

ELIŠKA SVOBODOVÁ

ARTEFACTS FROM ORGANIC MATERIALS IN NEOLITHIC GRAVES: SELECTED CASES

Although adornments made from animal bones and teeth are only rarely found in graves from the Neolithic period, they can be used to indicate the uniqueness and originality of local cultures and local artists. The main focus of this article is to provide an overview of such artefacts in Neolithic graves in Central Europe – their location in the grave, the age and sex of the buried individuals. Archaeological records indicate that the societies of Hinkelstein, Großgartach and primarily Lengyel Culture were inclined to make sex and gender distinctions in the case of body adornments.

Neolithic – grave – bone adornment – animal teeth – gender distinction

Artefakty z organických materiálů v neolitických hrobech: vybrané druhy nálezů. Ozdoby vyrobené ze zvířecích kostí se v hrobech z období neolitu objevují velmi vzácně. Vzhledem k tomu, že nepředstavují standardní složku hrobové výbavy, ukazují unikátnost a originálnost lokálních kultur a místních tvůrců. Cílem práce je podat přehled těchto artefaktů v neolitických hrobech, které jsou evidovány na území střední Evropy. V případě kostěných ozdob byly sledovány samotné artefakty, jejich umístění v hrobech a také věk a pohlaví pohřbených jedinců. Na základě archeologických pramenů se zdá, že společnosti hinkelsteinské, grossgartašské a lengyelské kultury měly tendenci se genderově odlišovat prostřednictvím ozdob.

neolit – hrob – kostěná ozdoba – zvířecí zuby – genderové rozdíly

1. Introduction

Bone adornments can be assumed to have existed long before metal started to be commonly used for making jewellery and decorations. However, it appears that most of these adornments were fully disintegrated by taphonomic agents such as the physical, biological and geochemical factors (*Rulf 1984, 241*) as they are rarely found in graves of the Neolithic period (5600 to 4200 BC; e.g. *Zápotocká 1998, 165; Pavlů 2004*). Nevertheless, even despite their rarely occurrence, they can be used to indicate uniqueness and originality of local cultures and local artists.

Normally, bone adornments are only marginally mentioned in connection with particular excavations in archaeological literature. For example, they were overshadowed by spondylus adornments in Linear Pottery Culture in these works (e.g. *Vencl 1959; Willms 1985; Podborský 2002b; John 2011*). Although V. Ondruš (1967, 57–58) or I. Zalai-Gaál (2010, 157–159; *Zalai-Gaál et al. 2009*) were engaged with bone adornments as a whole.

To remedy the lack of records of bone adornments in the literature, this article is devoted to the finds of bone adornments and animal teeth in Neolithic graves in Central Europe and occasionally in Western Europe. It uses records from published burial grounds and includes sites in the Czech Republic, Slovakia, Germany, Austria, Hungary, Poland and France. Its main focus is to study the artefacts themselves, their location in the graves, and the age and sex of the buried individuals. However, it is important to note that the aim of this paper is to provide an overview of these artefacts and not a sum of existing finds.

2. Finds overview

More than 50 different burial grounds are known in Europe from the Linear Pottery Culture (*Nieszery 1995, 28, 30, Abb. 7; Podborský 2002a, 296*) and 24 of them are analysed in this paper. Although they altogether contain around 600 graves with grave goods (*Plesl 1952; Steklá 1956; Dzieduszycka 1959; 1964; Modderman 1970; Pavúk 1972; Höckmann 1982; Storch 1984/1985; Koštuřík – Lorencová 1989/1990; Brink-Kloke 1990; Peschel 1992; Nieszery 1995; Dočkalová – Koštuřík 1996; Čížmář – Geislerová 1997; Ondruš 2002; Farkaš 2002; Kahlke 2004; Dočkalová – Čížmář 2008*), only 24 of the graves contained bone adornments. Imitations of deer canine pendants were found in other four graves.

In addition, I analysed six cemeteries from the Middle Neolithic; three of them belong to the Stroked Pottery Culture from the Czech Republic (Miskovice, Praha-Bubeneč, Platiště nad Labem; *Zápotocká 1998*) and the other three to the Hinkelstein Culture from Germany (Trebur, Worms-Rheingewann, Rheindürkheim) where the Trebur burial ground also comes under Großgartach Culture (*Zápotocká 1972; Spatz 1999*). Furthermore, incomplete information comes from additional sites such as Wittmar (Germany), a burial ground from the Rössen Culture (*Rötting 1977; Kaufmann – Kürbis 2002; Lönne 2003*). The total number of graves with bone adornments is 36. In addition, deer canine imitations were found in other 16 graves and antler bracelets in 4 graves.

Finally, I also analysed about 560 graves from 20 sites from the Lengyel cultural complex in Moravia, Slovakia, Austria and Hungary (*Jażdżewski 1938; Král 1956; Dombay 1960; Ruttkay 1970; Humpolová 1992; Podborský et al. 1993; Zápotocká 1998; Czerniak 2002; Neugebauer-Maresch et al. 2002; Demján 2010; Siklósi 2010; Svobodová 2012*) where the total number of graves with bone adornments was found to be 61.

2.1. Bracelets

The majority of bracelets found in graves from the Neolithic Age are made from spondylus shells (*Vencl 1959, 728*), marble (*Zápotocká 1984; Bukovanská – Březinová 1996*) or serpentinite (*Zápotocká 1972, 322*) while bone bracelets are rarely present.

Two bone bracelets were found in the Linear Pottery Culture burial ground in Nitra – Priemyslová ulica (Slovakia), where the bracelets were part of the male graves no. 3 and no. 58. Both bracelets were made from long bones, have four holes in the corners (*Pavúk 1972, 62, Abb. 43*) and were placed near the left or right wrist of the buried men (*Pavúk 1972, 62–63*). While the grave no. 3 contained a young man aged 14–15 years and grave goods were limited to the bracelet and a ceramic vessel, an adult man aged 40–50 years was buried in the grave no. 58, which was one of the richest graves in the cemetery (*Pavúk 1972, 7, 63*).

One bone bracelet made of a pierced bone comes from a male grave no. 32 in Wittmar (Germany), a burial ground from the Rössen Culture (*Rötting 1977, 32, 44, 45*). Several bracelets were also found in other male graves, but unfortunately, more detailed information was not recorded (*Lönne 2003, 81*). One fragmented bracelet comes from grave no. 64 in Jechtingen (Germany), a burial ground from the Rössen Culture (*Pape 1993, 40*).

Bracelets of deer antler occurred in four burial places of women in Worms-Rheingewann (Germany), burial ground from the Hinkelstein Culture. Bracelets were located on the left or right arm and occurred in combinations of three, four and six bracelets (*Zápotocká 1972, 313–314, 317–319, 324*).

Two bone bracelets come from the Lengyel culture from Zengővárkony (Hungary). One (fragmented) was found in the hands of a child in grave no. 316 (*Dombay 1960, 142*) while the other bone bracelet comes from grave no. 243 where it appears that a man was buried. The bracelet has a diameter of about 94 mm, width 21–23 mm and a thickness of 1.5–2 mm and was found on the right forearm (*Dombay 1960, 126–127, Taf. LXVI: 4*).

2.2. Bone beads

One bone bead was found in grave no. 17 in the Linear Pottery Culture burial ground in Klein-Hadersdorf (Lower Austria). Two children were buried in the grave and the bead was the only grave good (*Peschel 1992, 158–161*). Furthermore, eighty beads of bird bones were one element of grave goods in grave no. 2 in Wittmar (Germany), a burial ground from the Rössen Culture (*Rötting 1977, 43*).

In contrast, bone beads are relatively numerous in Lengyel culture and they were worn in different types of decorations. They appeared in nine children's, three female and two male graves in Svodín (Slovakia; *Demján 2010, 24, 26, 32, 34–38, 40, 42–43*). They were located at the head, neck, hands and pelvis in the number ranging from 2 to 137. It was interesting to note that the largest number

of beads was found around the pelvis (137 pieces in a man's grave no. 139/81 or 75 pieces in the child grave no. 27/83) and it is likely that they were a part of a belt decoration. Similarly, several bone beads were found in three female graves in Brześć Kujawski (Poland; *Jażdżewski 1938, 7–8, 20, 32, 41–42, 54*), which were also likely components of a belt decoration. Moreover, one bone bead lay at the neck of a child in the grave at the Branč site (Slovakia; *Lichardus – Vladár 1964, 94*). Seventeen beads were also found in grave no. 22, two bone rollers in grave no. 46 and unknown number in grave no. 4.

2.3. Rings

Two rings were discovered in grave no. 15 in the Linear Pottery Culture's cemetery in Rixheim (France). It appears that the grave was of a grandmother and a grandson/granddaughter as an old woman together with a 7–9 year-old child were buried there (*Peschel 1992, 145–146, 149*). Taking into account anthropological analysis of other female graves, which were rich in grave goods, it appears that this old woman had a lower social status since the rings were the only grave goods and anthropological analysis has showed that this old woman performed hard work during her life as illustrated by her affected shoulder area (*Peschel 1992, 150–151*).

Additional bone rings were found in the Lengyel site Svodín (Slovakia; *Demján 2010, 23–40*) and were located in four female graves (no. 159/81, 164/81, 166/81, 113/80), in one grave of an older man (no. 93/79) and in one grave of an individual of unknown sex (no. 94/79). The rings were present in the number ranging from one to three pieces and were located next to the right or left hand. Although their diameters were around 2–2.5 cm in the majority of the graves (*Demján 2010, fig. A52: 8, A53: 16, A34: 17, A64: 2, A73/: 9*), rings in the female grave no. 159/81 (*Demján 2010, fig. A58: 1–3*) were about 1 cm in diameter.

2.4. Animal teeth

2.4.1. Deer canine

Real¹ and imitated deer canines appear in Linear Pottery Culture. Real deer canines were found in a very rich male grave (no. 15/75) in Vedrovice – “Široká u lesa” (the Czech Republic; *Ondruš 2002, 23–26; Bánffy 2008, 167*) and also in a female grave (no. 32) in Sondershausen (Germany) where a total of 31 real and imitated canines was discovered. In the Vedrovice grave four canines were found

¹ The real deer canines come from the upper jaw of male red deer, likely representing hunting trophies (*Hladilová 2002, 260*).

to lie on the man's neck and chest next to beads made from shells. Remarkably, the man's skull had a healed edge of a trepanation hole (*Crubézy 1996, 21*).

Canine imitations made from bones or shells appear more often than real canines. Five imitations were found in a child's grave in the "Martina" cave in Tetín (the Czech Republic; *Zápotocká 1998, 188*) and two in a child's grave no. 30 in Bruchstedt (Germany; *Kahlke 2004, 82, fig. 7*). One rich male grave no. 13 in Rutzing (Upper Austria) contained a necklace of 120 imitations and two fox teeth (*Peschel 1992, 164–166, 170; Nieszery 1995, 200*). In addition, flat oval spondylus pendants from grave no. 9/88 in Vedrovice – "Za Dvorem" (the Czech Republic; *Ondruš 2004, fig. 117a: 3–6*) can be also considered as imitations of deer canines.

Furthermore, deer canines were found in two rich child's graves in Plotiště nad Labem (the Czech Republic) from Stroked Pottery Culture. Sixty-eight pieces belonging to thirty-four different animals were found in grave LVII where they were spread all over the grave with an accumulation at the skull. In contrast, only seven deer canines were found in grave LVIII (*Zápotocká 1998, 206–207*).

The burial ground Trebur (Germany) gives us some indication of the use of deer canines in the Middle Neolithic Age, especially in Hinkelstein and Großgartach Cultures. Deer canines or rather their imitations² were inside 23 graves³ which count for about 17% of all the graves present in the burial ground. In contrast, real canines appeared only in four male graves (no. 22, 53, 60, 113) and three female graves (no. 19, 63, 103). Imitations of river shells *Margaritifera auricularia* were found in several other graves (*Spatz 1999, 143, 174*). It is intriguing that quite a large number of canines or imitations have no holes but nevertheless might have been used as clothing adornments. They are mostly located on the neck and pelvis in male and female graves, with an exception of one child's grave. Normally, canines and their imitations appear in the graves in small numbers comprising of 1 to 4 pieces (up to 19 pieces; *Spatz 1999, 174*). The exceptions are three female graves from Hinkelstein Culture (no. 62, 63, 103) where 49 imitations were present in grave no. 62, 237 canines (of which 230⁴ were real and laid on pelvis while 7 imitations laid on the neck) in grave no. 63 and 86 real canines in grave no. 103⁵ (*Spatz 1999, 144–146*). These rich sets were located on the pelvis and it is assumed that they were mounted in rows on a strip of organic material and represented belt adornments (*Spatz 1999, 144*). Surprisingly, only real deer canines were found in graves of Großgartach Culture which is an interesting feature in comparison to the frequent imitations in Hinkelstein graves. Deer canines also appear in other cemeteries from the Middle Neolithic Age. For example, they were found in graves

² The shape and measurements of imitations correspond to real canines, however, it seems that imitations are a bit bigger than real canines as imitations are 14.4–24.5 mm long, while real canines are 13.5–17 mm and 18–20 mm long (*Spatz 1999, 143–144*).

³ Graves no. 19, 22, 40, 45, 47, 53, 60, 62, 63, 68, 70, 72, 79/80, 87, 89, 93, 103, 110, 112, 113, 114, 124, 128.

⁴ At least 115 animals must be killed to obtain 230 canines.

⁵ Canines are from the upper jaw of male and female deer in this grave.

in Offenau (Germany; *Maier 1964, 244*), Lingolsheim (France; *Storch 1984/1985, 41*) and in Rössen Culture burial ground in Wittmar (Germany; *Rötting 1977, 32, 44, 45*) where they appear only in male graves. Unfortunately, we do not have more detailed information about them (*Lönne 2003, 81*).

In contrast, deer canines do not often occur in the Lengyel culture. One canine was located in the child's grave no. 139 in Zengövárkony (Hungary; *Siklósi 2010, 296*) and female grave from Racot (Poland; *Czerniak 2002, 14, 16–17, 19, fig. 6, 7*). Two more canines come from a child's grave no. 143/81 in Svodín (Slovakia; *Demján 2010, 56*) and four pieces were found in two female graves in the Brześć Kujawski site (Poland; *Jazdzewski 1938, 21–22, 54, 91*). It appears that in all cases they were neck adornments.

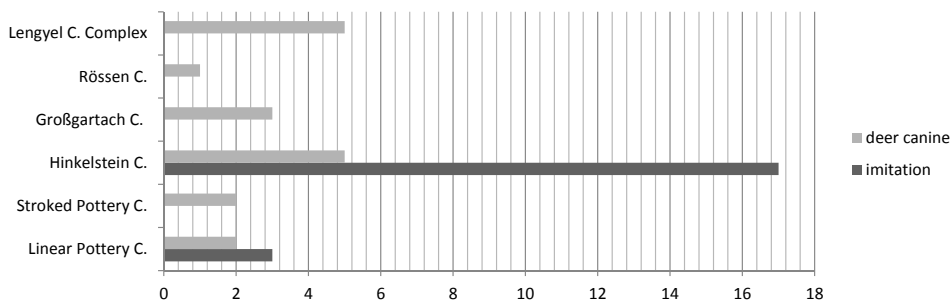


Fig. 1. The number of neolithic graves with deer canines and imitations from Central and Western Europe.

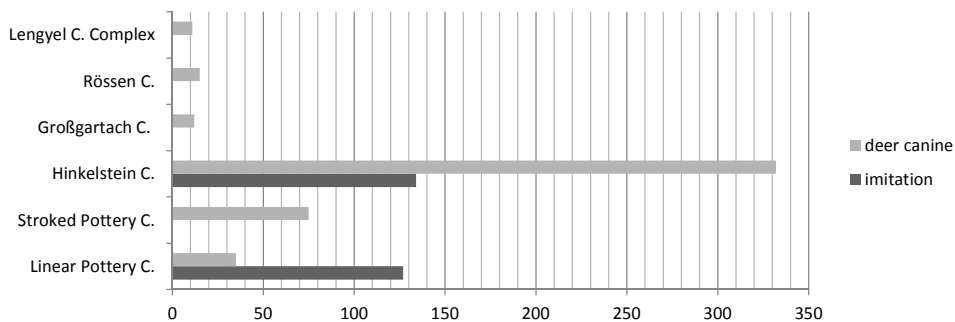


Fig. 2. The total number of deer canines and imitations (number of pieces).

2.4.2. Boar tusks

Boar tusks and lamellas from boar tusks were mainly used as instruments in Linear Pottery Culture. For that purpose they were modified – pointed and sharp-

ened to the point. One piece comes from a male grave no. 79/79 in Vedrovice – “Široká u lesa” (Czech Republic; *Ondruš 2002, 78–79; Švédová 2003, 37*) and one from a male grave in Stuttgart-Mühlhausen (Germany; *Peschel 1992, 63–64*) where it is interpreted as a pressure retoucher (*Kahlke 2004, 29*). The tusk from the child’s grave no. 26 in Sondershausen (Germany), where the boar tusk was laid in a hand and was found together with a silex flake, a core and a piece of ochre, was also more likely a tool than a decoration (*Kahlke 2004, 29*).

Imitations of boar tusks can be seen in the creation of pendants with a hooped shape which are also sometimes considered as scrapers. The similarity of shapes of spondylus and bone pendants with boar tusks has been noticed by S. Vencl (*1959, 728*), J. Pavúk (*1972, 61*) or J. Švédová (*2003, 36*). Examples of such imitations might include spondylus pendants from male graves no. 5 and 8 in Nitra (Slovakia; *Pavúk 1972, 61*) and from graves 13 and 17 in Sondershausen (*Kahlke 2004, 23, 24*) or spondylus and bone pendants of the hooped shape in Vedrovice – “Široká u lesa” (*Podborský 2002b, 245*) from grave no. 14/75, 19/75 46/77, 90/80 and 100/81 (*Ondruš 2002, 23, 29, 49, tab. XIV*) and no. 9/88 from the location “Za Dvorem” (*Ondruš 2002, fig. 117a: 14–16*).

Production of the boar tusk scrapers continues in Stroked Pottery Culture (e.g. *Zápotocká 1998, 206–207, 215*). However, adornments from the tusks are rare in this culture. Four tusk pendants were found in a male grave in Sány (the Czech Republic) but they are uncertain finds (*Zápotocká 1998, 227*). One non-perforated tusk appeared in the urn burial of Praha-Dejvice (the Czech Republic; *Zápotocká 1998, 216*).

Adornments from boar tusks were found in 13 graves in the burial ground Trebur (Germany): in four female (no. 7, 44, 58, 76), six male (no. 2, 21, 60, 100, 107, 120) and three child graves (no. 54, 57, 90). The adornments were made of lamella, which were created by longitudinal chipping of proximal part. The tip of the tooth was probably deliberately thinned by grinding and polishing and rounding of edges which can be seen on some pieces. Also the lamellas were perforated at both ends: two holes on the wider end and one hole on the narrow end. Interestingly, only one piece was found in nine graves while two in four of the graves where three lamellas were laid at the neck and one at the right forearm (*Spatz 1999, 146, 172*). Several more boar tusks were found in graves from Lingolsheim (France; *Storch 1984/1985, 41*), Worms-Rheingewann (Germany; *Zápotocká 1972, 320*) and Rheindürkheim (Germany; *Zápotocká 1972, 329–330*).

I. Zalai-Gaál, E. Gál, K. Köhler and A. Osztás (*2009*) have previously examined the finds of boar tusks from the Lengyel Culture. Therefore, these finds are mentioned in this work only briefly. A pair of boar tusks is typical for the Lengyel Culture and they usually appear in male graves. According to J. Pavúk (*1972, 71–73*) pairs of tusks can be regarded as a status symbol. Several pairs of boar tusks, which were simply perforated, were found in 10 graves⁶ in Zengövárkony (Hungary). It is known that men were buried in seven of them while the sex is unknown in the other three. The boar tusks lay on the pelvis in five cases, on the chest in two and

⁶ Graves no. 137, 178, 179, 180, 184, 205, 206, 213, 214, 325.

once next to a hand. In two of the richest graves the two tusks were found to cross over each other (*Dombay 1960, 95–145*). Pendants from one tusk were found in three of the graves (no. 108, 113, 236) and they were located on the pelvis, knees and chest (*Dombay 1960, 83–84, 86–87, 125*). Moreover, two big lamellas were discovered in grave no. 134 in Friebritz (Austria), lying on a 50–60 year old man's chest (*Neugebauer-Maresch et al. 2002, 206–207*). Also nine pairs of tusks are known from nine graves in Svodín (Slovakia). Men aged 30 to 60 years were buried in seven of them; a child was buried in one of them while the sex is unknown for the last grave. They were located mostly next to the chest (*Demján 2010, 19–26, 29, 35, 37, 51*). Finally, five perforated tusks were found in a female grave no. 22 in Brześć Kujawski (Poland) and one perforated tusk comes from graves no. 4, 7, 33 and 47 (*Jażdżewski 1938, 7–9, 18, 20, 26–27, 91, 41–42, 54*).

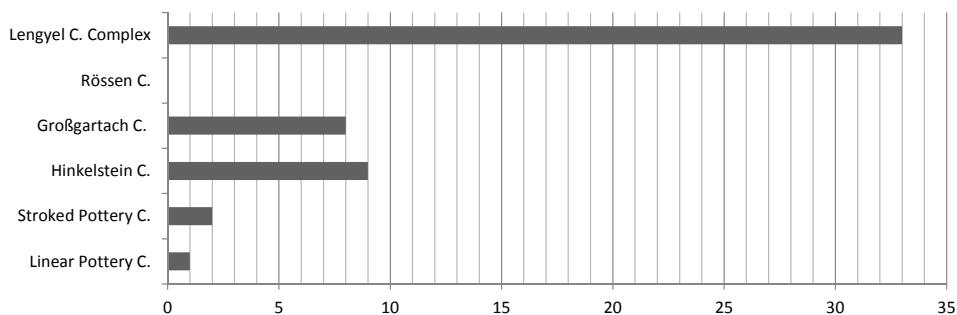


Fig. 3. The number of neolithic graves with boar tusks.

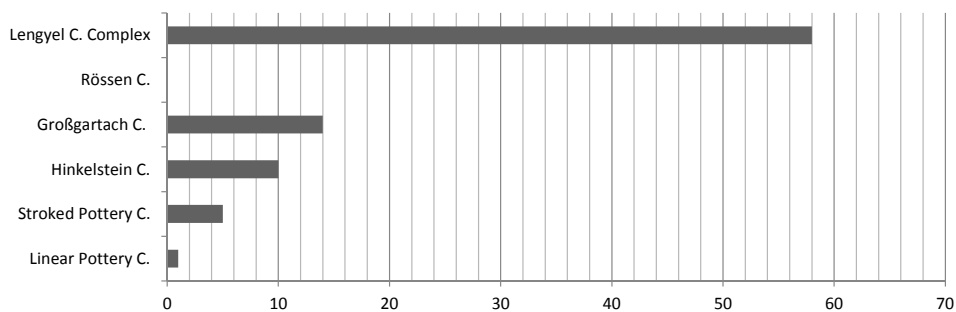


Fig. 4. The total number of boar tusks in graves.

2.4.3. Teeth of carnivores and herbivores

Perforated teeth of a dog or a fox can be found in the Linear Pottery Culture. A good example is a male grave no. 19 in Nitra – Priemyselná ulica (Slovakia), where a necklace comprising of two fox teeth and some human teeth was discov-

ered. It was surprising to notice that the necklace was the only grave good in the grave and that some of the human teeth probably belonged to a female person (Pavúk 1972, 11). Similar findings were also made in Rutzung cemetery described above. A unique find is a beaver tooth from a grave in Blučina, track Nivky (the Czech Republic) where a skeleton of a polecat together with some bird bones and cattle Phalanx was also found (Steklá 1956, 706; Vlčková 2002, 11).

Fox jaws belong to extraordinary finds in Linear Pottery Culture. Fox jaws, especially the front parts of lower jaws, were found in three graves no. 18, 102 and 141 in Aiterhofen burial ground (Germany) where men aged 35–40 years (no. 141), 40–50 years (no. 18) and over 60 years (no. 102) were buried. Interestingly, these three graves were the richest graves in the entire burial ground. The fox jaws were located on the neck and they might have been worn as necklaces (Nieszery 1995, 200, 267, 285, 292). However, their decorative function is controversial as they might have been symbolic artefacts.

Perforated carnivore canines were found in six graves (no. 1, 12, 17, 20, 57, 58) of Großgartach Culture in Trebur (Germany). The canines were obtained from the upper and lower jaws of dogs, foxes, badgers and wild cats, and always appeared as neck adornments. A different number of 1 to 28 pieces was found in each grave. It was interesting to notice that smaller canines of old dogs appeared in the graves of men, while canines of game (foxes, badgers and wild cats) were found in the graves of women and one child (Spatz 1999, 175). Perforated or un-perforated teeth from unspecified animal species came from three graves of Worms-Rheingewann (Germany; Zápotocká 1972, 312–313, 318, 320), and one grave in Rheindürkheim (Germany; Zápotocká 1972, 329–330) and Lingolsheim (France; Storch 1984/1985, 41).

In addition, adornments made from animal teeth (carnivores) were found in four female graves (no. 4, 7, 25, 48) in the Lengyel site Brześć Kujawski (Poland) with one tooth of a wolf and of a dog located in grave no. 4, one dog tooth in graves no. 7 and 25 (Jażdżewski 1938, 8–9, 54) and twenty-two perforated wolf or dog teeth in grave no. 48 (Jażdżewski 1938, 92). All the teeth were found on the neck.

A necklace of twenty animal teeth and one deer canine (mentioned above) came from the female grave in Racot (Czerniak 2002, 14, 16–17, 19, fig. 6, 7). Unspecified animal teeth laid on the neck were also found in a child grave no. 44/74 in Svodín (Slovakia; Demján 2010, 39).

Ten bison incisors were also found in the female grave no. 25 in Brześć Kujawski. These, however, do not belong to the carnivore finds. Interestingly, two of them were drilled (Jażdżewski 1938, 21–22, 54).

2.5. Extraordinary finds in Linear Pottery Culture

Combs belong to extraordinary finds in Linear Pottery Culture. Antler or bone combs⁷ appeared in nine graves in burial grounds in Essenbach-Ammerbreite (Ger-

⁷ It is hard to determine whether combs were made of bone or antler.

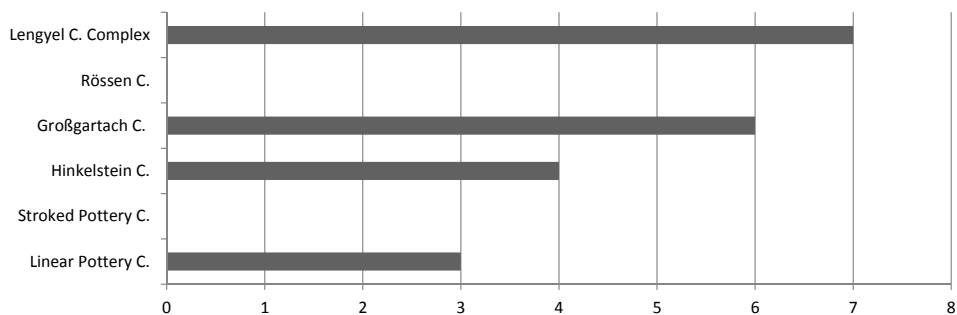


Fig. 5. The number of neolithic graves with animal teeth.

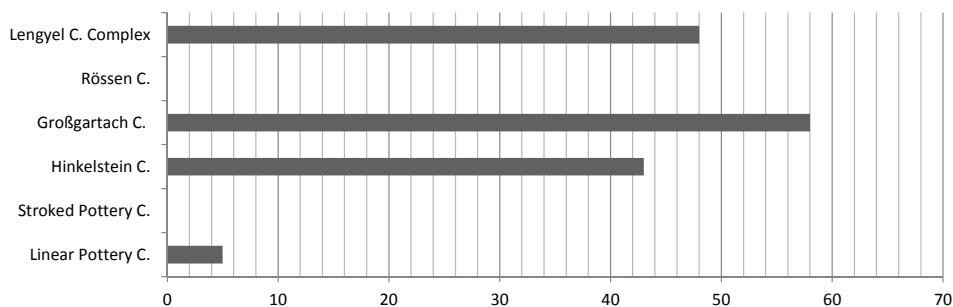


Fig. 6. The total number of animal teeth in graves.

many; *Brink-Kloke 1990, 428, 453*) and in nearby burial grounds (*Peschel 1992, 65*) in Aiterhofen (*Nieszery 1995, 276, 279, 286, 291–299*), Mangolding and Sengkofen (*Nieszery 1992, 309, 310*). Combs were located in children, female and male graves at the back side of the skull or neck. Some of them were decorated, such as a comb in grave no. 2 in Essenbach (*Brink-Kloke 1990, 458*). Additional grave goods, mostly adornments of spondylus or other mollusc shells, were also found in the graves but there did not seem to be any connection between the presence of combs and abundance of other grave goods⁸. According to finds of wooden combs from Swiss sites (*Nieszery 1995, 197–199, 309*), we can assume that these artefacts occurred much more frequently than the archaeological records show.

One extraordinary find came from Ensisheim (France) from grave no. 13 where a small child of 3–4 years old was buried. It is a decorated bone and it could have had a function as an idol or a doll and not a body decoration. This artefact

⁸ For example, the combs appeared in five graves (no. 60, 72, 108, 139 and 143) in Aiterhofen (*Nieszery 1995, 195–196*). Combs were a part of rich grave goods in two female graves no. 60 and 139, whilst male grave no. 108 contained only a comb (*Nieszery 1995, 276, 279, 286, 291–299*).

was made of sheep/goat metacarpus and was polished. Furthermore, two rings of mussels were located at its distal end. As these were filled with a black mass, probably resin, they look like “eyes” of a figurine (*Gallay – Mathieu 1988, 379, Abb. 8*). This bone figurine was found by the child’s clavicle bone. In addition, the grave was rich in adornments of shells (*Gallay – Mathieu 1988, 372–373*). Similar finds also came from Italy (*Gallay – Mathieu 1988, 382*).

An additional extraordinary find is a perforated and decorated fish vertebra from a small child’s grave no. 30 in Bruchstedt (Germany; *Kahlke 2004, 82, 110, Tab. 7*). Several unique bone artefacts of unknown function also came from the burial ground in Heidelberg-Schwetzingen (Germany). One of them is a triangular thin bone and it was found in graves of women and children and probably served as a dress selvedge (*Peschel 1992, 62*). In addition, a bone pendant was recorded in Bžany (the Czech Republic; *Zápotocká 1998, 180*).

2.6. Extraordinary finds in Stroked Pottery Culture

About 30 separate rolls of metapodials, mostly from sheep/goats, were found in a female grave no. 49 at Trebur (Germany). Matapodials were connected with a lime sinter and were found on the right forearm (*Spatz 1999, 358, 370, 414*).

2.7. Extraordinary finds in Lengyel cultural complex

Bone plates and epaulettes came from the Lengyel cultural complex. Bone plates appeared in Svodín (Slovakia) and they have a shape of a small disc with a diameter of about 1 cm. Most of them have two perforations and resemble a button. They were found in three graves of young people: two infants (no. 140/81, 112/80) and a young man of 20–30 years old (no. 139/81). They were presented in a number of 17, 56 and 66 pieces respectively and were parts of head decoration (*Demján 2010, 35, 39–40, 42, fig. A55: 7, A71: 11, A81: 3*).

Unique epaulettes came from sites Brześć Kujawski (Poland) and Racot (Poland). These adornments were made of cow ribs, which were artificially bent and decorated with geometric motifs. The holes were made to attach them at the rims. Epaulettes are known from three female graves no. 4 and 25 in Brześć Kujawski and in Racot. Two epaulettes were found on the right arm and one on the left arm in grave no. 4, whilst only two lay on the right shoulder in grave no. 25 (*Jażdżewski 1938, 7–8, 21–22, 41–42, 54*). Eighteen epaulettes appeared in the grave in the Racot site (*Czerniak 2002, 14, 16–17, 19, fig. 6, 7*). They were decorated and lay in the area between the frontal parts of the face and bent arms. All three female graves contained necklaces of animal teeth. In addition, the graves in Brześć Kujawski also contained a decorated bone plate, a bone adornment in the shape of a flat chisel and a bone pendant in the shape of an elongated triangle (*Jażdżewski 1938, 26–27, 54*).

3. Conclusion

The morphological structure of long bones predisposes them to be used for producing circular adornments. This phenomenon had been utilized in the production of bracelets, rings and beads in the Neolithic Age. Findings of bone adornments are not very numerous, which is likely caused by taphonomic agents such as the physical, biological and geochemical factors. In contrast, dental tissue is resistant to these factors and so animal teeth are the most frequent adornments found in graves.

Adornments from animal teeth appeared in all cultures. Their presence and cultural preferences are shown in graphs (fig. 1–6). Adornments were made of deer canines, boar tusks and carnivore and herbivore teeth. Carnivore teeth and deer canines (and imitations) were found in graves from Linear Pottery Culture. Deer canines were also found in two child graves in Stroked Pottery Culture which is probably due to the influence of Hinkelstein Culture. The highest popularity in using deer canine arose in Hinkelstein Culture which presents the continuation of Linear Pottery Culture in south and West Germany (*Raetzl-Fabian 1986; Dammers 2003, 2*). Although the boar tusks were recorded almost in all Neolithic cultures, different processing of tusk can be seen in each culture. The highest popularity of boar tusks is observed for the Lengyel Culture. Although boar tusks are usually considered as typical adornments of men, now it is apparent that this is true only for Lengyel Culture since the tusks were also found in graves of women and children in Hinkelstein Culture.

The meaning of animal teeth can possibly be explained by ethnography of mobile native peoples of Siberia, where various animal body parts are used as ritual objects. These animal parts, including the teeth, represent a symbolic link and as *pars pro toto* (*Sázelová 2012, 118*) or *mana*-objects (*Komárek 2011, 169*) they serve for communication between humans and spirits or to protect or transmit animalistic powers and abilities to man. Animal teeth are also used as personal charms, which can symbolize protective and helpful family spirits (totem ancestor), warding against evil spirits or aiding with prosperity and fertility (*Sázelová 2012, 118, 121, 126*).

In terms of symbolic meaning of decorations we can assume a linkage between specific decorations and categories according to age and gender (*e.g. Hodder 1982, 77–84; Seeger 1975, 212–213, 218, 221*). This can be expected in the case of fox jaws in three male graves at Aiterhofen in Linear Pottery Culture and in the case of boar tusks in Lengyel Culture.

Bone epaulettes, animal teeth (carnivores) and larger number of bone beads (next to the pelvis) were found in female graves in Brześć Kujawski. A belt made of bone beads appeared in Lengyel Culture primarily in children's burial in Svodín (exception is one grave of a young man). Based on these finds we can think about the existence of decorated belts, as E. Čermáková (*2008*) did. Women and children were close together, that is the reason why they belong to one category for example in the occurrence of deer canines in Lengyel Culture.

But we can observe sex distinctions in Hinkelstein and Großgartach Culture too. A belt decoration made of rich sets of deer canines appeared in three female graves from Hinkelstein group in Trebur. Smaller canines of old dogs were found in graves of men, while canines of game (foxes, badgers and wild cats) were present in graves of women and one child in Großgartach Culture (*Spatz 1999, 175*). Based on archaeological records it seems that society of Middle Neolithic and Lengyel Culture was inclined to make sex and gender distinction in the case of body adornments. In general, gender differences are primarily caused by socialization (in addition to biological predispositions such as configuration of the brain or physical competence) that shapes and determines the social roles and differences. These roles relate to different treatment of women and men and as social constructs they may vary according to individual cultures (*Oakley 2000, 11–12*). Based on ethnography of Papua New Guinea it is possible that the boar tusks symbolize fighters in the case of men (*Zalai-Gaál et al. 2009, 345–346; Davies 2012, 172, 189, fig. 4*) while the belts in the female graves could be interpreted as power objects that could be linked to the maintenance of the family. In the case of the tree people from Papua New Guinea it is a recorded custom to decorate humans with dog teeth that protect them against disease. They always have at least one in the neck just below the Adam's apple. They also have long necklaces that are worn over the shoulder and around the back of the body which are passed down from generation to generation (oral communication P. Jahoda).

Translation by author; correction by G. J. Morris

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ARTEFAKTY Z ORGANICKÝCH MATERIÁLŮ V NEOLITICKÝCH HROBECH: VYBRANÉ DRUHY NÁLEZŮ

Ozdoby vyrobené ze zvířecích kostí se v hrobech z období neolitu, který lze chronologicky vymezit 5600–4200 př. n. l. (např. *Zápotocká 1998, 165; Pavlů 2004*), objevují velice vzácně. Příčinou jsou pravděpodobně činitelé tafonomických procesů, mezi které patří fyzikální, biologické a geochemické faktory (*Rulf 1984, 241*). Vzhledem k tomu, že zubní tkáň je více odolná vůči těmto faktorům, zvířecí zuby patří mezi nejčastěji zastoupený druh „kostěných“ ozdob v hrobech. Kostěné ozdoby nepředstavují standardní složku hrobové výbavy, spíše prokazují unikátnost a originalnost lokálních kultur a místních tvůrců.

Práce se omezuje na publikovaná pohřebiště a hrobové objekty. V případě kostěných ozdob jsem sledovala samotné artefakty, jejich umístění v rámci hrobu a také věk a pohlaví pohřbených jedinců. Z hlediska samotných artefaktů jsem zaznamenala náramky, prsteny, korálky, zvířecí zuby (jelení grandle, kančí kly, zuby šelem) a několik dalších unikátních nálezů z kultury s lineární keramikou, s vypíchanou keramikou, z hinkelsteinské, grossgartašské a rössenské kultury a z lengyelského kulturního okruhu.

Morfologická stavba dlouhých kostí předurčuje kost na výrobu kruhových ozdob. Tento jev byl využit při výrobě náramků, prstenů a korálků v neolitu. Ozdoby ze zvířecích zubů se vyskytují ve všech kulturách. Používány byly jelení grandle, kančí kly a zuby šelem. V kultuře s lineární keramikou jsou jen nevýrazně zastoupeny zuby šelem, jelení grandle a jejich imitace. Jelení grandle se objevily ve dvou dětských hrobech v kultuře s vypíchanou keramikou, což lze vysvětlit jako vliv hinkelsteinské kultury. Jelení grandle a jejich imitace výrazně vystupují právě v hinkelsteinské kultuře (obr. 1, 2), která představuje pokračování kultury s lineární keramikou v jižním a západním Německu.

Přestože jsou kančí kly evidovány ve všech neolitických kulturách, pro každou kulturu je charakteristické jiné opracování klu. Největší oblibu kančích klů lze konstatovat u lengyelského kulturního okruhu (obr. 3, 4). Kančí kly jsou považovány za typické přídatky v hrobech mužů z celého neolitu. Nicméně toto tvrzení platí pouze pro lengyelskou kulturu. Ve středním neolitu se objevují prakticky stejně početně v hrobech žen a dětí hinkelsteinské kultury.

Z hlediska symbolického významu ozdob lze předpokládat vazbu konkrétních ozdob na kategorie podle pohlaví nebo věku. Tento vztah lze pozorovat v případě dolních čelistí lišek, které byly

nalezeny ve třech hrobech mužů na lokalitě Aiterhofen v kultuře s lineární keramikou, a v případě kančích klů v lengyelské kultuře.

Z hrobů žen z lokality Brześć Kujawski pocházejí nárameníky, zuby šelem a větší počet kostěných korálek (u pánve). Početné nálezy kostěných korálek byly objeveny v dětských hrobech (u pánve) na lokalitě Svodín (výjimkou byl jeden hrob mladého muže). Pozoruhodné jsou početné garnitury grandlí, které se vyskytly jako ozdoba opasků ve třech hrobech žen na pohřebišti hinkelsteinské kultury na lokalitě Trebur. V grossgartašské skupině se v hrobech mužů objevily špičáky starých psů, zatímco v hrobech žen a jednoho dítěte se našly špičáky lovných šelem. Děti a ženy patřily pravděpodobně do jedné kategorie, což lze sledovat například na výskytu jeleních grandlí v lengyelské kultuře.

Na základě archeologických nálezů se lze domnívat, že společnosti hinkelsteinské (opasky), grossgartašské (zuby psů a šelem) a především lengyelské kultury (opasky, korálky, nárameníky, kančí kly, jelení grandle) měly sklon odlišovat genderové kategorie podle ozdob.

Fig. 1. Počet neolitických hrobů s nálezy jeleních zubů a jejich imitací ze střední a západní Evropy.

Fig. 2. Počet jeleních zubů a imitací.

Fig. 3. Počet neolitických hrobů s nálezy kančích klů.

Fig. 4. Počet kančích klů v hrobech.

Fig. 5. Počet neolitických hrobů se zvířecími zuby.

Fig. 6. Počet zvířecích zubů v hrobech.

Mgr. Eliška Svobodová, Ph.D.

Okružní 478

Komárov 267 62

elasv@seznam.cz

