfaces of the bones were scorched (e.g. Tahitótfalu Vörös 1985, 17). The repetition of the act on the occupation territory of the culture implies that it was part of the ceremonial choreography (comp. Horváth 2006)

Cattle were thrown into the generally small pits or they were placed on the right or the left side, sometimes on the back. The skull was turned back on the vertebral column or under it. The positions of the limbs was also varied: accidental, extended, crouched (all the four or only the fore / hind limbs), or the hind legs were pulled up in a frog position. No system could be detected in the orientation: it was varied even within the same settlement. The positions of the bodies, however, reflect the same pattern as the one observed at human burials! Because of this and the proximity and connection between the human and cattle burials, it seems probable that cattle had the same value in the late Copper Age society as humans, they could substitute people (e.g. as a substitute offering in a bloody sacrifice).

The recurrent fixed versions of cattle burials imply that every version mirrored a specific social situation, which, however, had the same meaning in each community of the Boleráz/Baden society, and it was filled with the same symbolic content [10].

The rest of the animal bones found in pits with independent cattle skeletons uncovered at Balatonőszöd suggest that the sacrifices were given food for the feast or the afterlife.

9 The registered instances are the followings: Budapest, Káposztásmegyer/Farkaserdő pit no. 30, double cattle burial: the vertebral column of the 3 years old cow was broken in the lumbar region, the horns of the other cattle were cut off from the head, its forehead was smashed at pole-axing; pit no. 49: at least three pole-axe blows hit the head of the 4-5 years old cow; Pilismarót–Szobi rév, pit no. 315: the horns were cut off from the head, a stab would of sharp edges can be seen on the left scapula (Endrődi–Vörös 1997; 1998).

10 Comp. Douglas 2003, 91, 155. The peoples along the Nile formed their experiences with the help of cattle symbolism. The Dinka (cattle breeding tribe in Sudan) follow the colours according to the colours of the cattle; the picture a man forms of himself is mediated by an ox with which he identifies himself; the experiences concerning the society are totalled in animal sacrifices. When an ox is sacrificed, various methods of its killing are determined and each method matches the purpose they want to reach with the sacrifice. When a truce is accepted between two groups separated by blood feud, the animal is cut in the middle and the two parts are given to the two groups (indicating that the feud cannot separate them any more). In certain cases the animals are trodden to death, in other cases they are strangled. When the purpose of the sacrifice is to lift the effects of incest, the animal is cut into two in the length along the genitals. It is not difficult to find the reflection of a political body in the body of the sacrificial ox: evidently, a social situation is manifested in the manner of its splitting, while the activity itself expresses a common affair.

Fig. 54. Pit no. 334.
Abb. 54. Bef. Nr. 334.

Besides the survival of the earlier, Neolithic bull cult, cow and firstling sacrifices also became emphatic in the Late Copper Age.

Animal keeping peoples are dependant on the welfare of the stock, their wealth on the quality of the pasture. The clouded sky, which sends rain to the fields, is a friendly, positive natural element. Nomadic people call themselves the sons of the rain, the heavenly water, and the search for rich pastures drives them to continuous wandering. The animals are generally driven at night. Thus the nomadic and the large animal keeping peoples adore the darkness of the night and the clouded sky in daytime, and these elements are turned into the sympathetic topics and symbols of their myths. The preference of the night over the daytime is also manifested in their calendar based on the nights and the calculation of the lunar year according to the course of the moon. The Arabic verb *gasaka* means both the darkness of the sky and the rain and also that milk flows from the udder. For people who create myths, rain is the milking of the heavenly cows that the cowboys of the night drive to the heavenly pastures (comp.: Goldziher 2003, 88–127; Sümeghy 1958: he associated the cart vessels of the Baden culture with the ancient Greek daidala rain imploration fertility feast).

Catalogue of cattle burials

Pit no. 334, cutting 51/6, on the border of culture-bearing layer 925, older classical Baden (fig. 54).

Feature: *The round pit was filled with compact brown soil mixed with ceramic fragments. The animal skeleton, which appeared on top of the shallow pit, was strongly damaged by mechanic earth movement. The animal lay on the left side, the head was twisted back, the rump was incomplete. It perished after lifting. István Vörös determined it as a cattle skeleton from the photo and graphic documentation.*

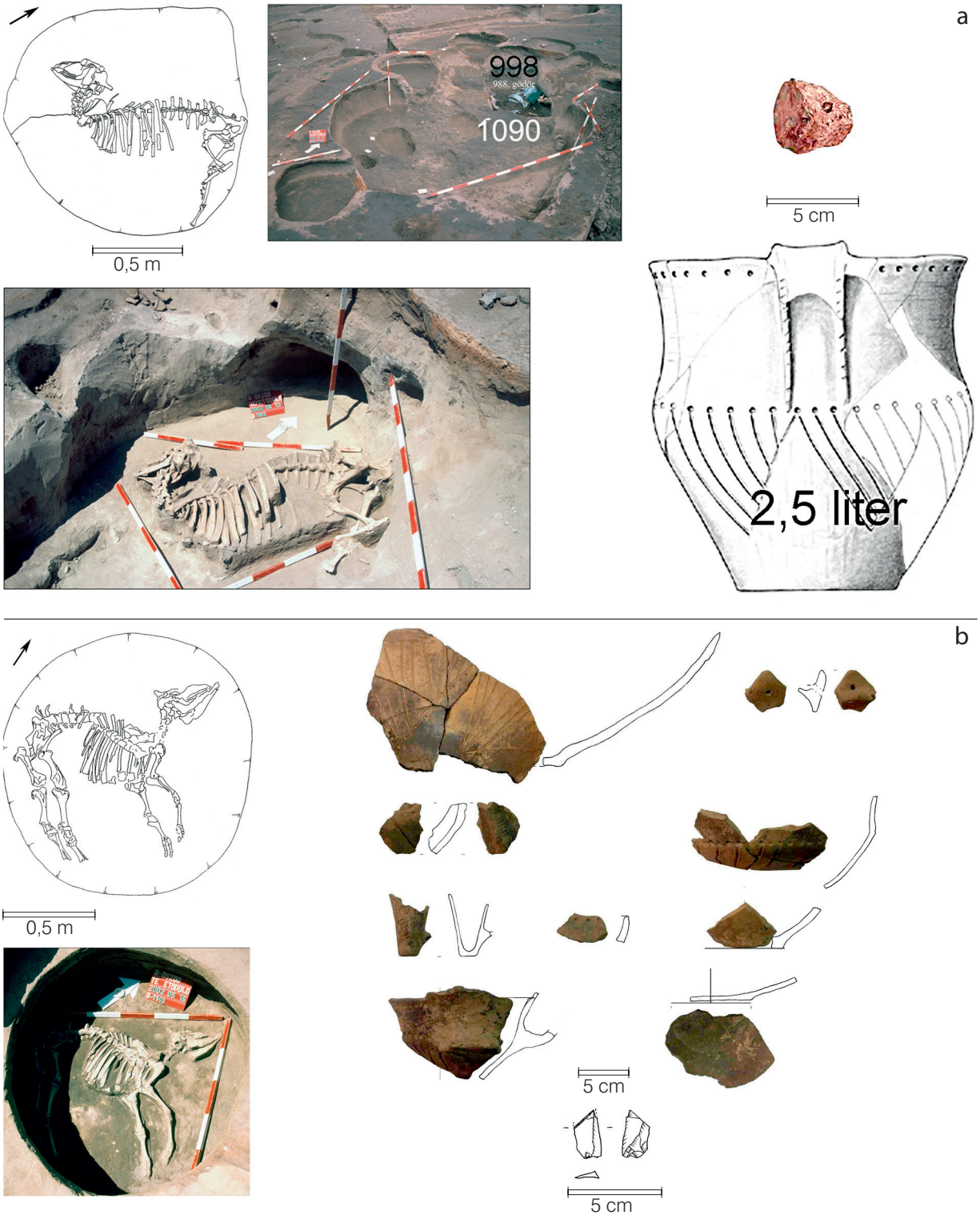
Ceramic finds (2.5 kg): *Fragment of a bipartite bowl.*

Pit no. 1090, cutting 49/8, under culture-bearing layer 925, Baden phase III (fig. 55 a).

Feature: *Ash pit no. 989 found in the centre of a complex of an oven and an ash pit of the Migration period intersected the Baden pit no. 1090, in which a coherent animal skeleton was uncovered. The otherwise intact skeleton was incomplete due to a disturbance on the southern side. The animal lay on the right side, the head was somewhat turned back toward the vertebral column, the left hind leg was pulled up, the right one was extended. The preserved filling of pit no. 1090 was dark brown, compact, mixed with shards and daub fragments.*

Ceramic finds (1.5 kg): *Handled pot with a bowl-like decoration, completed; chisel from the rib of a large ruminant; polished lateral fragment of a stone axe; red pigment lump of polished sides.*

Zoology: *Skeleton of a calf; vertebra of a great catfish.*



Pit no. 1143, cutting no. 48/6, under culture-bearing layer 925, older classical Baden (tending toward phase IV?) (fig. 55 b).

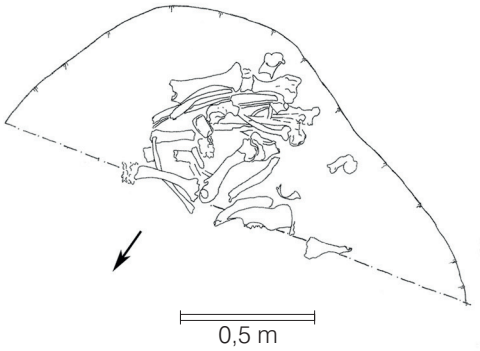
Feature: *The pit was filled with compact brown soil mixed with daub and charcoal. The skeleton of a calf lay on the left side with extended limbs. Oven no. 167 was found right next to the pit.*

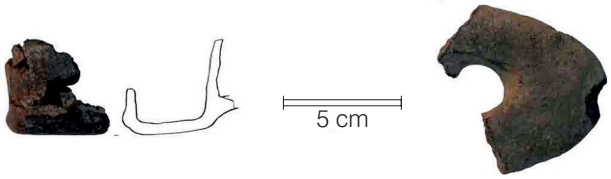
Finds (6 kg): *Fragments of bipartite bowls; fragment of a dipper; obliquely blunted flaked blade.*

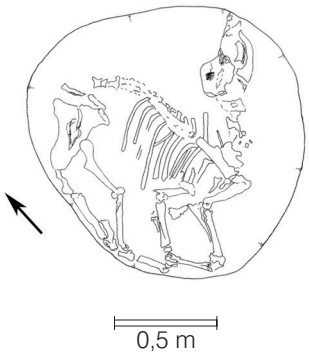
Zoology: *Skeleton of a 2–4 months old calf; limb of an adult cattle; skull and an limb of a 2–3 months old sheep; limb and a vertebra of an adult sheep; mandible of a not yet 8 months old pig; skull and vertebra of an adult boar. The animals were probably killed in summer.*

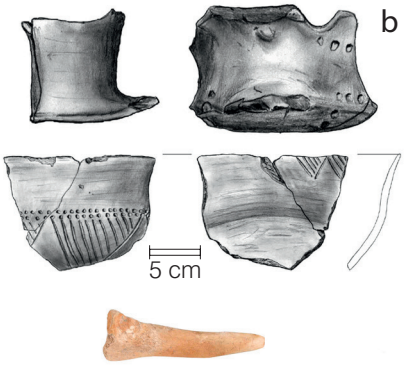
Fig. 55. a Pit no. 1090 and selected finds. b Pit no. 1143 and selected finds.

Abb. 55. a Bef. Nr. 1090 und Fundmaterial, b Bef. Nr. 1143 und Fundmaterial.









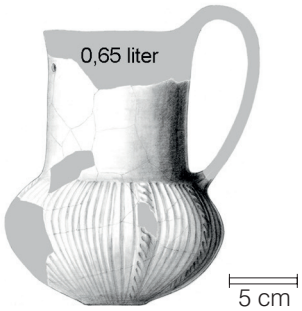


Fig. 56. a Pits no. 1237 and selected finds selected finds, b Pits no. 1399 and selected finds.

Abb. 56. a Bef. Nr. 1237 und Fundmaterial, b Bef. Nr. 1399 und Fundmaterial.

Pit no. 1237, cutting no. 43/5, under culture-bearing layer 925, Baden phase III (fig. 56 a).
Feature: *The upper layer in the cross-section of the round pit was brown with daub and loess grains underlain by a compact grey, ashy layer mixed with loess concretions, animal bones and charcoal: an incomplete cattle skeleton was uncovered in it. The neighbouring pit no. 1236 contained a human burial.*
Ceramic finds (1.5 kg): *Lower fragment of a dipper.*
Zoology: *Skeleton of a 2.5–3 years old bull; limb of an adult cattle; mandible of an adult sheep; limb of an adult sow (burnt). The animals were probably killed in winter.*

Pit no. 1399, cutting no. 46/11, on the border of culture-bearing layer 925, Baden phase III (fig. 56 b).
Feature: *The pit was filled in with dark grey soil mixed with charcoal, daub and shards. A cattle skeleton was uncovered on the bottom of the pit pressed against the wall. Pit no. 1399 intersected pits nos. 1398 and 1400. A jug that could be completed was found in pit no 1398.*
Ceramic find: *Bottom and wall fragment of a dipper with the lower start of the ribbon handle.*
Zoology: *Skeleton of a 3–3.5 years old cow; astragal of a sheep. The animals were probably killed in summer.*

Pit no. 1451, cutting 46/10, under culture-bearing layer 925, Baden phase III (fig. 57).
Feature: *The oval, beehive-shaped pit was filled with dark grey soil mixed with daub and charcoal. An incomplete cattle skeleton lay a few cm above the bottom, which the workers destroyed.*
Finds (4 kg): *Short foot-ring or hollow pedestal (suspension or hollow-pedestalled vessel); fragments of a dipper; profile fragment of a small, flat, handled bowl; bone-sharpener from a cattle radius.*
Zoology: *Skeleton of an about 4 years old cow; vertebra and limb of an adult cattle; limbs of 2 newborn lambs; mandible and limb of an 18–20 months old sheep; limb of an adult sheep; skull and limb of an adult pig; fragment of the right cast antler of a roe deer. The animals were probably killed in early spring/autumn.*

Pit no. 1493, cutting 48/6, under culture-bearing layer 925, older classical Baden culture (fig. 58).
Feature: *An incomplete skeleton was uncovered in the dark, compact filling of the pit.*
Ceramic find: *Profile fragment of a small handled bowl; stone fragments probably from a stone axe.*
Zoology: *Partial skeleton of a 6–8 months old cattle. The animal was probably killed in late autumn.*

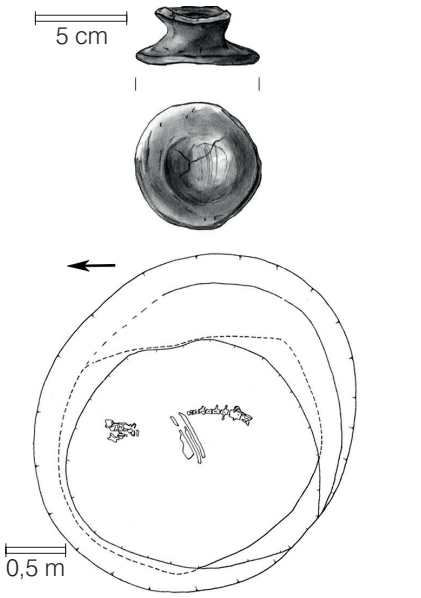
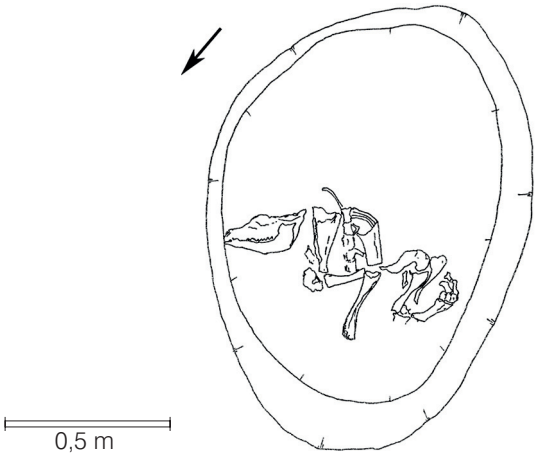


Fig. 57. Pit no. 1451 and selected find.
Abb. 57. Bef. Nr. 1451 und Keramik.

Fig. 58. Pit no. 1493.
Abb. 58. Bef. Nr. 1493.



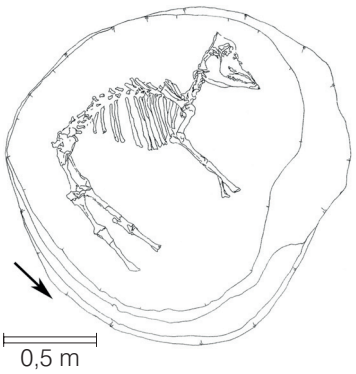
Pit no. 1772, cutting 38/4, on the border of culture-bearing layer 925, early Baden (fig. 59).
Feature: *The pit was filled in with compact grey soil mixed with some charcoal. The skeleton of a calf lay on the left side with extended limbs.*
Zoology: *Skeleton of a 4–6 months old cattle; mandible of an adult cattle; partial skeleton of an 8–10 months old pig; mandible of a 6–8 months old sheep; limb of a 2.5–3 years old horse. The animals were probably killed in early autumn.*

Pit no. 1796, cutting 39/5, under culture-bearing layer 925, indistinctive Baden (fig. 60).
Feature: *A cattle skeleton lay with a few shards in the shallow pit filled in with compact, grey soil mixed with some charcoal. The head was turned back under the ribs.*
Zoology: *Skeleton of a 3.5–4 years old cow; limb of an adult cattle, partial skeleton of an 8–10 months old pig; skull and vertebral column of an adult sow; limb of a pig foetus. The animals were probably killed in late winter / spring.*

Pit no. 1839, cutting 40/5, under culture-bearing layer 925, indistinctive Baden (fig. 61).
Feature: *The shallow pit was dug into forest soil. It was filled with greyish brown soil mixed with some charcoal. An incomplete thrown-in cattle skeleton and shards were found in it. Pit no. 1832 with a human burial lay in its vicinity.*
Zoology: *Skeleton of a 2.5–3 years old bull. It was probably killed in winter.*

Pit no. 1841, cuttings 40/4, 5, under culture-bearing layer 925, indistinctive Baden (fig. 62 a).
Feature: *The pit dug into forest soil was filled in with compact brownish grey soil mixed with charcoal. A cattle skeleton lying on the left side was uncovered together with a few shards. The limbs were extended and the head was somewhat bent toward the vertebral column. Pit no. 1832 with a human burial was close to it.*
Zoology: *Skeleton of a mature cow with a hole caused by a blow (stone axe?) in the mandible; mandible of a juvenile cattle; head and limb of a 6–8 months old sheep; limb of an adult pig. The animals were probably killed in autumn.*

Pit no. 1843, cutting 41/3, indistinctive Baden (fig. 62 b).
Feature: *The pit was filled with greyish brown soil mixed with some charcoal. It contained a cattle skeleton bent to the N side of the pit. The head was twisted*



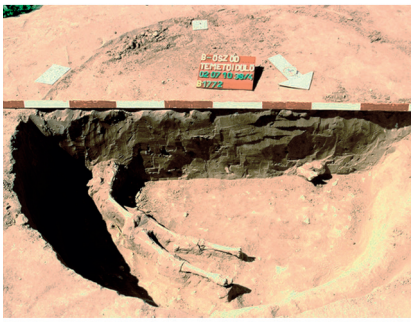
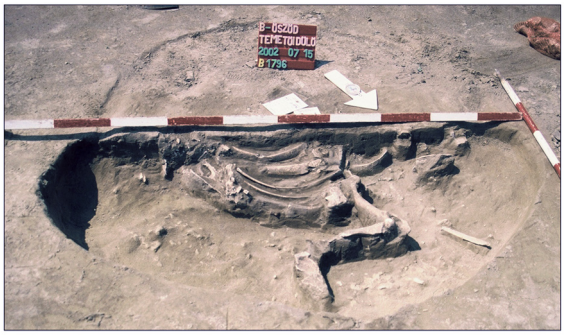


Fig. 59. Pit no. 1772.

Abb. 59. Bef. Nr. 1772.



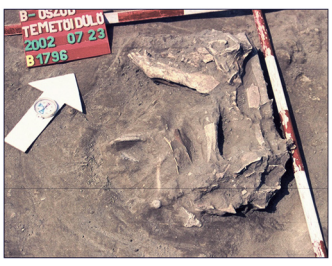


Fig. 60. Pit no. 1796.

Abb. 60. Bef. Nr. 1796.

back over the vertebral column, the legs were pulled up under the body. Another cattle skull was found on the other side of the pit.
***Zoology:** Head of a 16–20 months old cow; skeletal part of a ca. 3 years old cow; head of a ca. 3 years old cow; head and trunk of an adult bull; limb of an adult cattle; pelvis of an adult pig; limb of a bitch; bones of 3 horse individuals. The animals were probably killed in spring / late autumn.*

Pit no. 1856 cutting 44/6, under culture-bearing layer 925, older classical Baden (fig. 63 a).
***Feature:** The shallow, oval pit filled with layers strongly mixed with charcoal, daub and ash contained two cattle skeletons.*
***Finds:** Triangular flaked arrowhead; proximal end of a blade.*
***Zoology:** Skeleton of a 4–6 months old cattle; skeleton of an adult/mature cow; limb of an adult cow; lumbar vertebra of a dog. The animals were probably killed in autumn.*

Pit no. 1860, cutting 38/2, under culture-bearing layer 925, indistinctive Baden (fig. 63 b).
***Feature:** The pit dug into forest soil was filled with compact brown soil mixed with charcoal, refuse and daub. A cattle skeleton lay in it on the left side with shards. The head was turned back, the limbs were incomplete.*
***Zoology:** Skeleton of a mature bull; limb of an adult sheep.*

Pit no. 1899, cuttings 46/7, 8, under culture-bearing layer 925, older classical Baden (fig. 63 c).
***Feature:** The round pit was filled with compact, greyish brown soil mixed with some charcoal. It contained shards and a cattle skeleton laid on the left side with the head turned back and the legs slightly pulled up.*
***Finds (3 kg):** Two fragments of a bipartite bowl; trapezoid transversal scraper.*
***Zoology:** Skeleton of a 2.5–3 years old bull; head and limb of an adult sheep. The animals were probably killed in winter.*

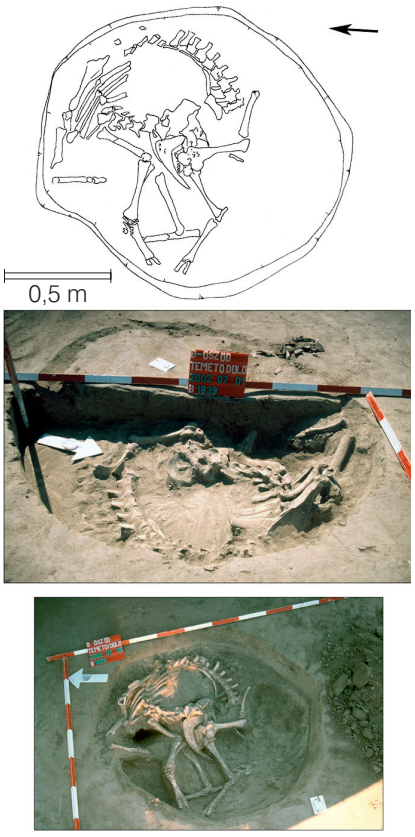


Fig. 61. Pit no. 1839.

Abb. 61. Bef. Nr. 1839.

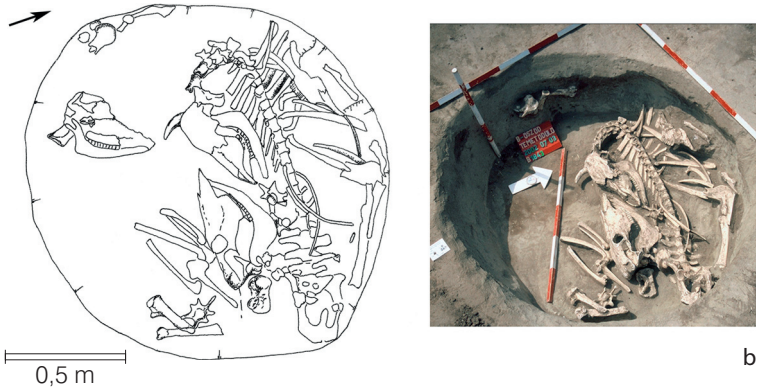
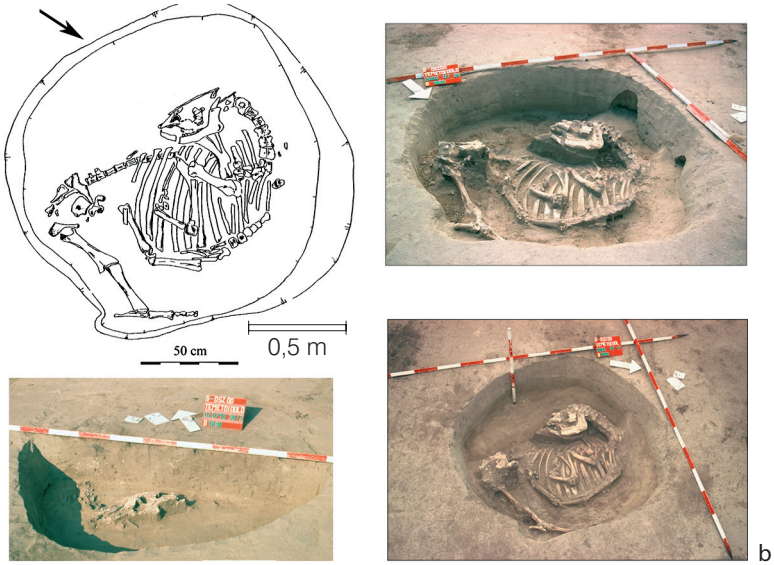


Fig. 62. a Pit no. 1841 and mandible of a cow injured by an axe; b Pit no. 1843.

Abb. 62. a Bef. Nr. 1841 und Mandibula eines Rindes mit Hiebspuren einer Axt; b Bef. Nr. 1843.

a



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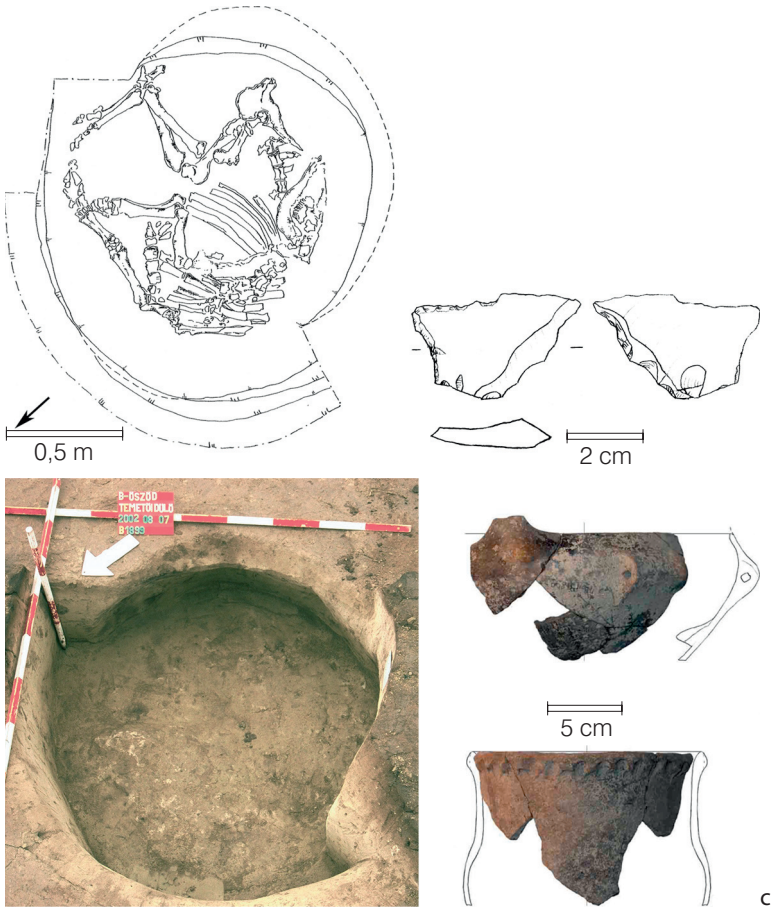

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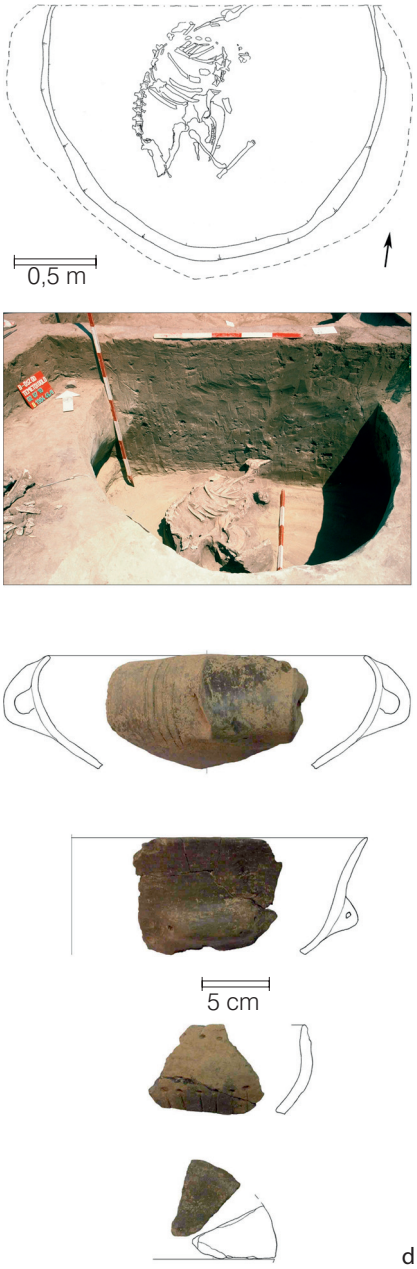


d

Fig. 63. a Pit no. 1856 and finds; b Pit no. 1860 and finds; c Pit no. 1899 and finds; d Pit no. 1904 and finds.

Abb. 63. a Bef. Nr. 1856 und Fundmaterial; b Bef. Nr. 1860 und Funde; c Bef. Nr. 1899 und Funde; d Bef. Nr. 1904 und Funde.

Pit no. 1904, cutting 46/8, under culture-bearing layer no. 925, older classical Baden (fig. 63 d).
Feature: *The stratified, beehive-shaped pit was filled in with compact grey soil mixed with some charcoal. A part of a cattle skeleton was uncovered on the bottom. It intersects layer no. 925?*
Ceramic finds (1.5 kg): *Lid segment; fragment of a biconical bowl of an everted rim.*
Zoology: *Skeleton of a 3.5–4 years old cow; skull and vertebra of an adult cattle; head and limb of a 10–12 months old sheep; limb of an adult pig; mandible of an adult roe deer. The animals were probably killed in the period from autumn to spring.*

Pit no. 2491, cuttings 31-32/6, 7, indistinctive (early?) Baden (fig. 64).
Feature: *The pit dug into forest soil was filled in with greyish brown soil mixed with loess grains. The skeleton of a calf uncovered on top of the pit had been damaged by earth movement. There were shards around the head. Trench no. 2457 intersected the pit in the entire length.*
Ceramic finds (0.5 kg): *Profile fragment of a deep pot-like vessel of an inverted rim.*
Zoology: *Partial skeleton of an 18–20 months old bull. The animal was probably killed in late autumn.*

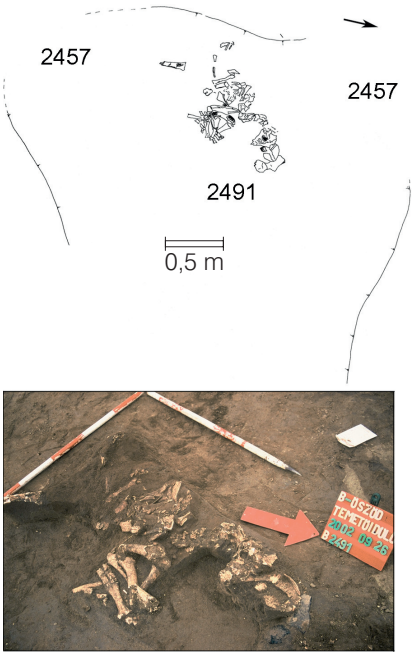


Fig. 64. Pit no. 2491.
Abb. 64. Bef. Nr. 2491.

b. Small ruminant burials in the Baden culture

The early Neolithic cultures brought with them southeast-european domesticated animal species when they arrived in the Carpathian Basin, among which small ruminants dominated (Bökönyi 1971, 642; Clutton-Brock 1999, 70). Extremely many variants of domesticated sheep evolved in the Late Neolithic, which differed in the shape of the horns, the length and fat content of the tail, the quality and quantity of wool and the colour of the fur. Cattle and pigs became dominant among the domesticated animals in the Neolithic and the Copper Age. According to Sándor Bökönyi it was due to the fact that the environment in the Carpathian Basin did not really match that of the Balkan so the keeping of small ruminant species was not as rewarding as in the Balkan. On the other hand, the natural growth was never large enough within the circumstances of prehistoric animal keeping to meet the demands, so the domesticated animal species always had to be completed with wild individuals that could be domesticated. However, the wild representatives of the small ruminants did not live in the Carpathian Basin, only aurochs (the wild ancestor of cattle) and wild boar (the wild ancestor of domesticated pig) could be found there. Thus the two locally domesticated species gradually took over the dominance from the small ruminants. This idea has since been refuted by traditional zoological analyses (Vörös 1994, 178; 2005, 210–211) and DNA tests carried out on Neolithic cattle and aurochs bones in the Johannes Gutenberg University in Mainz (Bollongino et al. 2003).

In the Boleráz/Baden period, István Vörös differentiates the hornless, turbary (Ovis aries palustris Rütimeyer 1862) and Studer's sheep (Ovis aries studeri Duerst 1905) types (Vörös 1983, 39). The Copper Age sheep could already yield more wool (Bökönyi 1971, 649–650), and perhaps the new features gave a new impetus to sheep keeping. The wide distribution of a new biconical, heavy spindle-whorl type is connected with this process: it is one of the landmarks of the "Badenisation process" (Köninger et al. 2001).

Sheep figurines are known from the cemetery of Pilismarót-Basaharc (Torma 1973 a, under stone-packing grave no. 413; at the edge of stone-packing grave no. 414; on the surface between graves nos.

416, 418), from Salgótarján-Pécskő (Korek 1968, Pl. XII/4, Pl. XIII/1–7) and Vel'ké Lomnica (Vladár 1979, 62, obr. 38–39).

Sheep were significant in the Baden culture as multipurpose animals of use: they were nearly equal to cattle. Regarding their body volumes, the meat of about 5–10 sheep was equivalent to that of a single cattle [11] so the meat and other profits provided by sheep were lower than those of cattle even with a far larger item number (from the 37 sacrificial pits of the site 134 sheep individuals, 71 complete or incomplete skeletons, 63 bone remains, and also a goat individual were recovered, comp. tables 2–3).

Not only the meat and milk of sheep were used, their wool was also utilized in textile weaving, felting, cloth filling etc. The first data on the consumption of sheep milk came from the western Iranian region from 5000–3000 BC (Benecke 1994, 130, Abb. 45: Kish/Tell el–Ohemir, milking of a hornless sheep). The first proofs of wool use go back to about 6000 BC in the Near East (Benecke 1994, 136–Abb. 50, clay sheep figurine, Tepe Sarab; Nahal Mishmar, cave 8, wool-based cloth remains), while in Europe, the earliest data on wool processing came from the end of the 4th millennium (Benecke 1994, 138–139, Abb. 51: wool cloth remains from Switzerland, figurine of a woolly sheep from Jordanów Śląski, Jordanow culture, Middle Copper Age). Finds attesting to the increasing utilisation of sheep wool and flax can be connected with the changing social estimation of women and dressing (Baldia et al. 2008; comp. Horváth 2008: gynaecomorphism).

The analysis of the animal bone material of the Tiszavalk cemetery has demonstrated that sheep were the most important animals at the offering feast organised within the frames of the burial rite as early as the Early/Middle Copper Age (Vörös 1986).

Goat is also called the "cattle of the poor" because it is less demanding, smaller and gives much milk. The process of its domestication cannot be documented as exactly as that of sheep although in certain regions it was more popular than sheep in the early phase of domestication (Clutton-Brock 1999, 78). The shortening of the limbs and the change of the shape of the horns (especially of he-goats) could also be observed at goats in the 7th–6th millennia BC.

Goats were kept mainly for their meat and milk, and various articles of use were made from their skin. The bones (for awls, pins, sockets and cases) and the horn cores of both animals were used for tool making. Musical instruments were prepared from the horns of small ruminants, fat was used in lamps, their manure was put on fire and added to the daub. They were very useful in the respect that they ate the young bushes and branches so they helped in cleaning the clearings. Regarding the quality of the pasture, they were satisfied with the barren desiccated meadows, in contrast to cattle that needed rich pastures.

Ágota Sz. Kállay discussed the role of goats as sacrificial animals from an archaeological and a religious historical aspect on the occasion of phenomena and finds uncovered in the sacrificial area of the Ludanice culture at Füzesabony (Sz. Kállay 1988, 38–41; Vörös 1988).

According to religious traditions that survived from the prehistoric and the classical civilisations, goats were among the most frequently offered animals, and they were used for various offerings. The people of Athens sacrificed 500 goats after their victory at Marathon (Leach 1949, 456).

Regarding their general occurence, they do not seem to have played an important role in the Late Copper Age.

In the 1800's, five major offering types were recorded at the Bedouins in connection with small ruminants (Klenck 1995) [12].

11 Within prehistoric circumstances, the estimated "useful" meat quantity of a mature animal was as follows according to Vörös 2005, 220: cattle 250 kg, sheep/goat 25 kg, pig 40 kg.

12 1: feast of the sacrifice, which is performed once a year to commemorate the event when Abraham wanted to sacrifice his son Isaac. 2: Genie-sacrifice, which was performed during hunting: the meat and blood of an animal are offered to the spirits of the earth so that it does not harm the hunters. 3: couples perform it before a wedding to guard them from curses and to bring bless. 4: it is put in the grave at the death of a member of the family for the journey, and another one is sacrificed 40 days after the death as a commemoration. 5: sacrifice to the saints (the ancestors and the patrons of the tribe are regarded saints). The eldest members of the family perform the sacrifice, while the women are segregated. Generally, a young male animal is chosen since it is thought to have the tenderest meat, while that of the old animal is hard and tastes bad. The sacrificial animal is predominantly a goat, although it can be cattle or camel as well. Before killing, water is given to them. First they are skinned, then they are split, prepared and eaten. The butcher gets the left-over parts (skull, hide). The refuse pit can be found 10–150 m from the scene of the sacrifice, in which the refuse left during and after the sacrifice is discarded. The scene of the sacrifice (e.g. the grave of a saint) is always kept clean.

Meat consumption takes a prominent part in certain (especially sheep keeping) cultures, which becomes a quasi protocol-like rigid ritual ceremony. A whole communication can be expressed without words by the seating of the participants at a feast, the preparation of the food and the serving of various parts of the animal since every movement has a symbolic meaning (Grantham 1995).

According to ethnographic studies (Viga 1981; 1982; Leach 1949), small ruminants were endowed with properties of carrying power, health and luck and averting evil as the reviving symbols of nature and vegetation.

In the uncovered Late Copper Age phenomena, small ruminants occurred beside humans, with dogs, and beside cattle burials with entire skeletons (pit no. 1795) or partial skeletons. Small ruminants did not have the same individual role as cattle in animal burials. They were, however, characteristic animals of mass sacrifices (pits nos. 203, 426, 1036, 1085, 1331, 1499, 1608, 1612, 2614). The proportion of pregnant ewes and foetuses/newborn lambs is very high in the collective sacrificial pits (203, 1036, 1331, 2614). They were generally killed by breaking the neck.

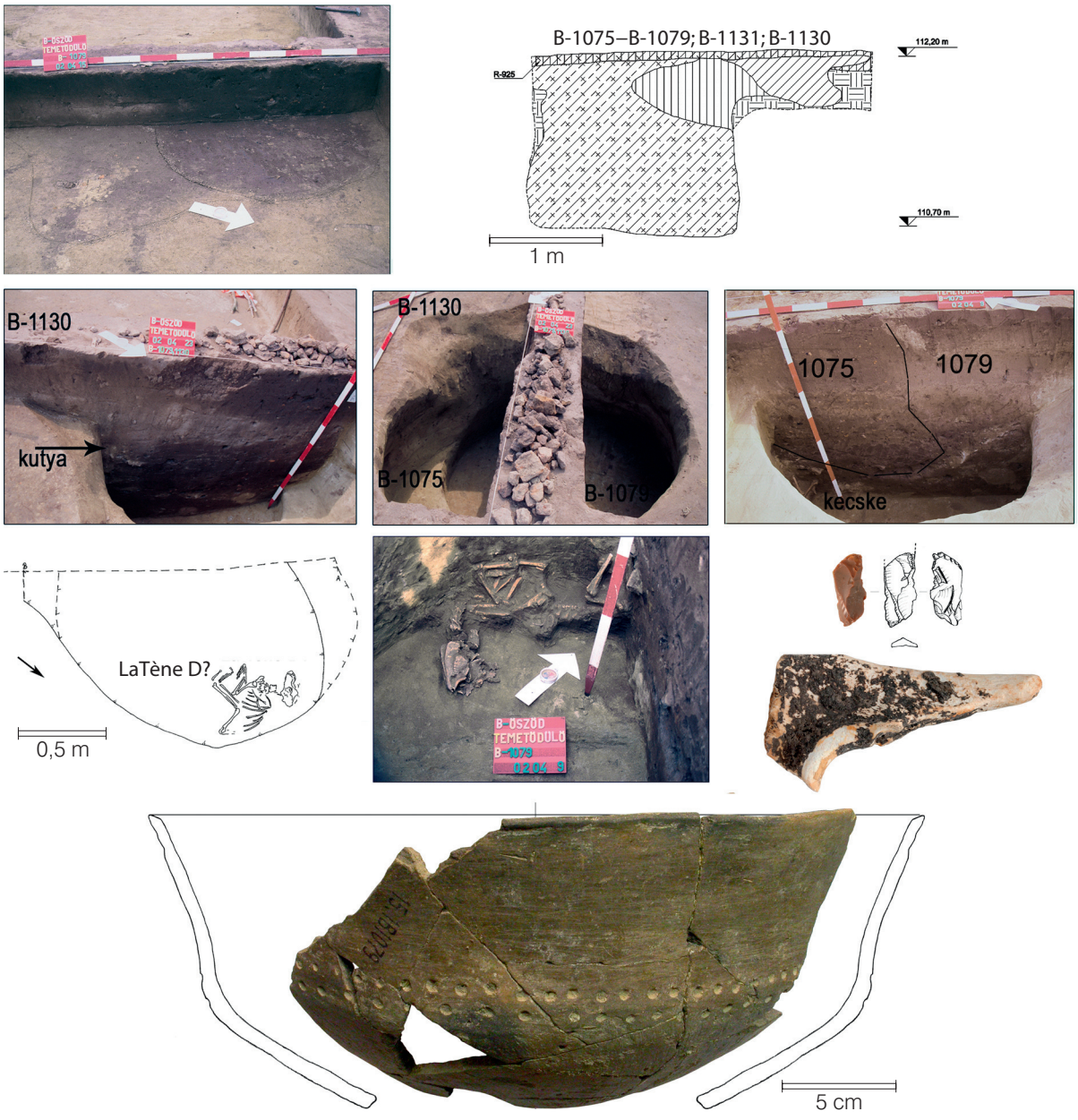


Fig. 65. Pits nos. 1075-1079 and selected finds.

Abb. 65. Bef. Nr. 1075–1079 und Fundmaterial.

Catalogue of small ruminant (sheep/goat) burials

Pits nos. 1075 (La Tène D) – 1079. Baden, cuttings 49/10, 11, under culture-bearing layer 925, older classic Baden (fig. 65).

Feature: *In the NW corner of the beehive shape pit no. 1079 were excavated a ruminant skeleton. Pit no. 1079 was cut by pit no. 1075, with a dog skeleton of its NE side.*

Finds (1 kg): *Obliquely truncated flaked blade; bone chisel from a cattle ulna, chisel from the tibia of a small ruminant.*

Zoology: *Skeleton of an adult sheep, and the limb of another. cranium of an adult bull, dog skeleton (from pit no. 1075 - celtic?).*

Pits nos. 1430–1431, cuttings 45/7, 8, under culture-bearing layer 925, Baden phase IIB (fig. 66 a).

Feature: *An intact bowl and a handled cup lay on the bottom of pit no. 1430 and the butchered skeleton of an animal was found in pit no. 1431. The amorphous pit no. 1430 had a stratified filling. The round pit no. 1431 was filled with dark grey soil mixed with charcoal, daub and animal bones: they were in superposition.*

Selected finds from pit no. 1430 (8 kg): *Completed flask; small jug without the handle, with animal bones in it; amphora fragment; profile fragment of a one-handled, biconical bowl with an everted rim; retouched flake: sickle inlay; medial fragment of a flake; weathered basalt fragments from one or more stone axes.*

Zoology: *Skeleton of an adult sheep.*

Pits nos. 1825–1826, cutting 41/6, under culture-bearing layer 925, indistinctive Baden (fig. 66 b).

Feature: *A common cross-section was left from pits nos. 1825 and 1826, which were dug side by side. The oval pit no. 1825 was filled with compact, dark brown soil mixed with charcoal, refuse and a large number of animal bones. The oval pit no. 1826 was filled with compact dark brown soil mixed with charcoal and refuse.*

Selected finds: *Core ridge with use wear on the right edge, burnt; edge fragment of a shaft-hole axe, weathered basalt.*

Zoology*: Partial skeleton of a sub-adult sheep; limb of an adult ewe; limb of a 2–4 months old cattle; limb of an adult pig. The animals were probably killed in summer.*

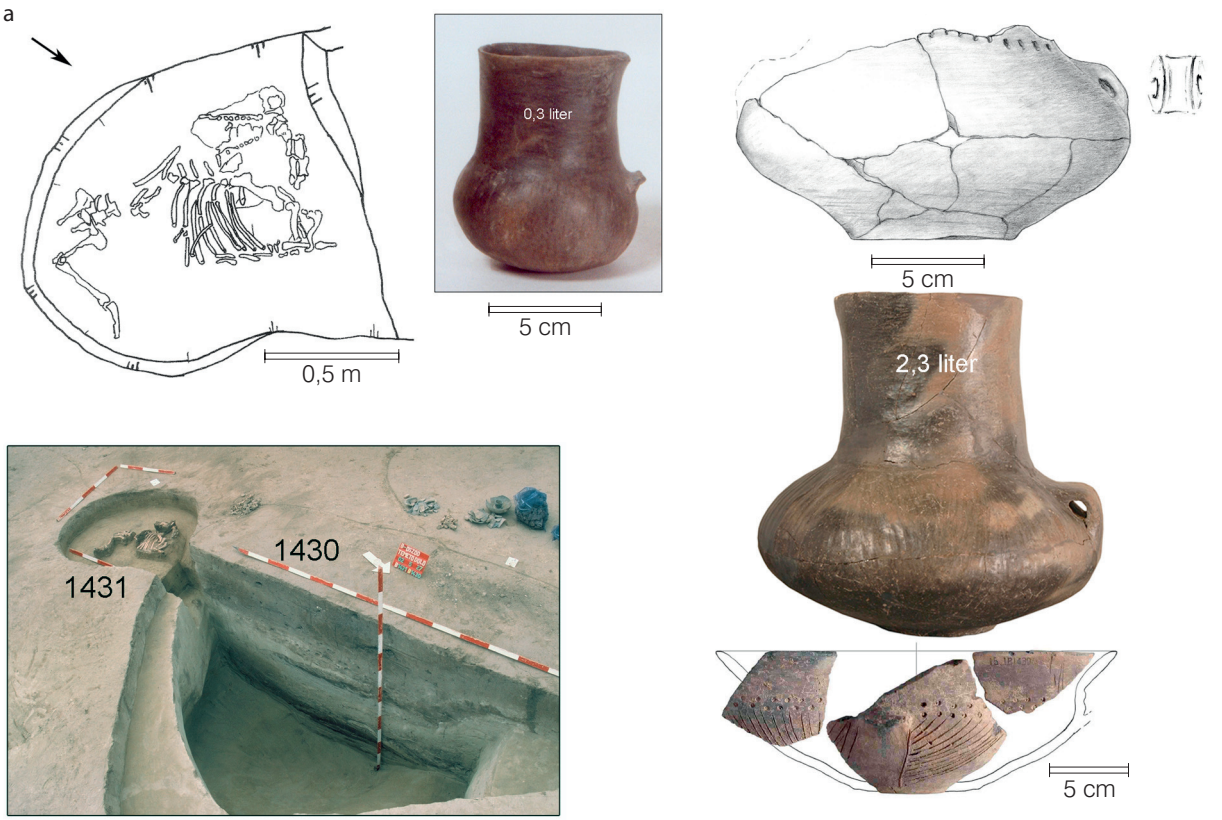
c. Pig burials in the Baden culture

Pigs (Sus domesticus Erxleben 1777) were especially favoured in prehistoric cultures because of their prolificacy. The domestic animals were used first of all for their meat and fat, and the skin and the bones were also used in various ways. Their excellent sense of smell could also prove useful (searching for mushroom and roots).

The presence of pigs in a settlement proves a settled lifestyle since they were generally fed on vegetal food and food remains. According to other authors, the upswing of pig keeping indicates continuously immigrating new populations within the settlement (Pétrequin et al. 1998, 190).

Certain studies owe special importance to the manure grubbing and eating habits of pigs: the animals practically removed the refuse and excrement from the settlement, which increased in parallel with the growth of the human population. In this sense, pigs were the disease limiting and also disease spreading factors of prehistoric societies (Nemeth 1998). When they were driven to the fields after harvest, they grubbed up the left over roots and made the field more arable and fertile.

Transitional individuals between the domesticated and the wild versions can continuously be demonstrated in the Neolithic in Hungary.



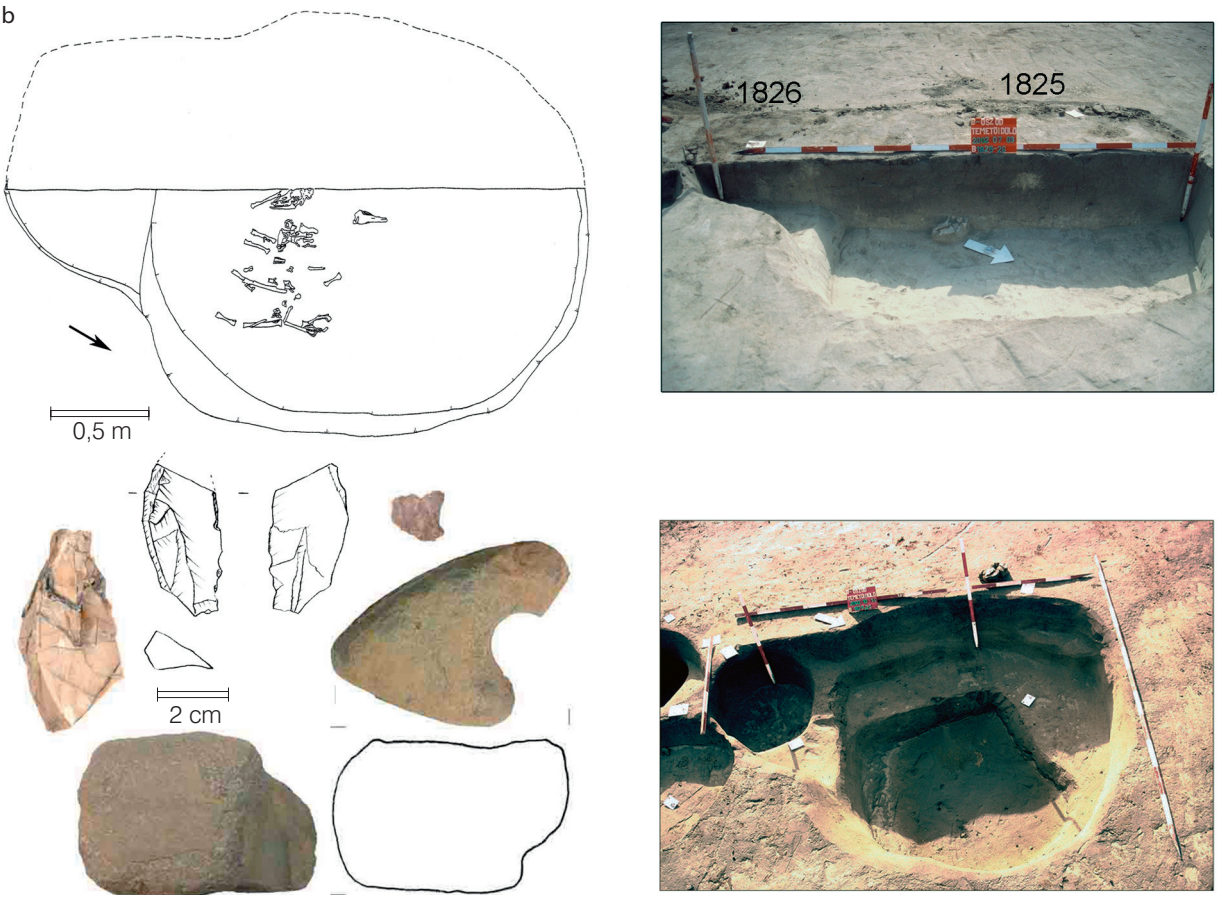


Fig. 66. a Pits nos. 1430, 1431 and selected finds; b Pits nos. 1825, 1826 and selected finds.

Abb. 66. a Bef. Nr. 1430, 1431 und Funde; b Bef. Nr. 1825, 1826 und Funde.

The small-statured turbary boar (Sus [scrofa] palustris Rütimeyer 1862, Vörös 1983) was characteristic of the livestock of the Baden culture although large-bodied individuals also appeared.

Wild boar mandibles and wild boar tusks often appear in the grave furniture of burials from the Late Neolithic to the end of the Middle Copper Age. They are not that important in the burials of the Baden culture although they are still present (e.g. Budakalász–Luppa csárda, male grave no. 91: the "artisan's" grave: Korek 1986). Polished tusk plates were found in pits nos. 1789, 2234, 2655, 2708 and 2724 at our site. They could be status symbols, totem animals or trophies as well (comp. Griffin 1998).

The fragment of a pig figurine is mentioned from grave no. 364 of the Pilismarót-Basaharc cemetery (Torma 1973 b, 494).

Complete and partial skeletons were found in the sacrificial pits. There are domesticated and wild individuals among them.

In the Celtic, German and Scandinavian mythology, wild pigs are symbols of bravery, the great and cunning warrior, the most worthy adversary and the nobility, and they were also the most frequently prepared as sacrificial dishes. In the ancient Greek mythology, a subterranean shrine was built for Demeter and her daughter. Pigs were generally sacrificed to her, the goddess of agriculture and cultivation (as substitute offerings, holy pig figurines also appear in the shrine district: Mylonas 1961, Fig. 66).

In China, where it was the first domesticated animal, it was the symbol of good luck and health, which was also used as a food offering cooked for the ancestors, in fortune telling and shamanistic rites.

At our site, the pits with independent pig skeletons generally contained partial skeletons of other animals, which suggests that food for the feast or the afterlife was added to the sacrifice. Pig skeletons occurred beside a human skeleton (pit no. 2344) and beside a cattle skeleton as well (1795). The piglet found in pit no. 1794 was probably a firstling sacrifice, which was supported by the miniature suspension offering vessel decorated by painted and incised patterns, which was found beside it. Piglet bones were also found in pits nos. 203 and 1331, 1770. Besides, they were common elements in the large stratified pits (pits nos. 203, 1331, 1362, 1497, 1499, 1608, 1770, 1795), and smaller parts and bones of pig skeletons could be found in nearly every pit (comp. tables 2–3).

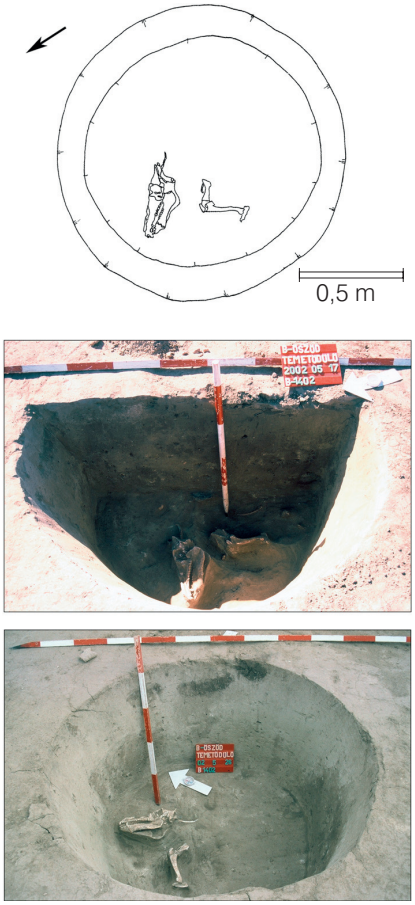


Fig. 67. Pit no. 1402.

Abb. 67. Bef. Nr. 1402.

Catalogue pig burials

Pit no. 1402, cutting 46/11, on the border of culture-bearing layer 925, older classical Baden (Fig. 67).

Feature: *The skeletal part of a pig was uncovered on the bottom of the round pit filled in with dark greyish brown soil mixed with charcoal.*

Finds (0.5 kg): *Wall fragment of a bipartite bowl with the interior dividing wall.*

Zoology: *Skeleton of a 2–2.5 years old sow; limb of an adult cattle; limb of a subadult sheep. The animals were probably killed in summer.*

Pit no. 1536–1782, cutting 44/7, 8, under culture-bearing layer 925, IIB/III.

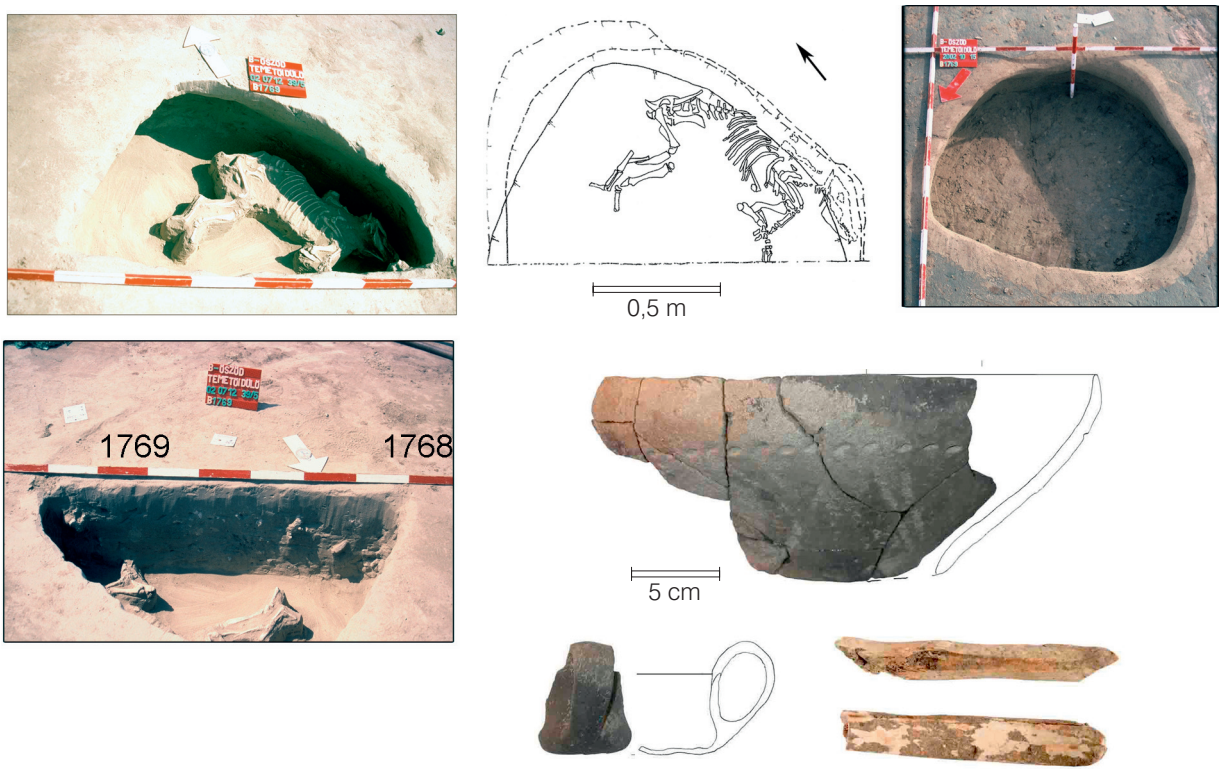
Feature: *The pit is part of a larger unit, it is in superposition with pit no. 1531. A partial animal skeleton was uncovered in it.*

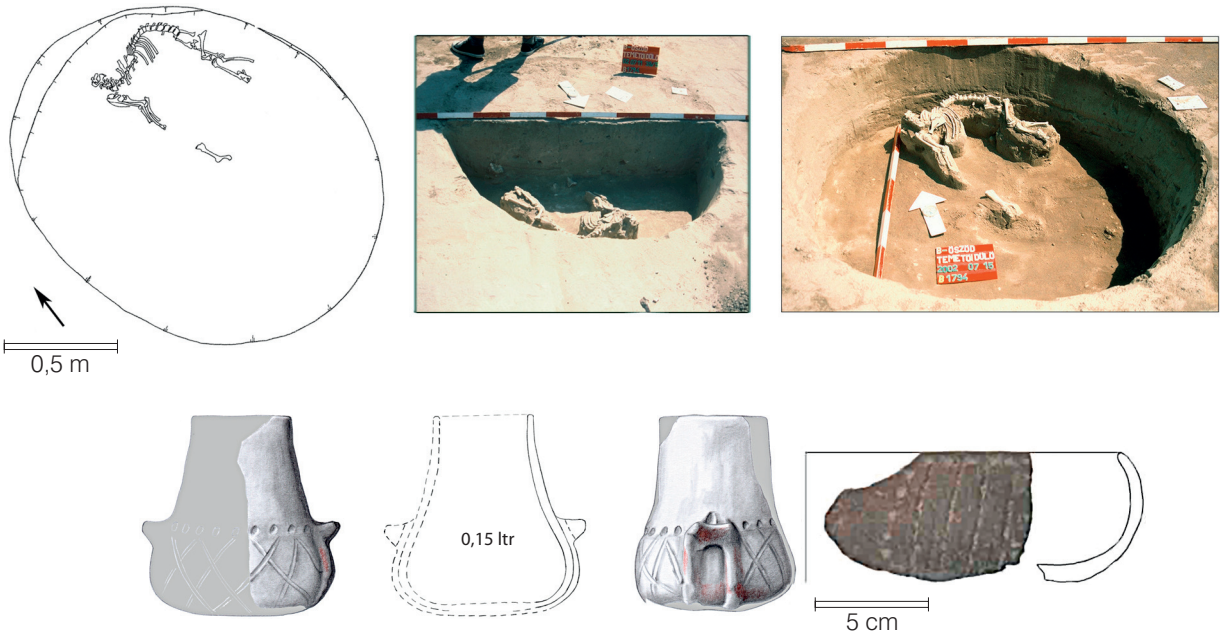
Finds (4.5 kg): *Fragment of a bipartite bowl; fragment of a stone axe.*

Zoology: *Skeleton of an 18–20 months old pig; limb of a dog. The animals were killed in late autumn.*

Pit no. 1769, cutting 39/5, under culture-bearing layer 925, IIA/B? (fig. 68).

Feature: *The beehive-shaped pit was filled in with compact, grey soil mixed with some charcoal. It contained the skeletons of two pigs. One of them lay on the E*





side of the bottom of the pit on the left side with slightly pulled up legs. The other animal skeleton was disturbed during cleaning. The ceramic material belongs together with the finds of the neighbouring pit no. 1768.
Finds (0.5 kg): *Rib chisel made from the rib of a large ruminant.*
Zoology: *Skeletons of an 8–10 months and 10–12 months old sow; head of an adult cattle; skull and limb of a juvenile sheep. The animals were killed in spring.*

Pit no. 1781, cutting 44/6, under culture-bearing layer 925, Baden phase III (fig. 12).
Feature: *The discolouration of another pit was observed under feature no. 1608: it was pit no. 1781, which contained another animal skeleton fragment and many shards.*
Finds (7.5 kg): *Bottom and wall fragment of a dipper, its bottom is convex with an omphalos; bottom and wall fragment of a dipper with the lower butt of a rib-*

above: Fig. 68. Pit no. 1769 and selected finds.

oben: Abb. 68. Bef. Nr. 1769 und Fundmaterial.

below: Fig. 69. Pit no. 1794 and selected finds.

unten: Abb. 69. Bef. Nr. 1794 und Fundmaterial.

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Tünde Horváth
Transcendent phenomena in the Late Copper Age Boleráz/Baden settlement uncovered at Balatonőszöd-Temetői dűlő: human and animal "depositions"
published on September 1st, 2010

bon handle; neck fragment of a vessel of an everted rim.
Zoology: *Skeleton of an 18–20 months old pig; limb of a dog.*

Pit no. 1794, cutting 39/5, under culture-bearing layer 925, older classical Baden (fig. 69).
Feature: *An animal skeleton lay on the left side with extended legs and without the skull at the northern side of the shallow pit.*
Finds (2 kg): *Profile fragment of a miniature anthropomorphic flask-like suspension vessel with traces of red paint on the exterior surface; point: both edges are convex, the left one is retouched from one side, the right one is bifacial with sickle shine; fragment of a stone axe, basalt.*
Zoology: *Skeleton of a 4–6 months old pig; limb of an 18–20 months old cattle; skull and limb of an adult sheep. The animals were killed in autumn.*

Pit no. 1849, cuttings 40-41/3, indistinctive (older classical?) Baden (fig. 70).
Feature: *A common cross-section was left in the neighbouring pits nos. 1848 and 1849. Pit no. 1849 intersected pit no. 1848. Pit no. 1849 was filled in with compact grey soil with some charcoal and an animal skeleton.*
Finds: *Edge fragment of a stone axe, strongly weathered basalt, the edge is a convex chisel edge, it is blunt and injured.*
Zoology: *Skeletons of an 8–10 months old and an 18–20 months old pigs; head of a dog. The animals were killed in winter.*

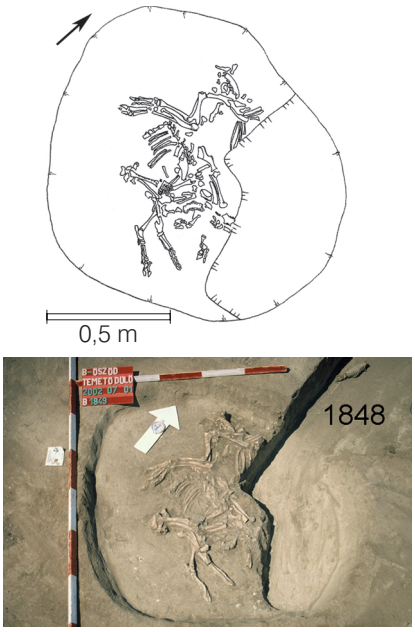


Fig. 70. Pit no. 1849.
Abb. 70. Bef. Nr. 1849.

d. Dog burials in the Baden culture

The domestication of dogs (Canis familiaris L. 1758) dates from the Mesolithic, yet it could already be a companion to humans much earlier (Bökönyi 1974, 317; Larsson 1990, 155; Clutton-Brock 1999, 49). Smaller dogs prevailed in the Copper Age, less so in the earlier periods (turbary dog, Canis familiaris palustris: Rütimeyer 1862). Data from the Neolithic and the Copper Age show that dogs were consumed by humans, a custom having disappeared by the Bronze Age (beside the frequent occurrence of bones, cut marks were observed on a number of bones: Schibler 2006, 60).

The hunting dog role was less important, instead they watched the houses and the herds. The palustris type is the most frequent in the prehistoric dog burials.

The fragment of a dog figurine and the fragments of a rhyton lay in grave no. 359 at Pilismarót-Basaharc.

I. Zalai-Gaál recapitulated the dog burials from before the Baden culture (Zalai–Gaál 1994), and J. Maringer summarized them in the prehistoric Europe also with regard to their religious historical role (Maringer 1980–1981, 40–41). These studies mention dogs as divine attributes, cosmic animals, sacrificial animals, building sacrifices, the companions of humans in the otherworld in the cult of the dead and also as demons from the otherworld, corpse devourers, healer and fortune teller animals. Ancient societies probably owed the promise of prey to amulets made from their teeth.

At Balatonőszöd, a dog skeleton was found with a human one, and they also occur together with other animals (small ruminants, cattle, pigs). It always appeared in the stratified pits with human skeletons (pits nos. 203, 1612): they were always put on top. Complete skeletons were found in pits nos. 203, 1085, 1099, 1362, 1497, 1499, 1608, 1770, 1844 and beside human burials in pit no. 1106 (comp. tables 2–3).

Catalogue dog burials

Pit no. 578, cuttings 83/4, 5, Baden culture? (fig. 71).

Feature: *Three partial skeletons were uncovered on the bottom of the pit in a compact, brown filling mixed with charcoal grains. It did not contain other finds.*

Zoology: *The bones perished during earth movement and uncovering. According to the photos and the drawings, István Vörös suggested that one of the skeletons belonged to a dog.*

Pit no. 1847, cuttings 40/3 - 41/4, Baden phase III (fig. 72).

Feature: *The oval pit was stratified in a cross-section. The filling was mixed with loess, daub, ceramic and animal bone fragments, while the bottom layer was ash grey, slightly burnt and compact. Fragments of the daubing of an oven were found among the finds.*

Finds (2.5 kg): *Dipper, broken into two; profile and rim fragment of a biconical bowl of an everted rim; half of a quern, both surfaces were working surfaces; about half fragment of a hemispherical quern.*

Zoology: *Dog skeleton; head and limb of a dog; limb of an adult cattle; limb of a juvenile sheep.*

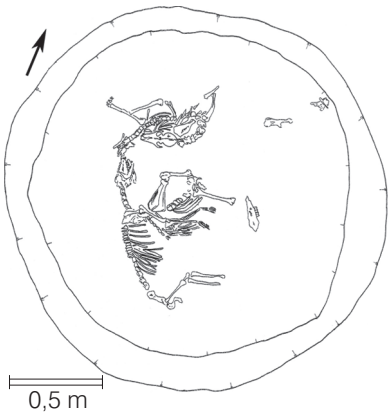
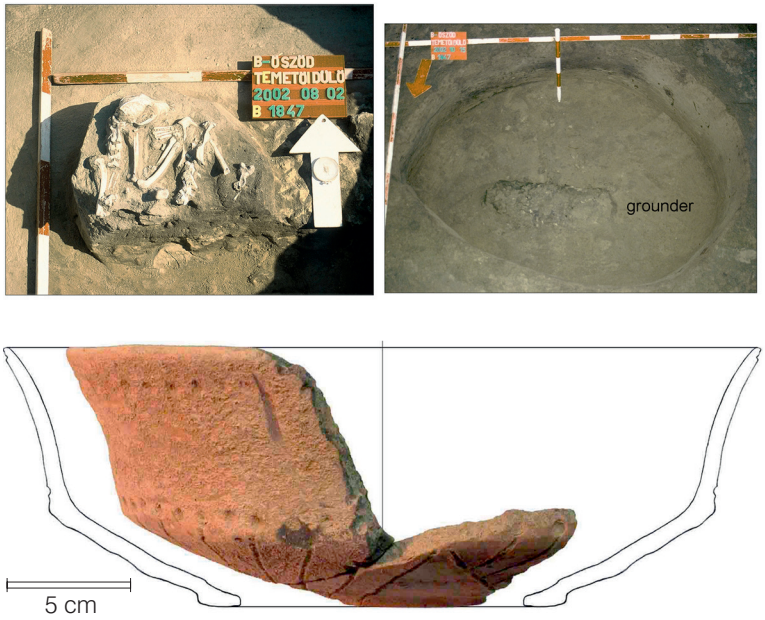


Fig. 71. Pit no. 578.

Abb. 71. Bef. Nr. 578.



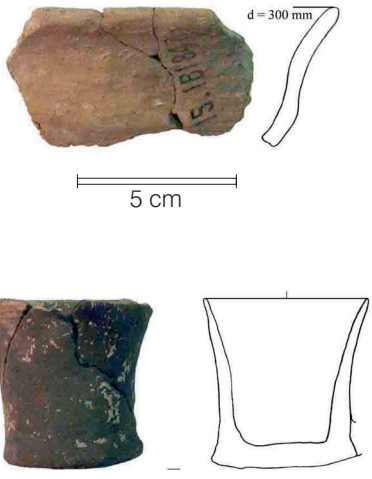


Fig. 72. Pit no. 1847 and selected finds.

Abb. 72. Bef. Nr. 1847 und Fundmaterial.

Interpretation of animal burials

Lifestyle and settlement structure

Prehistoric animal burials were first recapitulated by H. Behrens (1964) and recently by V. Struhár (2001). A. Endrődi and I. Vörös discussed the Baden finds from Hungary in details in several studies (Endrődi / Vörös 1997; 1998) but regrettably none of the manuscripts have yet been published [13].

The number of settlements suddenly increased in the Late Copper Age and technological innovations appeared: a new type of pottery (a new collection of vessels for liquid storage), animal keeping developed faster than ever, its products like milk, meat, wood, manure were used in a new way, and animal power was put to use as draught power in cultivation and transportation-commerce (Sherratt 1981; 1983; 1997). Sherratt marked the specific features of the period stressing the two major factors: "alcohol and animal traction – drinking and driving" (Sherratt 1997, 30). This complex process took place on a large territory of Europe including the Carpathian Basin (Köninger et al. 2001).

13 I would like to express my gratitude to both authors for allowing me to use the manuscripts.

Despite the large number of settlements (about 1500 in Hungary), there are barely any definite archaeological evidences about the dwellings of the Baden culture (Horváth et al. 2007). However, Boleráz settlements, which can be characterized by typical pile dwellings standing on water banks, can be found in Hungary (Balatonőszöd). As a community that herds large animals must migrate with the animals from time to time, they could have temporary or even permanent dwellings in the form of light-structure houses or large covered wagons (comp. Rolle 1991, 85–92). This would also mean that most of the settlements were temporary ones. This periodicity is excellently illustrated by the periods of the killing of animals: animals were generally sacrificed at the Balatonőszöd site from autumn to spring, which probably means that they stayed here in this period. Everyday life was mostly confined within the settlements but the activities were performed outdoors. This is supported by the large number of hearths and pits in the settlements and even the large extent of the settlements and the archaeologically more and more often documented devastation layers that covers them (Balatonőszöd, Balatonlelle, Balatonmagyarád).

The high standard of animal keeping, its primary role and status value is indicated by the extremely large number of animal bones and the strikingly high number of animal burials at the Boleráz/Baden sites (tables 2–3).

The first known ceramic flask came from Segesd-Alsóbogát (Dravecczky 1965; 1970, 6, Taf. XIV / 138). Pottery shapes that indicate large animal keeping lifestyle include the so-called barque-shaped vessels in which butter can be prepared (Horváth 2009 a), and the hat-shaped perforated strainers (for the preparation of curd and whey, Nitriánsky Hrádok–Výsoky breh: Točík 1963, obr.1/9, 12). Numerous suspension vessels of various forms helped the mobile way of life.

The number of hunted and fished animals is low (at our site aurochs were found in pits nos. 1612 and 2635, roe deer in pits nos. 1451, 1904, wild cat in pit no. 1657, red deer in pits nos. 1608, 1612, and a hamster in pit no. 1608), although this proportion can somewhat grow within certain geographic regions (comp. Schibler 2006). Skeletons of red deer were reported from Nitriánsky Hrádok II (Struhár 2001, 196); Vučedol–Gradac (Baden culture? Schmidt 1945, 16, T/3); 13 badger skulls from Ljubljansko Barje and a complete beaver skeleton and the bones of 3 more individuals from pit no. 80 at Vučedol–Streim (Jurišić 1989, 30–31). Beaver bones were found in pit no. 197 of Pilismartót-Basaharc as well (Vörös 1979), and the same animal is known in the form of a figurine from Mödling-Jennyberg (Ruttkay 2001, 523).The skeleton of a doe was unearthed in a pit at Mamming (Driesch-Gerstner 1993).

According to the data completed with archaeozoological and palaeoecological analyses, this lifestyle was named "wetland nomadism", a nomadic lifestyle in a wet environment (Schibler 1987, 196). The settlements are really connected with natural water flows along the southern bank of the Balaton (comp. fig. 52).

Climate historical data

Late Copper Age including the Boleráz and the Baden cultures (3500–2800/2600 BC) fell to the end of the Atlantic phase (5500–3000 BC) and the Atlantic-Sub-Boreal transition (3000–2000 BC), which is characterised by a very slow and gradual cooling (the most evidently around 3000 BC) and probably a growing amount of precipitation (Magny 2004; Magny / Haas 2004). The climatic phenomenon called Piora Oscillation is calculated from 3900 BC, in which the prehistoric populations gradually adopted a large animal, mostly cattle breeding lifestyle in Europe. In the Carpathian Basin it started with

the Balaton-Lasinja and the Ludanice cultures (Virág 2004). Cultivation became subordinated because of the whimsical climatic factors, while revolutionary changes took place in animal keeping.

Forests spread in the Balaton region, beech (Fagus) became frequent, elm (Ulmus) regressed and human impacts increased (according to a bore probe from Balatonboglár-Berek). The water level of the uniform lake basin ranged between 106–107 m, which was 2–3 m higher than to date (Sümegi et al. 2004).

It can be demonstrated among the long-lived Late Copper Age sites along the southern bank of the Balaton that the early Boleráz features lay on a lower elevation and closer to the Balaton than the Baden phenomena, which shifted toward the higher hill ridges farther from the bank. This may go back to climate historical reasons, which are connected with the rise of the water level in the Balaton (Fábián-Serlegi in print).

Character of the rites

In the Neolithic, sacral phenomena and finds generally appear in the corners of the houses, near hearths and in pits next to the houses (Bánffy 2001, 61).

At Balatonőszöd, the uncovered cultic phenomena appeared in open spaces all over the settlement showing certain regularities. They cannot be interpreted as family acts regarding either their quality or their appearance: they were rather collective sacrifices according to a monumental uniform choreography, or the manifestations of the cult of the dead and the ancestors.

The burial of animals with humans is explained with social (social status), religious and emotional reasons (Behrens 1964, 161–162). V. Struhár differentiated two major groups of animal burials: the normal liquidation of individuals that were not suitable for consumption and the cases when some kind of irrational behaviour manifested itself in the community (Struhár 2001, 195).

Is it possible to set apart the animal skeletons or skeletal parts that were buried with profane (perished) versus sacral purposes by archaeological methods? Similarly to the problem of simple human burials or human sacrifices, it sometimes seems impossible to decide if a deliberate partial animal burial is uncovered or a refuse pit, which was filled with a more than average number of animal bone refuse (e.g. in cases of pits nos. 639 and 1362).

As rites have a regular logic characteristic only, the common, recurrent aspects demonstrated during the uncovering of animal skeletons (in the slaughtering method, the character of the burial, the positioning, the accompanying phenomena and finds, see the detailed discussion by species in Horváth 2006) and the concurrences suggest that what we found was not accidental and not common, profane death.

The distribution of the sacrificial pits, vessels and objects within the settlement shows clusters (sacrificial/ritual areas "complex area": Fig. 18).

The similarities and connections between finds, depictions and phenomena that are interpreted as cultic ones are difficult to demonstrate with archaeological methods: the data we have are not sufficient. The cremation burial no. 1 of Méhi-Feketesár is a representative of these rare observations, in which a gynaecomorphic vessel, an anthropomorphic vessel and a female idol were found together (B. Kovács 2002, fig. 24; Bánffy 1990–1991, 234). The body of an idol was found together with animal skeletons in a sacrificial pit at Aljmaš (Grammenos 2003, 161). The finds that are considered cultic ones at Balatonőszöd and that were evidently uncovered as grave-goods in other Boleráz/Baden excavations proving that they were linked with

burial rites (mask, idols, seals, footed beakers, bipartite bowls, special vessels) were generally found near animal and human sacrifices (Horváth 2009 a; 2010).

The existence of combined ceremonial areas as potential scenes of communal feasts is another argument in favour of the communal level of the sacrifices. Cultic feasts organised on a community level and the organisation of daily meals needs the existence of table communities on a higher than house / family community levels. Table communities were generally established along lineages and played a role in determining and keeping prohibitions concerning certain foods, taboos, and unclear / holy categories. They were the most common tools of the establishment of confraternities organised on religious, ethnic and political bases and they were also permanent sources of confrontations (Weber 2005, 57).

The sacrifices offered in settlements can basically be linked with the following events:

Individual landmarks of human life (like e.g. birth, puberty, marriage and death, these are the so-called life crisis rites);

Community life, individual history (e.g. rise in status, rites of changing status);

Seasonal or calendrical collective rites at vegetation feasts adjusted to the cycles of nature;

Unsolved conflicts of the community, unexplained "supernatural" phenomena, natural disasters;

Spontaneous unexpected events.

Offerings used at ritual ceremonies have diverse characters [14], while the sacrifices are either real individuals (real bloody sacrifices) or pseudo-sacrifices that substitute them (animal for a human or a copy of a living creature shaped from an organic or an inorganic material, maybe in the form of an idol or a mask) [15].

The animal chosen for sacrifice had to have the best properties: it could not be sick or imperfect (Stengel-Oehmichen 1890, 83). Regarding the character of the sacrifice, the choice of gender and age of the animal was an important element of the choreography [16].

As could be observed, the celestial deities were invited to a joint feast during the offering, and certain parts of the sacrificed animal were offered to them. Celestial deities are the lords of the courses of stars and being the guardians of the fixed laws that rule this sphere, they were also the lords of justice, customs and ethics in the earthly world (Weber 2005, 25). Their predominance over the earthly deities evolved in societies where "knightly culture" flourished, meaning that charismatic social/military/religious leaders played a major role and a weaponry and social classes matching this role developed.

The situation was different with the chthonic deities. They could not be invited to a joint feast, so the entire animal had to be offered to them (Stengel-Oehmichen 1890, 85). Accordingly, the complete skeletons uncovered at a site could have been offered to the chthonic deities, the partial ones to the celestial deities. Regrettably, this means of seperating burials and sacrifices might lead to ambiguous observations, due also to recent damages of the finds.

A. Endrődi and I. Vörös observed that only a few and incomplete skeletons were found in the Boleráz period, while many and complete skeletons were uncovered from the later, classical Baden period (Endrődi-Vörös in print; 1998). The proportion of incomplete/complete skeletons have a conceptual (celestial/chthonic) meaning

14 The sacrifice types known from literature are the following: foundation, building, votive, appeasing, victory, consecration, retribution, communal peace sacrifice, fertility-spring, funeral, sun cult, rites protecting and assuring harvest, cleansing sacrifice, sacramental sacrifice. Many sacrifice types can overlap each other: Kézikönyv a Bibliához 1992, 172–180

15 Idols and anthropomorphic or zoomorphic vessels can also be grouped in the category of "pseudo-sacrifices", although no real evidence of it has been recovered from the prehistory, just like cattle substituting humans in the Baden world.

16 Only male animals were sacrificed at votive offerings, female or castrated animals were sacrificed to the dead and mostly male animals were sacrificed to the chthonic deities. According to the sacrificial ceremonial order in Mycenae, one year old animals were sacrificed to Dionysus, Zeus Chthonios and Ge Chthonia. Young animals were sacrificed to the holy people and the ancestors. At firstling sacrifices, the firstlings of the livestock were sacrificed generally within fixed ceremonies Bloedow 2003; Leach 1949).

according to religious historical studies, while as excavation data, they have a dating force.

The sacrificial pits dug into the earth are generally associated with the cult of chthonic deities and consequently the fertility cult and the cult of the dead: they are the lords of wealth, abundance and fate in the otherworld. By means of offering sacrifices, these pits create a connection to the earthly and chthonic deities, who willingly accept the offering placed in the pits. In certain cases the pit itself is a chthonic altar (Makkay 1975, 168).

As pits are the most common phenomena in a prehistoric settlement excavation, like in Balatonöszöd, the majority of the finds come from this feature type and it is not astonishing that the sacrifices were always uncovered in pits. This, however, does not mean that all of them were offered to the chthonic deities! After all: what feature type could be associated in a prehistoric settlement with offering types intended for the celestial deities if not a pit?

Regarding the character of the sacrifices in the Balatonőszöd settlement, only a single feature can certainly be set apart from the rest: well no. 1099 with ten human offerings, which was made not in a burning but in a wet environment. Perhaps this is the only really chthonic offering in the settlement.

In the following we try to categorize in a simple and combined way the above described ritual rules of diverse origins as it can be adapted to the Boleráz / Baden cultures.

Female animal skeletons could be funeral sacrifices relating to female fertility symbols in fertility rites;

Mature male animals could be votive offerings, the symbols of male power in fertility ceremonies, and appeasing offerings to the chthonic deities;

Immature skeletons could be firstling offerings, the young animals could be offered to prominent heroes and ancestors;

The large communal sacrifices could be peace offerings.

Social reconstruction according to the classification of animals

There are only a few studies that contain the complete analysis of animal bone material of a Boleráz / Baden settlement [17]. According to them the frequency order of the quantitative occurrence of the species is the following: small ruminants, cattle, pig, dog, horse (it is not discussed here in detail, at our site each bone was found in sacrificial pits nos. 1772 and 1843). The order remains the same when we examine the animal bone material determined as refuse in the settlements of the culture, the animal bones in the grave furniture and the rarely occurring special finds and features imbued with spiritual content (zoomorphic vessels, animal figurines, animal burials, sacrificial pits).

What picture does this order paint of the culture and the society? Regrettably, this picture seems very contradictory.

The high proportion of sheep, the large number of settlements, the presence of millet (as a mush cereal, of a very short ripening period, undemanding, the crop of the nomads) and the (archaeologically attestable) lack / scarcity of houses imply a mobile lifestyle.

It is in sharp contradiction with the definite presence of cattle and pig (characteristic of a settled lifestyle), the appearance of real cereals beside millet, the high standard of ceramic production and the frequency of its products and the size and features of the recently completely uncovered settlements and the ones the extent of which can be estimated. Thus the economic system of the Baden culture can be described as a large-animal keeping, pasturing, perhaps extensive lifestyle completed with cultivation to a changing propor-

17 Salgótarján: Bökönyi 1968;
Gyöngyöshalász: Vörös 1983; Takács 1982–1983;
Győr–Szabadrétdomb: Figler et al. 1997 (here, however, the analysis of the archaeological find material is missing);
Csongrád–Bokros: Vörös 2001; Arbon-Bleiche III: Capitani et al. 2002, chapter 6: 277–367.

tion within wet climatic circumstances, but it certainly cannot be called nomadic!

A social group, which distinguished itself from others by eminent values, can clearly be seen. The expression of its power could be religious and social at the same time. Archaeologically, this group can be identified by rare metal prestige objects [18], while, in an indirect way, the offering of sacrifices might also indicate them (social elite, the ownership of the majority of the livestock, ordaining and assuring communal large sacrifices?).

According to cultural anthropological observations, the classification of animals is imbued with strong social considerations. Taxonomy organises nature in both cases so that the social rules can be confirmed and mirrored in the animal categories. The same is reflected in the butchering methods of the animal sacrifices: a kind of anatomical totemism evolves (Douglas 2003, 327).

How may the Boleráz / Baden religious life and society have looked? The most important domesticated animals can be found among the animal sacrifices, their choreography is varied pointing to a multidirectional mythological thinking involving not personified deity figures but rather the deification of, for example, the power that left the hero in the moment of his death, theoretical concepts, "momentary deities" [19] or very realistic natural forces which were perhaps personified by animal figures during the rituals. This mythology may also include the evolution and existence of a kind of animal cult/blood cult (totemic concept), in which a hierarchy similar to the human classifying/ranking society ruled.

Discussion

The question about the system of the Boleráz / Baden society can be raised again.

There exists a connection between the lineage and the organisation of a society and also the given ecological circumstances. If there are no factors that would link a population to a restricted, smaller area, there evolves no filiation that would prefer one to the other. The two lineages will rather compete. Where, however, a community has a restricted territory of fertile lands, or it can put to use only one type of mobile power sources (e.g. it possesses a significantly large animal stock but barely cultivates the lands), we usually find that in many fields of activities, a single lineage concept is preferred in the organisation: it is either patrilineal or matrilineal (Turner 2002, 96).

Which situation is valid in this case? The large occupation territory of the Boleráz and Baden cultures implies that no limiting factor existed and the two lineage systems could have been equally accepted. A certain shift of the climate historical data and the archaeological finds (in contrast to stunningly few plant remains [20], masses of animals bones, few male but many female depictions were found, and most of the cattle individuals were cows) suggests that such a factor yet existed and the role of women was more significant in the Late Copper Age than formerly: was the society arranged according to matrilineal lineage?

We cannot be certain, however, that the proportions of the archaeological finds reflect a true picture! [21]

It should be examined if the culture was open to scarcity of cultic life. This disposition may vary in the different cultures [22]. It was strong in the Boleráz culture, while the archaeological evidence indicates an even stronger aptitude in the Baden culture regarding both the phenomena and the finds [23].

18 E.g. the diadems at Vörs and Kakaslomnic, the pectoral ornament at Velvary, the torques at Leobersdorf and Lichtenworth, the knives at Csongrád–Bokros, Balatonszemes and Sármellék: Horváth 2008, 162.

19 Following Herman Usener, we imagine a power ruling a certain, individual process, which determines the outcome of the process and then sinks into oblivion until the same process reappears. On the process of deification see Weber 2005, 14.

20 In the Balatonőszöd settlement, only charred millet seeds were found in a small jug, and charred unidentified plant remains were cemented on the grinding surface of a large, intact quern. Other known plant remains from the Baden culture: Horváth 2008, note 43. At Balatonlelle–Országúti dűlő and –Felső Gamász sites, owing to the great importance of the site, András Sófalvi archaeologist took soil samples, yet no plant remains could be identified after levigation and sieving: Sófalvi 2004, 20.

21 An example for the sake of comparison: "If the Apollo hymn by Homer did not evidently prove the religious leading role of the deity, we would still emphasise the predominance of goddesses in the 6th century BC based solely on the archaeological material." (Hegyi 1998, 39)

22 "Certain societies owe a great importance to rites, others, although they practice many rituals, these rituals are less varied and contain a simpler symbolism; yet others do not show any manifestation of a religion." (Turner 2002, 20)

23 It seems more significant than in the previous Middle Copper Age and the following Early Bronze Age. At Tököl, e.g. the fragments of 12 female idols were uncovered in a single pit (Kalicz 2002).

The art of a culture is connected with its ritual symbolism. Besides the controlled, standard collective rites, spontaneous, individual ceremonies and ones related to smaller occasional groups must have played significant roles. The frequency of ritual ceremonies, the complexity of their symbolism was strongly linked with the social dynamics. The frequency of ritual ceremonies was linked with the multitude of conflicts (Turner 2002, 26).

The Baden culture fought with many "conflict situations" yet it must be added that it could perhaps be more than normally sensitive to "conflict situations". The concept of "conflict" is linked with the concept of social structure since the differentiation process leads to a permanent struggle for social positions and power (Turner 2002, 140, 153, 218). Such a conflict situation could be caused by exterior factors as well (deterioration of the climate, exterior aggression).

A society shows structure (stratification involving statuses and prestige) and also limitations (threshold effect). The expression of the power of various social layers plays the same role as the temporary cessation and banning of social ranks and rules created by occasional communities born in cults and mediated by the transitional rites (Turner 2002, 140–144, 152–153).

With the selection of the animal burials, an apparent order "was made" among them and at the same time, we are offered a possible solution to the uncovered archaeological phenomena. An interpretation according to the above stated ritual rules (comp. p. 69) almost frighteningly simplifies the animal burials, which seem extremely complex and variegated at first glance. Still, one circumstance remains unexplicable: no religious historical work mentions an offering type in which pregnant women and female animals (sheep) or foetuses (newborn babies, calves, lambs, piglets) were used, a phenomena, which could be observed at Balatonőszöd several times.

As the society of a prehistoric culture is so difficult to be grasped through the archaeological material, we cannot state certain facts about the composition of the society, its lineage system and concepts. As I have already discussed, with the examination of a single aspect of the society (e.g. lineage), we can find arguments in favour of either basic variant. We have not identified the social group that stood behind the ritual conceptual background of animal burials. Certain arguments attest that large communal offerings were made at the order of the social elite to emphasize their interests, while other arguments suggest that conflict situations triggered these ceremonies to stabilize the community.

The contradictions and dualities appearing during the analysis of the phenomena and the finds might indicate a slow and certainly not peaceful amalgamation of the diverse social and economic systems of the Baden and the Boleráz populations.

Summary

The human and animal burials uncovered at the Late Copper Age settlements are considered to be the manifestations of the Transcendent, irrespective of the fact if the purpose was a sacrifice or simply a burial. Their separation is not impossible with the collection of all the attainable information.

Human intramural burials can be grouped among the burial rites, their number proves the practice of the cult of ancestors, which is characteristic of strong, generally patrilineal societies. The post mortem manipulations were limited to the limbs and the head, and in this respect, a connection can be found with the idol representations. Among the individuals, there were unexpectedly many phys-

ically imperfect people, and maybe this is why they were sacrificed. Ritual vessels and objects were used at the various funeral rites, just like in the graves of regular cemeteries. Here, however they were found not in the funeral features but next to them.

This is not simply the reflection of a relatively scattered and unorganised lifestyle and settlement feature but also the proof of a uniform ceremonial series composed of various rites, which leaves a complex ceremonial area including a number of features.

Sheep, cattle, pigs and dogs were mostly buried in the Boleráz/Baden settlement, which lived from large animal keeping. Cattle could replace humans, the same burial rite was applied to them: this implies a totemic, ranking society.

Traces of violence and its tools could be demonstrated during the analysis of both the human and the animal skeletons (although one can kill without trace as well e.g. with bare hands). These evidences support the supposition that certain burials were sacrifices. The character of the sacrifices can be different, although within the occupation territory of the cultures they had a uniform choreography. Most of them came from the period from autumn to spring, the majority probably in a winter cycle.

This implies that the cultic phenomena belonged to permanent communities and continuously existing organisations because they had a constant and uniform meaning in every settlement of the culture. Such societies had a completely evolved symbolic conceptual system and mythological thinking, where abstract concepts were maintained by the continuous and lasting cultic activities. And lasting cults were dedicated to permanent or identical deities/forces (Weber 2005, 20).

The high number of sacrifices can be linked with exterior and interior conflicts. At Balatonőszöd, the separate identities of the Boleráz and the Baden communities were first demonstrated, and instead of the formerly supposed organic and peaceful Boleráz/Baden evolution, the continuous and, according to the observed phenomena, very aggressive conquest and assimilation of the alien Baden population of a different identity arriving between 3300–3100 cal BC could be proved.

The Boleráz communities of the north-central European Trichterbecher tradition had a different material culture and a different social organisation (gynaecomorphism, the rise of the status of females, perhaps a matrilineal lineage) than the Baden culture, which showed a southeast-european contact system (idol and mask use, cross band to mark the initiation level, male societies, Cucuteni-Tripolje analogues in the burial rites and in idol use – comp. Gheorghiu 2001). The integration of the two cultures was not peaceful, and it could further be aggravated by exterior factors (deterioration of the climate).

It is the moral rules of a community that are primarily expressed in the rites. Rites are behaviour rules, the only inseparable unit of intense emotion and symbol, which possesses an integral meaning, and fills an important synchronising role (Csányi 1999, 170, 217). Only the stories known within the given community are played out in the rite by mimics, which turn into a collective, a communicative act during the play. On this level of social morality (the second one in a human ethological sense) the sanctions that forced it out are led outside the living community, e.g. ancestors, punishing spirits, divine will (comp. the use of masks and idols). The sacrifice of life and blood cult can be the manifestation of the coherence of and the loyalty to the group.

No matter what purpose the observance of morals characteristic for the community served and what form it took, the funeral ceremony of the individual within the sanctional rites related to death were carried out in the same form and with the same group of objects within the settlements and at regular burials.

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Tünde Horvath
Archaeological Institute
Hungarian Academy of Sciences
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Hungary

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