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FOSSIL BRACHIOPOD FROM A ROMAN PERIOD GRAVE AT WEKLICE, SITE 7 (WOJ. WARMIŃSKO-MAZURSKIE / PL)

ON PAST USES OF FOSSILS

Plant and animal specimens were once an important aspect of funeral rites; however, such macro-remains are rarely found and interpreted by archaeologists. This category also includes fossils, a particularly rare type of discovery. This includes finds made in the Central and Northern European Barbaricum, a region of Europe once inhabited by Germanic tribes in the Roman period, which gradually came to engage in military, cultural and economic interactions with the Roman Empire.

In one of the graves (fig. 1) from the cemetery of the Wielbark culture at Weklice, whose users are predominantly connected with the historical community of Goths and Gepids, a find was discovered which was originally misidentified as a fossilised peach stone, *Prunus persica* L. Batsch. At the time of the finding, the object was tentatively interpreted as the central part of a banded pendant (Natuniewicz-Sekuła/Okulicz-Kozaryn 2011, 58 pl. 66/Grave 161, 5). It should be noted that in this period peaches were being grown in the Roman Empire and its provinces; as a result, the fossil in question was considered an import from southern Europe. Fruit trees of this species did not become widespread in northern Europe and around the Baltic Sea until the Early Middle Ages. However, a macroscopic reassessment of the find put the original identification in doubt, and the original interpretation was unequivocally rejected. The find was not in fact a peach stone, but a brachiopod (fig. 1, 5).

THE CONTEXT OF THE DISCOVERY

Studied since 1984, the cemetery at Weklice is one of the larger sites of its type found in territories once occupied by a multi-ethnic mixture of Germanic peoples, of which Goths and Gepids are believed to have been predominant. Based on written sources and archaeological discoveries it is assumed that these peoples began to migrate from Scandinavia through the lands of what is now northern and eastern Poland towards the Black Sea in the early centuries AD (recently cf. Kokowski 2020; Skóra/Cieśliński 2020, 228-229). Their presence had left archaeological traces in the form of numerous cemeteries and settlements in areas in present-day Poland. The necropolis at Weklice stands out from other sites on account of the richness and high quality of decorative items and everyday objects that accompanied the deceased, and the variety of funeral rites that indicates transregional contacts with the Roman Empire, Scandinavia (mainly the Danish islands), and also with areas near the Black Sea (most recently cf. Natuniewicz-Sekuła 2020).

Description of the Inhumation Grave 161

An indistinct outline of a grave pit was captured at a depth of 0.75 m below ground level (fig. 1). In the north-western section the outline was disturbed by a destroyed cremation urn burial (no. 162).

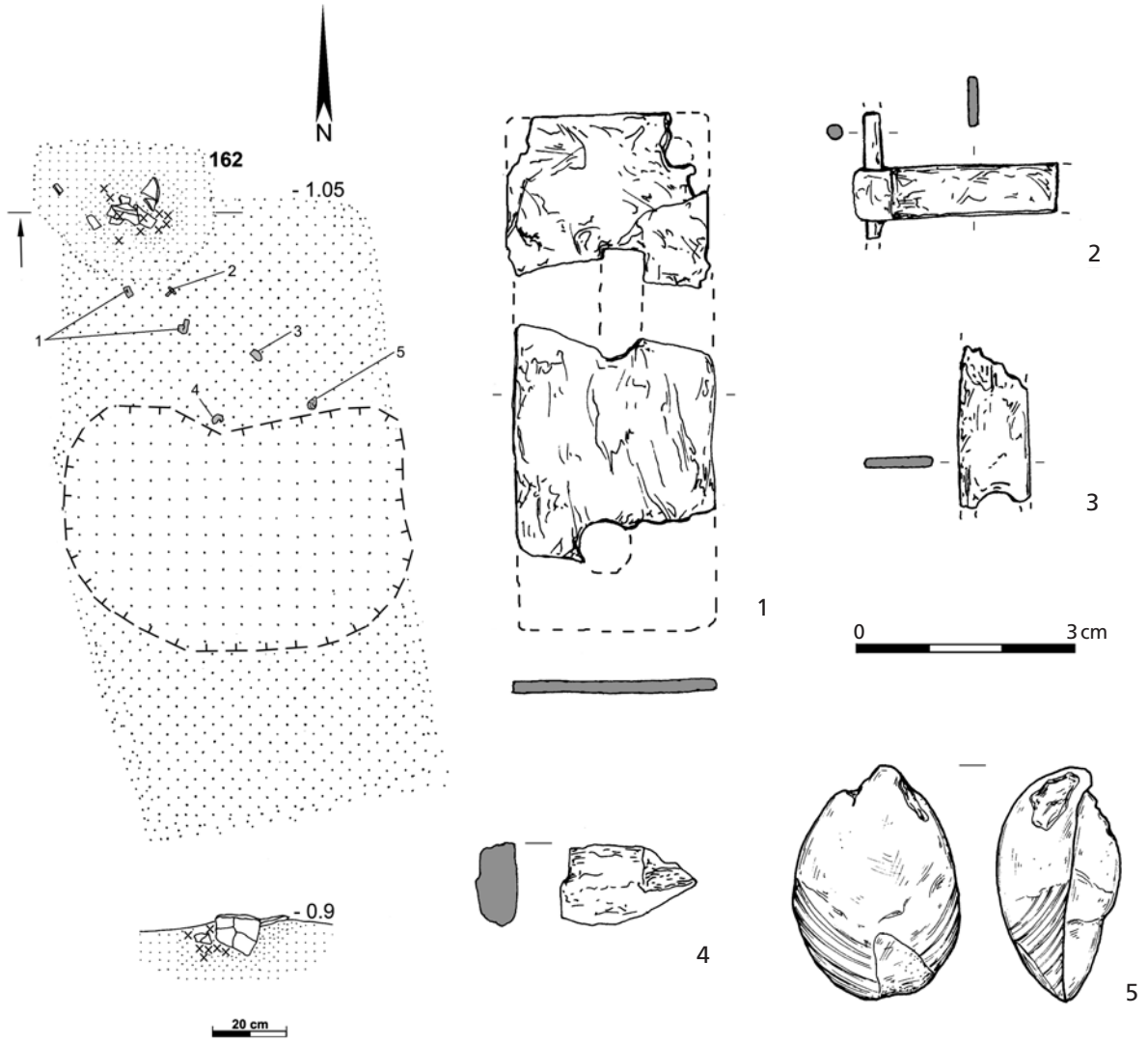

Fig. 1 Weklice (woj. warmińsko-mazurskie/PL). Grave 161 and elements of grave goods: **1** lock fitting of a wooden box. – **2** key shaft. – **3-4** fittings of the wooden box. – **5** fossil brachiopod. – (Illustration E. Pazyna). – 1-5 scale 1:1.

Approximately 30 cm further below, there was a clear rectangular pit with its longer axis aligned with the north-south line, slightly inclined to the west, sized 1.8 m × 0.9 m. In the central part of the grave, a so-called secondary dig was found. Damaged graves are quite common in cemeteries of the Wielbark culture. At this point, we offer no interpretation of this particular post-burial disturbance (it may have been ritual or economic – for more information on the subject see Skóra 2017; 2018), although there are references in the literature to burial disturbances which appear to have been the result of robbery (Natuniewicz-Sekuła/Okulicz-Kozaryn 2011, 58).

Bone remains were not preserved. The sex and age of the deceased person at the time of death are unknown. Based on the discovered finds, the buried person may have been female. Items of grave equipment were scattered in the northern part of the grave pit, beyond the reach of the so-called secondary dig. However, their arrangement suggests that they were displaced at the time of the post-burial interference.

The grave was dated to stage IIB in the internal chronological system created for the cemetery; in interregional chronology, this corresponds to phase B2b-B2c of the Roman period (Natuniewicz-Sekuła/Okulicz-Kozaryn 2011, 126-128).

Fig. 2 Brachiopod from Weklice: **1** dorsal view. – **2** lateral view. – **3** ventral view. – **4** anterior view. – **5** posterior view. – (Photos K. Skóra). – Scale 1:1.

The following items were discovered in the grave: a rectangular iron lock fitting, once part of a wooden box, now surviving as two fragments with two partially visible keyholes (one round and one rectangular) (**fig. 1, 1**); a fragment of an iron key shaft with a looped end forming an eyelet, with an iron rod embedded within (**fig. 1, 2**); two non-distinctive fragments of the iron fittings of the wooden box (**fig. 1, 3-4**); the shell of a fossil brachiopod (**fig. 1, 5**).

The Brachiopod from Weklice – Description of the Find

The brachiopod from Weklice (**fig. 2**) is of medium size (the preserved length is 33 mm). Its shell is an elongate oval in outline, with a smooth surface with weakly marked growth lines. The shell is biconvex, with the ventral valve more convex.

Based on external morphology, we can only conclude that the specimen most likely belongs to the short-looped brachiopods of the order Terebratulida (Lee et al. 2006). The representatives of this order are known since the Lower Devonian till today. In the modern seas, Terebratulida is represented by 18 families (Emig/Bitner/Álvarez 2013).

Its morphology, state of preservation, partially silicified shell as well as the sediment infilling the shell suggest that this brachiopod is most probably of Late Jurassic age. Brachiopods are numerous and diverse in the Upper Jurassic rocks in Poland, e. g. on the Mesozoic margin of the Świętokrzyskie Mountains (cf. Barczyk 1969) or in the Kraków-Częstochowa Jura.

METHODS AND ANALYSIS

Traceological Analysis

The find was examined using two types of microscopes. In the preliminary stage, a Carl Zeiss Discovery v8 stereoscopic model was used, allowing a range of magnification from 10× to 80×. Magnifications of up to 50× were used in this analysis. In the next stage, the surface of the brachiopod was examined under a Meiji Techno MC-50T metallographic microscope with a total magnification of 50×/100×/200×/500×. In this case, the observations were made using magnifications of up to 200×. The aim of these tests was to 1) assess the nature of the mechanical damage to the brachiopod surface and 2) check for traces that might indicate contact between the brachiopod and metal, i. e. the enclosing bands of the pendant.

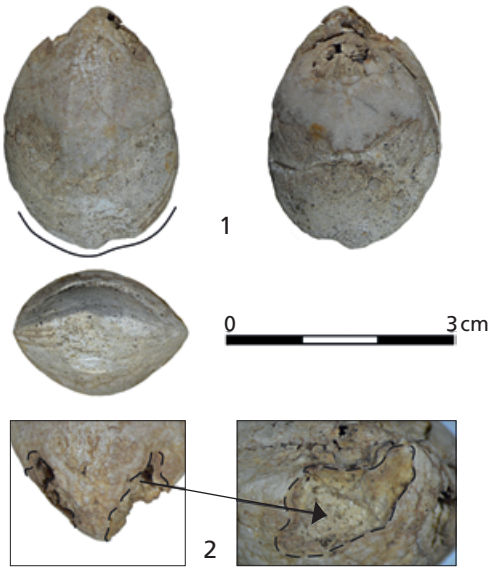

Fig. 3 Brachiopod from Weklice: **1** the continuous line marks the extent of damage to the bottom section of the shell. – **2** damage visible in the upper part of the shell. – (Photos P. Mączyński). – 1 scale 1:1.

Three cavities in the form of funnel-shaped pits (up to several millimetres in depth) with irregular edges were found in the area of the pedicle opening. The mechanical damage occurs in the shell and partially in the sediment deposited inside the brachiopod (fig. 3, 2). Neither the state of preservation nor the nature of this damage makes it possible to clearly identify the circumstances in which the damage occurred. Nonetheless, we should rule out the possibility that the damage had resulted from natural causes before the specimen came to the attention of people in the Roman period. The damage may have been caused by a failed attempt to create a hole for hanging the fossil from a string around the neck. It seems like attempts had been made to gouge or pierce the item using a sharp instrument (such as a knife tip or an awl). No traces identifiable with drilling were found. A small part of the damage may have been caused as sand was being removed from the item during archaeological work. This damage consists of small pits, lighter in colour, which are visible in the lower sections of the holes and in other places.

Another area where damage was found was the posterior part of the shell, near the beak. This damage takes the form of compacted crushing signs at the edge and a single, flat negative chipping of a fragment of the silicified ventral valve, also including the sediment adhering to it. These places are lighter in colour compared to the undamaged parts (fig. 3, 1). This damage may have been caused by post-depositional processes (fluvial and fluvioglacial transport or deposition in weathered material). However, given the nature of the damage in the pedicle area, we can assume that the damage was caused by the brachiopod's original finder (owner). This conjecture is supported by the traces of frontal crushing and compacting in the posterior part. The unidirectional arrangement of the forces that caused the crushing and the compacting fractures suggests deliberate action. This conjecture would also be corroborated by the fact that the impact damage only occurs in a relatively short and continuous section of the edge, and by the fact that the surfaces damaged in the first centuries AD are slightly lighter in colour. In technological terms, the changes described here are equivalent to the effects of the brachiopod's beak section being knocked against a hard surface or, conversely, of the fossil being hit with a hard object. If the damage had been inflicted as a result of processes taking place after the item had been deposited, a much larger area of the brachiopod would have been damaged.

SEM / EDS Analysis

No discolouration was found on the brachiopod's surface to clearly indicate that it was once placed in some kind of metal holder (made of copper alloys, less often of silver or iron) as part of a banded pendant. In the Roman period in the Central European Barbaricum, decorative items of this kind containing glass beads, cowrie shells or fruit stones were part of women's clothing. To verify this possibility, additional geochemical analyses (quantitative and qualitative) were carried out in the Laboratory for Instrumental Analysis at the Fac-

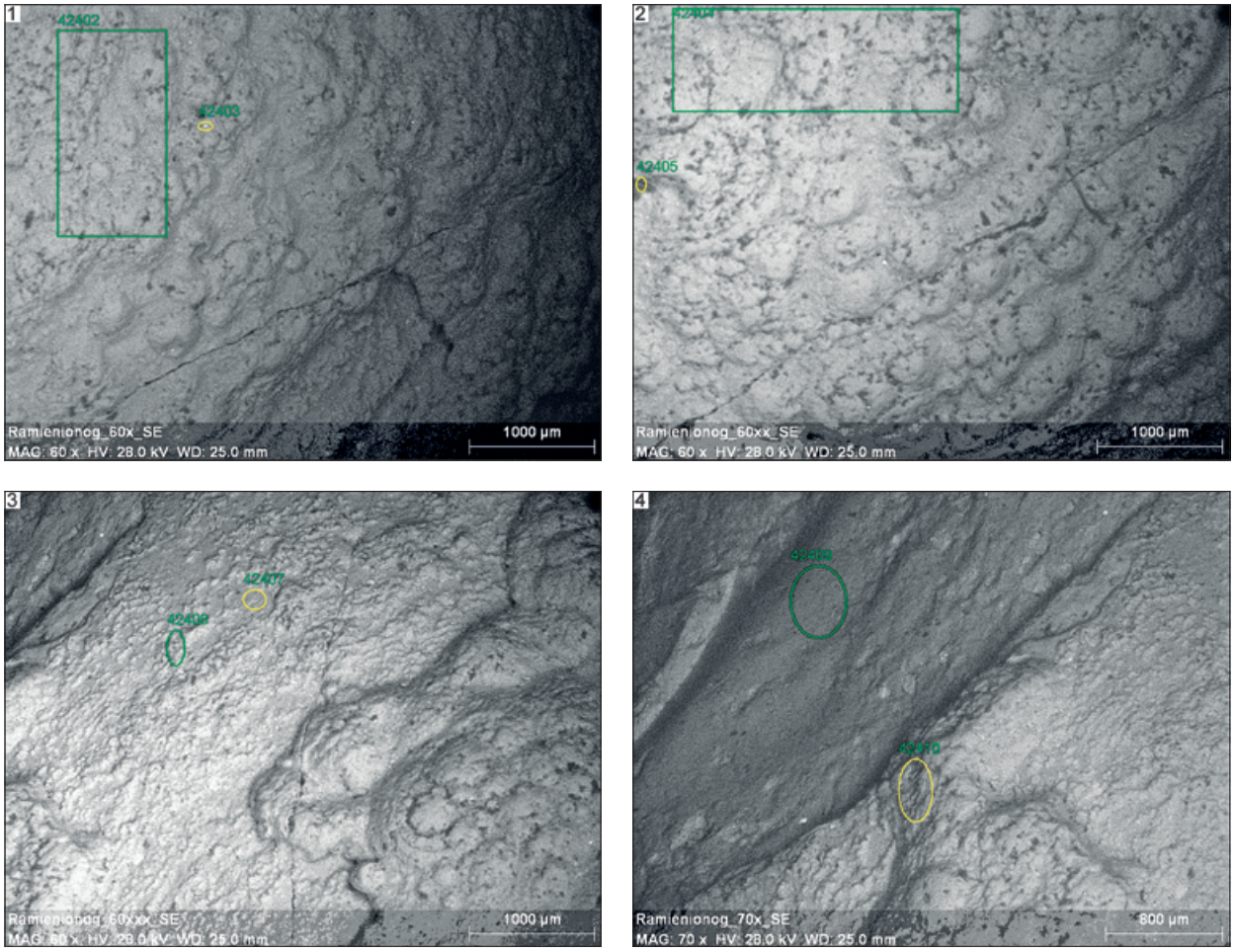

Fig. 4 Brachiopod from Weklice: locations of the SEM/EDS analyses on the ventral shell. – (Photos G. Szczepańska).

ulty of Chemistry, Nicolaus Copernicus University in Toruń (**fig. 4; tab. 1**). The analysis was performed with a scanning electron microscope manufactured by LEO Electron Microscopy Ltd, England, model 1430 VP manufactured in 2001. The device was connected to a Quantax 200 energy dispersive X-ray spectrometer (EDX) with an XFlash 4010 detector manufactured in 2008 by Bruker AXS in Germany.

The analysis failed to detect any traces of such elements as copper or silver which would have been left by metal bands. On the other hand, traces of iron were detected, which may have been caused by contact with iron objects, such as elements of the wooden box in which the specimen may have been kept (such as the lock or the iron fittings). However, iron elements are also part of the chemical composition of the original brachiopod shell, and diagenetic processes tend to enrich iron content. Finally, it is also not impossible that iron appeared on the shell as a result of contact with hardpan, the predominant geological component of the esker on which the cemetery is located.

Spectrum no.	C	N	O	Na	Mg	Al	Si	S	K	Ca	Fe
42402 (see **fig. 3, 1**)	4.80	-	47.97	0.12	0.10	1.34	43.27	0.20	0.52	0.32	1.37
42403 (see **fig. 3, 1**)	3.41	9.51	50.53	-	-	1.18	32.83	-	0.70	-	1.84

Spectrum no.	C	O	Mg	Al	Si	P	S	K	Ca	Ti	Fe
42404 (see **fig. 3, 2**)	9.18	46.74	0.19	1.82	38.88	0.15	0.11	0.62	0.27	0.18	1.86
42405 (see **fig. 3, 2**)	8.13	51.14	-	1.68	37.79	-	-	0.77	-	-	0.49

Spectrum no.	C	O	Na	Mg	Al	Si	P	S	Cl	K	Ca	Ti	Mn	Fe
42407 (see **fig. 3, 3**)	3.23	51.92	0.69	0.58	2.94	34.96	0.22	-	0.15	0.84	0.41	0.23	0.64	3.21
42408 (see **fig. 3, 3**)	4.13	46.32	1.05	1.09	4.11	38.12	0.46	0.24	0.13	1.06	0.44	0.29	-	2.56

Spectrum no.	C	O	Na	Mg	Al	Si	P	S	Cl	K	Ca	Ti	Fe
42409 (see **fig. 3, 4**)	1.88	57.79	-	0.07	0.84	37.42	-	-	-	0.42	0.38	0.26	0.94
42410 (see **fig. 3, 4**)	6.79	47.71	1.08	0.98	3.10	36.65	0.39	0.26	0.10	0.74	0.26	0.27	1.69

Tab. 1 Results of SEM/EDS analysis of the brachiopod from Weklice. Values of chemical elements are given as percentage of the total weight. – (Prepared by M. Natuniewicz-Sekuła).

DISCUSSION

An Import from Outside the Elbląg Heights?

Fossils discovered in archaeological contexts are assumed to have been mainly obtained locally, an assumption which obviously needs to be confirmed on a case-to-case basis. However, some fossils discovered in archaeological sites are of extraneous origin. This shows that they must have been transported over various distances, possibly as part of trade exchanges, as gifts or with migrants. Such non-local origins have been posited for belemnite finds from the Viking era found in Sigtuna (Stockholms län/S) (Ljunggren 2019, 67) or for an ammonite fossil from a rich early Roman period grave in Bendstrup (Midtjylland/DK) (Hedeager/Kristiansen 1981, 108-109).

In the case of the brachiopod from Weklice, there are several possible origins for a Roman period object found in the Elbląg Heights. The specimen under discussion probably dates back to the Late Jurassic, and since the Elbląg Heights did not take their final geological form until the last (Baltic) glaciation, a local origin should be ruled out. However, fossil-bearing Jurassic deposits, though rare, are also found in Scandinavia. Jurassic sediments have also been found at the bottom of the Baltic Sea (Roniewicz 1984). Therefore, it can be assumed that the find may have been present locally as part of a secondary deposit within Quaternary sediments, carried to its present location by a glacier moving from the north. Considering the known geographic ranges of Jurassic brachiopods in Poland, a more likely explanation, however, is that the specimen in question originated from the south of Poland, i. e. from the southern margin of the Świętokrzyskie Mountains or from the Kraków-Częstochowa Upland.

How Was the Brachiopod Used – as a Pendant, a Gaming Token or an Item in the Wooden Box?

As mentioned above, the shell of the brachiopod, originally misidentified as a mineralised peach stone, has been identified as the central element of a banded pendant. There are no decorative remains in the grave to confirm this interpretation of its intended purpose. Tests aimed at detecting and identifying residual substances (microscopic, SEM/EDS) failed to confirm any trace residue on the brachiopod that might have come from contact with metal bands.

The regular and symmetrical signs of chipping in the posterior part of both valves may have been caused by an unsuccessful attempt to make a hole for threading a necklace cord. Given that the specimen is partly silicified, the operation would have been highly problematic and may have been abandoned as a result. Microscopic observations confirm that the pits are not coincidental; however, it is not possible to identify clearly how they were made other than to rule out drilling as an option. We can also suggest the use of a brachiopod with a decorative braid in the form of a basket made of string for suspension[1]. The remaining damage may have been caused by contact between the brachiopod's surface and another hard surface (stone, metal or wood). One possibility is that the fossil was damaged when being used as a gaming token or in some other unspecified way. The grave at Weklice was opened in antiquity. It is not known what elements of the grave equipment were removed at that time. Therefore, the fossil is probably the only preserved piece of equipment from the wooden box.

Fossils from Cemeteries and Settlements in the Central and Northern European Barbaricum in the Roman Period

Various fossilised plant and animal specimens have come from cemeteries and settlements from the Central and Northern European Barbaricum, demonstrating that such fossils attracted interest in the past. However, this phenomenon is not widespread.

In cemeteries, fossils are found relatively more often in burials of women and children than of men. Various uses of fossils have been noted, including plant and animal fossils being used as the decorative central element of banded pendants or regular pendants, or being placed in a grave in a wooden box. Fossils found in funeral contexts other than these generally make it difficult to determine whether they were deposited intentionally or occurring naturally. In such cases, palaeobiological consultation and traceological evaluation are necessary (cf. Banasiak 2017).

The taxonomic range of fossils found at archaeological sites from the Roman period (**fig. 5, 1-9**) depends on the particular region of the Barbaricum and its geological past, and therefore on whether or not they could be sourced locally. Belemnites are often discovered, with belemnite rostra having been used as beads or pendants, e. g. at Modła (woj. mazowieckie/PL), Grave 225 (Andrzejowski 2009), or at the settlement in Herzsprung (Lkr. Uckermark/D) (**fig. 5, 2**; Schuster 2004, 136 pl. 54, 8). Ammonites and fossil shark teeth are also found, e. g. at Lubieszewo (woj. zachodniopomorskie/PL), Tunnehult 1 (**fig. 5, 1**; Schuster 2010, 191-192 pl. 23, 16), or Jaworze (woj. kujawsko-pomorskie/PL), Grave 1/1968 (Hahuła/Kurzyńska 1999, 224 fig. 3, b), as well as crinoids (Crinoidea), for instance at Ciebłowice Duże (woj. łódzkie/PL), urn burial 8 (Dzięgielewska/Kulczyńska 2008, 13 pl. II, Grab 8, 1). A mould of a Jurassic bivalve of the genus *Pholadomya* (**fig. 5, 3**) found in a grave at a cemetery in Górzyca (woj. lubuskie/PL) was part of a banded pendant (Jakubowski/Kurzawska 2012; Socha/Sójkowska-Socha 2012, 98. 109 fig. 12).

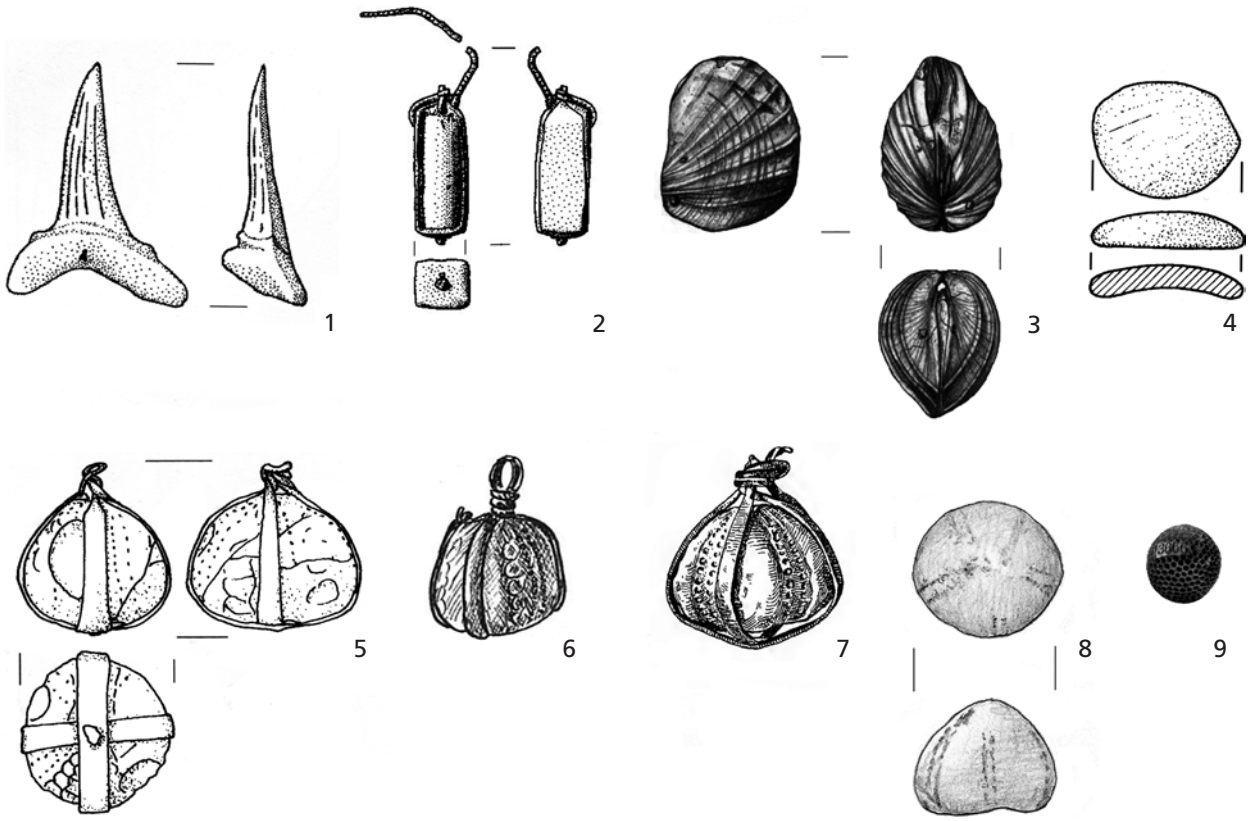

Fig. 5 Sample uses of fossils: **1** shark tooth from Lubieszewo (woj. zachodniopomorskie/PL). – **2** pendant with a belemnite rostrum from Herzsprung (Lkr. Uckermark/D). – **3** mould of a Jurassic bivalve as an element of a banded pendant from Górzyca (woj. lubuskie/PL). – **4** gaming token made of mammoth tooth from Opatów (woj. śląskie/PL). – **5** sea urchin inside a banded pendant from Podańsko (woj. zachodniopomorskie/PL). – **6** sea urchin inside a banded pendant from Zethlingen (Lkr. Salzwedel/D). – **7** sea urchin inside a banded pendant from Bregninge on Lolland (Sjælland/DK). – **8** sea urchin from an urn burial in Szelków Stary (woj. mazowieckie/PL). – **9** fossilised coral from Stręgiel 1, grave 36 (former Groß Strengeln; woj. warmińsko-mazurskie/PL). – (1 after Schuster 2010; 2 after Schuster 2004; 3 after Socha/Sójkowska-Socha 2012; 4 after Madyda-Legutko/Zagórska-Telega 2000; 5 after Stanek 1999; 6 after Kuchenbuch 1938; 7 after Blinkenberg 1911; 8 unpubl. materials by R. Prochowicz; 9 photo C. Jahn, www.smb-digital.de: Museum für Vor- und Frühgeschichte Berlin, PM Pr 12046; with changes by the authors). – Not to scale.

During the Roman period, communities inhabiting the lands around the Baltic Sea were also enthusiastic users of sea urchins as decorative items. Finds of this kind have come from Podańsko (woj. zachodniopomorskie/PL) (**fig. 5, 5**) in Pomerania (Blume 1912, 97; 1915, 173; Eggers/Stary 2001, 98 pl. 277, 11), from Szelków Stary (woj. mazowieckie/PL), Grave 226 (**fig. 5, 8**), as well as from the Danish islands of Lolland, Funen and Langeland (Stanek 1999, 342-353, see for more literature). Echinoidea specimens have been found in sites in Denmark and northern Germany, especially on the island of Rügen and in the vicinity of Lägerdorf (Kr. Steinburg/D) (Thenius/Vávra 1996, 416). Two pendants containing sea urchins have come from Zethlingen (Lkr. Salzwedel/D) (**fig. 5, 6**) and other places (Kuchenbuch 1938, 42 pl. XXXI, 10). A similar ornament was discovered in the village of Bregninge on Lolland (Sjælland/DK) (**fig. 5, 7**) (Blinkenberg 1911, 85 fig. 33; cf. also Stanek 1999, 350). It is possible that the fossil sea urchin discovered in the inhumation grave E in Stengade II (Langeland/DK), which was dated to phase B2 (Skaarup 1976, 21-22 pl. 3, 2), was similarly part of a banded pendant. Echinoidea specimens were also found as part of equipment in other elite graves, e.g. one from Karolinehøjs Mark (Midtjylland/DK) (Brøndsted 1960, 407 – cited in: Lund Hansen 1987, 406), and one from Møllegårdsmarken on Funen (Syddanmark/DK), Grave 99 (cf. Lund Hansen 1987, 404; Carlie 2004, 155).

Fig. 6 The Blidegn grave on Funen (Syddanmark/DK). Contents of a box with »divination« accessories, including fossil urchins. – (After Mikkelsen 1938; with changes by the authors).

Fossils of animals or plants have also been discovered inside wooden boxes placed in graves. In particular, this list of finds includes the imposing tomb from Blidegn on Funen (near Brande-Lydinge, Faaborg-Midtfyn Kommune [Syddanmark/DK]), dated to phase B2. Items of Roman origin were found there: two Eggers type 142 saucepans with the manufacturer's stamps and an Eggers type 162 ladle (Mikkelsen 1938; Eggers 1951; Lund Hansen 1987, 404-405), as well as metal costume elements and a small clay vessel. In a container made of linden wood containing a reed box and placed behind the buried person's head, there were three fossil sea urchins and halves of a Neolithic flint axe and a flint tool, as well as a collection of smoothed oval stones and two knives made of a copper alloy (**fig. 6**). Also found with them were seeds of the European bladdernut (*Staphylea pinnata* L.), a pine nut, three spindle whorls made of amber, glass and clay, and accessories interpreted as being related to fortune-telling (cf. Garhøj Larsen 2019, 21-22).
Fossils have also been found in archaeological excavations of households, in contexts, which confirm that they were perceived in magical terms. These include votive offerings, as well as so-called foundation offerings placed within settlements in Scandinavia, chronologically ranging from the Iron Age to the Viking period, particularly in elite houses (Söderberg 2005, 230 fig. 53; Søvsø 2017, 340 fig. 3). Fossil sea urchins have also been discovered in post-holes. Such finds have been discovered, among others, in the pre-Roman settlement at Hodde, site 11, Jutland (Syddanmark/DK) (cf. also Hvass 1985, 80; Carlie 2004, 156; Jensen 2011, 288) and in the settlement at Grøntoft (Midtjylland/DK) (Carlie 2004, 157). Also found in similar contexts are squids and sponges, e.g. at Joldelund (Kr.Nordfriesland/D) (Beilke-Voigt 2007, 105), or belemnites (Søvsø 2017, 341; Jensen 2011, 287-288). Similar practices have been attested in British sites from the Roman period (and later in the Anglo-Saxon period, McNamara 2007, 284-285). Fossils such as belemnites, bivalves and other shells, corals, shark teeth, extinct *Orthoceras* nautiloid squid, but above all sea urchins are known from many sites in Scania in Sweden dating to different periods. However, it has been noted that in the Iron Age they come to occur much more frequently in the domestic sphere, which is attributed to a belief in their protective powers (Ljunggren 2019, 13-14. 49). In spatial terms, the example of a settlement in Hodde has demonstrated that sea urchins are found in contexts closely connected to house entrances (Hvass 1985, 80 fig. 150, m; Carlie 2004, 157-158 fig. 9, 1).
As a whole, findings like these lead to the conclusion that fossils played a ritual role and were connected with the elites, at least in terms of funeral customs – mainly in Scandinavia. This conclusion will certainly be open to further verification as new research findings become available.

Fig. 7 Brachiopods (**1-2**) and »ammonite« (**3**) found among the grave goods at Bendstrup in Jutland (Midtjylland/DK). – (After Hedeager/Kristiansen 1981; with changes by the authors).

Brachiopods in Archaeological Contexts

Against the background of these finds, fossil brachiopods do not stand out in terms of numbers. In the context of graves, they are recorded only sporadically, mainly in older periods, e. g. the Neolithic tomb from Ballycarty (Kerry/IRL; cf. Wyse Jackson/Connolly 2002, 142 fig. 4, F-I; tab. 1), or in the form of a pendant (an Upper Palaeolithic specimen from the order Terebratulida from Dolní Věstonice, [okr. Břeclav/CZ] – cf. Oakley 1965, 12; Key et al. 2014, 399).

Other material from the Roman period from the Central and Northern European Barbaricum has so far yielded only a single analogue to the Weklice brachiopod, but it is quite a significant one. This is a find consisting of two brachiopods of the genus *Chatwinothyris* from an elite grave at Bendstrup in northeast Jutland (**fig. 7, 1-2**), which, like the »two halves of an ammonite« found with them (**fig. 7, 3**), were classified as gaming tokens (Hedeager/Kristiansen 1981, 31-32. 108-109 fig. 8; Lund Hansen 1987, 406). In the case of the »ammonite«, some doubt arose concerning the taxonomic identification of the fossil. According to L. Hedeager and K. Kristiansen (1981, 153), ammonites of this type are not known in Jutland, but rather are found in areas south of the Baltic Sea, in Mecklenburg and Holstein and around Teutoburg (western Germany). This was presented as one indication of a southern connection for the person buried in Bendstrup. The conclusion was based on an expert opinion by S. Floris of the Geologisk Museum at the University of Copenhagen (Hedeager/Kristiansen 1981, 108). Elsewhere in the article, the authors also indicate that taxonomic classification of the specimen cannot be determined beyond dating it to the Jurassic-Cretaceous (Hedeager/Kristiansen 1981, 153); they also identify the order Lytoceratida, suggesting a western or south-western origin (Hedeager/Kristiansen 1981, 109. 159. 161). In contrast, U. Lund Hansen (1987, 406) described this specimen in a catalogue of Roman imports in Denmark as an ammonite of the genus *Baculites*. M. Machalski, a specialist in Upper Cretaceous ammonites, is of a different opinion. He believes that the specimen shown there is not in fact an ammonite, but rather possibly a mould of two consecutive ammonite chambers (pers. comm.). These taxonomic doubts do not in any way invalidate the idea that the specimens may have been used in the past as game accessories. This is especially the case given that their shape is somewhat reminiscent of an astragal (ankle bone). Also, the surfaces of both halves bear signs of considerable abrasion, possibly indicative of active use. Different sizes of valves in brachiopods might have been useful in a game requiring the two sides of the »gaming token« to be different from each other. As in the case of astragals used for gaming, the morphological differences of the two sides of the specimens would have allowed players to score different points or other values in strategic or point-based games. The conjecture that ammonites and brachiopods may have been used as gaming stones in the Roman period is supported by discoveries from other parts of Europe, from the Roman Empire and its provinces, such as finds of belemnites, ammonites, clams, and *Gryphaea arcuata* oysters from Augusta Raurica/Augst (Kt. Basel-Landschaft/CH; cf. Schaub/Thüry 2005, 153). Similar uses have also been attested in modern times. Importantly, it is brachiopods, namely *Terebratula punctata* and *Rhynchonella tetrahedra,* that were known as »jacks« in the first half of the 20th century in Rutland, one of the counties of central England (Phillips 1912, 27-28), because they were used for playing a game of the same name (involving sets of five or ten »stones« – cf. Oakley 1965, 12).

CONCLUSIONS

The brachiopod found at Weklice undoubtedly offers testimony to the interest in fossils among Germanic peoples. Each of the potential functions discussed above is possible: it may have been a decorative object (a talisman), a gaming stone or a medicinal item.

In the past, the origin of fossils was unknown, and their finders looked for possible meanings based on their experiences and their ideas about the world. Thus, fossils were on the one hand a material embodiment of myths and legends. On the other hand, given their resemblance to forms known from everyday experience suggested that they could be treated as magical objects (amulets, talismans) or used for medicinal purposes in accordance with the universal homeopathic principle of »like curing like« (*similia similibus curantur*; cf. van der Geer/Dermitzakis 2008).

In antiquity, stones and fossils had a major significance as medicinal and protective items, but they were also used for divination and foretelling the future. The prophetic properties attributed to these items could determine specific interpretations of the social function (profession) of their owners in the community, such as the role of seeress (about the role of the seeress in Germanic communities, cf. Tac. hist. IV, 61. 65-66; V, 22. 24; Germ. 8; cf. e. g. Tausend 2004; Sundqvist 2020). It is possible that the rarity and the mysterious origins of fossils contributed to their perception as extraordinary items, a quality perfectly suited for displays of social status. This would suggest a link between fossils and elite graves around the Baltic Sea in the Roman period, which would not limit the group of users only to those engaging in prophetic activities.

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Note

1) This type of solution is proposed for fossil finds in archaeological contexts from Skåne (Ljunggren 2019, 102-103).

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Zusammenfassung / Summary / Résumé

Fossiler Brachiopode aus einem Grab der Römischen Kaiserzeit in Weklice, Fst. 7 (woj. warmińsko-mazurskie/PL). Über die antiken Verwendungen von Fossilien

Das Gräberfeld von Weklice befindet sich im Weichseldelta auf der Elbinger Höhe in Nordpolen und gehört zur Wielbark-Kultur. Es wurde während der Römischen Kaiserzeit (1.-4. Jh.) von einer multiethnischen Gemeinschaft genutzt, die anhand der schriftlichen Quellen als Goten und Gepiden identifiziert wurde. Die Analyse der archäologischen Funde deutet darauf hin, dass die lokale Gemeinschaft zahlreiche überregionale Kontakte zu verschiedenen Regionen Europas pflegte, dazu zählen das Römische Reich, das Schwarze Meer und Skandinavien. In diesem Artikel wird ein Fund vorgestellt, bei dem es sich um ein Objekt aus einem Körpergrab handelt, das ursprünglich für einen mineralisierten Pfirsichstein (*Prunus persica* L. Batsch) gehalten worden war. Bei einer erneuten Untersuchung konnte der Fund eindeutig als fossiler Brachiopode bestimmt werden. Aufgrund der äußeren Morphologie gehört das Exemplar höchstwahrscheinlich zu den kurzgliedrigen Terebratuliden. Angesichts der neuen Identifikation diskutieren wir, wie Fossilien in der Vergangenheit verwendet und wahrgenommen wurden. Der Brachiopode aus Weklice wurde als Anhänger verwendet oder in einem Holzkästchen ins Grab gelegt. Der Gegenstand könnte als Amulett, als medizinisches Objekt oder als Spielstein verwendet worden sein. Die Interpretation dieses einzigartigen Fundes aus Weklice wird im Zusammenhang mit anderen Funden fossiler Pflanzen- und Tierreste in Gräbern der Römischen Kaiserzeit aus dem Ostseeraum diskutiert. Übersetzung: C. Jahn

Fossil Brachiopod from a Roman Period Grave at Weklice, Site 7 (Woj. Warmińsko-Mazurskie/PL). On Past Uses of Fossils

The cemetery of the Wielbark Culture at Weklice is located in northern Poland in the Vistula delta on the Elbląg Heights. It was used during the Roman period (1st-4th century) by a multi-ethnic community, identified on the basis of written sources as Goths and Gepids. Analysis of archaeological finds indicates that the local community had numerous supraregional contacts with many regions of Europe, including the Roman Empire, the Black Sea and Scandinavia. This article presents a find comprising an object discovered in an inhumation grave, originally taken to be a mineralised peach stone (*Prunus persica* L. Batsch). When re-examined, the find has been unequivocally demonstrated to be a fossil brachiopod. Based on external morphology, the specimen most likely belongs to the short-looped Terebratulida. Given the new identification, we discuss how fossils were used and perceived in the past. The brachiopod from Weklice was used as a pendant or was placed in the grave pit inside a wooden box. The item may have been used as an amulet, a medicinal object or a gaming token. The interpretation of this unique find from Weklice is discussed in the context of other discoveries of fossil plant and animal remains in Roman period graves from areas around the Baltic Sea. Translation: K. Skóra

Brachiopode fossile provenant d'une sépulture de l'époque romaine à Weklice, Site 7 (woj. warmińsko-mazurskie/PL). À propos de l'utilisation des fossiles dans le passé

La nécropole de la culture Wielbark à Weklice est située dans le nord de la Pologne, dans le delta de la Vistule, sur les hauteurs d'Elbląg. Elle a été utilisée pendant la période romaine (1er-4e siècle) par une population multiethnique, identifiée sur la base de sources écrites comme Goths et Gépides. L'analyse des objets archéologiques indique de nombreux contacts interrégionaux de la communauté locale avec de nombreuses régions d'Europe, y compris l'Empire romain, la mer Noire ou la Scandinavie. L'article présente la découverte dans une tombe à inhumation d'un objet considéré d'abord comme un noyau de pêche minéralisé (*Prunus persica* L. Batsch). L'analyse nouvelle a prouvé sans équivoque qu'il s'agit d'un brachiopode fossile qui, basé sur la morphologie externe, appartient le plus probablement à l'ordre Terebratulida avec les boucles courtes. Cette nouvelle identification nous permet de discuter comment les fossiles étaient utilisés et perçus dans le passé. Le brachiopode de Weklice était utilisé comme pendentif ou plié dans une caissette en bois provenant de la tombe. Il a pu jouer le rôle d'amulette, de médicament ou de jeton de jeu. L'interprétation de cette découverte unique de Weklice est présentée dans le contexte d'autres découvertes de végétaux et animaux fossiles dans les sépultures situés autour de la mer Baltique à l'époque romaine. Traduction: K. Skóra

Schlüsselwörter / Keywords / Mots clés

Weklice / Römische Kaiserzeit / Goten und Gepiden / Gräberfeld / Grabausstattung / Fossilien / Brachiopoden
Weklice / Roman period / Goths and Gepids / cemetery / grave goods / fossils / brachiopods
Weklice / période romaine / Goths et Gépides / nécropole / mobilier funéraire / fossiles / brachiopodes

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