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Hook Pins in the Grave Inventories of the Wielbark Culture. A Case Study Based on the Finds from Cemeteries in Czarnówko, Lubowidz and Wilkowo Nowowiejskie, Lębork District (PL)

Abstract

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This paper presents a special category of textile-related artefacts, hook pins, interpreted as the remains of spindles. The study is based on tools discovered in burials of the population of the Wielbark culture in Czarnówko, Lubowidz and Wilkowo Nowowiejskie, Lębork district (PL). The collected materials were not only analysed typologically but were also examined for functionality and the presence of traces of use. They were also juxtaposed with artefacts discovered at other archaeological sites from the Roman Period, including those from the area of the Przeworsk culture.

Keywords: textile-related tools, hooks, spinning, Wielbark culture

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Introduction

The aim of this paper is to discuss in detail the so-called hook pins discovered during excavations at the cemeteries of the Wielbark culture from Czarnówko, Lubowidz and Wilkowo Nowowiejskie, Lębork district (PL). These cemeteries, explored almost in their entirety, provided a numerous set of textile-related tools. In addition to the hook pins, which are the subject of this paper, these included spindle whorls, distaffs, needles and a collection of over 700 textile fragments. Cemetery in Czarnówko is dated on B1–C1b phase of a Roman Period, Lubowidz on B1–C1a, while cemetery in Wilkowo Nowowiejskie is dated on phase B2a–C1a (Pruska and Andrzejowski (eds.) 2018, 8, 21, 47). Those three archaeological sites are located within several kilometres of each other (Fig. 1). Although they were in use almost simultaneously, they differ in the number of graves and the wealth of equipment. Czarnówko is one of the most well-equipped cemeter-

ies of the Wielbark culture discovered on Polish territory and the numerous imports in grave furnishings indicate extensive and intensive trade contacts.

Aim of the article

Despite the considerable number of textile tools and textiles related to the population of the Wielbark culture, only textiles (Maik 2012; 2013; 2015a; 2015b; 2018; Przymorska-Sztuczka 2017; Maik and Wtorkiewicz-Marosik 2020; Cybulska and Maik 2023) and distaffs (Schuster 2010) have been fully studied. This article focuses on one category of tools, hook pins, which are the remains of spindles.

Hook pins (also referred to as hooks hereafter in the text) first appeared on the Polish territory in the pre-Roman Period. The oldest specimens found in Poland are dated to the A2 phase, i.e. around the end of the 2nd century BC and the first half of the 1st century BC (Stącel 2021, 106). They are found both among the

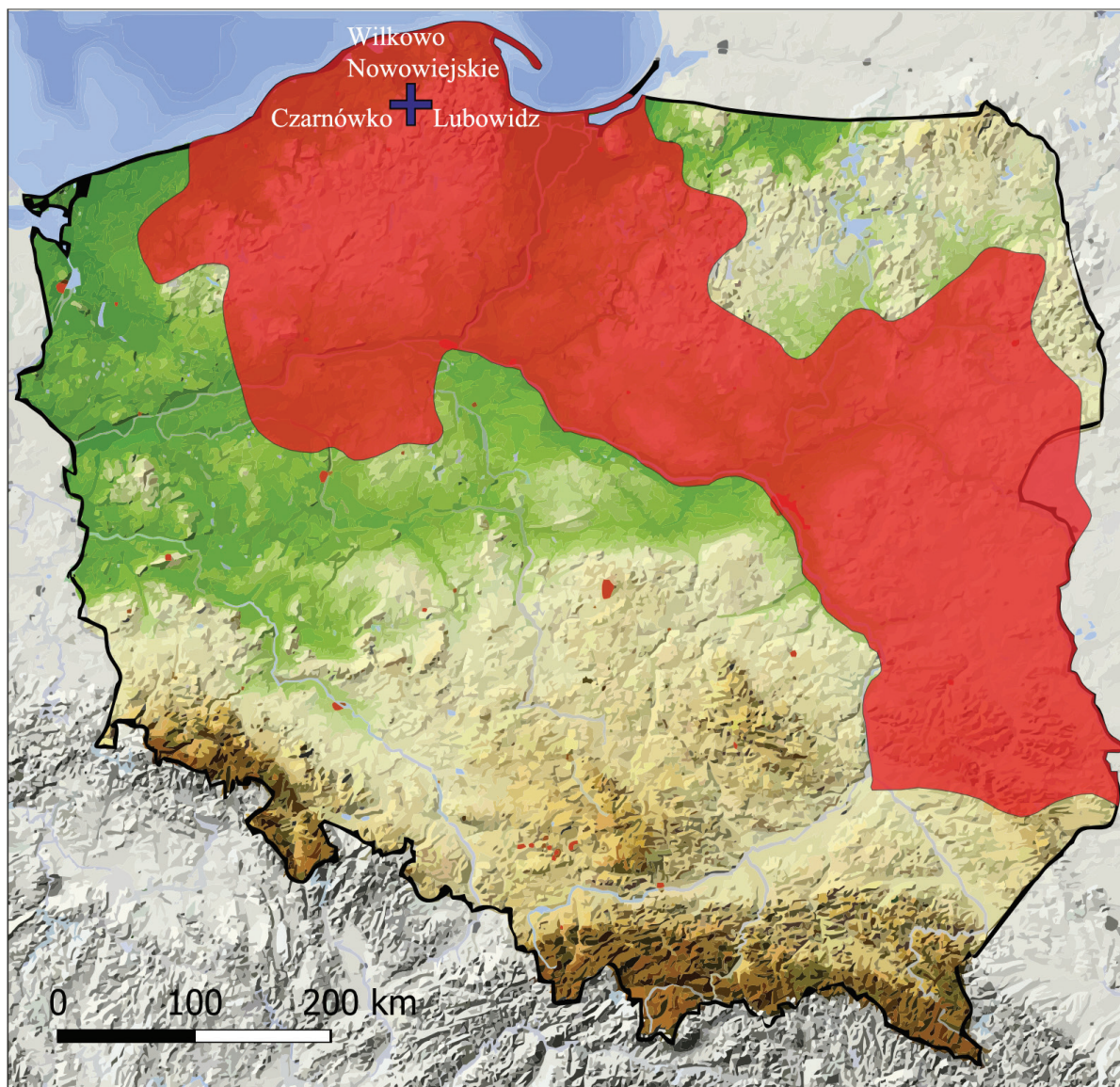


Fig. 1. Location of cemeteries in Czarnówko, Lubowidz and Wilkowo Nowowiejskie within the range of the Wielbark culture (elaborated by M. Sosnowski, based on Cieśliński 2016, fig. 8).

grave goods of the people of the Przeworsk culture, e.g. from Karczewiec, Opatów (Stącel 2021, 104) and of the Oksywie culture, e.g. from Podwiesk, Grudziądz-Rządź (Bokiniec 2008, 89; Kurzyńska 2020, 177). Their number among grave goods increases significantly in the Roman Period. Although already at the beginning of the 20th century, based on ethnographic analogies, these objects were correctly identified as parts of spindles (von Kimakowicz-Winnicki 1910; cf. Stącel 2021, 103), they were interpreted very differently in Polish literature – sometimes as crochet needles or pins used to fasten clothing, hair or shrouds (Kostrzewski 1926, 18; Kmiecinski *et al.* 1966, 78; Godłowski 1977, 41; Tempelmann-Mączyńska 1989, 71; Cieśliński 2010, 87; Stącel 2021, 103 – further literature there). Even

though most researchers recognised a clear correlation between the frequent co-occurrence of hooks and spindle whorls in graves. The view that they were used for spinning purposes is already dominant in recent literature (Gostenčnik 2001, 571–572; 2003, 10; Dąbrowska 2008, 132; Gleba 2008, 103; Maik 2012, 57; Schuster 2015, 29; Tuszyńska 2020, 80; Mączyńska *et al.* 2021, 64; Stącel 2021, 104).

Typological and functional analysis of hook pins

In this article, spindle hooks are divided according to characteristic features based on data collected from the sites of the Wielbark culture where these ar-

tefacts were found (Przymorska-Sztuczka, in print). This classification is based on the division developed by T. Skorupka for artefacts from the cemetery of the Wielbark culture in Kowalewko (Skorupka 2001, 151). The main criterion is the shape of the hook shank. Group 1 comprises specimens with a twisted shank (Fig. 2: A), while Group 2 those with a plain shank (Fig. 2: B). A further subdivision, however, takes into account the material from which they are made. Thus, it is subtype A – hooks made of copper alloys, B – made of iron, and C – made of silver.

The analysed collection contains a total of 45 spindle hooks: Czarnówko – 35; Lubowidz – 6; Wilkowo Nowowiejskie – 4. Except for one item made of iron (Czarnówko, grave no. 204, Fig. 3A: 1), the other specimens are made of copper alloy wire. Iron objects were subject to a certain taboo in Wielbark culture and were placed in graves much less often (Wołągiewicz 1981, 169; Woińska 2018, 3–4). The low frequency of tools found in graves could be connected with another custom of the people of Wielbark culture – the elimination of tools from grave inventories (Cieśliński 2016, 243). Hooks with a twisted shank (type 1A) predominate in grave equipment from Czarnówko, Lubowidz and Wilkowo Nowowiejskie. For 9 items, it was not possible to determine whether the shank was twisted or plain due to the remains of wood on the hook (7) or the preservation of only the bent part of the hook (2). All artefacts were found in inhumation graves, usually in the northern part of the burial pit. It should be mentioned that some graves were disturbed in the past. However, in most cases, the textile tools were outside the area of the secondary trenches, so they were in situ, like in graves nos. 138, 403, or 513 or in Czarnówko. The state of preservation of this category of finds varies. Due to the fact that the hooks were usually made of 1–2 mm thick wire, we often deal with broken specimens. It should be noted, however, that if the hook shank is plain and preserved without the characteristic bend, such an item can be easily classified as a fragment of another artefact, e.g. a needle. The length of fully preserved copper alloy hooks in the analysed collection varies from approximately 3 to 4.5 cm (Tab. 1). In the case of specimens with wooden remains, the total length of the whole object is given in the form of a table.

Five specimens (Czarnówko – graves no. 1153, 1882, Lubowidz – graves no. 249, 268, Wilkowo Nowowiejskie – grave no. 154) show traces of use in the form of hollows/grooves located at the bend of the hook (Fig. 2A: 5, 7). They were created as a result of the spun thread leaning and rubbing against the

surface of the bronze hook. This indicates that these items must have been used very often. Remains of a wooden spindle shaft are found on 26 specimens (Fig. 3). However, it is necessary to take the shrinkage of the dried wood into account, which can reach several percent. The thicknesses of the wooden remains of the spindles varied between 0.4 and 0.7 cm, so they must have originally been slightly larger in diameter. These measurements, therefore, correspond to the average diameters of holes in spindle whorls from these three cemeteries (usually from approx. 0.6 to 0.9 cm). Unfortunately, the species of wood from which the spindle shafts were made has not yet been determined, although such studies are planned for the future. For example, analysis of the wood on the specimen from Grzybnica showed that the spindle was made of linden (Habuła and Wołągiewicz 2001, 41).

This category of textile tools is much less common in grave furnishings than spindle whorls or needles. Out of approximately 2,239 excavated burials in Czarnówko, Lubowidz and Wilkowo Nowowiejskie, hooks were discovered in only 43 of them. Therefore less than 2% of all excavated burials had spindle hooks among grave goods. However, we must keep in mind that some artefacts, for some reason (like robbery trenches or excavation method), may not have survived to our time. In other cemeteries of the Wielbark culture, the number of hooks in grave equipment varies, e.g. in Pruszcz Gdański it is 31, in Weklice 21, while in Babi Dół-Borcz and Gostkowo it is 6 items and in Cecele only 4 (Przymorska-Sztuczka, in print). These tools are relatively often found together with spindle whorls, and less frequently needles, although this is not the rule. Hooks occur quite often among well-equipped grave that is, those containing a large number of items, such as sets of fibulas, bracelets, belt elements and necklaces, like in a grave no. R400 from Czarnówko (Schuster 2018, 18) or in a grave no. 268 from Lubowidz (Wołągiewicz 1995, 33). Would the hooks be linked to the high status of the buried women, who were representatives of the local elites? This theory, however, requires more research, analysis of the other cemeteries where hooks were discovered, and a comparison of their grave equipment.

The preservation of human remains in the three cemeteries included in this study was poor. It is difficult to estimate whether these cemeteries have been explored in their entirety and what percentage of the graves have been destroyed. In the majority of graves, skeletons were not preserved or only fragmentarily, which made it difficult to carry out anthropological analyses. Therefore, archaeological gender markers

Table 1. Compilation of metric data of spindle hooks from cemeteries of the Wielbark culture at Czarnówko, site 5, Wilkowo Nowowiejskie, site 1, and Lubowidz, site 1, Lębork district. (F) indicates fragmentary preserved – broken specimens.

No.	Site	Grave no.	Length (cm)	Wire diameter (cm)	Wooden remains diameter (cm)	Material	Shank	Hook type	Grave equipment
1	2	3	4	5	6	7	8	9	10
1.	Czarnówko, site 5	R349	3.00	0.14	-	copper alloy	plain	2A	fibula, few fragments of silver wire, copper alloy needle, pottery shreds
2.	Czarnówko, site 5	R371	2.10 (F)	0.11	-	copper alloy	twisted	1A	copper alloy key, copper alloy ring-shaped object with rivet, 2 copper alloy ring-shaped objects, rivets, fragments of a wire, copper alloy wire connectors, silver ring, copper alloy belt buckle, glass beads, amber beads, banded pendant with shell, conical beads, copper alloy banded pendant, spindle whorl
3.	Czarnówko, site 5	R400	4.80	-	0.60	copper alloy, wood	-	A	foot of a silver cup, fragment of a copper alloy vessel, 3 silver fibulas, 3 copper alloy fibulas, silver and gold-plated embossed applications, fragments of silver wires, glass and amber beads, stone disc, 2 copper alloy belt buckles and fittings, fragments of a wooden box with a lock fitting, sandstone spindle whorl, pottery shreds
4.	Czarnówko, site 5	R405	3.60 (F)	0.14	0.40	copper alloy, wood	twisted	1A	copper alloy belt buckle and belt end fittings, silver applications, fragments of silver wires, amber and glass beads, fragment of a copper alloy needle, spindle whorl, pottery shreds
5.	Czarnówko, site 5	R425	2.80 (F)	0.11	0.40	copper alloy, wood	twisted	1A	2 pairs of silver bracelets, fragments of wood with copper alloy ferrule, wooden elements joined by copper alloy caps, 2 copper alloy needles, pin, gold foil on silver plate, gold foil from fibula, necklace from glass and amber beads
6.	Czarnówko, site 5	R426	1.50 (F)	0.12	-	copper alloy	twisted	1A	3 copper alloy fibulas, copper alloy belt buckle, gold S-shaped clasp, glass bead, spindle whorl, copper alloy needle
7.	Czarnówko, site 5	138	2.50 (F)	0.20	0.30	copper alloy, wood	twisted	1A	2 spindle whorls, pottery shreds
8.	Czarnówko, site 5	164	3.60	0.20	-	copper alloy	plain	2A	copper alloy belt buckle and fittings, belt separators (linking pieces) and overlay, copper alloy S-shaped clasp, necklace of amber and glass beads, spindle whorl
9.	Czarnówko, site 5	204	4.62	0.25	0.52	iron, wood	plain	2B	clay cup, copper alloy pin and belt buckle, copper alloy bracelet, spindle whorl
10.	Czarnówko, site 5	403	3.20	0.12-0.20	0.40	copper alloy, wood	twisted	1A	silver biconical beads, silver S-shaped clasps and fragment of a silver ring, copper alloy belt buckle and fittings, spindle whorl, pottery shreds
11.	Czarnówko, site 5	458	3.10	0.30	0.50	copper alloy, wood	twisted	1A	amber bead, copper alloy needle, fragment of a pin, fragments of an iron crescent knife, fragment of a copper alloy fibula, copper alloy needle, spindle whorl
12.	Czarnówko, site 5	512	4.20	0.20	0.50	copper alloy, wood	-	A	copper alloy pin, 3 copper alloy fibulas, necklace of glass and amber beads, fragment of S-shaped clasps, copper alloy belt buckle and fittings and separators (linking pieces)

1	2	3	4	5	6	7	8	9	10
13.	Czarnówko, site 5	513	3.70	0.20	0.50	copper alloy, wood	twisted	1A	copper alloy fibula, necklace of glass and amber beads, copper alloy casket key, fragment of a copper alloy fibula, spindle whorl
14.	Czarnówko, site 5	562	4.30	0.18	0.40	copper alloy, wood	plain	2A	amber bead, copper alloy belt fittings and separators, copper alloy needle, clay cup
15.	Czarnówko, site 5	654	1.90 (F)	0.18	0.44	copper alloy, wood	-	A	copper alloy fibula and belt buckle, 2 spindle whorls
16.	Czarnówko, site 5	768	2.70 (F)	0.19	-	copper alloy	plain	2A	necklace of amber beads, copper alloy fibula with gold foil
17.	Czarnówko, site 5	821	4.30 (F)	0.20	0.50	copper alloy, wood	plain	2A	copper alloy fibula, silver S-shaped clasp, fragment of a bracelet and belt end fitting, spindle whorl
18.	Czarnówko, site 5	897	1.90 (F)	0.20	-	copper alloy	plain	2A	amber beads, fragment of a silver biconical bead, copper alloy belt end fitting, fragment of a pin, spindle whorl
19.	Czarnówko, site 5	1035	2.10 (F)	0.15	-	copper alloy,	twisted	1A	3 copper alloy fibulas with silver foil, 1 copper alloy fibula with gold foil, necklace of glass beads, copper alloy needle, spindle whorl
20.	Czarnówko, site 5	1079	4.00 (F)	0.20	0.50	copper alloy, wood	twisted	1A	copper alloy belt buckle and fittings, copper alloy bracelet with snake-head ends
21.	Czarnówko, site 5	1082	1.90 (F)	0.20	-	copper alloy	plain	2A	spindle whorl
22.	Czarnówko, site 5	1153	1.10 (F)	0.15	-	copper alloy	-	A	necklace of amber and glass beads, copper alloy fibula with gold elements, fragment of a copper alloy belt fitting, spindle whorl, pottery shreds
23.	Czarnówko, site 5	1270	4.20	-	0.50	copper alloy, wood	-	A	fragment of a copper alloy belt fitting, spindle whorl
24.	Czarnówko, site 5	1329	1.00 (F)	0.16	-	copper alloy	twisted	1A	spindle whorl
25.	Czarnówko, site 5	1343	4.00 (F)	0.20	0.50	copper alloy, wood	-	A	glass and amber beads, spindle whorl
26.	Czarnówko, site 5	1497	2.80 (F)	0.20	0.35	copper alloy, wood	plain	2A	copper alloy fibula with silver element, 2 copper alloy bracelets, 2 copper alloy fibulas, copper alloy belt buckle, fittings and belt separators (linking pieces) and overlay, S-shaped silver clasp, glass beads
27.	Czarnówko, site 5	1525	2.40 (F)	0.15	0.40	copper alloy, wood	twisted	1A	2 copper alloy bracelets with snake-head ends, S-shaped silver clasp, glass bead, fragment of a copper alloy or silver pin, 2 spindle whorls
28.	Czarnówko, site 5	1620	1.20 (F)	0.16	0.40	copper alloy	twisted	1A	necklace of amber and glass beads, clay vessel, spindle whorl
29.	Czarnówko, site 5	1753	3.50 (F)	0.18	0.45	copper alloy, wood	twisted	1A	copper alloy needle, spindle whorl
30.	Czarnówko, site 5	1764	2.70 (F)	0.18	-	copper alloy	twisted	1A	necklace of amber and glass beads, fragment of a copper alloy fibula, copper alloy ring-shaped object, copper alloy needle, spindle whorl

1	2	3	4	5	6	7	8	9	10
31.	Czarnówko, site 5	1794	2.20 (F)	0.14	0.35	copper alloy, wood	twisted	1A	necklace of amber and glass beads, silver fibula, bucket-shape silver pendant, bone comb, copper alloy belt buckle and fittings, fragments of a silver objects, glass vessel, 5 clay vessels, spindle whorl
32.	Czarnówko, site 5	1839	0.80 (F)	0.16	-	copper alloy	-	A	necklace of amber and silver biconical beads, S-shaped silver clasp, copper alloy fibula and belt buckle, copper alloy needle, 2 spindle whorls
33.	Czarnówko, site 5	1872	2.60 (F)	0.11	-	copper alloy	twisted	1A	2 copper alloy fibulas, necklace of glass beads, copper alloy belt buckle, copper alloy ferrule, spindle whorl
34.	Czarnówko, site 5	1882	3.00 (F)	0.18	0.40	copper alloy	plain	2A	copper alloy fibula, amber and glass beads
35.	Czarnówko, site 5	1962	3.50 (F)	0.13	-	copper alloy	twisted	1A	spindle whorl
36.	Lubowidz, site 1	18	2.40 (F)	0.18	0.62	copper alloy, wood	twisted	1A	copper alloy belt buckle
37.	Lubowidz, site 1	109	6.80 (F)	0.16	0.67	copper alloy, wood	twisted	1A	3 copper alloy fibulas, necklace of glass, amber and silver beads, banded copper alloy pendant, silver finger ring, 2 copper alloy bracelets, copper alloy S-shaped clasp, fragment of a copper alloy needle, iron belt buckle, copper alloy belt fittings, iron key and iron fragments of a casket
38.	Lubowidz, site 1	249	7.50	0.16	0.60-0.70	copper alloy, wood	-	A	glass and amber beads, copper alloy fibula, copper alloy belt fittings, fragment of a copper alloy needle, clay cup
39.	Lubowidz, site 1	268	2.30 (F)	0.13	-	copper alloy	twisted	1A	2 necklaces of glass and amber beads, 3 copper alloy fibulas, tweezer, copper alloy belt buckle, 2 bucket-shaped pendants, silver locking hook, finger ring, fragments of a copper alloy plates with rivets, 2 biconical silver beads, iron key and iron fragments of a casket, 3 clay vessels, copper alloy needle, 2 spindle whorls
40.	Lubowidz, site 1		3.20 (F)	0.13	0.45	copper alloy, wood	twisted	1A	
41.	Lubowidz, site 1		1.30 (F)	0.12	-	copper alloy	twisted	1A	
42.	Wilkowo Nowowiejskie, site 1	17	1.90 (F)	0.13	-	copper alloy	twisted	1A	copper alloy fibula and belt buckle, copper alloy needle, clay vessel
43.	Wilkowo Nowowiejskie, site 1	85	3.60 (F)	0.15	0.50	copper alloy, wood	twisted	1A	copper alloy fibula, S-shaped silver clasp, silver beads
44.	Wilkowo Nowowiejskie, site 1	91	3.80 (F)	0.19	0.45	copper alloy, wood	plain	2A	3 copper alloy fibulas, 2 copper alloy bracelets with snake-head ends, copper alloy pin, necklace of glass beads, copper alloy S-shaped clasp, copper alloy belt fittings and belt end fitting
45.	Wilkowo Nowowiejskie, site 1	154	3.40 (F)	0.15	0.55	copper alloy, wood	-	A	3 copper alloy fibulas, 2 copper alloy bracelets with snake-head ends, S-shaped silver clasp, amber and glass beads, spindle whorl

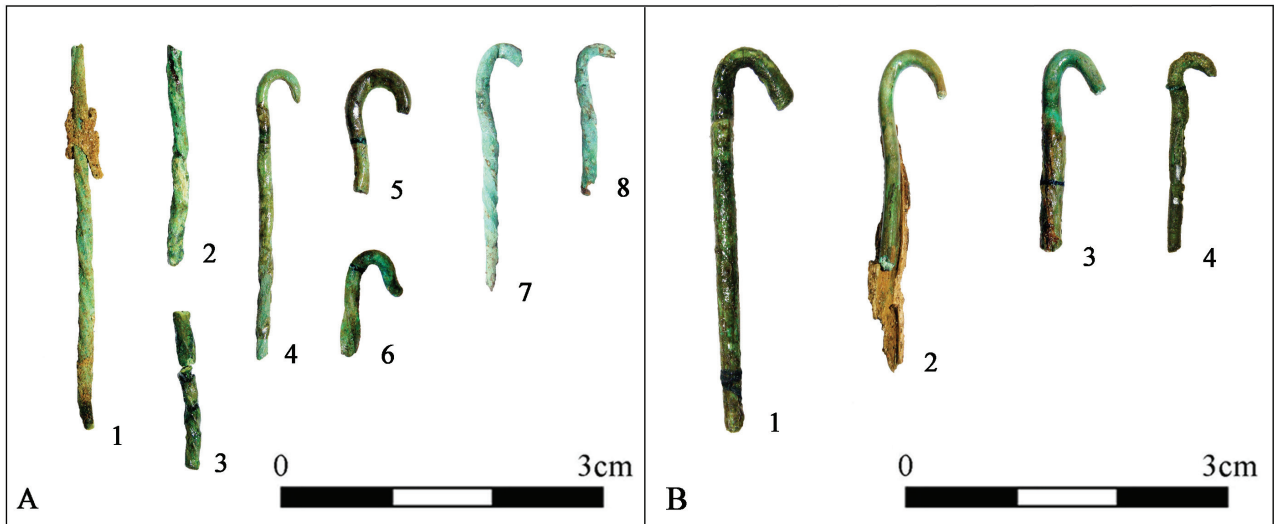


Fig. 2. Types of spindle hooks.

A – with a twisted shank: 1. Czarnówko, grave no. 1962; 2. Czarnówko, grave no. R371; 3. Czarnówko, grave no. 426; 4. Czarnówko, grave no. 1872; 5. Czarnówko, grave no. 1153; 6. Czarnówko, grave no. 1329; 7 and 8. Lubowidz, grave no. 268; B – with a plain shank: 1. Czarnówko, grave no. 164; 2. Czarnówko, grave no. 1882. 3. Czarnówko, grave no. 897; 4. Czarnówko, grave no. 1082 (photo by M. Przymorska-Sztuczka).



Fig. 3. Hooks with remnants of wooden shaft spindle from cemeteries of the Wielbark culture populations in Czarnówko (A), Wilkowo Nowowiejskie (B), and Lubowidz (C), Lębork district.

A: 1 – grave no. 204, 2 – grave no. 512, 3 – grave no. 163, 4 – grave no. 562, 5 – grave no. 403, 6 – grave no. 1753, 8 – grave no. 458, 9 – grave no. 1794, 10 – grave no. 821A, 11 – grave no. 1079, 12 – grave no. 1343, 13 – grave no. 1497; B: 1 – grave no. 85, 2 – grave no. 91, 3 – 154; C: 1 – grave no. 249, 2 – gr. 109, 3 – grave no. 18, 4 – grave no. 258 (photo by M. Przymorska-Sztuczka).

were also used to determine the presumed sex of the individuals buried in Czarnówko, Lubowidz, and Wilkowo Nowowiejskie. These determinants are primarily based on identifying objects associated with the traditional division of roles and activities (Skóra 2015, 88). It was concluded that most individuals buried in those three cemeteries with hooks had typically adult female equipment (fibulas, glass and amber beads, bracelets, needles, spindle whorls). This category of tool is less frequently found in the burials of children and men (Skóra 2015, 90). Hook pins in burials anthropologically identified as male were discovered i.a. in Kowalewko – grave 451 (Skorupka 2001, 117) and Pruszcz Gdański, site 10 – grave 151 (Pietrzak 1997, 29). The more frequent occurrence of these artefacts in female graves is also evident in inventories associated with the Przeworsk culture (Stącel 2021, 122).

Functional analysis of hook pins

The infrequent occurrence of this category of items in burials may be due to the fact that the hook is not necessary for the proper functioning of the spindle. At this point, the mechanics of spinning need to be introduced and explained to the reader. Spinning is the process of drawing fibres out of fleece, with the simultaneous splicing, twisting and stretching them to form yarn of a desired diameter (Michałowska 2006, 310). It is carried out using a spindle, which consists of a wooden shaft and a spindle whorl attached to one of the ends. Placing the spindle whorl on the spindle increases the spinning time and also keeps the tension of the thread (Chmielewski 2009, 70). This results in an evenly twisted yarn with a similar diameter along its length. The spindle whorl can be placed on the spindle shaft from the top, bottom or in the middle (Andersson Strand 2015, 45). The spindle can rotate freely, hanging in the air on the spun thread, or its end can be rested on the ground (Barber 1991, 43). In the former case, the spindle is secured by a notch or hook, or by a loop made of yarn wrapped around the upper end of the spindle (Fig. 4: B). The process is as follows: one hand holds the raw material from which the thread is twisted; the other hand sets the spindle in motion, and then both hands are used to pull the fibres into the yarn. Occasionally, if necessary, the free hand turns the spindle again to keep it moving. When the thread is long enough for the spindle to reach the ground, it is wrapped around its shaft, reattached to the spindle tip, and the process is repeated (Kania 2017, 266).

Thus, the thread can be hitched to the top of the wooden shaft with a simple loop made from the spun

thread, which also works perfectly well (Fig. 4: B). On the other hand, when spinning with a spindle fitted with a hook, there is no need for such an “eyelet” (Fig. 4: A). The author has carried out experimental work to find out whether a spindle fitted with a hook is more functional and efficient than those without one. The results of these experiments indicate that, above all, there are no differences in yarn parameters between threads twisted using a spindle fitted with a hook and those spun on tools without one (Przymorska-Sztuczka, in print). The spindle with a hook, on the other hand, is a little more convenient to use, as it is not necessary to make an additional securing loop each time after winding the thread onto its shaft. This may or may not speed up the whole spinning process a little, and thus may affect the length of the yarn. It should be noted, however, that this gains at most a few minutes or so, not hours, which translates into an extra several centimetres of yarn length. This is of no significance in the case where, for example, 2 km of thread is needed to make the fabric. The conclusion is, therefore, that the hook in the spindle does not affect either the spinning process or the parameters of the threads being produced. Consequently, since the functionality of the spindle does not change, the pres-



Fig. 4. Methods of attaching thread to the spindle with (A) and without a hook (B) (photo by M. Przymorska-Sztuczka).

ence of this “improvement” amongst the grave goods is difficult to explain. It may, for example, be related to the affiliation of the women buried with these tools to the higher social strata. Perhaps elite women, who were the first to have access to technological ‘novelties’ thanks to trade contacts, were more likely to use spindles equipped with hooks.

The presence of hooks in grave inventories of the Pre-Roman and Roman Periods in Central and Northern Europe could be related to a change in the spinning tradition from using bottom-loaded spindles to those in which the whorl is mounted at the top of a spindle. The difference is that top-loaded spindles are set in motion by twisting the shaft at the bottom or rolling it over the thigh, whereas the second type is set in motion by twisting the shaft at the top (Barber 1991, 43). It is traditionally assumed that European prehistoric communities used bottom-loaded spindles (Wild 1970, 33; Barber 1991, 53). This is supported by the few finds of spindles themselves from Late Neolithic pile dwellings settlements in Switzerland, e.g. Arbon Bleiche, Twann and Bronze and Iron Age Italy from Fivè-Carera, Ledro, Longola di Poggiomarino, Verruchio (Barber 1991, 54; Leuzinger 2002, 116; Gleba 2008, 101; Grömer 2016, 81), as well as a rich iconography from Classical Greece (Barber 1991, 70–72). However, for Egypt and the Near East, a spindle with an upper whorl is typical. At the same time, specimens with a hooked top are also from Egypt (Wild 1970, 33; Barber 1991, 53). Therefore, it seems that the Egyptian specimens have inspired many researchers to link the hooks with the tradition of spinning with an upper whorl spindle (Gostenčnik 2013, 65). The insufficient data, however, does not allow for such far-reaching analogies. Nevertheless, the presence of these objects among the grave goods indicates certain, not yet fully understood, changes taking place in textile economy in the Polish lands at the turn of the century and in the first centuries AD.

Hook pins in other archaeological contexts – a brief overview

This category of tools in the Roman Period is also found in other cemeteries of the Wielbark culture (e.g. Cecele – Jaskanis 1996, 141; Goskowo – Kurpiewski 2008, 58; Gronowo – Machajewski 2013, 47; Kowalewko – Skorupka 2001, 151; Malbork-Wielbark – Kleemann 2017, 227; Pruszcz Gdański – Pietrzak 1997, 82) and cultural group related to it, like Masłomęcz group (Kokowski 1999, 92), Dębczyno group (Schuster 2015, 29) and Černâkov culture (Ruta and Strobin 2015, 317). Hooks occur also at this time

in Przeworsk culture (e.g. Chmielów Piaskowy, Karczewiec, Opatów – Stâcel 2021, 104), with iron specimens dominating there. However, this is not the only area where they are found. The closest analogues from outside Poland are also known from Germany (e.g. Kemnitz – Geisler 1974, 93; Mühlberg – Laser 1987, 49; Ichstedt – Becker 1999, 54–55; Ammern – Bemmann 2014, 187), as well as from the Czech Republic and Slovakia (e.g. Stražnici, Kostolné pri Dunaji – Zeman 2017, 158–160; Chotin – Romsauer *et al.* 2019, 171; Cífer-Pác – Varsik and Kolnik 2021, 337) and Austria (e.g. Magdalensberg, Virunum, Frauenberg – Gostenčnik 2001, 571; 2003, 9; 2012, 70–72; Groh and Sedlmayer 2007, 186). At this point, reference should be made to the site at Magdalensberg (Old Virunum) in Austria, where up to 127 specimens of these tools were discovered, including two specimens with a socket (Gostenčnik 2013, 63). Forms with a twisted shank made of copper alloy wire predominated there. Excavations have proved that these tools were made in local workshops (Gostenčnik 2003, 9). This category of tool also occurs in grave equipment at the end of the late Roman and in the Migration Period in Scandinavia (Sejflod, Fraugde in Denmark, Ytter Restad in Sweden – Schuster 2015, 29).

These items are also known from the late La Tène Period (mid-1st century BC) from the Celtic oppida, e.g. Velemszentvid in Hungary (Gostenčnik 2003, 9). Spindle hooks have also been discovered in archaeological material from Greece and Italy from earlier Periods (5th to 3rd century BC; Barber 1991, 68–69; Gleba 2008, 103). However, they have a different form, i.e. a bronze socket ending in a hook that was mounted at the top of the spindle.

It seems, therefore, that the presence of these tools in the Wielbark culture grave inventories may be related to the genesis of this cultural unit, which developed on the grounds of the Okseywie culture. Hence, the question of the original area of occurrence of these objects should be asked. Unfortunately, we do not have much data on hooks from Celtic or other Roman sites (Gostenčnik 2003, 9). It is, therefore, difficult to state with certainty where and by whom these tools were first used (Gostenčnik 2003, 10).

Conclusions

Spindle hooks are a very valuable and potentially highly informative category of textile-related artefacts since a number of specialised studies can be carried out on them. Metallographic analyses can indicate the quality of the raw material from which these

tools were made, as well as identify the copper alloy (bronze or brass) or type of iron. Wooden remains adhering to the hooks can be a valuable source of information about the species of trees that were used to produce the spindles. These artefacts can also be examined for traces of use, which are sometimes visible on them, as demonstrated by the examples from Czarnówko, Lubowidz and Wilkowo Nowowiejskie. Also, the spread and chronology of hook pins in different areas of Europe, and in particular their distribution in and north of the former Roman provinces of Noricum and Pannonia, require detailed and extensive cross-regional studies. These are, therefore, artefacts that can be analysed in multiple ways and whose in-depth study can yield valuable results.

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