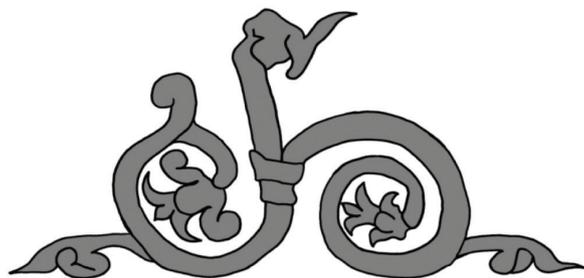


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Skull cult in the Late Copper Age

Mária Bondár, Anna Szécsényi-Nagy

Abstract: Two Late Copper Age burials dating from the later fourth millennium BC uncovered on a site in the Carpathian Basin provide additional proof for the existence of a skull cult: the two graves uncovered at Balatonlelle (County Somogy) contained two regular burials and the fragments of several human skulls. One of the graves contained the burial of a child with a special status: the grave goods were a bracelet of sheet copper found on the wrist, two beads and some vessels. In addition to the child's skeleton, the grave also contained the skull fragments of four other children and an adult. Discussed here are several issues raised by these burials. The study covers the currently known varieties of the skull cult of the Late Copper Age, alongside the archaeological and archaeogenetic assessment of this unusual burial.

Keywords: Late Copper Age; burials; jewellery; skull cult; ancient DNA.

Introduction: The symbolic significance of the skull

The symbolic interpretation of the human head is attested in almost every culture as representing and denoting human beings. In some cases, the indication of the eyes and the mouth sufficed, without the need for portraying the entire head.

The skull played a prominent role in religious beliefs and art too. The sophisticated centre governing the body's physical abilities and intellectual capabilities, whose repository was the brain, was and is regarded as the most important bodily part of humans. The head epitomised the brain, intellect and creativity, the computer of our body, without which we would be unable to function. It is not mere chance that medical science distinguishes between brain death and biological death.

The head played an important role in magical ceremonies among various peoples, particularly in the mortuary rites destined for revering and honouring the ancestors. One late variety is the creation of death masks cast from gypsum of famous people, a custom still practiced today.

In some cultures, artificial cranial modification is a community ritual, a part of life, practiced from early childhood. An elongated, longish skull can be created by tightly binding a child's head. Dolychocefalia was an indication of a distinctive, prominent status or a symbol of the community's cohesion if the same trait was shared by others, for example by the members of the clan.

The heads of live human beings can also function as distinctive visual codes: head ornaments, coiffure, face painting, tattoos and the like convey important visual information governed by strictly regulated norms, which made – and still make – time-honoured community traditions visible. To initiate familiar with the visual signs of the cultural code, a single look reveals an individual's status, namely his or her position in the community (chief, magician, healer, etc.), his or her age and current stage in life (adolescent, marriageable, married or widowed), as well as his or her membership in the community (for example a warrior or, conversely, an outsider or stranger).

The recontextualization of the skull, its infusion with a new meaning, can be observed when it is manipulated in one way or another, when human bodily parts are re-used as amulets or ritual paraphernalia (for example as drinking cups made from human skulls).

The severance of the head from the body could have occurred during the individual's life (which thereby ended his or her life) or at a certain time after death for ritual reasons.

Decapitating the defeated enemy was a cruel way of extinguishing life. Acquiring the head was a means of appropriating the power of the defeated foe. The scalp was likewise a token of victory, of the annihilation of the vanquished foe, although the act of scalping also meant the appropriation of the adversary's might, the seizure of his protective guardian spirit. The acquisition of the head played a prominent role in head-hunting, human sacrifices and cannibalism. The guilty were often beheaded:

in these cases, the loss of the head was a consequence of the community's judgement and expressed exclusion and dissociation.

There is ample evidence that healing powers were attributed to human bodily parts, including the skull: the apotropaic power of a vanquished foe's head taken home after battle protected the vanquisher from various ailments and illnesses. The consumption of the brain was believed to increase the victorious warrior's strength.

Following death, human heads had a life of their own in some cultures and during some periods. The removal of the skull from the body can be seen as a metaphor vested with mystical meaning standing for purification and cleansing, rebirth, or other beliefs. We know that aboriginal peoples regularly dug up the bones of their dead as part of repetitive ceremonies, during which the skull and the bones of the deceased were collected and sometimes buried elsewhere¹. There is a scholarly consensus that these rituals can often be associated with an ancestor cult.

Archaeological evidence for skull cults

Skull cults are attested from the Upper Palaeolithic across extensive regions and during many millennia. In a comprehensive study, Florine Marchand examined the many diverse aspects of this remarkable mortuary ritual and reviewed the known skull burials from several sites other than Ain Ghazal, the perhaps best known among these². In the Near East, the rite is attested from the Mesolithic (Pre-Pottery Neolithic B) onward on a series of sites in Syria (Tell Ramad), Israel (Beisamoun, Kfar Hahoreh, Nahal Hemar, Yiftahel), Palestine (Jericho) and Jordan (Ain Ghazal, Tell Aswad), while in Anatolia it has been documented from the Neolithic onward (Koşk Höyük, Çatal Höyük). The deposition of the head after its removal from the body could take the form of an independent burial or its placement beside another burial. One novel mortuary custom was skull modelling, the creation of a sculpture around the skull, involving the use of clay, bitumen or glue prepared from animal bones to cover the skull and replace the missing portions. Shells were placed in the eye sockets and the skull was then often painted with red ochre or lime. The painting was often renewed (reflecting a repetitive ritual). Hair remains were occasionally preserved on the skull. One important aspect is that skull modelling did not preserve any indication of the deceased's sex or age, but inscribed the modelled skull with a new meaning. We have no way of knowing whether the modelled skulls portrayed the deceased or one of the community's still living members, or whether they depicted an imaginary face. Scholarly opinion remains divided on this issue. The preparation of the skull, followed by its modelling, could hardly have taken place immediately after death: the time needed for decay had to pass or the removal of the decaying elements had to be speeded up, for example by boiling. The remains were then prepared for modelling by cleaning, a procedure that can be assigned to the realm of purification, which again had a ritual dimension to it³.

The skull burials include both group and single burials at the currently known Near Eastern sites. Marchand suggested that the deposition of several skulls in the same grave could be interpreted as the burial of the skulls of the members of one family, in which case this was a long process (depending on the time of the body's decay and the frequency of death in the family), lasting between two and twenty years. She also assumed that during this time, the family exercised economic and political influence over the community since only thus could the skulls of a prominent family have been placed in the same grave. If, however, the skulls of the members of different families were deposited in one grave, this could have been performed shortly after an individual's death. In this case, the ritual was perhaps performed once a year⁴, when, as part of a repetitive ceremony, the primary burial was opened and the skulls of the individuals who had died that year were deposited in the grave.

Evidence for skull cults comes not only from the Near East and Anatolia. Rick J. Schulting has shown that it was also practiced in Europe, South-East Asia and North Africa between the Palaeolithic and the Neolithic. Skull burials have been reported from sites in Germany, France, Britain, Belgium,

¹ At present, a similar practice can be observed owing to the limited availability of space in local cemeteries, for example at Hallstatt and Palermo.

² Marchand 2013.

³ Marchand 2013, 50–53.

⁴ Marchand 2013, 49–50.

Denmark, Sweden, Latvia, Serbia and the Czech Republic. He pointed out that the mandible is also part of the skull and that this should be borne in mind during the assessment of this practice since we can most likely assume two widely differing rituals in cases when the entire skull is buried or solely the mandible is used in ritual acts⁵.

A skull cult was also practiced on the Neolithic settlement of Göbekli Tepe, where 408 of the 691 human bone remains came from skulls, most often from the calvaria⁶.

Skull cults in the Late Copper Age of the Carpathian Basin

The skull cult was also practiced in the heartland of the Carpathian Basin from early times, as demonstrated in detail by István Zalai-Gaál⁷. He cites two sites from the Late Copper Age (Budakalász and Szentés), both in the distribution territory of the Baden culture. Although the existence of a skull cult was for a long time treated with scepticism owing to the few known instances of the practice⁸, the main argument against it being that the other parts of the human body had perished owing to the soil conditions or for other reasons, it is by now accepted that several varieties of this remarkable mortuary rite were practiced in this region.

Most insights into the nature of skull burials were provided by the Budakalász cemetery. Given the poor state of preservation of most skeletal remains, many of which had crumbled, we could in all fairness assume that the burials containing only skulls uncovered by Sándor Soproni had originally also contained the post-cranial bones, which had disintegrated or crumbled away, and that the entire body had been deposited in these graves, which should therefore not be regarded as skull burials. However, conclusive evidence for this rite came from Grave 290, a double burial, which contained the body of a man and the skull of another individual (perhaps similarly a man). A skull was also placed in six other graves (Nos 191, 255, 262, 395, 406 and 425). Aside from the skull found in the double burial (perhaps a male skull), the other graves all contained the skull of children or of a girl barely entering adolescence (Grave 191)⁹. A look at the location of these burials on the cemetery plan reveals that they can without exception be found in the proximity of double or triple burials, or near symbolic graves¹⁰, again highlighting the extraordinary nature of the rite and the elusive mysticism of prehistoric religious beliefs.

Skulls deposited beside another burial in the same grave have more recently been found in County Somogy (Fig. 1)¹¹. The two graves uncovered at Balatonlelle-Rádpusztá will be discussed at greater length below.

Aside from the heads removed from the body and placed in a regular burial, there were other variants of the skull cult, one of these being the human skulls placed, discarded or buried in settlement pits. Although deposits of this type were known from earlier excavations¹², additional evidence for this practice comes from the more recent large-scale excavations conducted over extensive areas

⁵ Schulting 2015.

⁶ Gresky *et al.* 2017.

⁷ Zalai-Gaál 1984.

⁸ Several burials were uncovered at Szentés-Nagyhegy during earth-moving operations in 1950 (Banner 1956, 89–90, Abb. 18); however, there is no field documentation and only the find material housed in the Szentés museum offers some information on what had been found. Grave 2 contained four skulls, while Grave 3 a single skull. The skull of another individual was placed by the pelvis of the deceased interred in Grave 11 of a Late Neolithic cemetery excavated at Nyitra (Nevizánsky 1985, 268).

⁹ Bondár 2009, 231–232.

¹⁰ Bondár 2009, Fig. 14.

¹¹ Molnár, Sípos 2005.

¹² At Hódmezővásárhely-Banga földje, János Banner uncovered vessel fragments, animal bones, three vessels and a child's skull fragment in a settlement pit (Banner 1956, 78); at the Szob-Öregfalu site, Baden pottery sherds and a human skull fragment came to light from pits dug for planting fruit trees (MRT 9, 317, Site 26/11); a human skull came to light from a pit during the excavation at Esztergom-Szentkirályi-Duna-dűlő, tározó (Kövecses-Varga 1990, 12). Several settlement pits of the Baden culture were uncovered on the territory of the Pécs Thermal Power Plant. The human remains from the site were assessed by Zs. Zoffmann, who, citing I. Ecsedy's pers. comm., noted that while most of these were unstratified skeletal remains, which also included two skull fragments, one pit had contained four skulls (Zoffmann 1998, 141). The Roman-period settlement at Pécs-Vasas yielded some Late Copper Age finds too, among them a human skull fragment (Bondár 1982, 26).

during the past one and a half decades¹³. The observations made during these investigations indicate that several settlement pits contained a single human bone, including skull fragments – however, the possible reason for these occurrences has not been studied yet¹⁴.

Another variant of the skull cult is represented by the skulls deliberately deposited into ovens, a practice that could again be identified on the sites investigated during more recent excavations conducted over extensive areas¹⁵. On one site, for example, a skull was placed in each oven (usually a child's skull), perhaps an indication that they served healing purposes or were consumed (ritual cannibalism). Neither can we exclude the possibility that one of the main elements of this rite was associated with the cleansing power of fire.

Another intriguing issue is what happened to the body after the post-mortem removal of the head? Regrettably, we have nothing to go by for reconstructing the one-time ceremony: all we know is that there were no signs of peri-mortem violence on the occipital bone of the intact skulls, meaning that these do not represent skulls from beheadings, but the deposition of crania removed from the body after death beside other interments. We can at best only assume that the other bodily parts did not play a role in the ritual and that these were more or less carefully collected and then discarded into the settlement's pits that were no longer used. This would explain why, in many cases, only one or another human bodily part (such as an arm bone, a clavicle, a finger bone, etc.) is found in settlement features. We do not know whether the discarding of these bodily parts had a ritual aspect to it or was merely part of an overall clean-up operation for disposing of the remains that had lost their meaning. Features containing the skeletal remains of several individuals cannot be interpreted as mass graves because it is quite obvious that the bones had not been gathered for performing the final rites, but had been collected for some other reason and then discarded into a pit.

The above attestations of the skull cult indicate that this rite had several variations, which no doubt had different meanings and expressed different beliefs. Most of the sites mentioned in the above are still unpublished¹⁶, and therefore we can at best only note that children are conspicuously frequently represented in skull burials. However, further studies are needed to clarify possible patterns regarding age, family and kinship relations, etc.

The burials from Balatonlelle-Rádpusztza

The most recent evidence for the existence of a skull cult in the later fourth millennium is represented by two Late Copper Age burials (Graves 367 and 415) uncovered at Balatonlelle-Rádpusztza. In addition to the two regular burials, the graves also contained human skulls or their fragments.

According to anthropologist Kitti Köhler, Grave 367 contained the burial of an *adultus-maturus* (35–45-year old) woman. The fragmented skull found underneath the woman's skull came from an *Infans I* (1–7-year-old) child (Fig. 2)¹⁷.

¹³ The fill of the Late Copper Age pits uncovered at Vámosgyörk contained human skeletons and skulls (Farkas 2001, 21–23, Figs. 2–3 and 13); a skull was recovered from one of the pits of the Sátorhely-Újistállópusztza settlement (Voicsek 2009, 268–269); the remains of 55 individuals, including skull fragments, came to light from various settlement pits during the excavations at Balatonőszöd-Temetői-dűlő (Köhler 2013, Tables 1–2); one of the three wells excavated at Kántorjánosi contained four skulls and two skeletons as well as additional fragmentary human bones (Szabó, Szenthe 2012, 251; György 2013, 107).

¹⁴ A human thigh bone at Fertőrákos-Boglárhegy (Nováki 1966, 62), a perforated clavicle at Hódmezővásárhely-Gorzsa (Tóth 2010, 221), a calvaria and limb bones at Hódmezővásárhely-Kopáncs-Olasz tanya (Herendi 2010, 224), two calcined long bone fragments and a finger bone at Nagykanizsa-Billa, where the excavator did not document other traces of possible burials (P. Barna 2003, 98, 99). At Kántorjánosi, human arm bones and a clavicle was found among the animal bones in one of the wells. According to the excavator, the bodies had been dumped into the three wells at the same time (György 2013, 107, Pl. 32. 5, Pl. 33. 1–2).

¹⁵ A human skull was found in the corner of an oven, while human bones and skulls came to light from the settlement pits at Kaposvár, Road 61, Site 29 (Gallina, Somogyi 2004, 223). Several Late Copper Age ovens, each of which contained a child's skull, were uncovered at the Palotabozsok-Szarvashegy II settlement site. Human remains were also uncovered in several pits. The single human skeleton in anatomical order was likewise found in one of the settlement's pits, which also contained a child's skull. Many of the skulls were fragmentary; however, only in one case did the excavator observe traces of injury caused by some act of violence. The field report does not describe the exact position of the skulls in the ovens and neither do we know whether they were burnt (Ligner 2009, 51–52).

¹⁶ The burials mentioned in the above will be assessed by the author and her research team as part of the NKFI-funded research project (Grant K-128413).

¹⁷ The physical anthropological examination of the human remains was performed by Kitti Köhler: Köhler 2020.

Grave 415 was the burial of a child with a special status. According to the physical anthropological assessment, the interment was that of an *Infans II* (8–9-year-old) child, while the skull fragments came from an adult and children of various ages. The skull marked as No. 1 on the grave photo (Fig. 3/1–1a)¹⁸ came from an *Infans I* (1–7-year-old) child, No. 2 from another *Infans I* (1–3-year-old) child, No. 4, several fragments, from an *Infans I–II* (5–10-year-old) child, while No. 3 from an adult (20–25-year-old) individual. The skull fragments found under the lower arm bone came from an *Infans I* (3–5-year-old) child.

The two burials raise several questions. Were the skulls placed in the grave simultaneously with the regular burial or as part of a repetitive ritual? Are there any indications of peri-mortem violence on the skull remains? Was there any degree of kinship between the human remains?

There is no way of knowing what will turn up during the excavation of a particular feature: the archaeologist can at best only observe differences in the texture or colour of the soil, soil marks and the like. There was no mention of later intrusions or of any additional discolouration within the soil mark of the grave pit in the field diary.

In Grave 367, the burial lay in the middle of the grave pit, at a distance of 50 cm from both the head and the foot end of the grave pit (Fig. 2/1–3). The body was deposited carefully, with attention to the arrangement of the head and the hands. The skeleton was incomplete: the pelvic bones and the ribs were lacking, and one of the upper and lower leg bones was broken. There were no grave goods. The fragments of a child's skull (parietal, occipital and temporal bone) lay under the skull of the 35–45-year old woman. We do not know how much time had elapsed between the burial of the adult woman and the deposition of the child's skull, or whether there was a lineal relation between them.

The body of the 8–9-year-old child interred in Grave 415 was similarly carefully arranged. However, the pelvis was disturbed and one part was missing (Fig. 3/1). The skull fragments placed in the grave were as follows: frontal, occipital and temporal bone (Skull 1, 1–7-year-old child); parietal and temporal bone (Skull 2, 3–4-year-old child); parietal and occipital bone (Skull 3, 20–25-year-old adult); parietal and occipital bone (Skull 4, 5–10-year-old child); parietal bone, under the hand (3–5-year-old child). Aside from the multiple skull burials, the grave goods deposited in Grave 415 were quite extraordinary items. A 2 cm wide bracelet hammered from sheet copper, which has no analogies among the period's finds, graced the left wrist (Fig. 3/1c; Fig. 4/3). A poorly preserved, crumbling cylindrical copper bead (Fig. 3/1b; Fig. 4/1) and a black bead (Fig. 3/1b; Fig. 4/2) probably made from jet, also known as black amber, a mineraloid derived from wood, lay in the region of the neck, a unique find in the Copper Age. The three vessels placed in the grave were among the period's frequent types (Fig. 3/1a; Fig. 4/4–6).

One noteworthy point is that the skull fragments were frontal, parietal, occipital or temporal bone fragments; not one single fragment came from a mandible, an indication that the skull fragments had been deliberately selected and that no importance was attached to mandibles.

The anthropologist did not find any cut marks on the skulls and skull fragments from Graves 367 and 415, implying that they were not deposited after some bloody event (execution, beheading, scalping). It seems more likely that the placement of the skulls into the grave reflected and conformed to the community's beliefs: earlier graves had been re-opened and the bones without the soft tissues were collected, a custom documented among various aboriginal peoples.

It is also noteworthy that both burials showed signs of disturbance in the pelvic region. Assuming that the intrusions do not date from a much later period and that the post-mortem manipulation occurred some time after the burial would suggest that the interment of the complete body took place first and that the skulls were deposited some time afterwards. The participants of the ritual searched for the upper body because they intended to deposit the skulls around the head. The small burial heaps were either still visible or the location of the grave was marked during the funeral – whichever the case, the exact position of the head was no longer known, explaining why the middle section of grave was opened. After locating the upper body, a calvarium was placed under the head of the deceased in Grave 367, while the skull fragments were arranged around the head in Grave 415 and one fragment was placed under the lower arm. The excavation photos of Grave 415 would suggest that the skulls had been deposited simultaneously because the skull fragments lay at the same depth as the deceased's head (Fig. 3/1–1b).

¹⁸ The human remains are marked with green numerals, the grave goods with white numerals on the grave photo.

The only means of determining whether the 8–9-year-old child and the individuals whose skulls were deposited in the grave were related (whether there was any kinship relation between the adult woman and the children or only between the children) was to submit samples for archaeogenetic testing. The initial results indicated that a kinship relation could be assumed.

The archaeogenetic assessment of the graves from Balatonlelle-Rádpusztza

We sampled two individuals from Grave 367 (SA1) and six individuals from Grave 415 for DNA analyses, which were performed in the Archaeogenetics Laboratory of the Archaeological Institute of the Research Centre for the Humanities. The most valuable skull portion for genetic analyses, the petrous part of the temporal bone (*Pars petrosa ossis temporalis*), survived of three skulls. The other samples were taken from the calvaria (*fragm. calvariae, parietalis*).

The child's skull under the head of the woman in Grave 365 was very poorly preserved and we could therefore neither confirm, nor reject a kinship relation between the two. The DNA of the adult woman from this feature was suitable for complete mitochondrial genome sequencing. There was no close maternal relation between the woman and the children buried in Grave 415.

Maternal kinship relations could be demonstrated between the children buried in Grave 415 through the analysis of the maternally inherited mitochondrial genomes. The complete mitochondrial genome sequences indicated a close maternal relationship between the 8–9-year old child, skull 1 and the skull fragment of the 3–5-year-old child lying under the hand. The children could all be assigned to the mitochondrial K1a4a1 group, which, although attested from the Starčevo culture onward, only became more widespread in Europe during the Bronze Age¹⁹.

A further kinship relation could be demonstrated between skulls 2 and 4, a 3–4-year-old and a 5–10-year-old child. They could be assigned to group U5b3, which has been documented in the Neolithic of the Iberian Peninsula, but likewise only became more widespread during the Bronze Age²⁰.

Unfortunately, the nuclear DNA in the calvaria was poorly preserved (less than 15% endogenous DNA proportion) and only the 8–9-year-old child was suitable for a complete genome analysis (60% nuclear endogenous DNA content). His genetic sex was identified as male, based on the determination and comparison of the reads mapped on the Y and X chromosomes obtained by shotgun sequencing.

Conclusion

Various forms of the skull cult are attested in the heartland of the Carpathian Basin during the Late Copper Age: single or multiple burials of skulls, skulls or skull fragments placed beside regular burials, skulls discarded into settlement pits or wells, and skulls deposited in ovens. This rite is frequently attested during successive millennia and in many regions, often at considerable distances from each other. There is increasing evidence from a growing number of sites for communities practicing this rite.

The two graves from Balatonlelle-Rádpusztza furnish additional proof for this rite in the later fourth millennium BC. The two graves of the Baden culture can be regarded as highly unusual burials of this period. The location of the two graves appears to have been deliberately selected since both lie far from the areas of daily activities. The site's excavators suggested that the burials can perhaps be associated with the Late Copper Age settlement to the north of the site (Site 67/2–3–4)²¹. However, for the time being, we can only assert that Late Copper Age communities had lived in the broader area, but we cannot claim that the deceased interred in the graves had once lived on that settlement.

The jewellery items from Grave 415 – the currently unparalleled sheet copper bracelet and the two beads, the hard-black bead with its shiny lustre and the poorly preserved copper bead – as well as the four skull fragments deposited beside the deceased represent a unique assemblage and are an indication of the interred child's special status.

The skull fragments placed in the two graves come from the skull's upper part and do not include the mandible, suggesting that the placement of mandibles in burials had an entirely different meaning.

¹⁹ Olalde *et al.* 2018; Mathieson *et al.* 2018; Mittnik *et al.* 2019.

²⁰ Olalde *et al.* 2018; Mittnik *et al.* 2019.

²¹ Molnár, Sípos 2006a, 52.

As we strove to demonstrate in the above, Grave 415 from Balatonlelle-Rádpusztá is a most unusual burial in many respects, and another attestation of the colourful and sophisticated world of beliefs incorporating many diverse elements, which are repeatedly encountered in the Carpathian Basin during the later fourth millennium.

Given the skull burials brought to light during the past decades, there can no longer be any doubt that this rite was also practiced during the Late Copper Age. The human remains found in settlement pits (whether partial skeletons or merely the bones of a particular bodily part) shed light on the treatment of the body after the removal of the head and can hardly be regarded as formal burials or mass graves, even though we might be inclined to do so at first sight.

Skull burials are often associated with ancestor cults. The skulls interred in formal graves could have been symbolic mediums of the veneration of ancestors and a means of honouring their memory. However, the fact that the majority of the skulls came from children at Balatonlelle logically belies this supposition.

Neither can the skulls discarded in settlement pits or wells be regarded as a ritual element of an ancestor cult, unless this practice was motivated by the desire to destroy the ancestors' spirit (negative rite). The child skulls found in ovens can perhaps be interpreted as the paraphernalia of ritual cannibalism.

If we turn to the ethnographic record and the abundant examples recorded by anthropologists among aboriginal peoples for the interpretation of this practice, this mode of the treatment of the dead can be set in a broader perspective. In addition to ancestor veneration, there are several different varieties of the post-mortem treatment of the skull and its secondary use. However, there is no one-explanation-fits-all formula for the practices observed at different sites – in other words, we can at best document our observations regarding the burials of this type found in the future and interpret each occurrence on its own terms.

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Appendix

The site and the Late Copper Age burials²²

A total of 650 archaeological features were uncovered across a 9837 m² large area in the road section between Balatonlelle and Rádpusztá (County Somogy) of Road 67 between June 27 and November 16, 2005. Four crouched burials came to light in the northern part of the excavated area: two of these could be securely assigned to the Baden culture, while the date of the other two burials remains uncertain owing to the lack of grave goods²³. The two Late Copper Age graves lay 4 m apart and roughly parallel to each other. Both contained burials crouched on the right side with a roughly N-S orientation. Aside from the intact, crouched body, both had additional human skulls or skull fragments deposited in them.

Grave 367

The burial was deposited in a roughly N-S oriented rectangular grave pit with rounded corners, at a depth of ca. 20–25 cm from the current surface. The skeleton lay in the pit's middle part, roughly 50 cm from the pit's head and foot end (Fig. 2/1).

The body was interred in a crouched position with a N-S orientation. The body was carefully arranged. The skull was turned to right and faced westward. The two hands were placed tightly beside each other and drawn up; they had perhaps been bound together in the excavator's opinion. The deceased's legs were also drawn up: the upper legs were at 90° to the spine, while the lower leg bones were at 45° to the upper leg bones. The skeleton was incomplete, the pelvis and the ribs were lacking. One of the upper and one of the lower leg bones were strongly fragmented. Six perforated animal teeth were found east of the lower leg bones. A crushed skull lay underneath the skull of the deceased interred in the grave (Fig. 2/4)²⁴.

The burial did not contain any other grave goods.

Grave 415

The grave lay in the northern part of the excavation trench, some 3.5–4 m east of Grave 367. The grave's south-eastern corner was cut by Pit 332 dating from the Roman period. The grave pit was dug into Feature 333, a large feature whose brown sandy fill could be distinguished from the fill of the grave, even if with difficulties.

The crouched burial lay some 60 cm from the current surface in the roughly N-S oriented rectangular grave pit. The body was carefully arranged. The head faced westward, the body was crouched on the right side although slightly obliquely, with a NE-SW alignment of the spine. The two arms were bent at right-angles and rested on each other, the two legs were drawn up, with the upper legs at 90° to the spine and the lower leg bones at 45° to the upper leg bones. The pelvis was in part missing and in part disturbed (Fig. 3/1).

In addition to the crouched burial, there were four other skulls lying north of the burial's skull and a further skull fragment lay under the lower arm (Fig. 3/1–1a). Three other skulls were placed in the grave (Nos 2–4 on the grave photo) some 5 cm from the deceased's head, forming an E-W row. Another skull (No. 1) lay 35 cm north of skull 2.

Grave goods of Grave 415

A fragmented cylindrical copper bead (No. 1, Fig. 3/1b; Fig. 4. 1) beside the skull, slightly to its south, 4 cm west of the mandible; a 2 cm long, black, perforated bead (No. 2, Fig. 3. 1b, Fig. 4. 2) under the chin; a 2 cm wide copper bracelet (No. 3, Fig. 5. 1c, Fig. 4. 3) on the left lower arm.

Three vessels in a row beside skull 1, to its east (Fig. 3/1a, upper right corner; Fig. 4/4–6): a one-handled, globular vessel set upright (No. 4), another vessel set upright beside it (No. 5) and a vessel lying on its side (No. 6) west of the previous one.

²² The graves are described on the basis of the field documentation, in which even the minutest of details and observations were recorded. For the detailed publication, see Bondár 2020 (in press).

²³ Molnár, Sípos 2006, 180; Molnár, Sípos 2006a, 52, Pl. XVIII. 1, grave photo. The photos of the burial include one described as showing a fragmentary vessel (date: October 30, 2005). However, this vessel is not mentioned in the field documentation and it seems to have been misidentified since the photo shows the crushed skull.

²⁴

BIBLIOGRAPHY

- Banner 1956 J. Banner, *Die Pécelér Kultur*. Archaeologica Hungarica 35. Budapest 1956.
- Barna 2003 J. P. Barna, *Késő rézkori település Nagykanizsa-Billa lelőhelyen* – Late Copper Age Settlement in Nagykanizsa-Billa. *ZalaiMúz* 12, 2003, 97–142.
- Bondár 1982 M. Bondár, *Spätkupferzeitliche Siedlung in Pécs-Vasas (Kom. Baranya)*. *MittArchInst* 10–11, 1980–1981 [1982], 25–44.
- Bondár 2009 M. Bondár, *Funerary rites in the Budakalász cemetery*. In: M. Bondár, P. Raczky (Eds.), *The Copper Age Cemetery of Budakalász*. Budapest 2009, 198–243.
- Bondár 2020 M. Bondár, *Késő rézkori különleges temetkezések Balatonlelléről (Somogy megye)* – Unusual burials of the Late Copper Age at Balatonlelle (County Somogy, Hungary). *KRRMK* 7, 2020, 89–108.
- Farkas 2001 Cs. Farkas, *Rézkori sírok Vámosgyörk határában (Előzetes beszámoló)* – Gräber aus der Kupferzeit in der Feldmark von Vámosgyörk (Vorbericht). *Mátrai tanulmányok* 2001, 7–29.
- Gallina, Somogyi 2004 Zs. Gallina, K. Somogyi, *Kaposvár, Várdomb-dűlő*. In: J. Kisfaludi (Ed.), *Régészeti kutatások Magyarországon 2002*. Budapest 2004, 223.
- Gresky et al. 2017 J. Gresky, J. Haelm, L. Clare, *Modified human crania from Göbekli Tepe provide evidence for a new form of Neolithic skull cult*. *Sci. Adv.* 3, e1700564 (2017). *Science Advances* | Research Article 28 June 2017
- György 2013 L. György, *Az emberi megtelepedés emlékei Kántorjánosi határában* – The Relics from the Copper Age Settlement in the Vicinity of Kántorjánosi. In: Á. Szabó, Zs. Masek (Eds.), *Ante viam stratam. A Magyar Nemzeti Múzeum megelőző feltárássai Kántorjánosi és Pócspetri határában az M3 autópálya nyírségi nyomvonalán*. Budapest 2013, 81–154.
- Herendi 2010 O. Herendi, *Hódmezővásárhely-Kopáncs, Olasz-tanya*. In: J. Kisfaludi (Ed.), *Régészeti kutatások Magyarországon 2009*. Budapest 2010, 224–225.
- Köhler 2013 K. Köhler, *Embertani leletek táblázatos összesítője*. In: Sz. Honti, T. Horváth (Eds.), *Balatonöszöd-Temetői dűlő lelőhely (M7/S-10) őskori településrészei. Digitális kiadás – dupla DVD 1*. Budapest 2013, 1–9.
- Köhler 2020 K. Köhler, *Balatonlelle-Rádpusztá 67/5. lelőhely embertani leleteinek vizsgálati eredményei*. Appendix. A *KRRMK* 7, 2020, 106–108.
- Kövecses-Varga 1990 E. Kövecses-Varga, *Grubenhäuser mit verschmiertem Boden in einer Siedlung der Badener (Pécelér) Kultur*. In: B. Chropovský (Ed.), *Die Ergebnisse der archäologischen Ausgrabung beim Aufbau des Kraftwerksystems Gabčíkovo-Nagymaros*. Nitra 1990, 11–15.
- Ligner 2009 J. Ligner, *Palotabozsok–Szarvas-hegy II. (Baranya megye, HT 59. lelőhely)*. In: J. Kvassay (Ed.), *Évkönyv és jelentés a K.Ö.SZ 2009. évi feltárássairól*. Budapest 2012, 51–52.
- Marchand 2013 F. Marchand, *The Modelling Skulls in the Ancient Near-East*. *Tiempo y sociedad* 1, 2013, 21–58.
- Mathieson et al. 2018 I. Mathieson, S. Alpaslan Roodenberg, C. Posth, A. Szécsényi-Nagy, D. Reich et al., *The Genomic History Of Southeastern Europe*, *Nature* 555, 2018, 197–203.
- Mittnik et al. 2019 A. Mittnik, K. Massy, C. Knipper, F. Wittenborn, R. Friedrich, S. Pfrengle, M. Burri, N. Carlich-Witjes, H. Deeg, A. Furtwängler, M. Harbeck, K. von Heyking, C. Kociumaka, I. Kucukkalipci, S. Lindauer, S. Metz, A. Staskiewicz, A. Thiel, J. Wahl, W. Haak, E. Pernicka, S. Schiffels, P. W. Stockhammer, J. Krause, *Kinship-based social inequality in Bronze Age Europe*. *Science* 366, 6466, 2019, 731–734. <http://www.ncbi.nlm.nih.gov/pubmed/31601705> (July 10, 2020), DOI: 10.1126/science.aax6219.
- Molnár, Sípós 2006 I. Molnár, C. Sípós, *Balatonlelle-Rádpusztá, Romtemplom mellett (Somogy m.)*. In: J. Kisfaludi (Ed.), *Régészeti kutatások Magyarországon 2005*. Budapest 2006, 180–181.

- Molnár, Sípos 2006a I. Molnár, C. Sípos, *Balatonlelle-Rádpusztá, Romtemplom mellett (67/5 lelőhely)*. In: Sz. Honti, Sz. Fábián, Zs. Gallina, Á. D. Hajdú, P. Hornok, I. Koós, Zs. Mersdorf, I. Molnár, P. G. Németh, P. Polgár, J. P. Szeőke, G. Serlegi, Zs. Siklósi, C. Sipos, K. Somogyi, Régészeti kutatások az M7-es autópálya Somogy megyei szakaszán és a 67-es úton (2004–2005) Előzetes jelentés IV – Archaeological research on the Somogy county section of the M7 highway and on Route No. 67. Preliminary Report IV. SMK 17, 2006, 51–52.
- Mrt 9 I. Dinnyés, K. Kővári, J. Kvassay, Zs. Miklós, S. Tettamanti, I. Torma, *Pest megye régészeti topográfiája. A szobi és a váci járás (XIII/2. kötet)*. Budapest 1993. (Magyarország Régészeti Topográfiája 9)
- Nevizánsky 1985 G. Nevizánsky, *Grabfunde und Überbauerscheinungen der Träger der Badener Kultur im zentralen Gebiet des Karpathenbeckens*. SlovArch 33, 1985, 249–272.
- Nováki 1966 Gy. Nováki, *Őskori települések Fertőrákos mellett*. Arrabona 9, 1966, 53–66.
- Olalde et al. 2018 I. Olalde, S. Brace, M. E. Allentoft, I. Armit, D. Reich et al., *The Beaker phenomenon and the genomic transformation of northwest Europe*, Nature 555, 7695, 2018, 190–196. <http://www.nature.com/articles/nature25738> (September 17, 2019), DOI: 10.1038/nature25738.
- Schulting 2015 J. R. Schulting, *Mesolithic Skull Cults?* In: K. von Hackwitz, R. Peyroteo-Sjerna (Eds.), *Ancient Death Ways. Proceeding of the workshop on archaeology and mortuary practices*. Uppsala 16–17 May 2013. Uppsala 2015, 19–46.
- Szabó, Szenthe 2012 Á. Szabó, G. Szenthe, *Kántorjánosi, Homoki dűlő Ny-i pereme*. In: J. Kisfaludi (Ed.), *Régészeti kutatások Magyarországon 2010*. Budapest 2012, 251–252.
- Tóth 2010 K. Tóth, *Hódmezővásárhely–Gorzsa V. számú homokbánya*. In: J. Kisfaludi (Ed.), *Régészeti kutatások Magyarországon 2009*. Budapest 2010, 220–222.
- Voicsek 2009 V. Voicsek, *Sátorhely-Újistállópuszta*. In: J. Kisfaludi (Ed.), *Régészeti kutatások Magyarországon 2008*. Budapest 2009, 268–269.
- Zalai-Gaál 1984 I. Zalai-Gaál, *Neolitikus koponyakultusz és emberáldozat Tolna megyéből*. BBMÉ 12, 1984, 3–42.
- Zoffmann 1998 Zs. Zoffmann, *Embertani leletek a Badeni kultúra Pécs–Hőerőmű lelőhelyéről*. JPMÉ 43, 1998, 141–146.

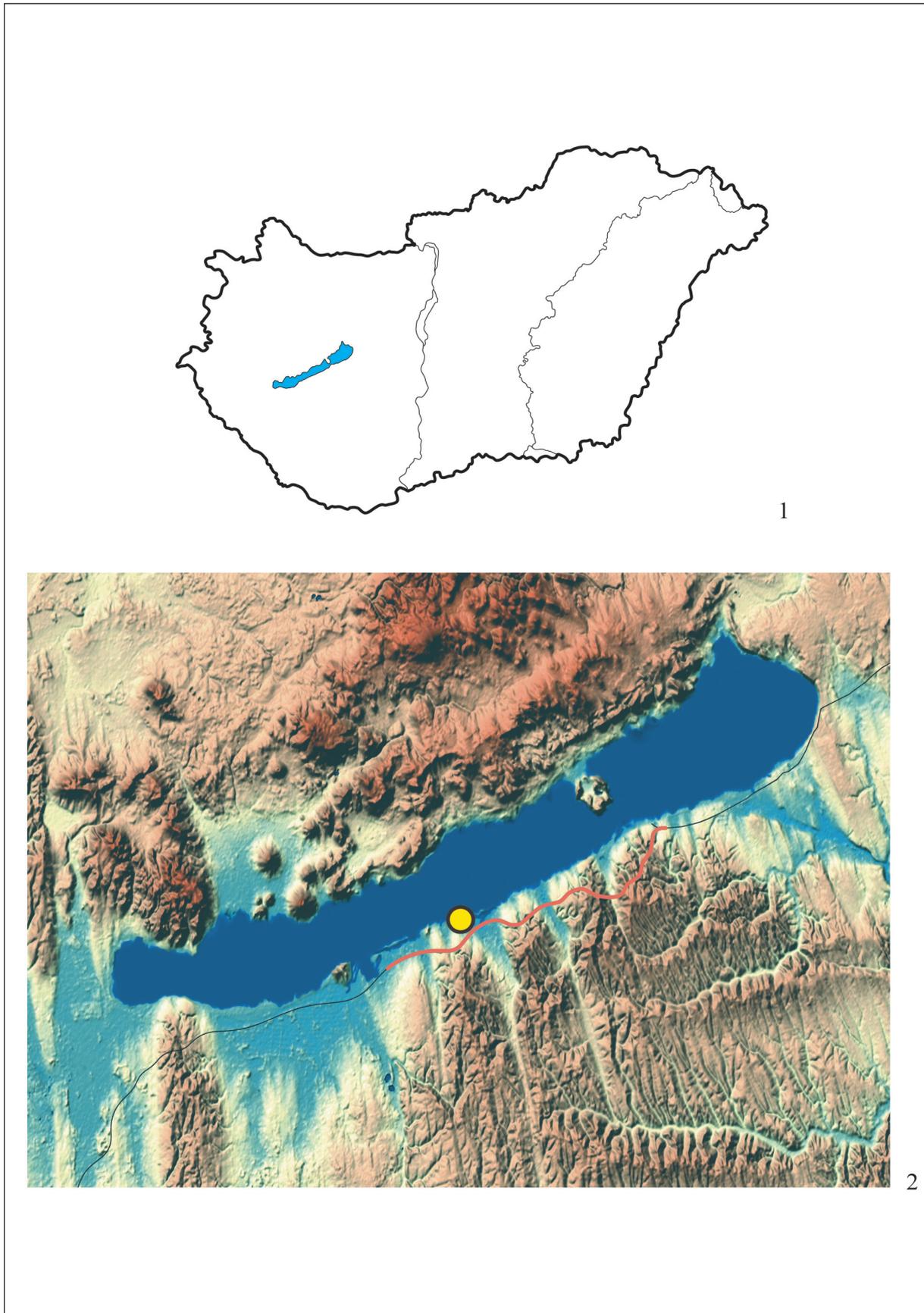


Fig. 1. Location of the Balatonlelle site near Lake Balaton.



Fig. 2. Grave 367.



1a



1b



1c

Fig. 3. Grave 415.



Fig. 4. The grave goods of Grave 415.

Abbreviations

ActaArchHung	Acta Archaeologica Academiae Scientiarum Hungaricae.
AAC	Acta Archaeologica Carpathica, Cracow.
ActaMN	Acta Musei Napocensis, Cluj-Napoca.
ActaMP	Acta Musei Porolissensis, Zalău
AnArchRessoviensia	Analecta Archaeologica Ressoviensia, Rzeszów.
AAS at CEU	Annual of Medieval Studies at CEU, Budapest.
Apulum	Acta Musei Apulensis – Apulum, Alba-Iulia.
Alba Regia	Alba Regia, Székesfehérvár.
Antaeus	Antaeus, Budapest.
Arrabona	Arrabona, Győr.
ArhMed	Arheologia Medievală, Cluj-Napoca, Brăila, Reșița.
ArchBaltica	Archaeologia Baltica, Vilnius.
Arch.Inf	Archäologische Informationen.
ATS	Acta Terrae Septemcastrensis, Sibiu.
ArchÉrt	Archaeologiai Értesítő, Budapest.
Banatica	Banatica, Reșița.
BBMÉ	A Béni Balogh Ádám Múzeum Évkönyve, Szekszárd.
BUFM	Beiträge zur Ur- und Frühgeschichte Mitteleuropas.
BCMI	Buletinul Comisiei Naționale a Monumentelor, ansambluri situri istorice. București.
CommArchHung	Communicationes Archaeologicae Hungaricae, Budapest.
CCA	Cronica Cercetărilor Arheologice, Comisia Națională de Arheologie, București.
CIL	Corpus Inscriptionum Latinarum, Berlin.
CMA	Complexul Muzeal Arad.
Dolgozatok	Dolgozatok az Erdélyi Múzeum érem- és régiségtárából, Cluj.
Dolg.	Dolgozatok a Magyar Királyi Ferencz József Tudományegyetem Archaeologiai Intézetéből, Szeged.
Dolg. ÚS	Dolgozatok az Erdélyi Múzeum Érem- és Régiségtárából, Új Sorozat. Cluj-Napoca / Kolozsvár.
EphNap	Ephemeris Napocensis, Cluj-Napoca.
HOMÉ	A Hermann Ottó Múzeum Évkönyve. Miskolc.
JAHA	Journal of Ancient History and Archaeology, Cluj-Napoca.
JAM	Jósa András Museum, Nyíregyháza.
JPMÉ	Janus Pannonius Múzeum Évkönyve.
JRGZM	Jahrbuch des Romisch-Germanischen Zentralmuseums, Mainz.
KRRMK	Kaposvári Rippl Rónai Múzeum Közleményei, Kaposvár.
LMI	Lista monumentelor istorice, updated in 2015.
MittArchInst	Mitteilungen des Archäologischen Instituts der Ungarischen Akademie der Wissenschaften.
MOL	Magyar Olaj- és Gázipari Részvénytársaság / Hungarian Oil and Gas Public Limited Company
Marisia	Marisia, Târgu Mureș.
NyJAMÉ	A nyíregyházi Jósa András Múzeum Évkönyve, Nyíregyháza.
PBF	Praehistorische Bronzefunde. Berlin.
Przegląd Archeologiczny	Przegląd Archeologiczny, Wrocław.
Rad	Jósa András Museum, Archaeological Archive
RégFüz	Régészeti Füzetek, Budapest.

RKM	Régészeti Kutatások Magyarországon/Archaeological Investigations in Hungary, Budapest.
RAJ Arad	Repertoriul Arheologic al Mureşului Inferior. Judeţul Arad. Timişoara 1999.
RAN	Repertoriul Arheologic Naţional.
Sargetia	Sargetia. Acta Musei Devensis, Deva.
SCIV(A)	Studii şi Cercetări de Istorie Veche şi Arheologie, Bucureşti.
SGB	Studii de Geografie a Banatului, Timişoara.
SIB	Studii de Istorie a Banatului, Timişoara.
Slavia Antiqua	Slavia Antiqua, Poznań.
SlovArch	Slovenská Archeológia, Nitra.
SMK	Somogyi Múzeumok Közleményei, Kaposvár.
SovArh	Sovetskaja Arheologija, Moskva.
SRTM	Shuttle Radar Topography Mission.
StudiaUBB Historia	Studia UBB Historia, Cluj-Napoca.
SzKMÉ	A Szántó Kovács Múzeum Évkönyve, Pécs.
Századok	Századok, Budapest.
Terra Sebus	Terra Sebus. Acta Musei Sabesiensis, Sebeş.
Tibiscum S. N.	Tibiscum S. N., Caransebeş.
TransRev	Transylvanian Review, Cluj-Napoca.
ZalaiMúz	Zalai Múzeum, Zalaegerszeg.
ZSA	Ziridava. Studia Archaeologica. Arad.
Živa Antika	Živa Antika, Skopje.