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Wojciech Rajpold

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The Castle Museum in Sandomierz, Zamkowa 12, 27-600 Sandomierz, Poland;
e-mail: w.rajpold@zamek-sandomierz.pl; ORCID: 0000-0001-9404-6701

On Two Newly Discovered "Scythian" Arrowheads from the Sandomierz Upland

Abstract

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During the Late Bronze Age and Early Iron Age, the Sandomierz Upland was inhabited by communities of the so-called Tarnobrzeg Lusatian culture, which incorporated a range of cultural traits inspired by the Scythians which can be discerned in their ornaments, ceramics, and weaponry. Until recently, evidence of these eastern influences had been scarce and largely incidental. The recent discovery of two arrowheads – from Zawichost and Wyszmontów – clearly associated with the Scythian cultural sphere, significantly expands the available evidence for such contacts in the region. This paper offers a formal and typological analysis of these artefacts and considers the possible routes by which they may have reached the Sandomierz Upland.

Keywords: Bronze Age, Early Iron Age, Scythians, weaponry, arrowheads, Sandomierz Upland, eastern influences, Tarnobrzeg Lusatian culture

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Introduction

Artefacts of eastern cultural provenance associated with the Scythian world and dating from the Late Bronze Age and Early Iron Age are well documented in the Lublin region (Kłosińska 2005a; 2007; 2013) and in Subcarpathia (Czopek 2007). The most characteristic finds are weapons: arrowheads (Fig. 1; Czopek *et al*. 2015), an akinakes from Rozbórz, Przeworsk county (Czopek 1995), and iron battle-axes from Żuklin, Przeworsk county (Chochorowski and Gawlik 1997), Werchrata, Lubaczów county (Kłosińska 2001), and an unidentified site in the Lublin region (Sadowski 2012). Military artefacts linked to traces of Scythian incursions via the Moravian Gate have also been recorded in western Poland (Dąbrowski 2009, 126–130; Chochorowski 2014, 32–43).

It appears, however, that in the case of eastern and south-eastern Poland, this military context has a different character than in the west. One argument for this is the discovery in these areas of numerous vessels with "eastern" stylistic features. Examples include bowls with *žemčuzinas*, vases decorated with incised triangles and herringbone motifs, vessels with impressions of spiral disks, and cups with hollow stems (Kłosińska 2005a, 183; cf. Trybała-Zawiślak 2019, 211–212, table 9, further references therein). Also noteworthy are pot-shaped vessels with slanting plastic ribs, and vases with gently biconical belly profiles and outwardly flared rims, reminiscent of materials classified as Scytho-Thracian (cf. Trybała-Zawiślak 2019, 224, 238, further references therein).

These forms appear in both funerary and settlement contexts. In addition to ceramics, ornaments are also represented, including glass beads (Czopek 2011), nail-headed earrings (Gawlik 2007), Kłyżów-type earrings (Kowalski-Bilokrylyy 2014), and pins with spiral or nail-shaped heads (Adamik-Proksa and Ocadryga-Tokarczyk 2021; Czopek *et al*. 2024a, 183–190, with further references).

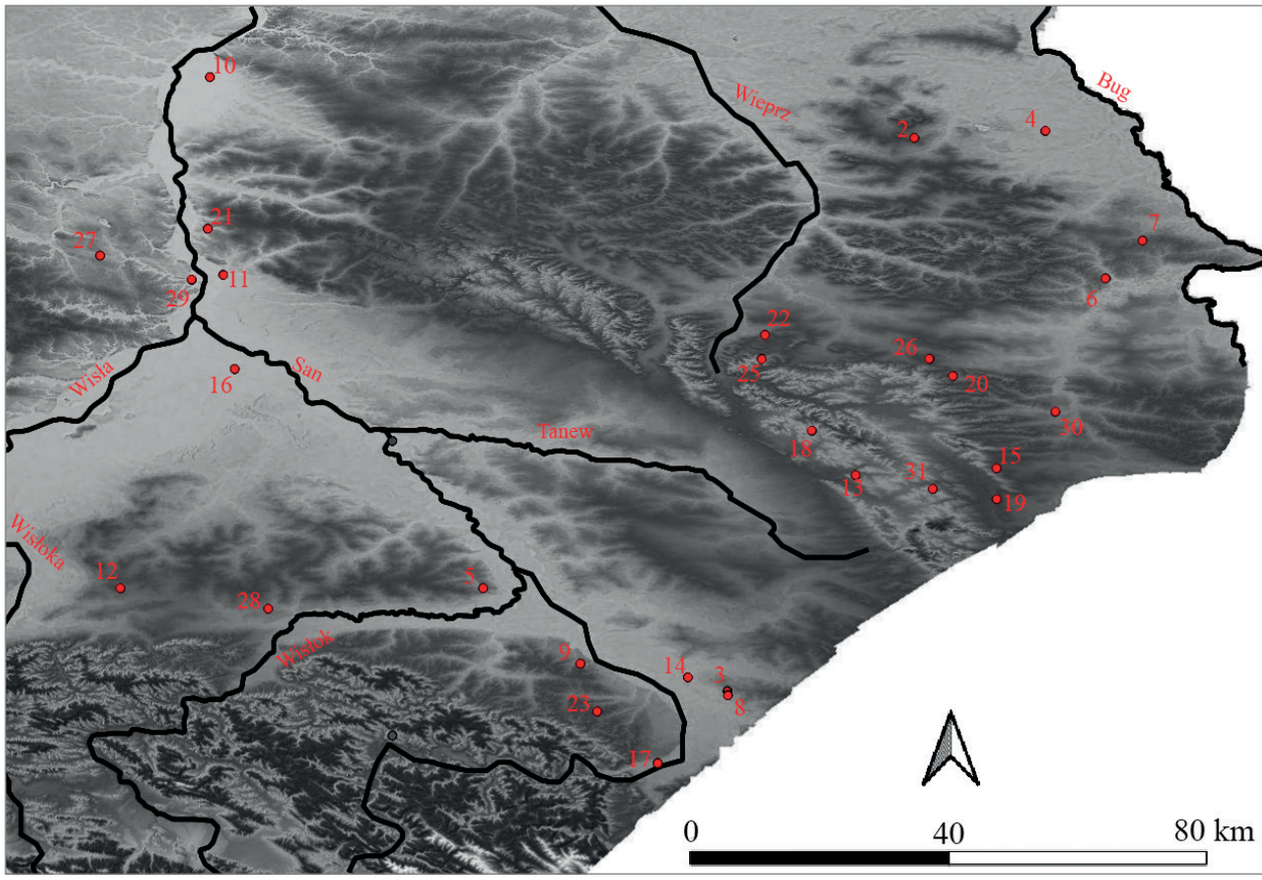

Fig. 1. Locations where "Scythian" arrowheads have been discovered in southeastern Poland (based on Czopek 2015 and Czopek *et al.* 2015, fig. 4, with updates by the author).

1. Bachórz, Rzeszów county; 2. Chełm, Chełm county; 3. Chotyniec, Jarosław county; 4. Dorohusk, Chełm county; 5. Grodzisko Dolne, Leżajsk county; 6. Gródek nad Bugiem, Hrubieszów county; 7. Hrebenne, Hrubieszów county; 8. Hruszowice, Jarosław county; 9. Jarosław, Jarosław county; 10. Kłodnica, Opole Lubelskie county; 11. Kosin, Kraśnik county; 12. Kozodrza, Ropczyce-Sędziszów county; 13. Maziły, Tomaszów Lubelski county; 14. Nienowice, Jarosław county; 15. Nowosiółki Kardynalskie, Tomaszów Lubelski county; 16. Obojnia-Zaosie, Stalowa Wola county; 17. Przemyśl, Przemyśl county; 18. Róża, Tomaszów Lubelski county; 19. Stary Machnów, Tomaszów Lubelski county; 20. Swaryczów, Zamość county; 21. Świeciechów Duży, Kraśnik county; 22. Topornica, Zamość county; 23. Trójczyce, Przemyśl county; 24. Ulanów, Nisko county; 25. Wieprzec, Zamość county; 26. Wolica Śniatycka, Zamość county; 27. Wyszmontów, Opatów county; 28. Zaczernie, Rzeszów county; 29. Zawichost-Trójca, Sandomierz county; 30. Żulice, Tomaszów Lubelski county; 31. Żyłka, Tomaszów Lubelski county (source of map: Geoportal).

The hillfort discovered a few years ago in Chotyniec, Jarosław county, supports this interpretation of the evidence (Czopek *et al.* 2017; Czopek 2020), along with the entire agglomeration of surrounding settlements (Czopek 2019; Czopek *et al.* 2024b), including the settlement in Hruszowice, site 2, Przemyśl county (Adamik-Proksa *et al.* 2022). From this direction, via the San River valley, eastern influences could have spread, with the hillfort acting as a gateway for their diffusion.

However, the Sandomierz Upland shows little evidence of eastern cultural influence. This is somewhat surprising, as the area was inhabited by the so-called Tarnobrzeg Lusatian Culture (further in the text of the TLC) community, which was strongly exposed to influences from the Chotyniec hillfort and readily adopted them.

From the Sandomierz Upland, only a mold for casting nail-headed earrings from Połaniec, Staszów county (Michalski 1982; Chomentowska 1989, pl. I,6,7: 334) is known. Also found here are fragments of bowls with "pearls" from the settlement at Okalina-Wieś, site 2, Opatów county (Niedźwiedź *et al.* 2025). Recently, this list was expanded by two arrowheads from Zawichost, site 17, Sandomierz county, and Wyszmontów, site 106, Opatów county. Both specimens clearly belong to the Scythian cultural sphere. In the following text, we will discuss these latest finds in more detail and consider the possible routes of their arrival in the region.

Materials

The first specimen was discovered on 2 December 2024 by members of the Annopol Commune Residents Association "Szansa" during metal detector surveys near the Holy Trinity Church in Zawichost, Sandomierz county (Fig. 4, 5). The arrowhead (Fig. 2, 3) is cast bronze, trilobate in form (length 2.1 cm; width 0.7 cm at midsection, 0.5 cm at the socket) and weighs just 2.1 g. The socket is short, all three blades are heavily damaged, and the tip is broken. A small hole in the socket likely resulted from a casting flaw. Metallographic analysis is recommended due to its unusual silvery hue, which may indicate an atypical bronze alloy, possibly with high lead content.

The Zawichost-Trójca site occupies a field next to the Holy Trinity Church in Zawichost, near the valley of the small Czyżówka River, which joins the Vistula here. It is situated on the edge of a plateau with considerable exposure. The site lies at the junction of six physiographic units: the Sandomierz Upland, the Iłża Foreland, the Biłgoraj Plain, the Urzędów Hills, the Vistula Lowland, and the Lesser Poland Gorge of the Vistula (Kondracki 2002). This strategic location, combined with the terrain and the latitudinal course of the early section of the Lesser Poland Gorge, favored the existence of a convenient river crossing.

In the early Middle Ages (10th–13th centuries), the crossing was heavily used (Wąsowicz 1967; Hoczyk-Siwkowa 1996). Two major routes intersected here: one from Europe to Rus, and another from the Hungarian Basin, via the Vistula and Carpathian passes, to both the Baltic and the Adriatic (Florek 2022b, 88). In 1205, Prince Roman of Halych crossed here into the Sandomierz Land, where he was defeated by the knights of Lesser Poland (Słupecki 2018). This crossing was also part of the routes taken during the Mongol invasions (Chochorowski 2014, 47–48, fig. 31).

The second arrowhead (Fig. 6, 7) was discovered on 5 April 2025 by twelve-year-old Filip Nawrocki while playing near a stream in the village of Wyszmontów (Fig. 8, 9). It is a well-preserved bronze, bilobate form, asymmetrical (one blade wider), with distinctly defined and slightly flattened edges. A small hole is visible near the socket – likely the result of a casting defect, as is the case with the specimen from Zawichost. The dark green patina suggests long-term

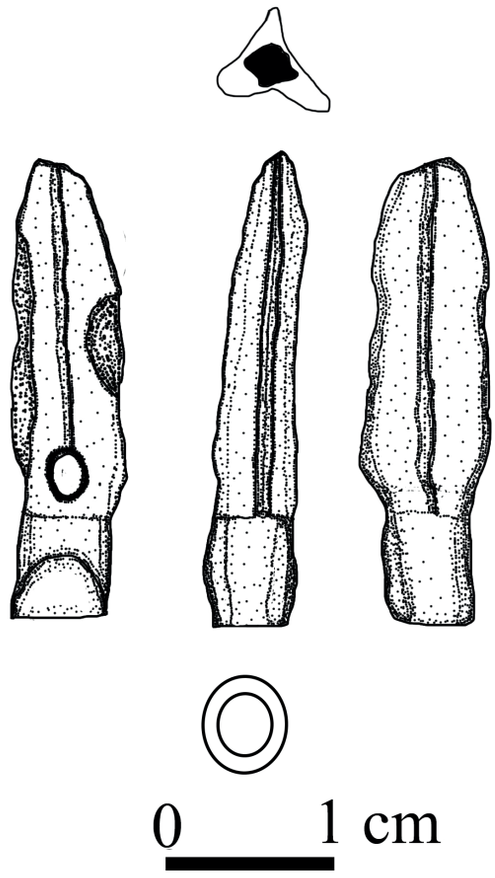

Fig. 2. Photographic representation of the arrowhead discovered in Zawichost-Trójca, site 17, Sandomierz county (photo by W. Rajpold).

Fig. 3. Drawing of the arrowhead discovered in Zawichost-Trójca, site 17, Sandomierz county (drawn by W. Rajpold).

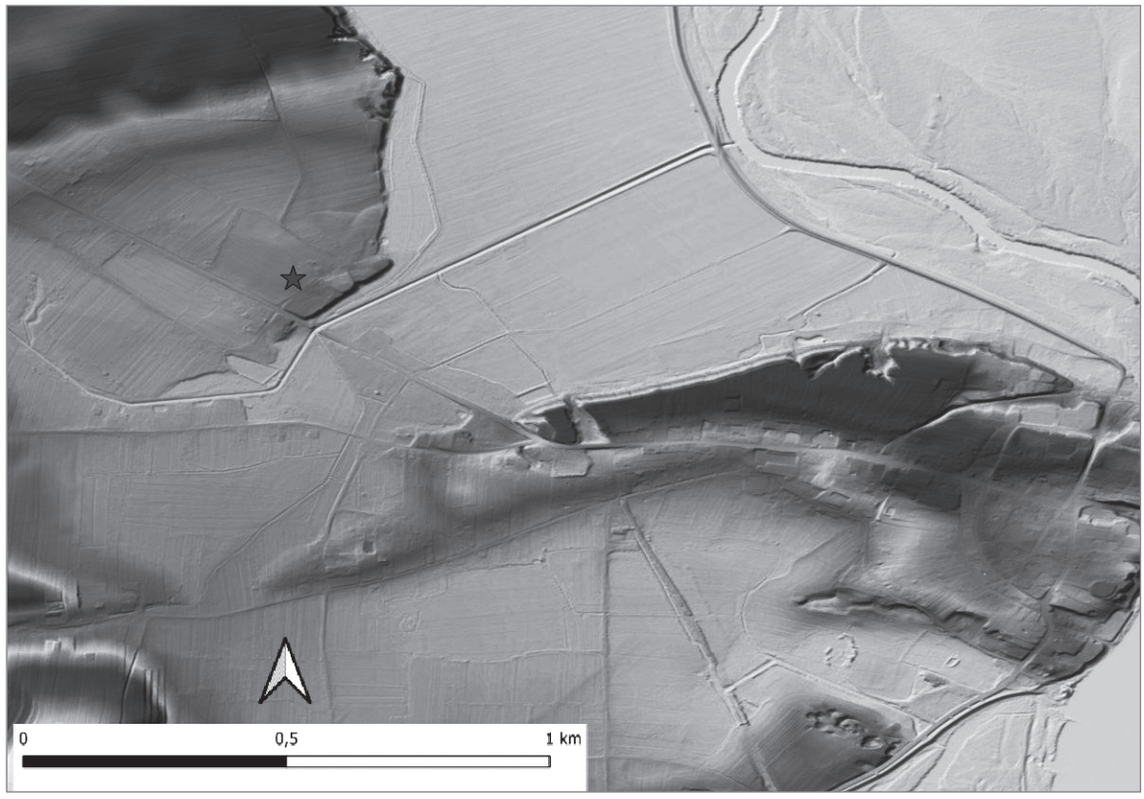

Fig. 4. Location of the arrowhead findspot in Zawichost-Trójca, site 17, Sandomierz county, on a hypsometric map (source of map: Geoportal).

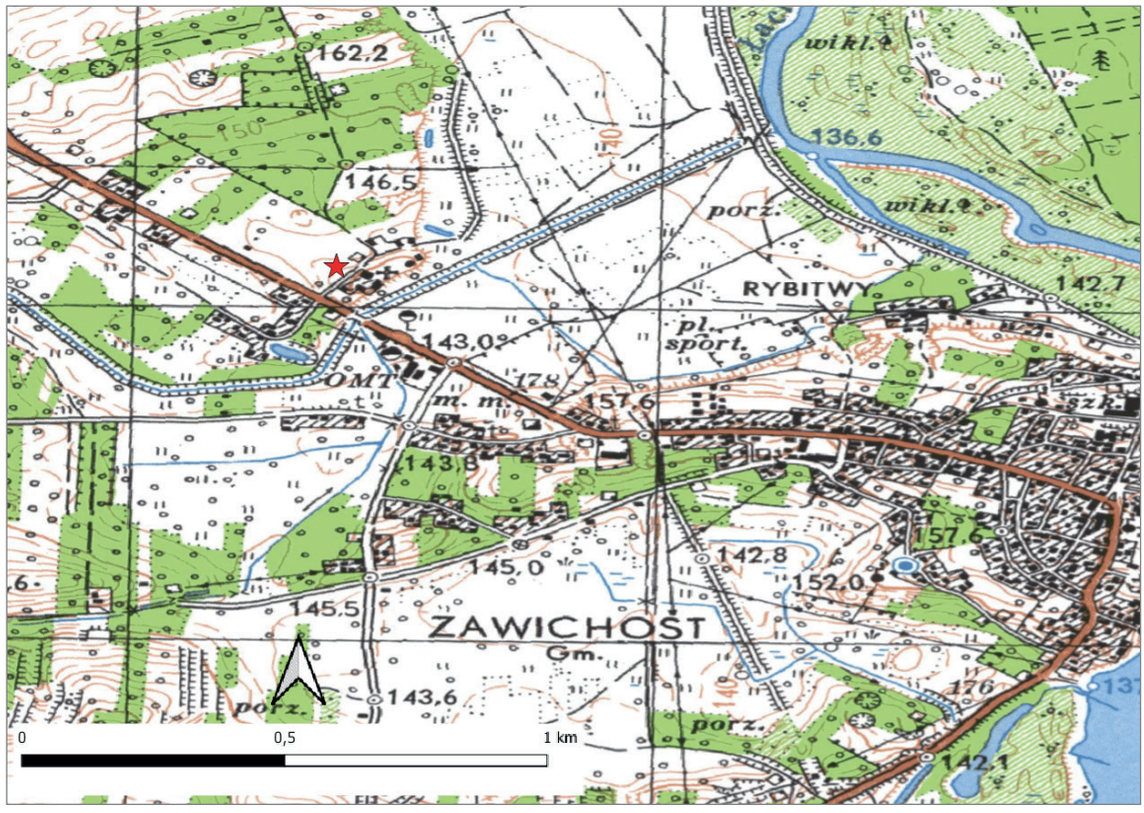

Fig. 5. Location of the arrowhead findspot in Zawichost-Trójca, site 17, Sandomierz county, on a topographic map (source of map: Geoportal).

deposition in a wet environment. Dimensions: height 2.91 cm; max width 1.16 cm; socket diameter 0.6 cm.

The site is located on the border of the Sandomierz Upland and the Iłża Foothills (Kondracki 1988, 358–361). The former has very good soil conditions, dominated by chernozems, while the latter is characterized by poorer-quality soils – mainly podzolic and lessive – developed on chalk substrate. This difference is reflected in potential vegetation data (Matuszkiewicz 2008). The Sandomierz Upland was likely covered by fertile hornbeam forests, indicating high agricultural potential (Kruk and Przywara 1983, 25–26, 35). The Iłża Foothills were probably dominated by pine and pine-oak forests, typical of mineral-poor soils (Kruk and Przywara 1983, 27, 36–37).

The archaeological context is poor, as no other finds were recorded at the site. However, two sites – Wyszmontów 5 and 6 (AZP 85-73/167 and 168) – lie 600–700 m to the east, separated by the same stream. Dispersed TLC materials over several hectares suggest a large settlement or cemetery. The Wyszmontów site 4 (AZP 85-73/166), covering over 5 ha, is located approx. 700 m to the north-east. Settlement traces to the west are scarce. The site forms part of a chain of TLC settlements along the stream. Their recognition is poor, with no excavations beyond AZP survey, and no TLC cemetery has yet been discovered in the area.

Analysis

The Zawichost arrowhead (Fig. 2, 3) is too damaged for a precise classification. In Anna I. Melŭkova's typology, trilobate arrowheads with pointed blades and distinct sockets fall into type II/2 (Melŭkova 1964, 19, fig. 1). In Anja Hellmuth's system, it corresponds to type II, most likely variant IIB3 with a short socket and narrow blades undercut at the base. Due to the poor preservation of the blades and the missing tip, variant IIA3 with an almond-shaped blade is also possible (Hellmuth 2010, 57).

A similar example from Poland comes from Hruszowice, site 2 (Adamik *et al*. 2022, pl. LXXXIV), which had a longer socket and wings merging more gently into it. From the Chotyniec hillfort, eight trilobate arrowheads are known, divided by Marcin Burgardt (2020, 337) into two types (with or without barbs) and four subtypes by blade shape. The present piece is closest to type II-2-a (Burgardt 2020, 337, fig. 7: 10; Czopek *et al*. 2024a, 179, fig. 5.8: 7), though with a slightly longer socket. Similar forms are also recorded at the Wicina settlement, Żary county (Chochorowski 1974, pl. II:O: 13–14).

Fig. 6. Photographic representation of the arrowhead discovered in Wyszmontów, Opatów county (photo by W. Rajpold).

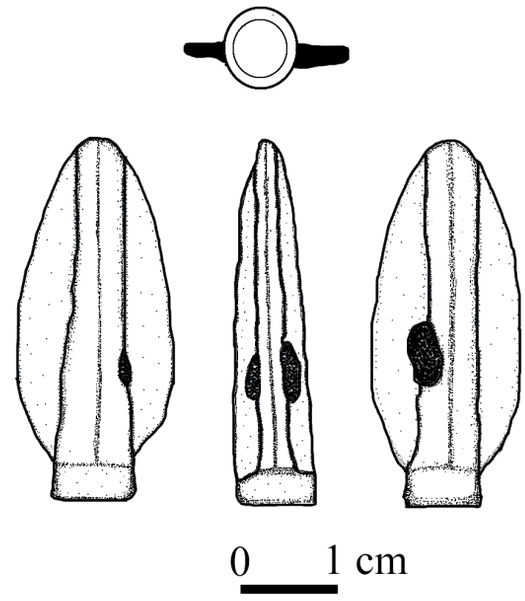

Fig. 7. Drawing of the arrowhead discovered in Wyszmontów, Opatów county (drawn by W. Rajpold).

In the Scythian world, IIA and IIB types were widespread (Hellmuth 2010, 58, 63, fig. 73, 80). Type IIB occurs in both early and later assemblages (Hellmuth 2010, 271–281), making it a weak chronological marker, dated broadly from the mid-7th to the 5th/4th centuries BC. The condition of the blade does not rule out variant IIA, which appeared around the late 8th/early 7th century BC, peaked in the 7th century, and was thought to have fallen out of use thereafter (Hellmuth 2010, 271), though it may have persisted into the 1st half of the 6th century BC (Melŭkova 1964, 18; Grechko 2020, 15).

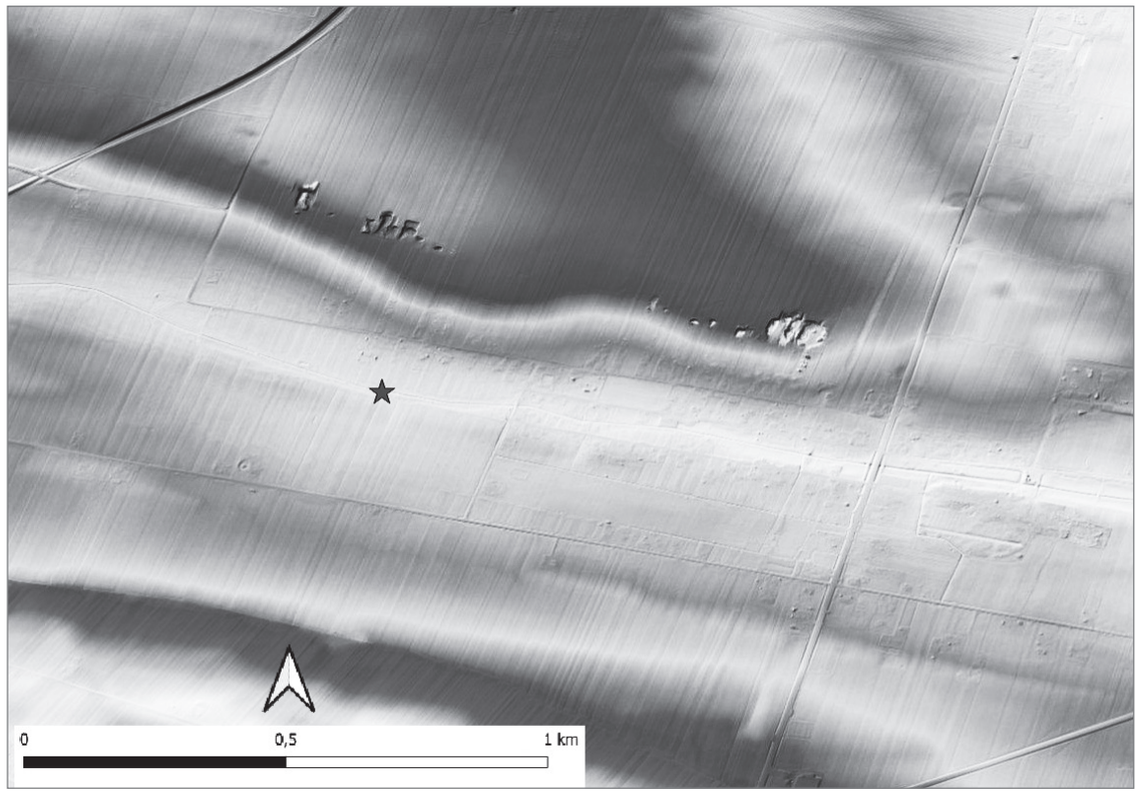

Fig. 8. Location of the arrowhead findspot in Wyszmontów, Opatów county, on a hypsometric map (source of map: Geoportal).

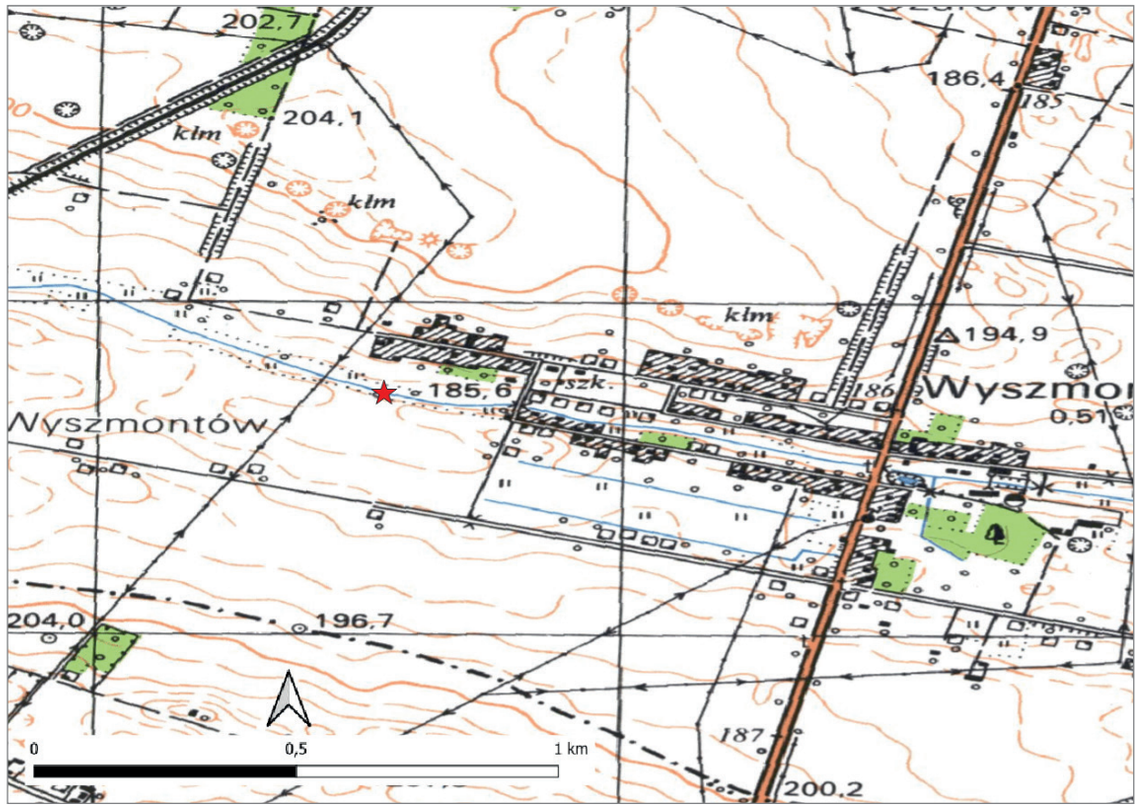

Fig. 9. Location of the arrowhead findspot in Wyszmontów, Opatów county, on a topographic map (source of map: Geoportal).

Given the heavy damage and lack of associated finds, precise dating is not possible. The closest match is form IIB-3, which has a broad range. A cautious date would be the 7th–5th century BC, with a likely concentration in the 7th–6th centuries BC, in line with most parallels.

The Wyszmontów arrowhead (Fig. 6, 7) is a bilobate type I/2/2 in Anna I. Melŭkova's typology (1964, 18, fig. 1). In Anja Hellmuth's system, it is variant I/A/4, with a short socket and a laurel-shaped blade (Hellmuth 2006, fig. 2; 2010, 17). This variant is also known as the "Kelemér type", distinguished by its characteristic blade shape (Czopek *et al*. 2025a, 175).

The closest parallels include five bilobate arrowheads from Chotyniec (variants I/A/2 and I/A/3, with longer sockets). Comparable forms are recorded in the Lublin region, e.g., at Kłodnica, Wieprzec, and Stary Machnów (Kłosińska 2013, 356–357, fig. 4: 13–17), where variants I/A/2 and I/A/3 also prevail. The Stary Machnów specimen is the nearest to subtype I/A/4; its socket was damaged and may originally have been longer. Arrowheads of this subtype are also reported from the destroyed Wicina hillfort (Chochorowski 1974, pl. II:O: 1–3).

Kelemér-type bilobate arrowheads were distributed across the Scythian world, most densely along the upper Don, the middle Dnieper, and in the Caucasus (Hellmuth 2010, fig. 12, 13). They are generally dated to the 7th–mid-6th centuries BC (Meluŭkova 1964, 18; Grechko 2020, 14), though an earlier origin, in the late 8th century BC, is also possible (Hellmuth 2010, 203–204).

Discussion

As noted above, artefacts of eastern origin are relatively rare in the Sandomierz Upland. However, comparable finds occur in adjacent areas, with the Vistula River serving as a natural boundary. Notable examples include the Kosina cemetery, site II, Kraśnik district, which yielded arrowheads, nail-shaped earrings, and pottery with eastern-style decoration (Miśkiewicz and Węgrzynowicz 1974; Kłosińska 2005b, 274–277) – one of the cemeteries showing the strongest Chornolis influences. Another case is a nail-shaped earring from Opoczek Mały, site 1, Kraśnik district (Kłosińska 2005b, 277–278, fig. 6). Further south, at the Tarnobrzeg-Zakrzów, site 1 settlement of the Tarnobrzeg Lusatian Culture, finds include pots with applied strips below the rim and a vessel bearing the impression of a twisted bronze wire (Podgórska-Czopek and Czopek 1991, 102). From site 5 in Tarnobrzeg comes a hollow-footed bowl (Rajpold 2022, 113).

Funerary contexts are equally important. The Tarnobrzeg-Mokrzyszów, site 2 cemetery produced bowls with spiral boss impressions, hollow-footed bowls, and knobbed vessels (Trybała-Zawiślak 2012, 254, 256–257). From Tarnobrzeg, site 1, come knobbed vessels with stamped ornamentation (Ligoda 2004, 117–118), and from Machów, site 20 (Tarnobrzeg district), a nail-shaped earring (Poradyło 2022, fig. 12, 78). Particularly noteworthy are a figure-eight button – associated with the Cimmerians – and a vessel decorated with punctures forming triangles, evoking Scytho-Thracian designs, found at the Knapy, site 6 cemetery (Tarnobrzeg district) (Czopek 2004, 74, 82).

Numerous other examples could be cited, but the pattern is clear: east of the Vistula, eastern cultural influences are strongly represented, unlike on the west bank.

These arrowheads are of particular interest as the first finds of their kind from the Sandomierz Upland, although their archaeological context remains uncertain. The Zawichost specimen was recovered during detectorist surveys, carrying the concomitant risk of the loss of contextual data (e.g. spatial relationships) (Barford 2000, 444–445). However, the "Szansa" Association from Annopol works closely with Dr. Marek Florek (Provincial Office of Monument Preservation – Delegation in Sandomierz) and Monika Bajka (archaeological company "Trzy Epoki"), making it likely that the context has been preserved (Kutyło *et al*. 2023). This collaboration has produced significant results, including two hoards of medieval coins (Nakielski 2022) supplementing interwar finds (Różańska 1960; 1962), numerous early medieval weapons, ornaments, and ceramics (Florek 2022a; 2022b), and material linked to the Przeworsk Culture (Krupka 2024, 20–23). Yet, no other artefacts from the Bronze or Early Iron Age have been found in Zawichost. The Wyszmontów arrowhead is also an incidental find, with only poorly recognized traces of Bronze and Early Iron Age settlement in its vicinity.

Both finds therefore share an isolated nature and the absence of related material nearby. They likely represent accidental loss or discarded projectiles, offering too little evidence to reconstruct broader patterns of eastern influence in the region.

A second issue is chronology. The Wyszmontów piece dates to the 7th – mid-6th century BC, while the Zawichost example has a broader range (7th–5th century BC), reducing its precision as a chronological

marker. For comparison, finds from Kosina date to the late 6th and 5th centuries BC (Czopek *et al*. 2015, table 1), making the Wyszmontów arrowhead at least a century earlier. Given this early date, the Wyszmontów arrowhead – and possibly the Zawichost one – may represent some of the earliest eastern influences in the Sandomierz Upland. They could be synchronized with the earliest phases of the Chotyniec hillfort and with the wave of Scythian incursions into western Poland, recalling similar forms from the Wicina hillfort.

While their isolated nature limits functional interpretation, the location of both sites points to a potential role for the Zawichost river crossing as a conduit for such objects. This remains a hypothesis requiring further evidence. Historically, this crossing served multiple communities: the Mongol invasion route ran from the upper Bug through the Lublin region to the Sandomierz area, while another route, from Przemyśl to Lesser Poland, used it for the return journey (Chochorowski 2014, 47–48, fig. 31). Although this analogy is distant in time, and current evidence does not confirm Scythian raids into eastern Poland, it is notable that both the Scythians and later Mongols were nomadic groups for whom river valleys and crossings were central to mobility and spatial organization since prehistory. As for the direction of arrival, eastern-style finds occur in Subcarpathia, also inhabited by the Tarnobrzeg Lusatian Culture, which extended into the Sandomierz Upland. The Chotyniec hillfort and its south-eastern route are key points of interest (Czopek *et al*. 2024b), while numerous finds along the Roztocze range in the Lublin region (Kłosińska 2007) suggest an alternative or complementary route. It is plausible that both operated in parallel, making it difficult to determine definitively which brought the arrowheads here.

The final question is whether a Scythian arrowhead necessarily signals Scythian presence. Probably not. The Scythians were ethnically diverse. Herodotus describes the Neuri – a people with Scythian customs but not Scythians proper (*Dzieje* 2020, IV: 105) – who, a generation before Darius' campaign (before 512 BC), left their homelands and settled among the Budini. The Chotyniec hillfort is sometimes linked with the Neuri (Czopek 2020, 82, 102), and their migration has been invoked to explain population growth in the HaC–D phases within TLC territory (Rajpold 2013, 46).

It is also possible that the arrowheads are local products imitating eastern prototypes. A mold for casting nail-shaped earrings from the TLC settlement in Zawada supports this possibility (Michalski 1982; Chomentowska 1989, pl. I,6,7: 334). Unfortunately, no metallurgical analyses have been carried out on the arrowheads presented here, although such studies would be valuable. Similar work on "Scythian" arrowheads from Kuyavia and Chełmno Land suggests local production. At Kamieniec (Toruń district), evidence of metallurgy was found alongside a "Scythian" arrowhead in a pit. The comparison with another from a burnt layer revealed technological differences but a similar chemical composition to other metallurgical artefacts (Gackowski *et al*. 2018, 333–334).

Summary

In summary, these finds raise several questions:

1. Do they reflect sustained contact with the Scythian world or merely sporadic interactions?
2. Is their relatively early chronology – compared to Kosina – typical?
3. Did they arrive exclusively via the "Chotyniec" route along the San, or also by other paths such as the Zawichost crossing?
4. Are they imports from the east or local imitations?

Answering these requires further fieldwork and metallurgical analysis. For now, the arrowheads remain isolated "swallows" that may foreshadow future finds, allowing for a fuller cultural and chronological framework.

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