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FLINT ARROWHEAD FROM A HOARD IN PAPOWO BISKUPIE, CHEŁMNO DISTRICT: COMMENTS ON THE DISCUSSION ON THE SACRAL FUNCTION OF LITHIC ARTEFACTS FROM THE TURN OF THE IRON AGE

ABSTRACT

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The article presents a flint arrowhead from Papowo Biskupie, Chełmno district. Hoards from this place and many loose metal finds are interpreted as votive offerings deposited in the water. Numerous objects made in bronze are accompanied by abundant non-cremated human bones unearthed there. The archaeological site is dated back to a period from about 1000 to 400 BC. A traceological analysis of the flint arrowhead showed that it had never been used, and that it found its way into one of the hoards on purpose as an element of a set of many artefacts that were deposited with in a birch bark container. Therefore, it probably served a purpose similar to that attributed to flint artefacts discovered in Lusatian-culture cremation graves. The provenance of the arrowhead can be determined in the context of Scythian-style ornaments that were reaching Kuyavia and Chełmno Land, as they have been found more and more often in the Lusatian culture in the area of Tarnobrzeg.

Keywords: flint arrowheads, votive hoards, Lusatian culture, Later Bronze Age, early Iron Age
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INTRODUCTION

At the beginning of 2023, in Papowo Biskupie, in arable land that occupies the site of a now-vanished lake, numerous accumulated prehistoric objects from the Bronze Age were encountered. The artefacts were discovered by members of the Kuyavian-Pomeranian History Finders Group who were conducting a field search with metal detectors in Chełmno district with the consent of monument protection authorities. In terms of landscape, this space was (and partly still is) distinguished by bigger or smaller ribbon lakes and kettle lakes. At present, most of the latter are peat bogs used for agricultuiral purposes and it was within one of those peat bogs the spectacular discoveries were made. The findspot was within the area of a post-lake depression situated southeast of the central buildings of Papowo Biskupie. Here, several assemblages holding hundreds of bronze objects were identified, but there were also many artefacts made of bronze that were found outside the distinct assemblages of such items (Fig. 1). The latter are most likely remnants of similar hoards that comprised exclusive metal artefacts. Other finds included many non-cremated human bone remains (remains of extremities, bases of skulls, mandibles).

In one of these hoard deposits (No. 2/2023) a flint arrowhead was encountered (Fig. 2). The mentioned assemblages can be interpreted – in line with the classification of this kind of finds adopted in archaeology – as hoards deposited in the ground or water for various reasons (Blajer 2001, 16, 17; Maciejewski 2016, 16). Given the fact that many artefacts have been revealed in the vast space of the former reservoir about 20 hectares in area, allowing us to interpret it as a prehistoric location where valuable goods were deposited in the depths of the lake, frequently and cyclically rather than on a one-time basis. The uniqueness of the find soon echoed in the media, named by journalists and amateurs of relics of the past the "field of bones", "treasure field", "votive peat bog", or "holy lake" (for example, Popkiewicz 2023; Willma 2023, 1, 3; Zdziebłowski 2023). For the purpose of this paper, we further refer to this place using the last of the listed names, as termed in the title and the body of the first scientific publication on this interesting discovery (Gackowski *et al.* 2024).

One should bear in mind that Papowo Biskupie made its way into the archaeological literature as a place where a hoard of bronze products was found in the second half of the 19th century. In the year 1876 (or somewhat earlier), the peat bogs at the shore of the lake near Papowo Biskupie revealed a hoard comprising 13 items made in bronze (Undset 1882, 116). These included ornaments in the form of ring ornaments of the neck and extremities made using multiple rods: eight neck-rings preserved in entirety and one damaged, five greaves including four shaped in sheet steel. Furthermore, the hoard involved one pin with a spiral plaque and three bronze disks with a perforation (*phalerae*). In the literature so far, the above-mentioned ornaments made of sheet steel are considered to have probably come from east-Pomeranian bronzeworking smelters and should be dated to the turn of the younger phase of the early Iron Age (Lissauer 1887, 79; Semrau 1917, 5, 23; Kostrze-

wski 1958, 230, 298; Chudziakowa 1974, 81, 124, 125; Blajer 2001, 364; Gackowski and Kowalski 2019, 230). The find is stored in the collection of the District Museum in Toruń (Chudziakowa 1974, 124). At present, it is unclear whether the hoard unearthed in the second half of the 19th century was found in the post-lake area of Papowo Biskupie where so many metal artefacts have been recently encountered, or whether it had been found at some distance.

THE FLINT ARROWHEAD

The artefact bearing a bifacial retouch was made in tan-coloured Baltic flint. Its triangular shape is quite indistinctive from the base of a short solid tang (Fig. 1). In terms of morphology and size, the arrowhead from Papowo Biskupie (6.3 cm long at the maximum width of 2.3 cm) can be linked to a group of blades with triangular tips whose tang has the shape of a somewhat indistinctive short shaft. For this type of form seen in arrowheads and small bifacial points, Jerzy Libera suggested a similarly determined type, subtype, and

Fig. 1. Papowo Biskupie (Site 82, AZP 35-43: 291, Hoard no. 2/2023). Flint arrowhead (photo by W. Ochotny)

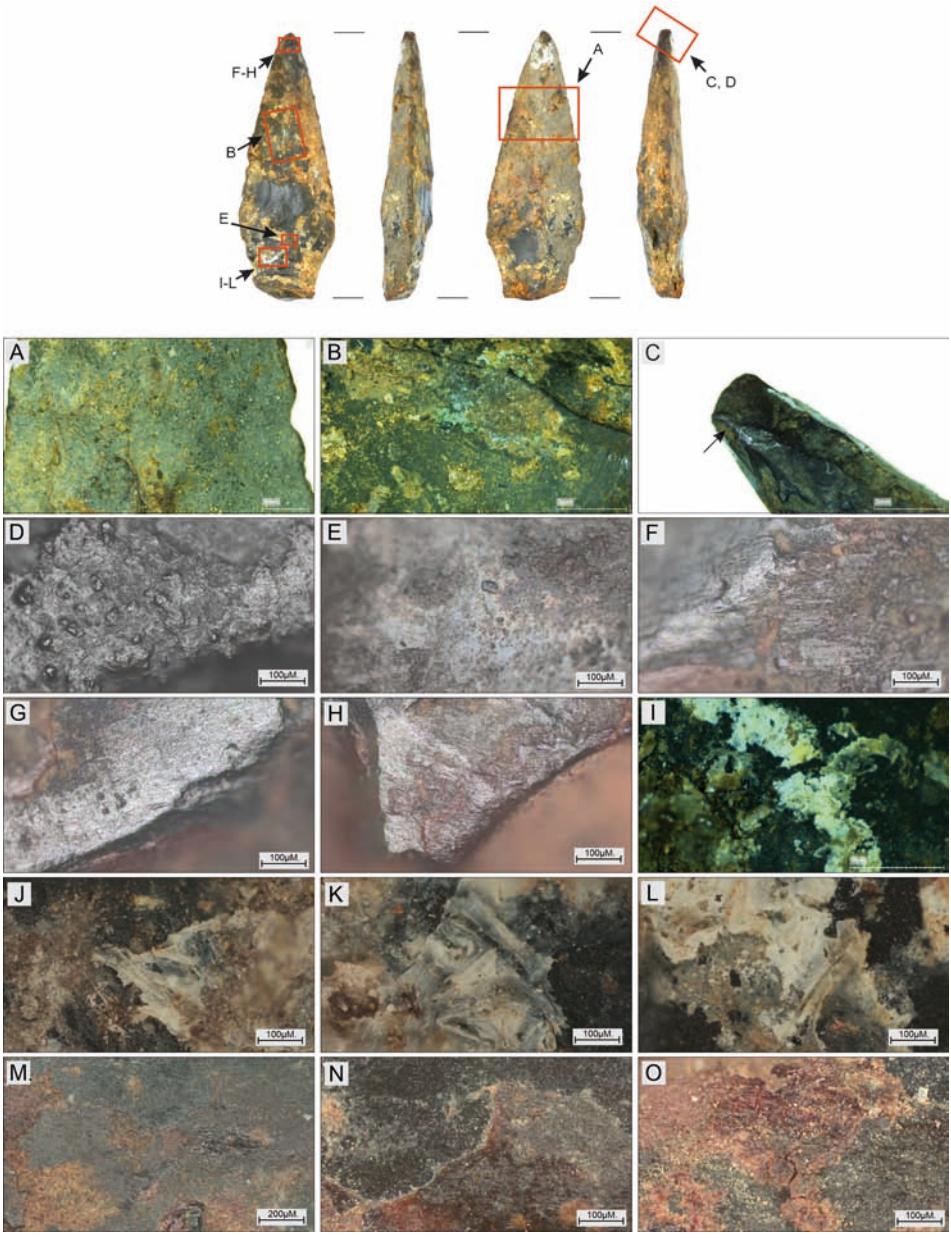

Fig. 2. Papowo Biskupie (Site 82, AZP 35-43: 291, Hoard no. 2/2023). Microscopic imaging of selected areas of the artefact (A: area contaminated with a mineral substrate /sand/); B: contamination with metal oxides; C-E: traces of technological processes in the form of abrasion and polish; F, G: traces of technological processes in the form of polish; H: traces of resin; I-L: traces of a fibrous substance (traces of an adhesive?); M-O: traces of resin (photographs in various areas of the artefact).
Edited and photographed by G. Osipowicz

variant BA I: 1 (Libera 2001, 26, 27, 32, 33). In terms of function, it is difficult to unequivocally interpret this artefact. The item bears a resemblance to small (Trzciniec-culture?) bifacial points employed as insets in polearms, such as in Guciowo, Zamość district (Libera 2001, 90-92, tables 7, 8, 17). However, it is worth stressing here that in terms of form and size (though not in terms of the choice of raw material), the specimen from Papowo Biskupie is clearly similar to the bifacial blade from the Lusatian-culture settlement in Zagroda, Chełm district (Kłosińska 2019, 216, fig. 1: 3).

The surfaces of the artefact bear numerous mineral contaminants of a post-depositional context (Fig. 2: A) and traces of oxidised metals. The formation of the latter is a result of the flint arrowhead leaning pressed against bronze artefacts (Fig. 2: B). The first specialist examination of the object showed the absence of typical "postimpact" traces that would have suggested that the arrowhead had been used as an element of a throwing weapon (Osipowicz 2023). The researcher added that on one of the lateral edges of the blade, in the tip area, on a section about 0.7 cm long, the surface is clearly and visibly rounded and dimmed (Fig. 2: C, D), which is a trace of technological treatments related to correcting the line of the lateral edge by means of grinding and not retouching. The surface of the tang bears a clear mirror polish of a flat topography called bright spots (Fig, 2: E). It was formed as a result of hafting. On the blade surface a linear polish oriented long axis-wise was identified (Fig. 2: F, G). These traces were formed as a result of the object being slid into a sheath made using an organic material (most likely wood). They are readable also on the residues (some kind of resin? – Fig. 2: H) present in that same area, which serves as evidence of their primary and not secondary (post-depositional) origin. In turn, on the base of the object there are visible remains of some white material, most likely an organic substance similar to hide/bone. At high magnification, one can see that this substance is made by fibres of unspecified type (Fig. 2: I-L). This can be a residue of an adhesive (resin?) used for fitting the specimen into the wooden haft (Fig. 2: M, O). On the surface of the artefact, traces of grinding and not retouching were observed on the lateral edge, which is recorded on many bifacial points not earlier than late Neolithic (Osipowicz 2023).

THE OBJECT IN THE CONTEXT OF THE METAL ARTEFACTS AND ORGANIC REMAINS AT THE SITE

The arrowhead was found in one of the hoards containing a numerous group of bronze objects. It was found among them and it is beyond doubt that it was made part of this deposit on purpose. All the identified artefacts were accumulated in a very small area, which suggests that they had been put into a container and then meticulously packed and hidden. Palaeobotanical studies conducted for organic macro-remains preserved in this hoard deposit (that is, present between the objects) and on its immediate edges show that this container was most likely made using the bark and wood of the birch, and lined with moss

Fig. 3. Papowo Biskupie (Site 82, AZP 35-43: 291, Hoards no. 2/2023; 3/2023). Some of the metal objects made in bronze (photo by W. Ochotny)

on the inside. Both the hoard of bronze products involving the flint arrowhead and the other deposits of metal products were deposited in the shallow lake (Gackowski *et al.* 2024, 2, 3).

The metal artefacts with whic the flint arrowhead was deposited include, primarily, ring ornaments (for the neck and upper and lower limbs), as well as elements of equine harness (*phalerae*; Fig. 3: D) from the end of the Bronze Age and the beginning of the Iron Age. These two distinctive groups of items are in many cases interregional products, but also objects of allegedly Pomeranian and, in a broader context, Norse provenance. In the latter group, attention is drawn to necklaces, multicoil bracelets (Fig. 3: A, F), elements of layered necklaces of multiple bronze and glass beads (threaded between spacer beads) with additional numerous cast pendants in the shape of a fish tail (Fig. 3: B, C), which are well reflected in the craftsmanship of the mentioned Pomeranian and Norse regions (Sprockhoff 1956, 9, 26, Taf. 26: 1; 72: 9; Bukowski 1998, 291-296; Gackowski *et al.* 2024, 2-6). They are also found at archaeological sites distant from Pomerania and Chełmno Land, for instance, in settlements, graves, and hoards in the Upper Oder basin, in the Czech Republic, and in Bavaria, dated back to the Later Bronze Age and the beginning of the Iron Age (Kossack 1954, 175, Abb. 26: E; Michalak 2011, 39; Hüttel 1981, 135, Taf. 36: 8-10).

In many areas of the "holy lake", also in the hoard that the flint arrowhead comes from, nail-shaped temple rings were unearthed (Fig. 3: E). The latter are, again, ornaments that

show the style of steppe nomads encountered in the vicinity of the Bydgoszcz-Fordon meander of the Vistula (Gawlik 2007, 231, 232; Garbacz-Klempka *et al.* 2017).

THE HOARD FIND IN THE LOCAL SETTLEMENT SPACE

The numerous metal products that have been recently unearthed in the post-lake terrain of Papowo Biskupie are a spectacular trace of settlement activity of the local Lusatian-culture community; however, it is not the only one that has been encountered in this area. The fact that bigger or smaller groups of people of this culture were inhabiting it is evidenced also by other finds, mainly ceramic vessels from the end of the Bronze Age and the early Iron Age revealed on the borders of the southern and southeastern parts of the subglacial trough that existed there, filled with the waters of the lake near Papowo Biskupie in its northwestern area.

Lusatian-culture source materials have been found on both sides of the mentioned depression of the trough, from Żygląd to the area near Skąpe and Kucbork (Fig. 4). The edges of the settlement microregion are defined by a series of archaeological sites, both

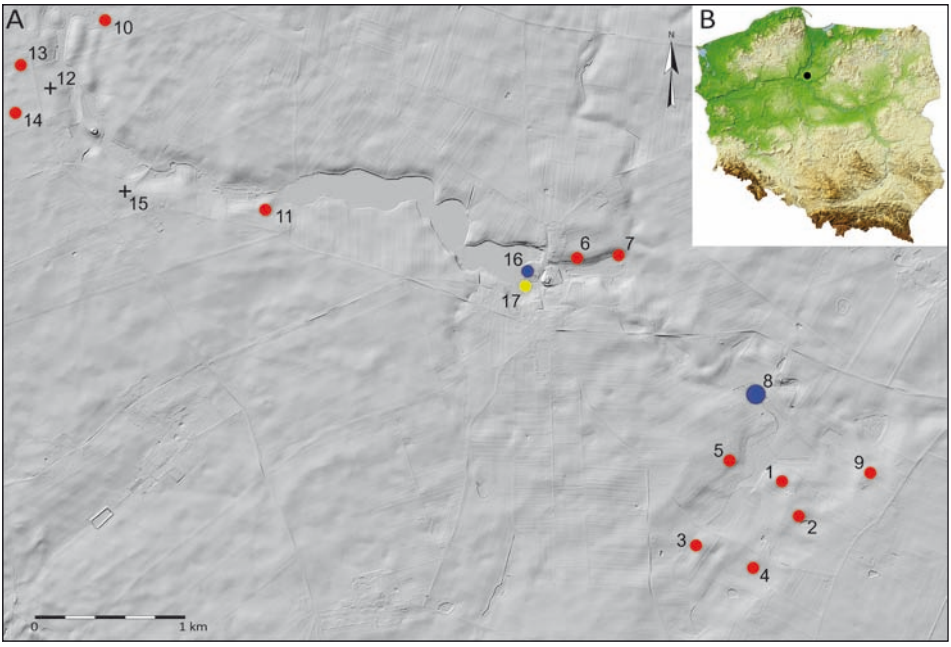

Fig. 4. Archaeological sites in the area of the trough of the lake near Papowo Biskupie (A) and the location of Papowo Biskupie Site 82 (B) (based on Gackowski J. 2012; edited by W. Ochotny).
Key: 1-11, 13, 14 – traces of settlements; 12, 15 – cremation grave fields; 8 – "holy lake" (Papowo Biskupie, Site 82); 16, 17 – find of an unspecified location (16 – hoard of bronze artefacts, 17 – copper nugget)

remains of dwelling structures, cremation cemeteries, hoards and loose finds (Gackowski 2012, 144-146). In its northwestern part, attention should be paid to settlement points at Storlus (Site 6), Żygląd (Sites 2, 12, 13), and Papowo Biskupie (Sites 14 and 15). In turn, in the southeastern part of this settlement zone, the vast majority of traces of settlement activity were preserved around a biogenic depression running across the terrain of Skąpe and Kucbork. Residential areas were founded near small water bodies, covering their shores and nearby peninsular protrusions. This is most evident in Papowo Biskupie (Site 2), Kucbork (Sites 2, 4, 14, 15), and Skąpe (Site 4). In the northern part of the microregion there are two cremation grave fields of the Lusatian-culture communities discovered in the area of Żygląd. For one of them (Site 11), the source data is quite laconic, whereas in the other (Site 26), over 120 cremation graves and even one or a few places where cremation was conducted have been identified (Rembisz 2009, 69-80; Gackowski *et al.* 2021, 235-242).

The microregion can be linked to two metal finds. One of them is the above-mentioned hoard of over ten bronze objects from Papowo Biskupie. The other one, from Żygląd, is a copper nugget linked to the settlement of Lusatian-culture people (Dąbrowski 1997, 170).

FLINT ARTEFACTS IN THE SETTLEMENT AREA OF THE LUSATIAN-CULTURE CHEŁMNO GROUP

Until the commencement of broader-scale excavation works at several Lusatian-culture sites, flint products linked to this taxonomic unit had been known solely from surface surveys. One can safely assume that the postulated association of these artefacts with the Later Bronze Age and the early Iron Age is debatable, to say the least (Dąbrowski 1997, 74-76, map 14). Likewise, compiled works summarising the issue of the presence and use of flint in the Lusatian culture failed to address the materials from Chełmno Land (Malinowski 2000; Dąbrowski 2016). Therefore, it is worth mentioning that over the last three decades, more numerous flint series were obtained from two settlements that were subjected to excavation studies, namely, an open settlement in Ruda (sites 3-6), Grudziądz district, and a defensive settlement in Mirakowo-Grodno (Site 6), Toruń district, as well as a cremation grave field in Żygląd (Site 26), Chełmno district.

The series of flint objects from Mirakowo-Grodno consisted of several hundreds of artefacts. Analyses involved as many as 264 items. The results obtained from the study of this assemblage show dominance of Baltic flint with a noticeable contribution of Pomeranian flint and a few instances of chocolate flint. In terms of morphology, flakes are dominant, but the group of blades and cores is quite noticeable. Among typological tools, attention is drawn to blade scrapers and flake scrapers, flake endscrapers, blades, and retouched flakes, burins, perforators, as well as one trapezoidal inset (Gackowski and Osipowicz 2013, 180-184). In terms of typology and morphology, the assemblage of the analysed

flints shows a series characteristic of the Stone Age. Most likely, these are materials found in the vicinity of the settlement by its contemporary inhabitants that were perhaps re-used. Only single artefacts (flake endscrapers) are reminiscent of Zele-type truncated knives (Gac-kowski and Osipowicz 2013, 186). Although the author of the traceological analysis Grzegorz Osipowicz identified the categories of functional tools and the ways in which they were practically used, such as for working wood, hide, or antler, he was sceptical when it comes to linking these artefacts to the age of metal (Osipowicz 2009, 157-200).

Another 129 artefacts made in Baltic flint and, to a small extent, also chocolate flint come from Lusatian culture settlement pits in Ruda, Chełmno district. In the assemblage, there is prevalence of splintered piece cores and scaled pieces, flakes, and production waste, as well as blade-flake cores and blades. The few implements recorded involved single burins, scrapers, perforators, as well as two bifacial point forms. The author of this publication argues that the flint products from that site should be linked to the craftsmanship of the local settlement group of the Lusatian culture or, alternatively, that it was using older products (from the Stone Age) found near the settlement (Rembisz-Lubiejewska 2017, 48, 50, 51).

Likewise, the provenance of tens of flint artefacts unearthed at the Lusatian-culture cremation grave field in Żygląd, Chełmno district, remains unclear. Counting over 120 cremation graves and a few cremation sites, this necropolis is dated back to the early Iron Age (Gackowski *et al.* 2021). Although in spaces between burials, splintered pieces, flakes, chips, and a single serrated tool were found, due to their typological and chronological evaluation, paired with the fact that cinerary urns were dug into older layers (from the Later Stone Age and the beginning of the Bronze Age), one cannot convincingly link the manufacturing of these artefacts to the settlement stage of the cremation necropolis (Rembisz 2009, 70).

THE SACRAL FUNCTION OF FLINT

Despite the above-mentioned issue of the provenance of these objects, the fact that flint artefacts were unearthed at the burial site in Żygląd is consistent with the interpretation of their intended ritual-ceremonial presence in many Lusatian-culture graves of the younger Bronze Age and the early Iron Age noted in the literature (Dąbrowski 1997, 74; 2009, 204, 216, 221; 2016, 226, 227). Though the specimen from Papowo Biskupie does not come from a necropolis, I still believe that its cultural meaning can be interpreted in a similar manner – a topic I take up again further in the text – the fact that the flint arrowhead was put in one of the hoards of metal objects drowned in the "holy lake" of Papowo Biskupie may mean there is a connection.

The view concerning the intentional employment of flint under as a material of particular sacral importance during burial ceremonies of the people of the Lusatian culture was most fully addressed at the 1994 Warsaw conference titled "Z badań nad krzemieniarstwem epoki

brązu i wczesnej epoki żelaza/Studies of Flint-Mining and Flint-Working in the Bronze and early Iron ages" (Lech and Piotrowska 1997). Back then, the problem of the "symbolic presence" of flint at burial sites was touched on by several speakers (Balcer 1997, 310-314; Gedl 1997, 215-224; Krzyszowski 1997, 249-256; Kurgan-Przybylska 1997, 239-245; Lech H. & J. 1997, 111, 112; Mogielnicka-Urban 1997, 277-287; Piotrowska 1997, 259-273). Although the tendency to interpret flint in graves as archaeologically detectable elements of the "religious doctrine" of that time was reflected in subsequent publications (Mogielnicka-Urban 2000; Piotrowska 2000; Kłosińska 2012, 150, 151; Wilczyński 2014, 232; Lech, Piotrowska and Werra 2015, 226; Dąbrowski 2016, 226), there were also voices that expressed some scepticism as regards such assessments, which according to some prehistorians were premature or even impossible to be scientifically substantiated (Malinowski 2000, 129-131; Libera 2006, 202, 203; 2018, 109-112; Libera and Zakościelna 2020, 554-555). Similar critical views were appearing in the literature before the Warsaw conference (Kobusiewicz 1988, 81).

Regardless of whether they were older than the Lusatian-culture settlements or they had been made by the people of this taxonomic unit, the ritual-ceremonial purpose of flint products found in graves is often based on premises from the field of religious studies, linguistics, or ethnology, and even ethnography, emphasising the ceremonial and thus also metaphysical relationship of siliceous rock with the essential attribute of cremation, that is, fire (Mierzwiński 2012, 59; Woźny 2013, 121; 2014, 227-231; also, *cf*. Kowalski 2017, 225). Other authors add that in the past, the placing of flint in cremation graves could have been an element of resurrective and apotropaic magic (Kłosińska 2012, 151).

DISCUSSION AND CONCLUSIONS

Though the specimen from Papowo Biskupie does not come from a necropolis, I still believe that its cultural meaning can be interpreted in a similar manner. It made its way into one of the hoards of bronze objects and together with them, it was drowned in the shallow "holy lake"; most likely, it was shallow enough for the valuable objects deposited in it to remain visible to the locals. Therefore, it seems that there must have been a social norm in place prohibiting the retrieval of votive objects from the lake. According to the radiocarbon dating performed for the human bone remains that lie in the present-day peat bog of the former "holy lake", the period in which they were deposited is estimated at from c. 1000 to 400 BC (Gackowski *et al.* 2024, 2, Fig. 1B). In turn, the metal artefacts unearthed in that place so far belong to a somewhat shorter chronological horizon (particularly its lower limit), which for now can suggest that the deposition of humans as part of an offering (as evidenced by the mentioned bones) could have been taking place in a time preceding the votive drowning/deposition of precious metal objects. This kind of behaviour involving "human sacrifice" is consistent with the tradition of the Norse cultures, and, in

somewhat younger times, also those of German and Celtic communities (Rembisz 2011; Kowalski 2017, 209; Beek *et al.* 2023). The presented interpretation of the human remains from Papowo Biskupie requires further investigation; however, should it be confirmed in the course of further research at that site, it would be the first such case to be recorded in Poland – obviously, aside from the find of the so-called Girl of Drwęcko, Olsztyn district (La Baume 1940, 17-22). One should bear in mind, though, that the Chełmno group of the Lusatian culture is known in Europe for unearthed finds of non-cremated human remains, albeit offered in inhabited places and not earlier than the turn of the Iron Age (Bukowski 1995; 1996; Gackowski 2011; Beilke-Voight 2015). Attention should be paid to one more fact. The coinciding presence of female ornaments and horse harness elements (primarily *phalerae*-type disks) is typical of hoards of similar items very often deposited in lakes (Blajer 2001, 288; Jeremicz 2007; Szczurek and Kaczmarek 2022, 153-159). The tendency to make frequent depositions of hoards of this type of composition in standing water reservoirs has been repeatedly confirmed for the Late Bronze Age and the early Iron Age (*cf.,* Blajer 2001, 254). In this sense, the object from Papowo Biskupie is somewhat consistent with the common norm of ritual behaviours manifested in such a way. However, its uniqueness lies in that in Poland, no location of ritual deposition of valuable tangible goods that would be this large has been discovered. Importantly, , similar archaeological features of 'cult' nature are not numerous elsewhere in Europe either (Kossack 1999, 183, Abb. 113; Jeremicz 2007, 220; Heske *et al.* 2013, 308–337). The flint arrowhead found its way into the hoard dated back to the early Iron Age in the period when "Pontic cultural models" were reaching the Lower Vistula region (that is, the Kuyavia-Chełmno area) recorded, among other things, based on the presence of nail-shaped temple rings, (Trybała-Zawiślak 2019, 209-210). As mentioned above, use-wear traces have been recorded on neither the surfaces of the triangular blade nor its edges, which could indicate that having been made and equipped with a shaft of some sort, the artefact might have been stored in a sheath (perhaps something similar to a quiver) and in this 'non-used' state, it was placed in an organic container together with metal artefacts. Cases of valuable items made in organic materials (wood, including bark, fabrics, or hide), serving ritual purposes, are known in the literature (Jeremicz 2007, 214, 215; Maik and Rybarczyk 2016, 29, 30; Kowalski 2017, 183-188).

In the source materials of the Lusatian culture, it is exceptionally rare to find flint bifacial pints manufactured by the communities of that taxonomical unit deposited in graves. Despite being unearthed in cremation grave fields (*e.g.*, in Laski, Kępno district, or Śmiardowo Krajeńskie, Złotów district), single specimens, albeit of a much earlier provenance, tend to be interpreted as products found and re-used (Kobusiewicz 1988, 80). The planigraphy of this type of artefacts rather dates the centres in which they were made to much earlier periods than the younger Bronze Age and the early Iron Age in southeastern regions (Libera 2001, 77-89). However, it is worth mentioning and also stressing that in that area, there are records of bifacial blades very similar to the specimen from Papowo

Biskupie allegedly produced and utilised by the Lusatian-culture people (Kłosińska 2019, 216, fig. 1: 3). In turn, the state of research conducted so far on arrowheads bearing tangs allows one to assume that both the Lusatian-culture people (especially those of the 'Tarnobrzeg' variant), and the Wysocko culture neighbouring to the east most likely manufactured them and used them (alongside metal and antler arrowheads) until the end of the early Iron Age (Libera 2001, 91, 92, 131; Gedl 2014, 133-136, Taf. 34; Krzemiński 2017, 16, 17). As mentioned above, there is little doubt as to whether the flint arrowhead in question was placed in one of the hoards and deposited in the shallow waters of the "holy lake" just like other sets of bronze products. The fact that many ornaments, including those of south-eastern provenance in the form of nail-shaped temple rings have been unearthed can suggest that this flint artefact made its way from there to the region of Papowo Biskupie together with them. Nonetheless, one cannot rule out the possibility that it was made locally (perhaps based on foreign models); after all, the above-discussed presence of flint at archaeological sites of the Chełmno group of the Lusatian culture is a fact indicated in the excavated sources.

As yet, co-occurrence of flint and metal artefacts has not been recorded in Lusatian-culture hoards with the exception of the small heart-shaped arrowhead linked somewhat uncertainly to the deposit in Niewierz, Szamotuły district (Fogel 1979, 124; Blajer 2001, 326). This makes the Papowo specimen and the context of its deposition an exceptional find. I believe that the blade discussed here was rather unlikely to have been used as an element of a projectile weapon, although it might have been intended to serve this function formally and originally. Most likely, this object (aside from a number of other ones found submerged in the lake) could have served a unique role for the local community that can be placed in the category of ritual-votive behaviours. In this sense, its value, not utility value but the ritual one, could have been similar to the magical functions of the flint placed in cremation graves.

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