

## Abhandlung

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# Opening graves and turtles. The pond turtle (*Emys orbicularis* L.) from the cemetery of the Wielbark Culture in Czarnówko and the question of post-funeral interferences in the past

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**Zusammenfassung:** Im Jahr 2010 wurden auf der Sohle eines Wiederöffnungsschachtes in einem Grab auf dem Gräberfeld der Wielbark-Kultur in Czarnówko (PL) die Überreste einer Sumpfschildkröte entdeckt. In diesem Beitrag wird versucht, den Fund von Czarnówko im Zusammenhang mit zwei wichtigen Fragen einzuordnen: der Öffnung von Gräbern und dem Vorhandensein von Sumpfschildkrötenresten im Grab vor dem Hintergrund ähnlicher Funde aus dem mitteleuropäischen Barbaricum. Manipulationen im Grab nach der erfolgten Bestattung wurden auf dem Gräberfeld von Czarnówko etwa in 90 % der Fälle vorgenommen. Der Befund von Grab 963 findet Parallelen in den Gräberfeldern der Masłomęcz-Gruppe, der Černjachov-Kultur sowie sarmatischen und langobardischen Fundstellen. Die Frage des Vorhandenseins dieser Reptilien in den Gräbern hängt mit dem Phänomen der Graböffnung zusammen, einem Phänomen von großer räumlicher und chronologischer Ausdehnung, das in den Gebieten beobachtet wurde, in denen während der römischen Kaiserzeit und der Völkerwanderung die Körperbestattung praktiziert wurde.

**Schlagwörter:** Gräberfeld in Czarnówko, römische Kaiserzeit und Völkerwanderungszeit, Wielbark Kultur, Graböffnung, Sumpfschildkröte (*Emys orbicularis* L.)

**Abstract:** In 2010, the remains of a pond turtle were discovered at the bottom of a secondary pit (“robbery” trench) in one of the graves (feature 963) in the Wielbark Culture cemetery at Czarnówko (PL). This paper attempts to characterise the find from Czarnówko in the context of two important questions: the opening of graves and the presence of turtle remains in the grave against the background

of similar finds from the Central and East European Barbaricum. The problem of post-burial manipulation affects about 90 % of the graves in the cemetery at Czarnówko. The situation from grave 963 finds analogies in the burial grounds of the Masłomęcz Group, the Chernyakhiv culture and the Sarmatian and Longobard sites. The problem of the presence of these reptiles in the graves is related as it turns out to the phenomenon of grave opening, a phenomenon of great territorial and chronological extent observed in the areas where inhumation was practised during the Roman Period and the Migration Period.

**Streszczenie:** W 2010 roku w jednym z grobów (ob. 963) na cmentarzysku kultury wielbarskiej w Czarnówku (PL) znaleziono na dnie wkopu (tzw. wtórnego lub rabunkowego) szczątki żółwia błotnego. W artykule została podjęta próba scharakteryzowania odkrycia z Czarnówka w kontekście dwóch istotnych kwestii: otwierania grobów i obecności w grobie szczątków żółwi błotnych na tle podobnych znalezisk ze środkowoeuropejskiego Barbaricum. Problem manipulacji postfuneralnych dotyczy ok. 90 % grobów inhumacyjnych na stanowisku w Czarnówku. Sytuacja z pochówku 963 znajduje analogie na cmentarzyskach grupy masłomęckiej, kultury czerniachowskiej, sarmackich i longobardzkiej. Obecność żółwi błotnych w grobach, jak się okazuje, związana jest z fenomenem otwierania grobów, a więc zjawiskiem o szerokim zakresie terytorialnym i chronologicznym, obserwowanym w strefach praktykowania inhumacji w okresie rzymskim i wędrówek ludów.

**Słowa kluczowe:** cmentarzysko w Czarnówku, okres rzymski i wędrówek ludów, kultura wielbarska, otwieranie grobów, żółw błotny (*Emys orbicularis* L.)

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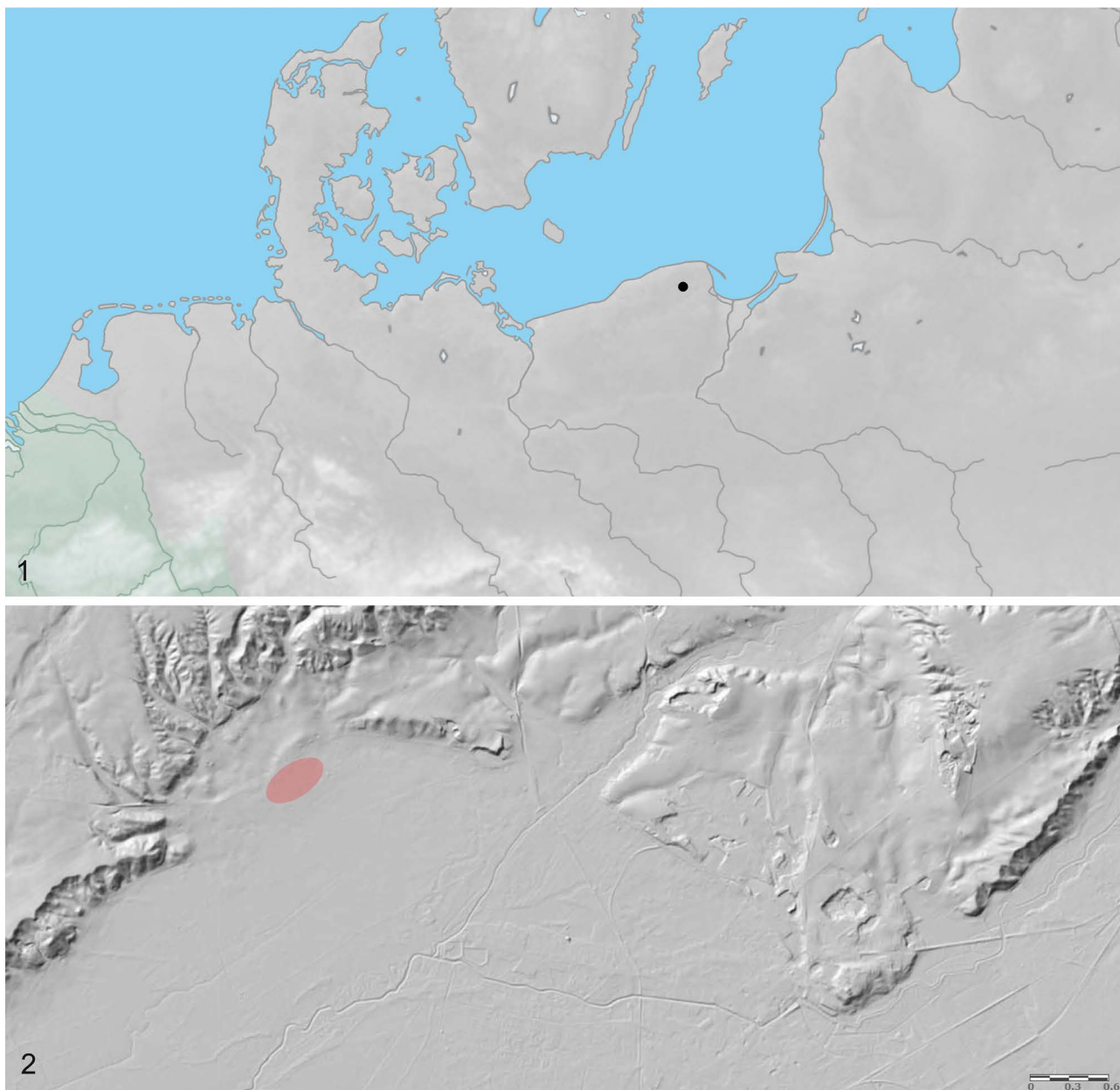


Fig. 1: Czarnówko: 1. Location; 2. Location of the cemetery on the background of LIDAR visualization (Design: K. Skóra).

## Introduction

The funerary rites of communities of the Wielbark culture have been the subject of numerous studies, but the topic of the presence of faunal osteological material in graves has not been realised more extensively. The poor representation of animals in the cemeteries of this culture is largely responsible for this<sup>1</sup>. This is possibly a consequence of funerary

norms, but also the influence of natural factors, i. e. the skeletal remains of animals, like those of humans, are extremely poorly preserved or not preserved at all, for which the soil conditions at the sites where the Wielbark culture population placed cemeteries are responsible. This is exemplified by the cemetery at Czarnówko (Figure 1,1), which provides sparse osteological material and generally in very poor condition<sup>2</sup>: remains in the grave pits are mostly cranial bones and teeth, less often long bone fragments. Bones of several represent-

<sup>1</sup> Węgrzynowicz 1981; Recently Skóra 2019; forthcoming; Waszczuk 2021.

<sup>2</sup> Rożnowski/Cymek 2015.

atives of the fauna, mostly mammals, have been recorded in more than 2,000 objects in Czarnówko. These include the skeletal remains of a horse, a dog and a bear<sup>3</sup>.

At Czarnówko, the remains of a pond turtle were discovered in grave 963. This is the first find in the faunal material of the Wielbark culture from the cemetery and is therefore worthy of wider analysis. Traces of post-funeral interferences (a secondary trench) were found in this grave. Thus, there is another case of an open grave from Czarnówko, which contained animal remains<sup>4</sup>.

This paper will attempt to characterise the discovery from Czarnówko in the context of two issues highlighted: the opening of graves and the presence of pond turtle remains in the grave against the background of similar discoveries from Central and East European Barbaricum. The situation from grave 963 at Czarnówko finds parallels in the cemeteries of the Masłomęcz Group, the Chernyakhiv culture, the Sarmatian and Longobardian sites. The problem of the presence of pond turtles in graves is related to the phenomenon of grave opening, a phenomenon with a wide territorial and chronological scope, observed in the zones where inhumation was practised during the Roman Period and the Migration Period.

## Czarnówko, grave 963

Grave 963 is located in the south-eastern part of the necropolis. The outline of a rectangular burial pit (173×60–70 cm) oriented on the NS axis was recorded directly below the humus (20.72–20.75 m above sea level). Approximately 50 cm lower, the pit was regularly rectangular in shape and the same length, 173 cm by 64 cm wide (Figure 2). At this level, the rectangular outline of a small log coffin (dimensions 135×35 cm) was captured. Its centre was destroyed by a trench with a clearly distinguishable dark fill. It also covered the northern part of the interior of the log, probably around the chest and head of the deceased. At the coffin level the pit had the shape of an irregular oval 95 cm long and 70 cm wide. The perpetrators also disturbed the area outside the log – the trench on the western side almost touched the wall of the grave pit. The pit was 70 cm deep.

At the bottom of the secondary trench, located in the centre of the burial pit, elements of grave goods (two brooches type A.VII.192<sup>5</sup> and one brooch type Mackeprang VIIb<sup>6</sup> and

a necklace of amber beads and pendants<sup>7</sup>), a fragment of a ceramic vessel, the remains of organics with the remains of the deceased (teeth) and the remains of a pond turtle were recorded side by side. The burial can be dated to phase C1b of the interregional chronology.

The bones of the deceased were not preserved. Only eight teeth survived, the condition of which did not allow basic information about the deceased such as gender and age to be determined<sup>8</sup>. The size of the grave pit, but above all the size of the log coffin, allows us to assume that this was the burial of a child.

According to the archaeozoological expertise of Daniel Makowiecki, the grave contained a plastron (1 fragment), mandible (right and left, two fragments), vertebrae (10 fragments) and one claw bone of a pond turtle<sup>9</sup>. The age and sex of the reptile have not been determined.

It can be assumed that the animal was at the level of the upper skeleton, probably near the skull of a child. The question that will come to be answered is whether this is the original site of the turtle's deposition, a secondary position as a result of post-funeral interference or an accidental one resulting from the reptile getting into an open trench.

## The pond turtle – habitat conditions and presence in the Czarnówko cemetery

The pond turtle was widespread in northern Central Europe as early as the Late Preboreal (9100–8600 cal BC). It is assumed that during the Boreal period (8 600 to 7 100 cal BC) it also appeared in Denmark and southern Sweden (Skåne)<sup>10</sup>. The regression of this species, which began as early as prehistoric times in some regions, especially in the northern limits of the species' range, i. e. southern Scandinavia, Denmark, Poland, England and Germany, is predominantly linked to human activity<sup>11</sup>, but also to climatic con-

tions in 2017 (grave 1906/17). The view of Mackeprang VIIb-type brooches as a phenomenon associated with the Danish islands must, in view of the new map of their dispersion, be revised (Schuster 2018, 56, fig. 33).

<sup>7</sup> The amber beads and pendants are made by hand, without the use of a lathe. They represent different types in the typology of M. Tempelmann-Maczyńska (types: 388, 389, 391, 394, 395, 396a, 389, 397, 447, and groups: XXX, XXXI and XXXII), the pendants – group LV (Tempelmann-Maczyńska 1985). Not all objects find analogues in the aforementioned classification.

<sup>8</sup> Rożnowski/Cymek 2015, 102 tab. 1.963B.

<sup>9</sup> Makowiecki 2015, 140 tab. 2.

<sup>10</sup> Karl/Paust 2014, 146.

<sup>11</sup> Cheylan 1998.

<sup>3</sup> Makowiecki 2015.

<sup>4</sup> Skóra 2019.

<sup>5</sup> Almgren 1923.

<sup>6</sup> Mackeprang 1943. This is the third brooch of this type from Czarnówko (Schuster 2018, 225, list 4) and an unpublished brooch from the excava-



**Fig. 2:** Czarnówko, grave 963: 1 – pond turtle; 2–4 copper alloy brooches; 5–7 – necklace of amber beads and pendants (Drawing: M. Benysek, K. Skóra, photography: M. Górski).

ditions<sup>12</sup>. Therefore, the remains of pond turtles discovered in Iron Age archaeological contexts in some regions are considered probable imports<sup>13</sup>.

Today, the pond turtle inhabits almost all of Europe (excluding, among others, Great Britain and Scandinavia) up to the Caspian Sea and Lake Aral in Central Asia, as well as the northern edge of Africa and the western part of Turkey.

The species prefers standing water bodies (small and medium-sized lakes, marshes, ponds, peat bogs, alders, oxbow lakes) and less frequently slow-flowing rivers, which are not very deep<sup>14</sup>.

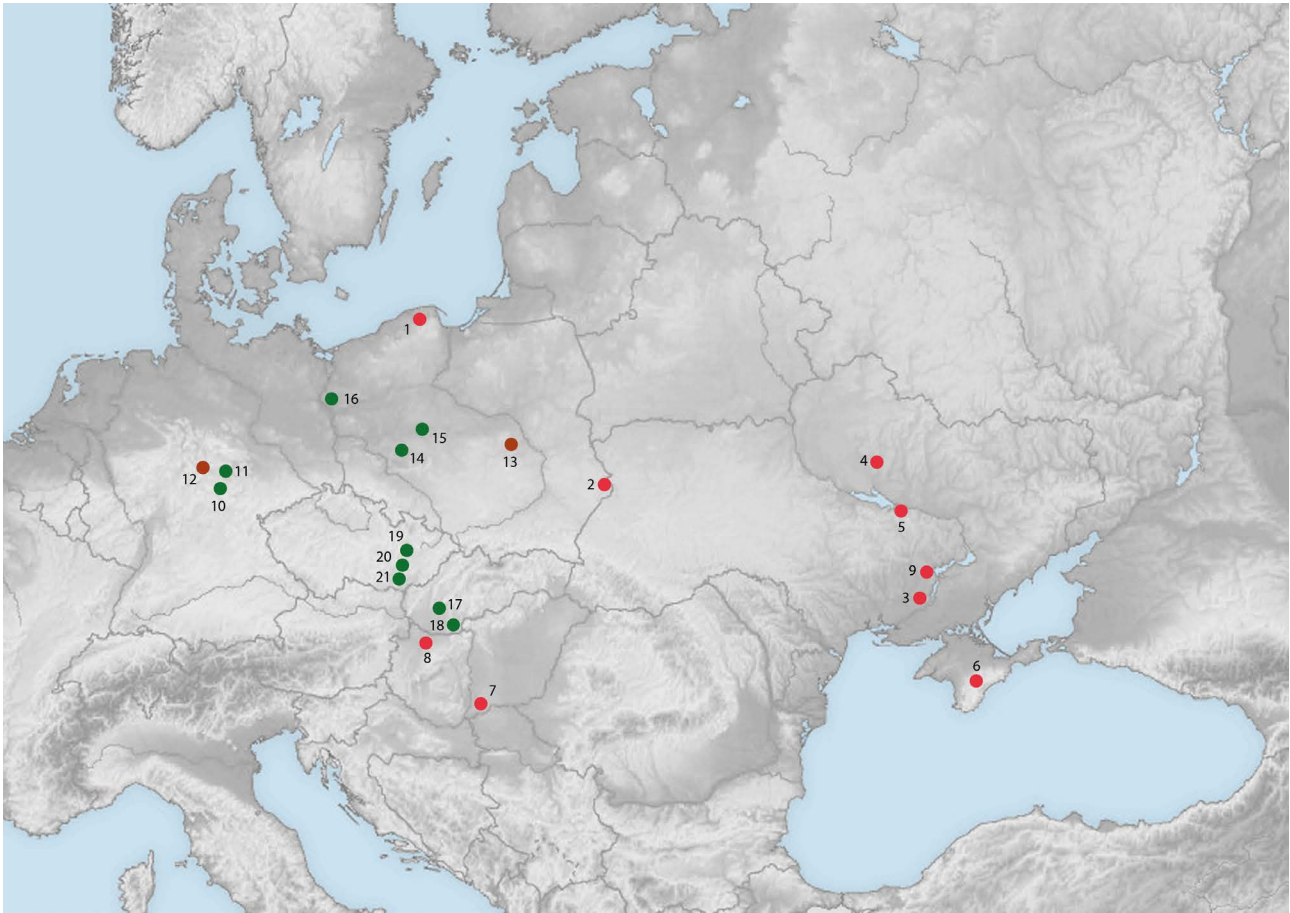
It is particularly attracted to dense vegetation on the banks and in the water, as well as large-leaved plants floating on the surface of the water. It feeds mainly on fish and frogs, but also on aquatic insects and snails. They need not

<sup>12</sup> Karl 1997, 457.

<sup>13</sup> Ibid. 457–458.

<sup>14</sup> Dolata 2010.





**Fig. 3:** Pond turtle finds at archaeological sites from the Roman Period and the Migration Period. 1 – Czarnówko (PL); 2 – Gródek (PL); 3 – Gavrilovka (UA); 4 – Gurbintsy (UA); 5 – Zhovnino (UA); 6 – Neyzats, Crimea (UA); 7 – Madaras-Halmok (HU); 8 – Ménfőcsanak (HU); 9 – Zolotaya Balka (UA); 10 – Haarhausen (D); 11 – Westgreußen/Funkenburg (D); 12 – Oberdorla (D); 13 – Otałążka (PL); 14 – Kielczewo (PL); 15 – Goślinowo (PL); 16 – Cedynia (PL); 17 – Nitra-Chrenová (SK); 18 – Stúrovo (SK); 19 – Vícemilice/Bučovice (CZ); 20 – Čejč (CZ); 21 – Lednice (CZ) (Design: K. Skóra).



**Fig. 4:** The pond turtle skeleton from cemetery at Gródek, grave 42 (After Kokowski 2007).

only marshes, but also an open area with loose soil where nesting holes can be dug and which is well warmed by the sun, which in turn is necessary for the eggs to hatch. The egg-laying site is usually between a dozen and a few hundred metres from water, although there are cases where this distance is up to 2 km<sup>15</sup>. Dry warm summer months with an average temperature of at least 19–20° C are essential for turtle reproduction. This means that the species can be used to determine the climate in different regions and epochs<sup>16</sup>.

The cemetery of the Wielbark culture is located approximately 1.5 km north of the Łeba riverbed (Figure 1,2). The Kiszewa River flows into the Łeba nearby. The site is situated on a river terrace above the floodplain, elevated a few metres above the floodplain, which is about 3 km wide. We

<sup>15</sup> Rybacki/Maciantowicz 2006, 25.

<sup>16</sup> Barthel 1987, 63.

do not know what the hydrological situation was like in the Roman Period, but it can be assumed that this was a habitat convenient for pond turtles.

## Pond turtles in funerary rituals in central and eastern European Barbaricum

The pond turtle is an animal rarely found in cemeteries of central and eastern European Barbaricum (cf. Catalogue)<sup>17</sup>.

Regarding the frequency of pond turtle remains in the cemeteries, the area of the Masłomęcz group and Chernyakhiv culture stand out (Figure 3). This representation was noted earlier in the literature<sup>18</sup>. It was analysed as an element of funerary ritual specific to the Dnieper zone: carapaces and skeletal remains were classified as individual turtle burials or gifts in human graves<sup>19</sup>. The higher number of turtles in the zone in question is certainly to some extent a result of the spread of the species in a zone providing favourable habitat conditions. Attention was drawn to the presence of turtles “always in the fillings of children’s graves” (with reference to the necropolis at Zolotaya Balka)<sup>20</sup>. Rogatko cautiously considered some elements of ritualism (including the placement of turtles in graves, the addition of animals of different species, biritual human-animal burials) in the context of the migration of ‘ideas’ in this part of Barbaricum<sup>21</sup>.

The number of graves with turtles within a necropolis does not exceed three, there is usually one feature of this type. The number of reptiles discovered per grave also varies. Single finds predominate. The exception is Gavrillovka, which had two, three and five turtles in three graves (cf. Catalogue).

The osteological completeness of individuals is rarely described in publications. Drawing and photographic documentation makes it possible to revise this information and assess in what condition the turtles arrived in the burial pit

(Figure 4). In most of the cemeteries, the turtles were complete, with the exception of the enigmatically described ‘interred carapace’ from Gurbintsy. The state of preservation of the remains did not always allow the sex and age of the animals to be assessed. This succeeded only in the case of the discoveries from Gródek (two females, approximately 20 years old). Anthropological analyses indicate that men and children were buried in this group of graves. An assessment of the character of the grave inventories in terms of gender determinants makes it possible to include women in this group as well. Thus, no relationship with the age or sex of the deceased is drawn. These are predominantly graves that do not meet the criteria to be considered elite burials. Chronologically, the burial complexes (cf. Catalogue) range predominantly from the younger Roman Period to the Migration Period. A common aspect of the graves in which turtle remains were discovered, which also applies to Czarnówko, is the fact that the structure of the grave pit has been disturbed as a result of extensive post-funeral interferences.

## Characteristics of post-funeral intrusions vs. pond turtles

All graves with pond turtle remains have been disturbed in the past. The opening of the graves occurred at different times after the funerary ceremony.

These sites can be divided into two groups:

- With visible trenches disturbing the grave pit, referred to in the literature as secondary or robbing trenches. These are directed at the central part of the grave or covering the centre with the part of the pit containing the upper part of the human skeleton (e.g. Gródek, graves 42 and 50 (Figure 5,1–2); Czarnówko)
- With invisible trenches. Then the disturbance is evidenced by the disturbed anatomical arrangement of the skeleton, dispersal and partial destruction of the grave goods (other sites, cf. Figure 6).

## When did the opening of the tomb occur?

Based on the layout of the boneyard, three moments of opening can be assumed.

The first is a relatively short time after the burial – up to several years. Its length cannot be measured precisely, as it depends on many individual factors responsible for the disintegration of tendons and joint ligaments<sup>22</sup>. On the

<sup>17</sup> Also outside this area, turtle remains have a minor part in burial rituals. Of recent discoveries, noteworthy is a bustum from Erkelenz-Borschemich, Kreis Heinsberg, grave IV, in which a casket was found with a lining probably made of turtle shells (Schuler 2014, 142). However, this is a different context to the one under consideration. Also worth mentioning is a comb made of turtle carapace discovered in grave 124 from a cemetery of the Przeworsk culture in Olbin (PL) (Czarnecka 2001; 2007, 37–38, Taf. CXXII:124:17).

<sup>18</sup> Rogatko 1991, 168.

<sup>19</sup> Ibid. 168 fig. 6.

<sup>20</sup> Вязьмитина 1972, 65; 112; Rogatko 1991, 178.

<sup>21</sup> Вязьмитина 1952; Rogatko 1991, 181.

<sup>22</sup> Skóra 2017, table 4 and 5.

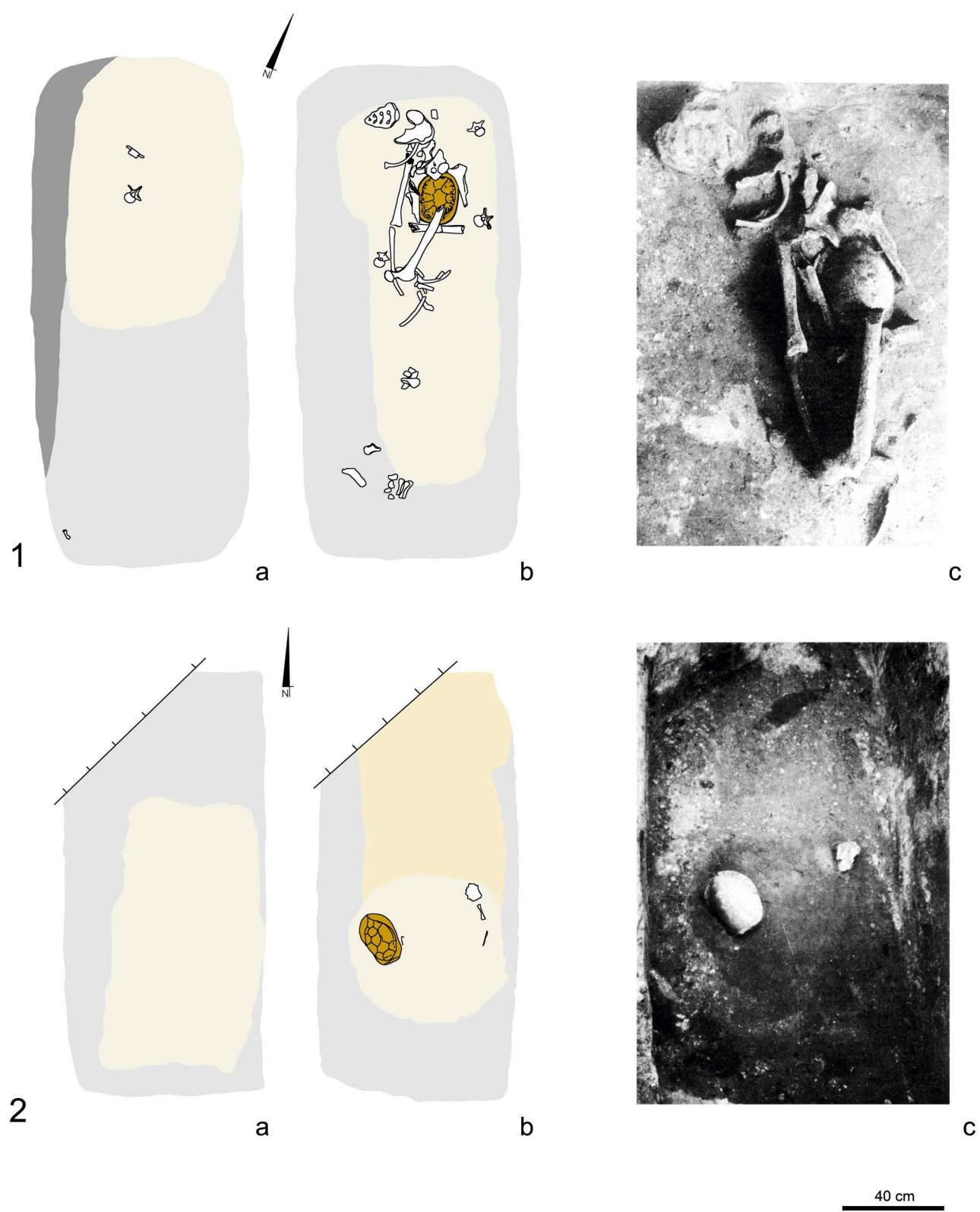


Fig 5: Cemetery at Gródek (PL): 1 – Grave 42; 2 – Grave 50 (after Kokowski 1993; design: K. Skóra).

basis of contemporary forensic studies, it is up to about three years after the corpse has been deposited in the grave. Most of the bones in the grave remain in anatomical alignment due to the integrity of the remains (in the group in question, this is the grave from the Zhovnino cemetery, Figure 6,3).

The second moment dates to the time after complete soft tissue breakdown and ligament disintegration. During postfuneral interference, bone shuffling unconstrained by the integrity or partial integrity of the ligaments has occurred. This is after a period of about 3 years or more – its duration depends on many factors. The arrangement of the bones is completely disrupted. Some bones are missing – they were accidentally removed with the soil removed by the perpetrators. These make up the largest number of such features in the analysed group.

There is also a third group of graves in which such an assessment is more complicated, due to the small number of human bones, their partial destruction and shuffling. In such situations, it is assumed that the grave opening took place a long time after the burial, i. e. the process of bone tissue decomposition was already advanced (Gavrilovka; Gródek, grave 50).

## Grave gift or accidental appearance?

Pond turtles are considered to be an element closely associated with the funerary rituals of the Chernyakhiv culture<sup>23</sup> and the Masłomęcz group. It is accepted that turtles were offered as grave gifts. Nikitina placed turtles in a diagram depicting the location of animal gifts in burial pits – they would most often be placed next to the head of the deceased<sup>24</sup>. Whether ‘pets’ or individuals freshly caught for burial were deposited was not assessed. It is known that the period from May to mid-June or July, i. e. when the females lay their eggs in the damp sand, is considered the most favourable period for capturing a turtle<sup>25</sup>. The dilemma: grave good or accidental appearance of a turtle, e. g. related to the need to overwinter, is known to researchers of earlier epochs, e. g. in relation to Neolithic graves in Poland<sup>26</sup>. Each discovery should be assessed on a case-by-case basis,

including in relation to the reptile’s living conditions and the burial customs of the community in question.

In the case of other cultures of the Roman Period and the Migration Period, no such general opinions were formed, which were not allowed by the frequency of these reptiles in the faunal material from the cemeteries, but also conclusions are made with more caution regarding the occurrence of turtle remains within features from the settlements. Here, their presence is linked to their lifestyle. On several occasions, pond turtle remains have been found in pits from settlements from Slovakia – at Nitra-Chrenová<sup>27</sup> and at Štúrovo, where its remains were recorded in pit T next to a piglet skeleton<sup>28</sup> and from Hungary (Tác-Gorsium)<sup>29</sup>. Representatives of this species are also recorded on sites from the area of the Przeworsk culture and neighbouring cultural groupings, e. g. Kielczewo, Goślinowo, Cedynia and Otałążka<sup>30</sup>. From the Sarmatian settlements at Apagy and Szegvár come the remains of four and two turtles respectively<sup>31</sup>, with the usual lack of evidence of their consumption<sup>32</sup>.

The skeletal remains and carapaces of pond turtles also come from sacrificial bog sites. The attribution of a ceremonial character to species preferring an aquatic environment must have an unquestionable basis. This is unlikely to be the case for a cult site from the younger Roman Period at Otałążka<sup>33</sup> or for one of the two specimens from Oberdorla<sup>34</sup>.

The analysis of materials from Central and Eastern European cemeteries also leads to the conclusion of the natural nature of the occurrence of pond turtles in graves. With regard to Chernyakhiv culture materials, this fact was pointed out by O. V. Petrauskas analysing the problem of grave disturbance. He concluded that grave pits were left open, which would be evidenced not only by turtle carapaces<sup>35</sup>, but also, for example, by the presence in a grave of skeletal elements from neighbouring graves or the ‘sliding’ into a grave of parts of neighbouring objects, such as urns and burnt bones at Malinovtsy/Малиновцы<sup>36</sup>.

23 СЫМОНОВИЧ 1963, 58; СЫМОНОВИЧ/Кравченко 1983; НИКИТИНА 1985. They have also been recorded in pits within the Chernyakhiv culture settlement at Portmashov. Turtles have also been found, for example, in Scythian burials in the cemetery at Mamay-Surka (Ерохина 2007, 169–174; СЛЬНИКОВ 2011).

24 НИКИТИНА 1985, 20.

25 Makowiecki 2012, 183.

26 Młynarski 1971.

27 Fabiš/Mikliková 2002; Březinová *et al.* 2003; Fabiš 2003.

28 Kolník 1962, 362–363; Nývtová Fišáková/Šedo 2003; Bielichová 2019, tab. 7.

29 Bökönyi 1984, 100; Cf. Vörös 2005.

30 Makowiecki/Rybacki 2001.

31 Istvánovits/Kulcsár 2015, tab. 5.

32 Willms 1986; Karl 2009, 62–64; Kysely *et al.* 2015.

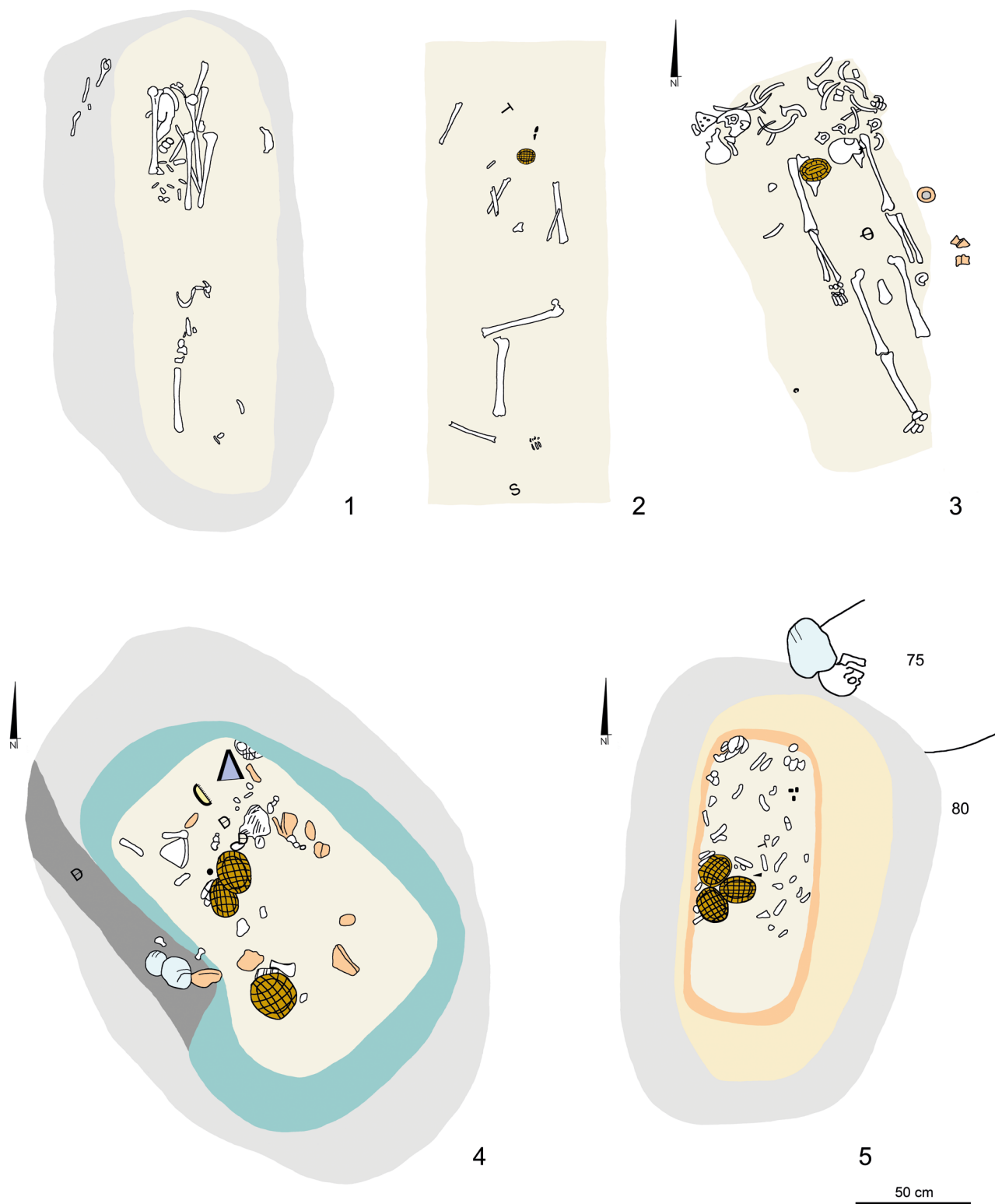
33 Bender 2009.

34 Behm-Blancke 2003.

35 Петраускас 2014, 145. This thesis is accepted in works on the role of animals in the funerary rites of the Chernyakhiv culture (Гопкало/Рудич 2017).

36 Пачкова/Яковенко 1983, 55.





**Fig. 6:** Examples of inhumation graves with pond turtle remains: 1 – Ménfőcsanak (HU), grave 282 (After Vaday 2015, fig. 12.1); 2 – Madaras-Halmok (HU), grave 481 (After Kőhegyi/Vörös 2011, tabl. 105); 3 – Zhovnino, grave 18 (After Петраускас/Цындровская 2002, fig. 3); 4 – Gavrilovka, grave 35 (After Сымонович 1960); 5 – Gavrilovka, grave 80 (After Сымонович 1960). (Design: K. Skóra).

A survey of the presence of turtles in graves undertaken for the wider area showed that in all cases they were recorded in features with traces of post-funeral disturbance. The remains of turtles were documented several times directly in the so-called secondary trenches, which could be seen macroscopically on the basis of the different structure of the fill (Czarnówko, Gródek). In the other sites they were usually found at the bottom of the grave pit or at different depths of the fill, but at the same time the excavation was not documented – the reason could be the simple fact that it was not included in the publication or its poor visibility, i. e. it was not visually different from the surrounding fill of the grave pit. Certainly these graves were open, as evidenced by the state of preservation of the grave inventory and the disturbed skeletal arrangement.

Turtle carapaces were often found next to human bones, e. g. in Zhovnino on the scapula of a deceased person (Figure 6,3), in Czarnówko next to teeth. In Gródek (grave 42) the turtle got under human bones slipped in a heap (Figure 5,1). We note situations where the turtle is discovered above a skeleton, such as 15 cm above the skull of a child in Zolotaya Balka. A similar situation was recorded in grave 282 from the Longobard cemetery of Ménfőcsanak (NW Hungary). In the pit at a depth of 10 to 30 cm was the skull of the deceased as well as the clavicles and vertebrae, at the height of the skull was the shell and bones of a turtle (–10 cm)<sup>37</sup>. The context of the discovery of the turtle at Ménfőcsanak clearly indicates that its remains are a natural deposit in the grave pit. It is not possible to determine whether the turtle that ended up in feature 282 benefited from the loose structure of the original, freshly made grave or from a secondary trench made by “robbers”. In any case, the activity that created optimal hibernation conditions for this turtle must have taken place shortly before winter<sup>38</sup>. The turtle from Ménfőcsanak was found shallow and this interpretation is convincing.

Two natural reasons for the presence of *Emys orbicularis* in a grave can be distinguished. The first is the sheltering of the animal for overwintering. Representatives of this species tend to burrow for hibernation at the beginning of winter, especially in mud or loose soil. Surveys of pond turtle populations from Poland show that they overwinter from October to March, usually burrowing into the mud at the bottom of water bodies and falling into a state of numbness<sup>39</sup>. It often happens that they do not survive. The pond turtle is well adapted to continental climates. It

needs an average temperature of at least 19°C in summer, but can survive average winter temperatures of –15°C<sup>40</sup>. Such a loose structure may have been present in the soil of a freshly backfilled grave or a ‘robber’ trench.

The second possible cause is related to leaving the trench open, even for a short time, e. g. overnight, when it proved to be a natural trap<sup>41</sup>. This situation applies to most of the graves included in the analysis. Reptile remains were found in the trench-infested grave pits at considerable depths, which excluded the possibility of burrowing for these animals. Of course, an assessment of this kind must be accompanied by consideration of whether there may have been aquatic areas in the vicinity of the burial ground suitable for this species. In the case of Czarnówko, these are the floodplains of the River Łeba. Several cemeteries are located near the Dnieper River, whose floodplains may have been or still are the habitat of these reptiles. Thus, by chance, turtles may have fallen into the trenches of graves in Gavrilovka, in Zhovnino, No. 18<sup>42</sup>, in Gurbinty<sup>43</sup>. Several specimens from grave 80 in Gavrilovka were located side by side – they give the distinct impression of having congregated at the site of a trench slowly filling with soil (Figure 6,5), with decreasing access to oxygen.

### Were so-called secondary trenches left open?

The problem of leaving secondary trenches unfilled has already been discussed in relation to the Czarnówko cemetery<sup>44</sup>. On the basis of the observations of the morphology of the excavations to date, it can be assumed that some of the secondary trenches stayed unfilled for some time, which is difficult to assess. Theoretically, the timing of the disturbance of these objects should date to the decline of the use of the necropolis or the time when the community associated with it left the area. However, this is conjecture. It will only be possible to assess this aspect after a comprehensive study of the material from the necropolis, which contains several thousand features.

<sup>37</sup> Bartosiewicz 2015, 251.

<sup>38</sup> Ibid. 260.

<sup>39</sup> Rybacki/Maciantowicz 2006, 26.

<sup>40</sup> van Wijngaarden-Bakker 1996, 449–450; Karl 1997, 457.

<sup>41</sup> Bartosiewicz 2015, 259.

<sup>42</sup> Петраускас/Цыдровская 2002.

<sup>43</sup> Макаренко 1927.

<sup>44</sup> Skóra 2019.



**Fig. 7:** Hirsemarken, grave 15, Jutland (DK), with visible secondary trench: 1 – View from above; 2 – View of the profile with the layering in the backfill of grave and the secondary trench (after Eriksen/Egeberg 2021).

## Stratigraphy of secondary trenches

Assessing the relationship of the trench to the grave pit proper and the layout and nature of the stratigraphy in the fill of the secondary trench is important in determining the timing of the intrusion and the method adopted by the perpetrators. The identification of variants of disturbance techniques is a potential clue to establishing the stages and chronology of the opening procedure. Related to this is also the question of whether the trenches were backfilled (if so, how) or whether they were left open. If they were left open, it is important to describe the backfilling process. Ideally, we should be given information on what natural factors played a role (e. g. wind, rain, river water in floodplains), what material made up their fill (sand, clay, gravel, humus, organic remains) and how many seasons the process may have lasted.

Documentation of the profiles of the burial pits and the disturbed trenches is generally not carried out during archaeological investigations, however, even though this data is crucial for understanding the process and the nature of the opening. This is a problem also diagnosed for research in other regions of Europe<sup>45</sup>. A commendable exception from the area of the Wielbark culture is, for example, the cemetery in Babi Dół-Borc<sup>46</sup> and in Krosno<sup>47</sup>.

## Ways of backfilling a secondary trench

Open graves can be backfilled with:

- 1) with original material, i. e. previously dug up outside. In addition, bones and objects of grave goods (accidentally or intentionally abandoned) enter the trench. This situation applies to cemeteries where the graves are at a great distance from each other or where there is no material from neighbouring open graves. In this situation, the trench is not filled in completely.
- 2) with dissimilar<sup>48</sup> or partially dissimilar material. The most common consideration in this situation is the contribution of layers accumulated after the cessation of use of the necropolis (a high humus layer, an alluvial layer or one associated with the position of the site on a floodplain, or a cultural layer associated with successive stages of use of the site).

Trenches with a different fill structure and colour than the burial pit were usually considered to have been created long after the burial. On the other hand, the homogeneous nature of the layering of pits and trenches may indicate a short time<sup>49</sup>.

If the backfilling was natural, the ‘products’ of wind and rain should be visible particularly quickly at the lowest level of the trench. The funnel of the trench should gradually decrease, absorbing the material left outside the burial pit. At Czarnówko we associate the cylindrical layering observed in the trench with such a process (Figure 7). In the case of Site 963, such an arrangement was not observed, but the pond turtle remains provide an argument for no backfilling of the trench.

A cylindrical structure of layers in a trench is observed in disturbed Longobard cemeteries, which would confirm that the trenches were left unfilled<sup>50</sup>. H. Adler assumes that heaps of dug-up earth were pushed into the trenches only if they interfered with the “plundering” of a neighbouring grave. Otherwise, the trenches were left open and partial backfilling took place naturally with the help of wind and rainwater. At Brunn am Gebirge, on the other hand, snail shells and 6<sup>th</sup> century pottery were found in the upper parts of the trench fill, while the lower parts were free of such inclusions. This suggests an intentional filling of the trenches only to half depth<sup>51</sup>.

A cylindrical arrangement of layers in secondary trenches was also recorded in a small Late Roman cemetery at Hirsemærken (Jutland) in several of the 32 disturbed graves (grave 15)<sup>52</sup>. It is presumed that some of the trenches were gradually filled with sand by nature (Figure 8). Another indication of the long-term opening of the trenches is the organic layer on the bottom in the profile of grave 2, which could be evidence of plants overgrowing the bottom of the site. The analysis carried out for Hirsemærken indicates that the disturbance of the graves may have taken place while the cemetery was still being looked after. The robbery motive would have been weakened by grave goods left in the graves, e. g. bead necklaces and brooches, and secondary trenches located ‘without a one method’. Socio-political considerations, leading to profanation and a symbolic takeover of the site (as assumed e. g. at Slusegård<sup>53</sup>) are also taken into account due to the chaotic shuffling of the contents of the grave pits, the scattering of objects that originally belonged to the buried.

45 Cf. Klevnäs 2013, 57–59. The fillings of the grave pits were the object of research, e. g. Perkins 1991; Aspöck 2011.

46 Mączyńska/Jakubczyk/Urbaniak 2021.

47 Jarzec 2018.

48 Cf. Klevnäs 2013, 57.

49 This possibility was also taken into account: T. Skorupka 2008, 83.

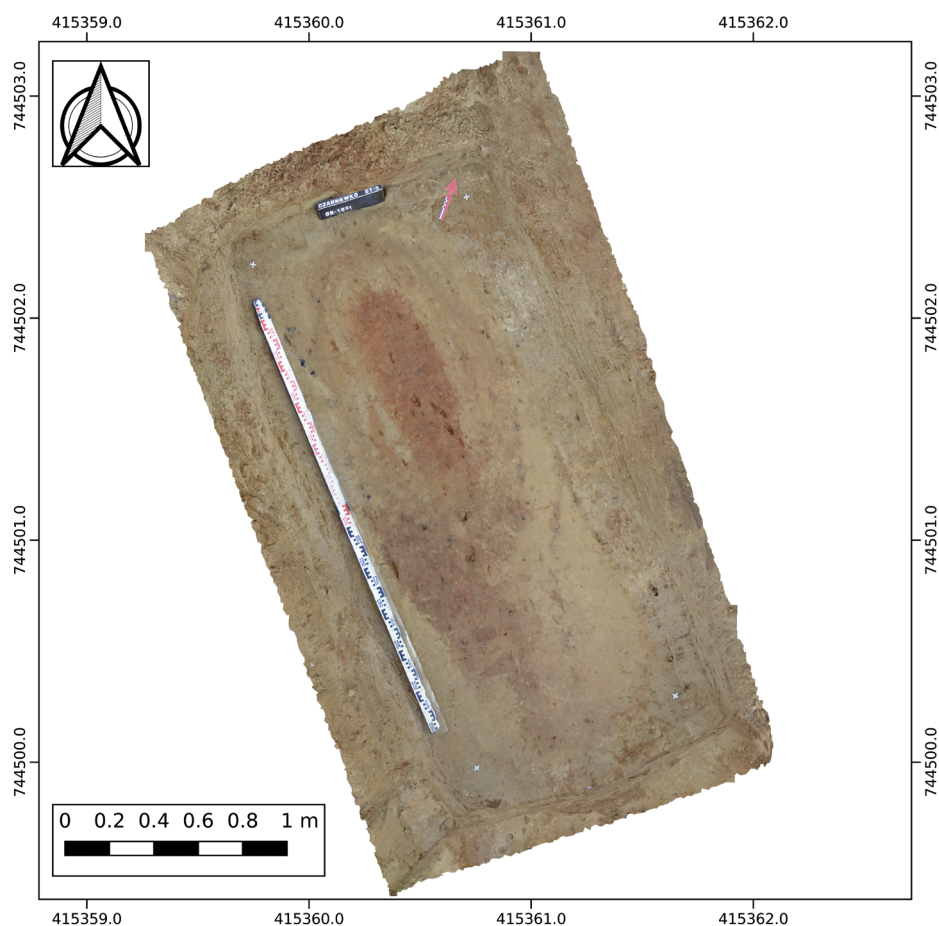
50 Adler 1970, 143.

51 Aspöck 2002.

52 Eriksen/Egeberg 2021.

53 Crumlin-Pedersen 1995.





**Fig. 8:** Czarnówko, grave 1881 (PL). Level above the bottom of the burial pit with a visible secondary trench with cylindrical layers (Photography: K. Skóra, drawing: J. Sikora).

However, the authors are mainly inclined to interpret that what took place at Hirsemærken was part of a burial ceremony<sup>54</sup>. This would be indicated by traces of secondary burials. Leaving graves open was supposed to help release spirits or ghosts, perhaps to prevent them from ‘walking’<sup>55</sup>. In the Hirsemærken cemetery, skeletal remains have been preserved in only two graves and in small numbers. The arrangement of the skeletal remains is very important for understanding past activities. We do not have this opportunity in Czarnówko either. Thus, we are missing a lot of key information and the possibilities for interpretation are limited.

Other reasons are also pointed out for why the secondary trenches remained open. According to A. Klevnäs, this is primarily indicative of the perpetrators’ indifference and their lack of need to conceal their actions or, on the contrary, their need to ‘advertise’ their gestures to reinforce

the insult, i. e. leaving the graves open is an act of symbolic violence<sup>56</sup>. Traces of ritual actions in unfilled trenches are rarely recorded and are more likely to be human bones in the trench or animal bones, which are regarded as a type of sacrifice or the remains of a meal or both at the same time<sup>57</sup>.

An unfilled trench may also indicate that the decomposition process of the corpse had been completed. It is believed that graves that were open when the decomposition process had not finished were backfilled for hygienic and aesthetic reasons. Such a situation may have occurred at Brunn am Gebirge<sup>58</sup>. All graves in which the decomposition of the corpse had not yet fully taken place were completely backfilled after opening. The time of soft tissue decomposition was seen as spiritually dangerous and physically distasteful. This related to the idea of a ‘decent interval’<sup>59</sup>.

<sup>56</sup> Klevnäs 2013, 58.

<sup>57</sup> Ibid. 59.

<sup>58</sup> Aspöck/Stadler 2003; 2018.

<sup>59</sup> Klevnäs 2013, 23.

<sup>54</sup> Eriksen 2006, 50.

<sup>55</sup> Eriksen/Egeberg 2021, 176–177.



Natural factors for filling in the trenches are also taken into account in the case of a small cemetery from the Migration Period in Šaratice, Slavkov u Brna District (Czech Republic). The graves in this cemetery were disturbed in the 5<sup>th</sup> century. The oval or irregularly shaped secondary trenches were already visible in the ceiling part of the burial pits. In cross-section they were funnel-shaped and directed towards the upper part of the skeleton. The backfill consisted of dark brown clay, half-mixed with yellow gravel<sup>60</sup>. The absence of poorly planned trenches may indicate the existence of ground markings in the cemetery at the time of the interventions. The corpses were already in a skeletonised state, as evidenced by the arrangement of bones in some graves. On the basis of the evaluation of the fills it was assessed that the trenches had been unfilled for some time and had filled up with the contribution of natural factors, wind and rain, the result being a compact influx of clay<sup>61</sup>.

The second phase of the 'life' of this necropolis is defined by seven new burials that were placed in graves from the older phase, but without respect for the orientation of the previous burials<sup>62</sup>. The graves from the older phase were much deeper than the younger graves placed in them (older 140–210 cm, younger 120–150 cm). In the younger graves, the deceased were buried without coffins and their graves bear no signs of post-funeral manipulation. In this group of graves, two were child graves, one a prone burial and the other in a contracted position on the side<sup>63</sup>. Tejral considers two possibilities<sup>64</sup>. The graves from the second phase are the work of the local population, who continued to bury their dead at the site<sup>65</sup>. Some of these burials would belong to a stratum of people of low social status, buried at the edge of the cemetery in older burial pits with trenches half-buried. The second hypothesis is that the use of the necropolis did not continue and that the population was replaced. Newcomers, probably the Longobards, deposited their dead in the ground using the existing older graves in the 6<sup>th</sup> century.

A similar situation, i. e. the use for burial purposes of older grave pits disturbed by 'robbery', was most probably found in the mid-fifth century cemetery at Smolín. An example of such usage is grave pit No. IX<sup>66</sup>.

Leaving secondary trenches unfilled is observed in cemeteries in various regions of Europe<sup>67</sup>. This kind of practice has been captured in Anglo-Saxon cemeteries, e. g.

Kent<sup>68</sup>; Finglesham, grave 22; Ozengell<sup>69</sup>). The phenomenon is certainly wider than the examples given, but it does not always succeed in being documented. We cannot assume that the reasons for leaving a 'disordered' cemetery with trenches unfilled will have a similar genesis.

## Conclusion

The ritual-symbolic role of pond turtles in the past is not excluded, but in relation to the funerary customs of Roman Period and Migration Period communities in central and eastern European Barbaricum, it is not proven. On the other hand, discoveries from sacrificial bog deposits are few and there are obviously too few indications to prove their ritual basis. Participation in the diet is also unproven (exception – Haarhausen (?)), despite its presence in objects from settlements<sup>70</sup>. Occasionally we obtain archaeological confirmation of the keeping of turtles as pets<sup>71</sup>. This is evidenced by finds of plastrons from Late Roman cities with a hole drilled in the tail part of the carapace<sup>72</sup>, to which a string was attached to keep the pet tethered, or alternatively the suspended shell served as an amulet or decoration<sup>73</sup>.

The remains of a pond turtle discovered in the inhumation grave from Czarnówko are important for several reasons. The presence of the pond turtle in the southern Baltic zone is information about climatic conditions, i. e. the range of occurrence of these reptiles in the first centuries AD. The remains from Czarnówko are the northernmost find of their kind in Barbaricum, and certainly the only one in a grave context in the area. It also stands out against the faunal material of the Wielbark culture. In the cemeteries, the frequency of animal remains, especially wild species, is low<sup>74</sup>. The presence of other amphibian and reptile species in the cemeteries of the Wielbark culture is generally con-

<sup>60</sup> Staňa 1956, 28.

<sup>61</sup> Ibid. 28.

<sup>62</sup> Ibid. 28.

<sup>63</sup> Ibid. 30.

<sup>64</sup> Tejral 1976, 84.

<sup>65</sup> Staňa 1956, 31.

<sup>66</sup> Tejral 1976, 89–90; 93.

<sup>67</sup> Cf. Aspöck 2011, 302.

<sup>68</sup> Klevnäs 2013, 57.

<sup>69</sup> Two graves no. 18 and 60, Klevnäs 2013, 58.

<sup>70</sup> It is known that pond turtle meat was part of the menu at different times. In the Middle Ages and modern times, in some regions these animals were traded in markets, i. e. during church fasts. For a long time, the pond turtle was placed in zoological systematics in one group with fish, snakes and vermin/amphibians, which allowed clerics to turn a blind eye to violations of the ban on meat consumption during fasting (Młynarski 1971, 127–128; Karl 1997, 459–460).

<sup>71</sup> Makowiecki/Rybacki 2001, 100.

<sup>72</sup> Beech 1997, 626–627, fig. 6.

<sup>73</sup> Cf. also Kitchell Jr. 2017, 188.

<sup>74</sup> Similar observations concern the funerary rituals of the Przeworsk culture or the Chernyakhiv culture. It also applies to sacrificial bog sites, e. g. more recently in relation to sites from Denmark (Kveiborg/Olsen 2023).

sidered to be incidental, i. e. related to the lifestyle of the animals (snake, *pelobates fuscus*)<sup>75</sup>.

The analysis in this article clearly indicates that in most cases the pond turtles entered the burial pits at some time after burial. Certainly, the pond turtle should be removed from the list of animal gifts of the rituals of the communities of the Wielbark culture, the Masłomęcz group and the Chernyakhiv culture until facts are presented indicating the non-accidental occurrence of these reptiles.

The pond turtle in the fill of the secondary trench of grave 963 in Czarnówko is another testimony to the practice of not backfilling trenches in cemeteries of the Wielbark culture as a result of post-funeral manipulation. An analysis of the ‘abandonment’ of backfilling of trenches by perpetrators in cemeteries from other regions shows that leaving graves open may have had various reasons. This generally led to the continuation of burial practices. This at Czarnówko is difficult to ascertain due to the failure to preserve skeletal remains or only fragmentary preservation<sup>76</sup>. It is certainly not possible that all open graves in such an extensive cemetery were disturbed by the same perpetrators and it is not possible that this was a one-off action. A variety of motives is therefore acceptable, but particular attention should be paid to the continuity aspect of burial practices.

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## Catalogue. Inhumation graves with pond turtle remains from the Roman Period and the Migration Period in central and eastern European Barbaricum

1. Gródek = Gródek nad Bugiem, pow. Hrubieszów (PL), grave 42

Description of post-funeral disturbance: a trench with a regular outline in the northern part of the burial pit (200×82 cm). In the roof of the trench single human bones,

at the bottom of the trench a cluster of broken human bones (mainly the lower part of the skeleton), lying on a turtle skeleton.

Sex and age: M (?), *maturus*

Grave goods: Mosaic bead TM XXIII.366, fragment of antler comb

Chronology: Younger Roman Period

*Pond turtle remains*

Number, sex and age: 1 individual, female, ca. 20 years old

State of preservation: complete

Location: at the bottom of a trench, no information on depth available

References: Nadachowski/Wolsan 1987; Szyndlar 1989; Kokowski 1993, 35–36 fig. 33 foto 49; 50; 51; 52; Makowiecki/Rybacki 2001; Gładysz-Juścińska/Kokowski 2021, 114–115.

2. Gródek = Gródek nad Bugiem, pow. Hrubieszów (PL), grave 50

Description of post-funeral disturbance: Secondary trench in the central part of the grave pit (170×80cm), in the lower parts also a trench in the SE part of the grave. In the trench, at a depth of 80 cm from the ground, a turtle skeleton, fragments of a child's skull, other skeletal bones. Bottom of the trench –89 cm, bottom of the burial pit –135 cm.

Sex and age: ?, *infans*

Grave goods: needle, hooked pin, fragments of a small ceramic vessel

Chronology: Younger Roman Period

*Pond turtle remains*

Number, sex and age: one individual, female, approx. 20 years old

State of preservation: complete. Among the turtle bones the remains of a frog (juvenile). It is possible that the frog was consumed by the turtle. These amphibians are the staple diet of pond turtles.

Location: at the bottom of the trench, at a depth of 85 cm

References: Szyndlar 1989, 73; Kokowski 1993, 39–40 fig. 39 foto 61; 62.

3. Gavrillovka/Гаврилівка/Гавриловка, Херсонської обл. (UA), grave 35

Description of post-funeral disturbance: Traces of post-funeral interference in the burial pit (NW-SE, dimensions 240×160 cm in the roof; 133×77 cm in the floor). At the bottom of the grave pit, alongside human bones, animal bones, including the carapaces of three turtles.

Sex and age: ?, juvenile

Grave goods: ceramic vessels, glass cup, three copper alloy buckles, multi-layer comb, iron item – knife (?), glass bead, animal bones (a sheep and a bird)

Chronology: C2a–C3/D1

<sup>75</sup> Skóra, forthcoming.

<sup>76</sup> In Czarnówko, the use of an older burial pit for a new burial is documented for the stage when Scandinavians from the 5<sup>th</sup> century began to bury their dead in this necropolis. According to Jan Schuster, the placing of grave 903A from the 5<sup>th</sup> century in the pit of grave 903B from the Roman Period is a coincidence due to the lack of visible grave markers on the surface of the cemetery (Schuster 2015, 29–30 fig. 8).

*Pond turtle remains*

Number, sex and age: three individuals, ?, ?

State of preservation: Unknown. In the figure complete shells.

Location: at various depths in a secondary trench (its bottom at a depth of 285 cm)

References: СЫМОНОВИЧ 1960, 206–207, fig. 12.35; 14.

4. Gavrillovka/Гаврилівка/Гавриловка, Херсонська обл. (UA), grave 79

Description of post-funeral disturbance: Grave pit (N-S) with traces of postfuneral interference. Human bones in disarray but not broken. Most dumped in N part of grave pit.

Sex and age: M, *maturus* (40–50)

Grave goods: fragments of several ceramic vessels and a green glass vessel, a copper alloy handle with a silver ring, a comb, an oval belt buckle, a spindle whorl, sheep bones.

Chronology: C2a–C3/D1

*Pond turtle remains*

Number, sex and age: four individuals, ?, ?

State of preservation: not known exactly. Based on the illustration – complete

Location: at various depths in a secondary trench (bottom at 232 cm depth)

References: СЫМОНОВИЧ 1960, 212–214 fig. 18; Rogatko 1991, 181.

5. Gavrillovka/Гаврилівка/Гавриловка, Херсонська обл. (UA), grave 80

Description of post-funeral disturbance: burial pit (NS, dimensions at bottom 137×57 cm). Evidence of postfuneral interference is the scattering of child bones on the bottom.

Sex and age: ?, *infans*

Grave goods: fragment of an armbrustfibel, glass beads, fragment of an iron knife.

Chronology: C2a–C3/D1

*Pond turtle remains*

Number, sex and age: five individuals, ?, ?

State of preservation: not known exactly. Based on the illustration – complete.

Location: in a secondary trench at different levels (bottom at 195 cm depth)

References: СЫМОНОВИЧ 1960, 214 fig. 21.

6. Gurbintsy/Гурбинці/Гурбинцы, Чернігівська обл. (UA), grave no. 1 or 2

Description of post-funeral disturbance: no data

Sex and age: no data

Grave goods: it is not possible, on the basis of the description in the text, to link the grave goods with the grave number.

Chronology: C2–D

*Pond turtle remains*

Number, sex and age: one individual, ?, ?

State of preservation: no data

Location: no data

References: Макаренко 1927, 121; Махно 1960, 62–63; СЫМОНОВИЧ/Кравченко 1983, 66.

7. Gurbintsy/Гурбинці/Гурбинцы, Чернігівська обл. (UA), grave no. 1 or 2

Description of post-funeral disturbance: no data

Sex and age: no data

Grave goods: it is not possible, on the basis of the description in the text, to link the grave goods with the grave number.

Chronology: C2–D

*Pond turtle remains*

Number, sex and age: one individual, ?, ?

State of preservation: turtle carapace ‘sawn through’.

Location: no data

References: Макаренко 1927, 121; Махно 1960, 62–63; СЫМОНОВИЧ/Кравченко 1983, 66.

8. Neyzats/Нейзац/Crimea (UA), vaulted grave 281

Description of post-funeral disturbance: “plundered grave”

Sex and age: no data

Grave goods: earring fragment, ring fragment, iron knife with bone handle, three K16/2/I silver brooches, comb fragment, belt buckle, beads, five ceramic vessels.

Chronology: 350–400

*Pond turtle remains*

Number, sex and age: one individual, ?, ?

State of preservation: complete

Location: no data

References: Храпунов 2011, 21 footnote 1; 28 fig. 18.3–7; 21.19–21; 38.3; Храпунов 2013; Khrapunov/Stoyanova 2018, 461 fig. 7.14; 7.16; 7.19; Polit 2022, 255.

9. Zhovnino/Жовнино, уроч. Носенки, Пристань, Биленковы Бурты, Полтавська обл. (UA), grave 18 (feature 150)

Description of post-funeral disturbance: In the pit (on the EW axis) of the disturbed grave, only the long bones of the limbs on the bottom in anatomical arrangement. Other bones (pelvis, ribs) scattered around the skull and in the part of the pit behind the skull. On the right scapula a turtle shell. The arrangement of the bones indicates that

the opening of the grave occurred before the joint ligaments disintegrated. The limb bones remained in anatomical arrangement.

Sex and age: no data

Grave goods: several ceramic vessels, a knife, a comb, a buckle

Chronology: late 4<sup>th</sup>–1<sup>st</sup> half of 5<sup>th</sup> c.

*Pond turtle remains*

Number, sex and age: one individual, ?, ?

State of preservation: complete

Location: on the scapula of the deceased

References: Рутковская 1971; 1972a; 1972b; Петраускас/Цыдровская 2002, 23–25 fig. 3.

10. Zolotaya Balka/Золота Балка/Золотая Балка, Херсонська обл. (UA), grave 61

Description of post-funeral disturbance: grave pit disturbed, outline of secondary trench not observed. At a depth of 74 cm two children's skulls, next to a ceramic bowl. Above it, 15 cm higher, a turtle carapace.

Sex and age: ?, two children

Grave goods: ceramic vessel

Chronology: 1<sup>st</sup> c. BC–1–2<sup>nd</sup> c. AD

*Pond turtle remains*

Number, sex and age: one individual, ?, ?

State of preservation: no data

Location: at a depth of 59 cm, probably in a secondary trench

References: Вязьмитина 1972, 65.

Notes: the monograph gives information about two turtles in grave 44 (Вязьмитина 1972, 112). This information is excluded by the description of the inventory of grave 44 (Вязьмитина 1972, 40–42).

11. Madaras-Halmok, Bács-Kiskun kom. (HU), grave 1, under barrow

Description of post-funeral disturbance: grave partially disturbed

Sex and age: no data

Grave goods: knife fragment, thin bronze plate, animal bones: pig, horse, on secondary deposit: stone axe fragment.

Chronology: 2/3–4/5<sup>th</sup> c.

*Pond turtle remains*

Number, sex and age: one individual, ?, ?

State of preservation: three carapace fragments, two plastron fragments

Location: in a burial pit (?)

References: Kőhegyi/Vörös 2011, 23; 452 tab. 1.

12. Madaras-Halmok, Bács-Kiskun kom. (HU), grave 481

Description of post-funeral disturbance: Grave pit disturbed, parts of the grave goods in the secondary trench. Anatomical arrangement of the skeleton disturbed, some bones missing.

Sex and age: M (?), *adultus*

Grave goods: fragment of brooch (A.VI), knife fragment, iron construction clasp from coffin, vessel fragment

Chronology: 2/3–4/5<sup>th</sup> c.

*Pond turtle remains*

Number, sex and age: one individual, ?, ?

State of preservation: 10 plastron and carapace fragments

Location: in a secondary trench at the bottom between the limb bones

References: Kőhegyi/Vörös 2011, 141–142; 454; 207; 448 tab. 105.

13. Ménfőcsanak=Győr-Ménfőcsanak (HU), grave 282

Description of post-funeral disturbance: In the pit (SW-NE) of the disturbed grave at the bottom, human bones in a non-anatomical position. In the fill of the secondary trench human skull, clavicles and vertebrae. *In situ* several foot bones and a right shin bone in the SE part of the grave. The trench has damaged the bottom of the grave pit.

Sex and age: M, *maturus* (40–50)

Grave goods: none

Chronology: 6<sup>th</sup> c.

*Pond turtle remains*

Number, sex and age: one individual, ?, ?

State of preservation: fragments of the carapace, several smaller parts of the skeleton, including the skull (with right mandible), a pair of scapulae, pelvis and right tibia, indicating a complete animal.

Location: near the skull of the deceased, at a depth of 10 cm from the roof of the grave

References: Bartosiewicz 2015, 251–252; Vaday 2015, 191–192 fig. 12.1.

## Overview of pond turtle finds from settlements and bog sites

1. Haarhausen, Thuringia (D), No TLDA 1345/81

Settlement

Chronology: 0–400

*Pond turtle remains*

Number, sex and age: one individual, female, ca. 10 years old

State of preservation: Three plastron fragments: the right side of the xiphiplastron, as well as the right fragment of the same abdominal plate and one half of the hypoplas-

tron. The “broken” plastron fragment suggests that the reptile may have been sacrificed or its meat consumed.  
References: Barthel 1987, 63 tabl. 3; fig. 2, 9–10; Karl/Paust 2014, 148 fig. 3.

2. Westgreußen/Funkenburg (D), Feature 442/77, No TLDA 764/77

Settlement

Chronology: 0–400

*Pond turtle remains*

Number, sex and age: no data

State of preservation: Plastron and carapace fragments; Pleurale VI sin., Peripherals VIII und IX links.

Location: feature 442/77.

References: Karl 1994; Karl/Paust 2014, 148 fig. 3 tabl. 3.5–8.

3. Oberdorla, Thuringia (D), concentration H6

Sacrificial bog site. Remains of two pond turtles in two different areas of the site. One in a sacrificial concentration (H6). The other individual – natural presence (?)

Dating: late La Tène Period (according to Teichert 1974); late Hallstatt (according to Behm-Blancke 2003).

*Pond turtle remains*

Number, sex and age: two individuals, ?, age over 6 years (both)

References: Teichert 1974, 97; Behm-Blancke 2003, 89–90; 209–210.

4. Otařazka, pow. Grójec, site 1 (PL)

Sacrificial bog site

Dating: Younger Roman Period

*Pond turtle remains*

Number, sex and age: two individuals

State of preservation: two plastrons

References: Bender 2009; Kobryń, Serwatka 2009, 103–104; Makowiecki, Rybacki 2001.

Comments: Natural presence highly probable.

5. Kielczewo, pow. Kościan, site 45 (PL)

Settlement (?)

Chronology: Roman Period (?)

*Pond turtle remains*

Number, sex and age: no data

State of preservation: no data available

Location: no data

References: Makowiecki/Rybacki 2001.

6. Goślinowo, pow. Gniezno, site 3 (PL)

Settlement (?)

Chronology: Roman Period (?)

*Pond turtle remains*

Number, sex and age: no data

State of preservation: no data available

Location: no data

References: Makowiecki/Rybacki 2001.

7. Cedynia, pow. Gryfino, site 9 (PL)

Settlement

Chronology: Roman Period

*Pond turtle remains*

Number, sex and age: no data

State of preservation: two pieces of turtle shell

Location: no data

References: Kubasiewicz/Gawlikowski 1959, 155 tabl. 1; Makowiecki/Rybacki 2001.

8. Nitra-Chrenová (SK), feature 49/96

Probably a dwelling or production feature (350×250 cm)

Chronology: early Roman Period-Migration Period

*Pond turtle remains*

Number, sex and age: one individual, ?, ?

State of preservation: Plastron and carapace

Location: in a feature. In addition, the feature contains numerous vessel fragments, plant remains, animal bones: cattle, goat, goat/sheep and a fragment of deer antler and bones of unspecified species.

References: Březinová *et al.* 2003, 28–29; 33; fig. 9 tabl. 18; Fabiš 2003, 102 tab. 12a.

Notes: there is also a second individual pond turtle at this site in a Neolithic feature, no. 16/99.

9. Štúrovo, Nitriansky kraj (SK), pit T

Settlement, pit T

Chronology: 2–5<sup>th</sup> c.

*Pond turtle remains*

Number, sex and age: one individual, ?, ?

State of preservation: ?

Location: in a pit, next to a piglet skeleton

References: Kolník 1962, 362–363; Nývltová Fišáková/Šedo 2003; Bielichová 2019, tab. 7.

10. Vícemilice, Morava, Bučovice (CZ), Plot No. 1091,

square No. 11, western fireplace

Burning pit (dimensions 95×75×35 cm). In it one vessel, vessel fragments, burnt clay, burnt animal bones, turtle shell.

Chronology: 2–3<sup>th</sup> c. (?)

*Pond turtle remains*

Number, sex and age: one individual, ?, ?

State of preservation: shell (?)

Location: on a flat stone

References: Kalousek/Pernička 1956, 50; 82; Šíroky *et al.* 2004, tabl. 1; Čambal 2010, tab. 1.



Comments: Plot 1091 predominantly provided Hallstatt material. Turtle shells mentioned in the context of raw material for manufacture (Kalousek/Pernička 1956, 82). Feature included in the literature as a Roman Period find. Based on the ceramic material, dated to the Halstatt period (?)

11. Čejč, Morava (CZ)

Settlement “Germanic” (?)

Chronology: Roman Period (?)

*Pond turtle remains*

Number, sex and age: no data

State of preservation: no data available

Location: no data

References: Skutil 1935; Široký *et al.* 2004, tabl. 1; Čambal 2010, tab. 1.

12. Lednice, Morava (CZ)

“Germanic or Slavic” Settlement (?)

Chronology: Roman Period or later (?)

*Pond turtle remains*

Number, sex and age: no data

State of preservation: no data available

Location: no data

References: Skutil 1949; Široký *et al.* 2004, tabl. 1; Čambal 2010, tab. 1.

## References

- Adler 1970: H. Adler, Zur Ausplünderung langobardischer Gräberfelder in Österreich. Mitteilungen der Anthropologischen Gesellschaft in Wien 100, 1970, 138–147.
- Almgren 1923: O. Almgren, Studien über nordeuropäische Fibelformen der ersten nachchristlichen Jahrhunderte mit Berücksichtigung der provinzialrömischen und südrussischen Formen. Mannus-Bibliothek 32 (Leipzig 1923).
- Aspöck 2011: E. Aspöck, Past “disturbances” of graves as a source: taphonomy and interpretation of reopened early medieval inhumation graves at Brunn am Gebirge (Austria) and Winnall II (England). Oxford Journal of Archaeology 30(3), 2011, 299–324.
- 2018: –, Frühmittelalterliche Graböffnungen: von ungeliebter Störung zur archäologischen Quelle. In: J. Drauschke/E. Kislinger/K. Kührtreiber/T. Kührtreiber/G. Scharrer-Liška/T. Vida (eds), Lebenswelten zwischen Archäologie und Geschichte. Festschrift für Falko Daim zu seinem 65. Geburtstag. Sonderdruck Monographien des RGZM 150(1) (Mainz 2018) 3–14.
- Aspöck/Stadler 2003: E. Aspöck/P. Stadler, Die langobardenzeitlichen Gräber von Brunn am Gebirge, Flur Wolfholz, Niederösterreich. Archaeologia Austriaca 87, 2003, 169–190.
- Barthel 1987: H.-J. Barthel, Tierknochenfunde aus Siedlungen der römischen Kaiserzeit bei Dienststedt und Haarhausen, Kr. Arnstadt. Beiträge zur Archäozoologie VI (Weimar 1987) 36–90.
- Bartosiewicz 2015: L. Bartosiewicz, Animal remains from the Langobard cemetery of Ménfőcsanak (NW Hungary). Antaeus. Communicationes ex Instituto Archaeologico Academiae Scientiarum Hungaricae 33, 2015, 249–263.
- Beech 1997: M. Beech, The Economy and Environment of a Roman, Late-Roman and Early Byzantine Town in North-Central Bulgaria: The Mammalian Fauna from Nicopolis-ad-Istrum, Anthropologica 25–26, 1997, 619–630.
- Behm-Blancke 2003: G. Behm-Blancke, Heiligtümer der Germanen und ihrer Vorgänger in Thüringen. Die Kultstätte Oberdorla – Forschungen zum alteuropäischen Religions- und Kultwesen. – Teil 1: Text und Fototafeln. Weimarer Monographien zur Ur- und Frühgeschichte 38(1) (Stuttgart 2003).
- Bender 2009: W. Bender, Otałazka stanowisko kultowo-bagienne z młodszego okresu rzymskiego. Materiały Starożytne i Wczesnośredniowieczne 8 (Warszawa 2009) 96–105.
- Bielichová 2019: Z. Bielichová, Archaeozoology of the Late Roman Period Settlement at Veké Zálužie in the Context of Regional Data. Slovenská Archeológia 67(1), 2019, 61–112.
- Bökönyi 1984: S. Bökönyi, Animal Husbandry and Hunting in Tăc-Gorsium. The Vertebrate Fauna of a Roman Town in Pannonia. Studia Archaeologica 8 (Budapest 1984).
- Březinová *et al.* 2003: G. Březinová a kolektiv: Nitra-Chrenová. Archeologický výskum na plochách stavenísk Shell a Baumax. Katalóg. Archaeologica Slovaca Monographiae. Catalogi 9 (Nitra 2003).
- Čambal 2010: Š. Čambal, Paleontologický nález želvy bahenní v travertinu. Živa 2, 2010, 87–89.
- Cheyran 1998: M. Cheylan, Evolution of the distribution of the European pond turtle in the French Mediterranean area since the post-glacial. Mertensiella 10, 1998, 47–65.
- Crumlin-Pedersen 1995: O. Crumlin-Pedersen, Boat-burials at Slusegaard and the Interpretation of the Boat-grave Custom. In: O. Crumlin-Pedersen/B. Munch Thye (eds), The Ship as Symbol in Prehistoric and Medieval Scandinavia. Papers from an International Research Seminar at the Danish National Museum, Copenhagen, 5<sup>th</sup>–7<sup>th</sup> May 1994. Publications from the National Museum. Studies in Archaeology & History 1 (Copenhagen 1995) 87–99.
- Czarnecka 2001: K. Czarnecka, Grzebień z pancerza żółwia z cmentarzyska w Olbinie. O potrzebie badań archeozoologicznych zabytków “kościanych”/Kamm aus dem Panzer der Schildkröte aus dem Gräberfeld Oblin. Über den Sinn der Erforschung von archäozoologischen “Knochenfunde”. In: W. Nowakowski, A. Szela, Officina archaeologica optima. Studia ofiarowane Jerzemu Okuliczowi-Kozarynowi w siedemdziesiątą rocznicę urodzin (Warszawa 2001) 65–68.
- 2007: –, Oblin. Ein Gräberfeld der Przeworsk-Kultur in Südmasowien. Monumenta Archaeologica Barbarica 13 (Warszawa 2007).
- Dolata 2010: P. T. Dolata, Żółw błotny *Emys orbicularis* (Linnaeus, 1758) w południowej Wielkopolsce. Chrońmy Przyrodę Ojczystą 66 (3), 2010, 216–223.
- Eriksen 2006: P. Eriksen, Gravrøvere i jernalderen. FRAM. Fra Ringkøbing Amts Museer 2006, 43–50.
- /Egeberg 2021: –/T. Egeberg, Gensyn med de døde fra Hirsemærken. In: R. Birch Iversen/S. Vestergaard Laursen/N. Helt Nielsen (eds), Døden i centrum. Yngre jernalders gravfund i Region Midtjylland. Jysk Arkæologisk Selskab (Højbjerg 2021) 171–177.
- Fabiš 2003: M. Fabiš, Archeozoologická analýza. In: G. Březinová a kolektiv: Nitra-Chrenová. Archeologický výskum na plochách stavenísk Shell a Baumax. Katalóg. Archaeologica Slovaca Monographiae. Catalogi 9 (Nitra 2003) 99–131.

- Fabiš/Miklíková 2002: M. Fabiš/Z. Miklíková, Nálezy korytnačky močiarnej (*Emys orbicularis* L.) v archeofaunálnych zvyškoch z Nitry a okolia. Rosalia 16, 2002, 155–160.
- Gładysz-Juścińska/Kokowski 2021: M. Gładysz-Juścińska/A. Kokowski, Gródek nad Bugiem. Gem. Hrubieszów, Kr. Hrubieszów, Fpl. 1C. In: M. Gładysz-Juścińska/A. Kokowski/B. Niezabitowska-Wiśniewska, Corpus der römischen Funde im europäischen Barbaricum – Polen – Band 4: Lublinerland (Kraków 2021) 112–122.
- Istvánovits/Kulcsár 2015: E. Istvánovits/V. Kulcsár, Animals of the Sarmatians in the Carpathian Basin (Archaeozoology through the eyes of archaeologists). In: A. I. Aybabin/V. N. Zin'ko (eds), Materials in Archaeology. History and Ethnography of Tauria 20 (Simferopol 2015) 49–78.
- Jarzec 2018: A. Jarzec, Krosno, stan. 1. Nekropola kultury wielbarskiej z obszaru starożytnego ujścia Wisły. Materiały z badań w latach 1980–2009. Barbaricum 12 (Warszawa 2018).
- Kalousek/Perníčka 1956: F. Kalousek/M. R. Perníčka, Die römische Siedlung bei Vímecilice in Mähren. Sborník prací Filozofické fakulty brněnské univerzity: řada archeologicko-klasická (E) 5(1), 1956, 42–90.
- Karl 1994: H.-V. Karl, Zur Verbreitung tertiärer und quartärer Reptilien und Amphibien Europas. Nordost- und Mitteldeutschland (NBL). Courier Forschungsinstitut Senckenberg 173, 325–340.
- 1997: –, Nachweis der Europäischen Sumpfschildkröte (*Emys orbicularis* L.) aus einem eisenzeitlichen Grubenbefund. Archäologisches Korrespondenzblatt 27(3), 1997, 457–461.
- 2009: –, Über einen eisenzeitlichen Grubenkomplex mit auffälliger Tierartenverteilung von Erfurt-Büßleben. Neue Ausgrabungen und Funde in Thüringen 5, 2009, 61–72.
- /Paust 2014: –/E. Paust, Die Geschichte der Europäischen Sumpfschildkröte in Deutschland 2: Checkliste zur prähistorischen Verbreitung der Europäischen Sumpfschildkröte (*Emys orbicularis* L., 1758) in Thüringen. Mainzer naturwiss. Archiv 51, 145–165.
- Khrapunov/Stoyanova 2018: I.N. Khrapunov/A.A. Stoyanova, Fibulae in the Cemetery of Nejzac. In: B. Niezabitowska-Wiśniewska/P. Łuczkiwicz/S. Sadowski/M. Stasiak-Cyran/M. Erdreich (eds), Studia Barbarica, Profesorowi Andrzejowi Kokowskiemu w 65. rocznicę urodzin 1 (Lublin 2018) 456–479.
- Kitchell 2017: K. F. Kitchell Jr., Animals in the Ancient World from A to Z (London/New York 2017).
- Klevnäs 2013: A. M. Klevnäs, Whodunnit? Grave robbery in Anglo-Saxon England and the Merovingian Kingdoms. British Archaeological Reports International Series 2582 (Oxford 2013).
- Kobryń/Serwatka 2009: H. Kobryń/S. Serwatka, Szczątki kostne zwierząt ze stanowiska 1 w Otałążce, pow. grójeckie/Animal Bone Remains from Otałążka, site 1 (distr. Grójec). In: W. Bender, Otałążka stanowisko kultowo-bagienne z młodszego okresu rzymskiego. Materiały Starożytne i Wczesnośredniowieczne 8 (Warszawa 2009) 96–105.
- Kőhegyi/Vörös 2011: M. Kőhegyi/G. Vörös, Madaras – Halmok. Kr. U. 2–5. Szazadi szarmata temető (Szeged 2011).
- Kokowski 1993: A. Kokowski, Gródek nad Bugiem. Cmentarzysko grupy masłomęckiej, tomy 1–3. Lubelskie Materiały Archeologiczne 7(1–3) (Lublin 1993).
- 2007: –, Goci od Skandzy do Campi Gothorum (od Skandynawii do Półwyspu Iberyjskiego) (Warszawa 2007).
- Kolník 1962: T. Kolník, Nové sídliskové nálezy z doby rímskej na Slovensku. Archeologické rozhledy 14, 1962, 344–397.
- Kubasiewicz/Gawlikowski 1959: M. Kubasiewicz/J. Gawlikowski, Szczątki zwierzęce z osady rzymskiej w Cedyni. Materiały Zachodniopomorskie 5, 1959, 145–156.
- Kveiborg/Olsen 2023: J. Kveiborg/J. Olsen, Targeted radiocarbon dating of animal bones from ritual wetland depositions in early Iron Age (Denmark). Journal of Archaeological Science: Reports 47, 2023, 103766.
- Kyselý 2016: R. Kyselý, Rozbor zvířecích kostí z řivnáčské chaty v Praze-Zličíně. Archaeologica Pragensia 23, 2016, 56–58.
- et al. 2015: –/K. Čuláková/M. Pecinová/P. Široký, European Pond Turtles from Obříství (Bohemia, Czech Republic). International Journal of Osteoarchaeology 26, 2015, 732–739.
- Mackeprang 1943: M. B. Mackeprang, Kulturbeziehungen im nordischen Raum des 3.–5. Jahrhunderts. Keramische Studien (Leipzig 1943).
- Makowiecki 2012: D. Makowiecki, Dane archeozoologiczne z miejscowości Bocień (stanowisko 5) do poznania gospodarki ludności kultury ceramiki wstęgowej rytej na ziemi chełmińskiej. Acta Universitatis Nicolai Copernici, Archeologia 32, 2012, 161–192.
- 2015: –, Wyniki badań archeozoologicznych z Czarnówka, pow. łęborski, stan. 5 (materiały z lat 2008–2015). In: J. Andrzejowski (ed.), Czarnówka, stan. 5. Cmentarzyska z późnej starożytności na Pomorzu 1, Monumenta Archaeologica Barbarica. Series Gemina 5 (Łębork/Warszawa 2015) 139–144.
- /Rybacki 2001: –, M. Rybacki, Archeologiczne znaleziska szczątków żółwia i jego znaczenie u społeczeństw prahistorycznych oraz wczesnohistorycznych na Niżu Polskim. In: B. Najbar/S. Mikrus (eds), Żółw błotny (Świebodzin 2001) 97–102.
- Mączyńska/Jakubczyk/Urbaniak 2021: M. Mączyńska/I. Jakubczyk/A. Urbaniak, Babi Dół-Borcz. Cmentarzysko kultury wielbarskiej z kręgami kamiennymi i kurhanami na Pomorzu (Warszawa/Gdańsk 2021).
- Młynarski 1971: M. Młynarski, Żółw błotny [*Emys orbicularis* (Linnaeus)] z cmentarzyska kultury pucharów lejkowatych na stanowisku 1 w Sarnowie, pow. Włocławek – z grobowca 8. Prace i Materiały Muzeum Archeologicznego i Etnograficznego w Łodzi. Seria Archeologiczna 18, 1971, 125–129.
- Nadachowski/Wolsan 1989: A. Nadachowski/M. Wolsan, Ocena archeozoologiczna szczątków zwierzęcych ze stanowisk grupy masłomęckiej (młodszy okres wpływów rzymskich, południowo-wschodnia Polska). In: J. Gurba/A. Kokowski (eds), Kultura wielbarska w młodszym okresie rzymskim (materiały z konferencji) 2 (Lublin 1989) 63–72.
- Nýřilová Fišáková/Šedo 2003: M. Nýřilová Fišáková/O. Šedo, Kostra kočky domácí v sídlisťním objektu z doby římské v trati Žleby u Vyškova na Moravě/Das Skelett der Hauskatze im Siedlungsobjekt aus der römischen Kaiserzeit in der Flur Žleby bei Vyškov in Mähren. Archeologické rozhledy 55, 2003, 517–538.
- Perkins 1991: D. R. J. Perkins, The Jutish cemetery at Sarre revisited: A rescue evaluation. Archaeologia Cantiana 109, 1991, 139–166.
- Polit 2022: B. Polit, Jewellery of the Barbarian Societies from the Crimea in the Sarmatian Period. Earrings, Bracelets, Band rings and Finger rings (Rzeszów 2022).
- Rogatko 1991: J. Rogatko, Znaleziska szczątków zwierzęcych na cmentarzyskach grupy masłomęckiej i kultury czerniachowskiej. Archeologia Polski 36(1–2), 1991, 151–191.
- Rybacki/Maciantowicz 2006: M. Rybacki/M. Maciantowicz, Ochrona żółwia błotnego, traszki grzebieniastej i kumaka nizinnego z instrukcjami do wyszukiwania gatunków w terenie (Świebodzin 2006).
- Široký/Stuchlík/Moravec 2004: P. Široký/S. Stuchlík/J. Moravec, Current situation and Pleistocene, Holocene, and Historic Records of *Emys orbicularis* in the Czech Republic. Biologia 59, Suppl. 14, 2004, 73–78.
- Schuler 2014: A. Schuler, Römische Grabidyll mit reichen Brandbestattungen bei Borschemich. Archäologie im Rheinland 2013, 141–144.

- Schuster 2015: J. Schuster, Przybysze ze Skandynawii – małe cmentarzysko z okresu wędrówek ludów. In: J. Andrzejowski (ed.), Czarnówko, stan. 5. Cmentarzyska z późnej starożytności na Pomorzu 1. Monumenta Archaeologica Barbarica, Series Gemina V (Łębork/Warszawa 2015) 15–42.
- 2018: –, Ab Oceano. Ein Beitrag zur Besiedlungsgeschichte der Küste Vorpommerns während der römischen Kaiserzeit. Beiträge zur Ur- und Frühgeschichte Mecklenburg-Vorpommerns 53 (Schwerin 2018).
- Skorupka 2001: T. Skorupka, Kowalewko. Cmentarzysko brytualne ludności kultury wielbarskiej (od połowy I w. n.e. do początku III w. n.e.). Archeologiczne badania ratownicze wzdłuż trasy gazociągu tranzytowego 2: Wielkopolska 3 (Poznań 2001).
- Skóra 2017: K. Skóra, Opening of graves in the cemetery of the Wielbark Culture in Kowalewko. A preliminary analysis. Fasciculi Archaeologiae Historicae 30, 2017, 193–210.
- Skóra 2019: K. Skóra, Liegt da der Hund begraben? An aspect of post-funeral interferences from the Wielbark Culture cemetery in Czarnówko in Pomerania. Sprawozdania Archeologiczne 71, 2019, 125–153.
- Skóra forthcoming: K. Skóra, Between Representation and Consumption. Animal Remains in the Inhumation Graves of the Wielbark Culture. In: A. Cieśliński, Ch. Jahn, S. Wadyl (eds), From Coast to Coast – Current Archaeological Research on Cultural Exchange Along and Across the Baltic Sea, Warsaw Studies in Archaeology (Warszawa forthcoming).
- Skutil 1935: J. Skutil, Předhistorické nálezky želvích zbytků z ČSR. Věda přírodní 16, 235–237.
- 1949: –, Nove nálezky časně historického želviho zbytku z Lednice. Vlastivědný Věstník Moravsky 4, 1949, 117.
- Staňa 1956: Č. Staňa, Nové nálezy na pohřebišti z doby stěhování národů v Šaraticích na Moravě. Archeologické rozhledy 8(1), 1956, 26–32.
- Szyndlar 1989: Z. Szyndlar, Szczątki żółwi błotnych *Emys orbicularis* (L. 1758) ze stanowiska grupy masłomęckiej. In: J. Gurba/A. Kokowski (eds), Kultura wielbarska w młodszym okresie rzymskim (materiały z konferencji) 2 (Lublin 1989) 73–74.
- Teichert 1974: M. Teichert, Tierreste aus dem germanischen Opfermoor bei Oberdorla (Weimar 1974).
- Tejral 1976: J. Tejral, Grundzüge der Völkerwanderungszeit in Mähren. Studie Archeologického Ústavu Československé Akademie Věd v Brně IV (2) (Praha 1976).
- Tempelmann-Maczyńska 1985: M. Tempelmann-Maczyńska, Die Perlen der römischen Kaiserzeit und der frühen Phase der Völkerwanderungszeit im mitteleuropäischen Barbaricum. Römisch-Germanische Forschungen 43 (Mainz am Rhein 1985).
- Vaday 2015: A. Vaday, The Langobard cemetery from Ménfőcsanak. Antaeus. Communicationes ex Instituto Archaeologico Academiae Scientiarum Hungaricae 33, 163–242.
- Vörös 2005: I. Vörös, A Szegvár-Oromdűlői császárkori telep állatsont-leletei, A Móra Ferenc Múzeum Évkönyve, Studia Archaeologica 11, 115–125.
- Węgrzynowicz 1982: T. Węgrzynowicz, Szczątki zwierzęce jako wyraz wierzeń w czasach ciałopalenia zwłok (Warszawa 1982).
- van Wijngaarden-Bakker 1996: L. H. van Wijngaarden-Bakker, A New Find of a European Pond Tortoise, *Emys orbicularis* (L.) from The Netherlands: Osteology and Taphonomy. International Journal of Osteoarchaeology 6, 1996, 443–453.
- Willms 1986: Ch. Willms, Die Europäische Sumpfschildkröte im neolithischen Nahrungssystem. Germania 64(2), 1986, 561–564.
- Ельников 2011: М. В. Ельников, Полі варіантності поховального обряду населення Нижнього Подніпров'я IX ст. (за матеріалами комплексу з некрополя Мамай-Сурка). В: М. В. Ельников, Археологія і давня історія України: 36. наук. пр. 7 (Київ 2011) 166–170.
- Ерохина 2007: Л. А. Ерохина, Останки болотной черепахи в археологических комплексах на территории Запорожской области, Музейний вісник 7, 169–174.
- Гопкало/Рудич 2017: О. В. Гопкало/Т. О. Рудич, Тварини на могильниках культури Черняхів – Синтана-де-Муреш. В: А. В. Скиба/С. А. Горбаненко (ред.), Європейська Археологія I тисячоліття н. е. Збірник наукових праць на честь Ліани Василівни Вакуленко (Київ 2017) 75–86.
- Храпунов 2011: И. Н. Храпунов, Некоторые итоги исследований могильника Нейзац/Some results of the Researches of the Cemetery of Neyzats. В: И. Н. Храпунов (ред.), Исследования могильника нейзац/Exploring the Cemetery of Neyzats. Сборник научных статей (Симферополь 2011) 13–113.
- 2013: –, Особенности могильника Нейзац. In: И. Н. Храпунов (ред.), Крым в сарматскую эпоху (II в. до н.э. – IV в. н.э.) = The Crimea in the Age of the Sarmatians (200 BC – AD 400): сборник научных статей (Симферополь/Бахчисарай 2013) 188–207.
- Махно 1960: Е. В. Махно, Памятники черняховской культуры на территории УССР материалы к составлению археологической карты). МИА 82, 9–83.
- Макаренко 1927: М. Макаренко, Євминка. Карагани. Ольбія. Археологічні дослідження та розшуки на Прилуччині. Коротке звітлення за 1926 рік (Київ 1927).
- Никитина 1985: Г. Ф. Никитина, Систематика Погребального Обряда Племен Черняховской Культуры (Москва 1985).
- Пачкова/Яковенко 1983: С. П. Пачкова/Э. В. Яковенко, Черняховский могильник у с. Малиновцы на Днестре. Археологические памятники среднего Поднестровья 1983 (Киев 1983) 55–61.
- Петраускас 2014: О. В. Петраускас, Разрушенные погребения на могильниках черняховской культуры Поднепровья: анализ археологической структуры. В: Г. Ю. Івакін (ред.), Від Венедів до Русі. Збірник наукових праць на пошану доктора історичних наук, професора Дениса Никодимовича Козака з нагоди його 70-ліття (Київ 2014) 125–152.
- /Цыдровская 2002: –/Л. А. Цыдровская, Находки черняховской культуры вблизи с. Жовнино (коллекция фондов Института археологии, г. Киев) (Киев 2002).
- Рутковская 1971: Л. М. Рутковская, Раскопки в Жовнині. Археологические открытия в 1970 г., 288–289.
- 1972a: –, Раскопки черняховского могильника в с. Жовнино. В: В. Д. Баран (ред.), Тези пленарних і секційних доповідей (результати польових археологічних досліджень 1970–1971 років на території України) (Одеса 1972) 297–300.
- 1972b: –, Дослідження поблизу с. Жовнин Чекраської області. Археологічні дослідження в Україні в 1969 р. IV, 224–229.
- Сымонович 1963: Э. А. Сымонович, Магия и обряд погребения в черняховскую эпоху. СА 1963(1), 49–60.
- /Кравченко 1983: –, Н. М. Кравченко, Погребальные обряды племен черняховской культуры. Археология СССР Д 1– 22 (Москва 1983).
- Вязьмитина 1954: М. И. Вязьмитина, Сарматские погребения у с. Ново-Филипповка, Вопросы скифо-сарматской археологии (по материалам конференции ИИМК АН СССР 1952 г.) (Москва 1954) 220–244.
- 1972: –, Золотобалковский могильник (Киев 1972).