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## Remarks on the state of research into hoards in the Polish Carpathians<sup>1</sup>

### ABSTRACT

In 2001, approximately 30 bronze hoards were known in the Polish Carpathians. At least 30 more were discovered between 2001 and 2022. An overview of these assemblages sheds some light on the dynamics of changes in the region and its contacts with various areas of Central Europe. While connections with the Carpathian basin initially prevailed (BrA-BrD), in BrD-HaA artefacts with analogies in the Oder basin and local types (Sieniawa style) became noticeable as well. At the end of the Bronze Age (HaB<sub>3</sub>), finds suggesting connections with the steppe cultures appeared, and bronze artefacts with analogies in northern Poland dominated in the early Iron Age (HaC-HaD).

### KEYWORDS

Polish Carpathians, Bronze and Early Iron Age, hoards of bronze and iron objects

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- 1 The first version of this paper was presented at the international conference “Bronze Age and Early Iron Age in the Carpathians”, held by the Podkarpackie Museum in Krosno on 16-17.11.2017. However, submitting the article for publication in the post-conference volume seemed premature in a situation where a large part of the recently discovered hoards had not yet been published, and I owed the information about them to the kindness of Jan Gancarski, MA, Director of the Podkarpackie Museum; Piotr Kotowicz, PhD, from the Historical Museum in Sanok; Paweł Madej, PhD, from the Archaeological Open-Air Museum “Karpacka Troja” in Trzcينica; and Bartłomiej Urbański, MA, from the Regional Museum in Nowy Sącz. An updated version of the paper was presented at a meeting of the Research Team on the Phenomenon of Hoarding, entitled “Via Carpathica? Carpathian contexts of the deposition of prehistoric bronze and iron products”, hosted by the Historical Museum in Bielsko-Biała on 27.05.2022.



## I. INTRODUCTION

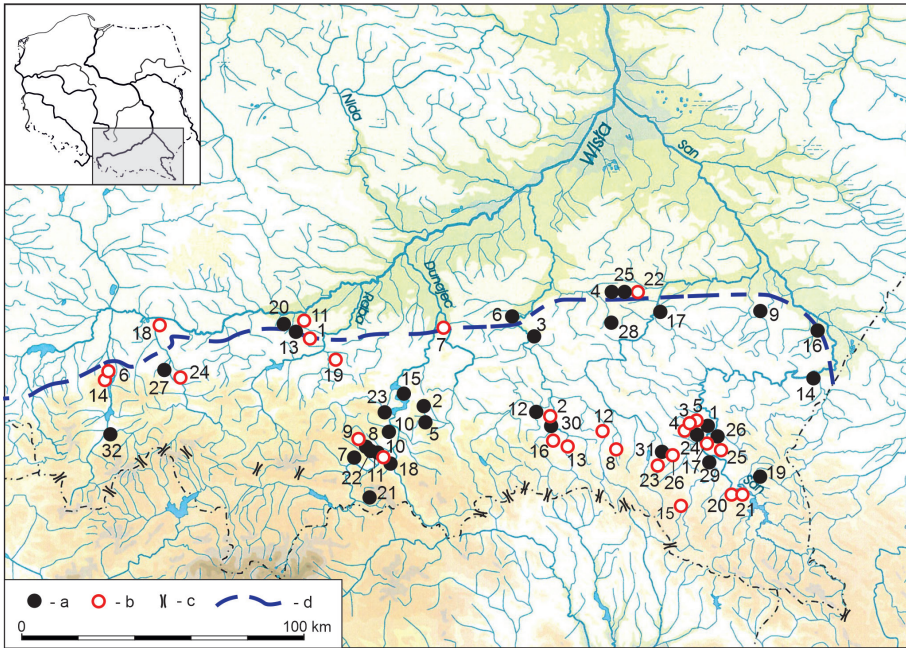
Hoardings of bronze objects discovered in the Polish Carpathians were first addressed in Józef Żurowski's paper on Early Iron Age finds from the Dunajec River basin. The Kraków scholar published the deposits from Jasienna, Stary Sącz and Świdnik, all in the district of Nowy Sącz; from Świdnik in the district of Limanowa; and – in the wider Carpathian foreland – from Gorzyce, Dąbrowa Tarnowska dist. He also discussed older artefacts found in Marcinkowice, Nowy Sącz dist., as well as three hoards: from Naszacowice<sup>2</sup>, Nowy Sącz dist.; Szlachtowa, Nowy Targ dist.; and from the vicinity of Łukowica, Limanowa dist. The fate of the last is unknown, and it lacks sufficient grounds for dating (Żurowski 1927).

In his comprehensive study from the early 1960s, Józef Kostrzewski, the foremost expert on Bronze Age artefacts in Poland at the time, listed 21 certain and presumed hoards found in the Carpathian zone, including the loess edge zone of the Carpathian Foothills and its immediate foreground. These were: Jasienna, Nowy Sącz dist.; Jaworze Dolne, Dębica dist.; Łącko, Nowy Sącz dist.; Łukowica, Limanowa dist.; Maćkówka, Przeworsk dist.; Marcinkowice, Nowy Sącz dist. (two finds); Naszacowice, Nowy Sącz dist.; Przemyśl; Radejowice (Rożnów), Nowy Sącz dist.; Radymno, Jarosław dist.; Rzeszów; Stary Sącz, Nowy Sącz dist.; Stefkowa, Lesko dist.; Szlachtowa, Nowy Targ dist.; Świdnik, Limanowa dist.; Świdnik, Nowy Sącz dist.; Trzciana, Rzeszów dist.; Zagórze, Przeworsk dist.; Załęże, Jasło dist.; and Zarszyn, Sanok dist. (Kostrzewski 1964, *passim*).

A list published nearly 40 years later (Blajer 2001) covered 30 certain and presumed hoards, including bronze artefacts from Żywiec, which Kostrzewski knew but did not count as hoards (Kostrzewski 1964, 81-82, Fig. 127). Compared with Kostrzewski's study, the following sites were added: Klęczany, Ropczyce-Sędziszów dist.; Korzenna-Jabłonki (Jasionki), Nowy Sącz dist.; Marcinkowice, Nowy Sącz dist. (alleged third hoard?); Wiśniowa, Ropczyce-Sędziszów dist.; Podłęże, Wieliczka dist.; Hłomcza, Sanok dist.; Lipiny-Kozia Wola, Dębica dist.; Osobnica, Jasło dist.; and Tyrawa Solna, Sanok dist. (Blajer 2001, 324, 331, 332, 336, 339, 360, 362, 364, 368). The list extends to 34 certain and presumed assemblages (Fig. 1: a) when adding bronze artefacts from Wadowice discovered in 1960 but not published until over 40 years later (Pieróg 2003); a hoard of iron neck-rings from Strumiany, Wieliczka dist.,

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2 Original spelling.



**FIG. 1.** Hoards in the Polish Carpathians and Carpathian foreland. a – discovered and reported before 2000 r. (site numbers – see the catalogue); b – discovered in 2001-2021 (site numbers – see the catalogue); c – major mountain passes; d – edge zone of the Carpathians

found in 1979, whose publication (Reguła 1980, 26-27, Figs. 4-5) I overlooked during my search conducted in the late 1990s; and gold ornaments from Trepcza, Sanok dist., found in 1995-1999 and published in 2001 (Ginalski *et al.* 2019).

At the beginning of the 21<sup>st</sup> century, approximately 1,050 certain and presumed Bronze Age and Early Iron Age hoards were known from the whole territory of Poland (Blajer 2001, 311-374), and at least about 150 new assemblages were revealed between 2001 and 2022, making an increase of about 15%. This is probably not the full number, as there may be other hoards in museum collections not yet published or even mentioned on the internet which have not been introduced into scientific circulation, not to mention finds never reported to archaeologists, the number of which cannot even be estimated. At least 30 hoards<sup>3</sup> were discovered in the Carpathian zone

3 Not counting hoards from the La Tène period.

between 2001 and 2022 (Fig. 1: b), almost doubling the number of known assemblages. A significant number of these new discoveries results from the activity of archaeologists from Sanok, Krosno and Bielsko-Biała, especially in their contacts with amateur explorers.

Leaving this interesting aspect aside, I would like to present here an overview of hoards from the Carpathian part of the Vistula basin, highlighting not only issues of typology and chronology, but also what past and new finds can contribute to our knowledge of the phenomenon of hoarding and the dynamics of its change in this region.

### Phases BrA2-BrB2

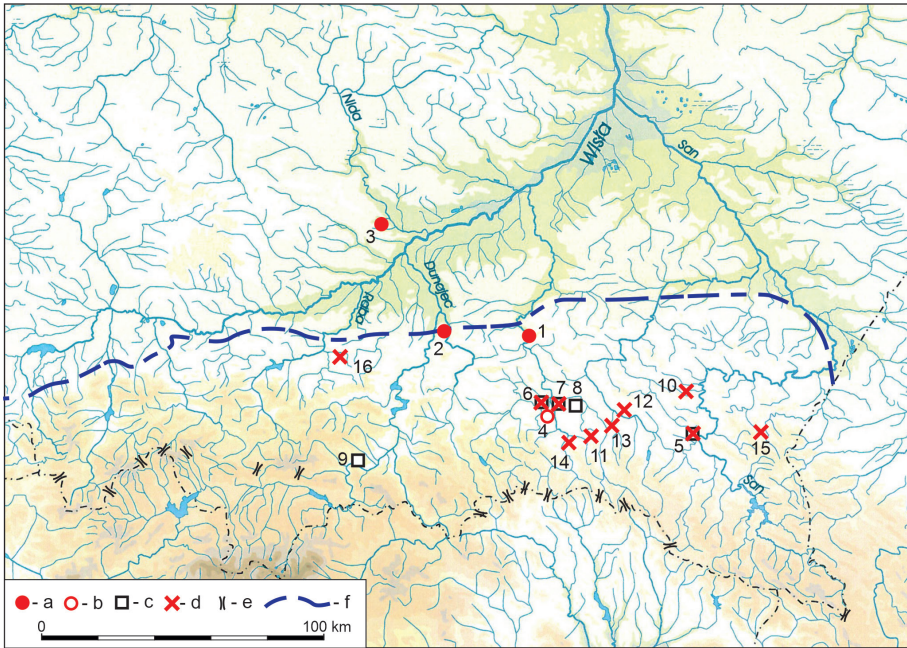
The earliest hoards, attributable to phases BrA2-BrB1, are few, and so far they are known only from the central and eastern parts of the Polish Carpathians (Fig. 2: a).

The BrB phase (and possibly more precisely: BrB1) is represented by a pair of bracelets from Koszyce Wielkie in Tarnów dist. (Fig. 3), which were found with fragments of a ceramic vessel and 'large beads with a hole' (Szpunar, Okoński 2007), likely elements of a necklace. This discovery confirms the role of the Dunajec valley as an important route which, like the parallel Wisłoka valley with its well-known hoard (a pair of bracelets and small ornaments, mainly beads) from Jaworze Dolne, Dębica dist. (Nosek 1959), was significant for the transmission of southern patterns, and perhaps also for the expansion of the Otomani culture (Makarowicz 1998).

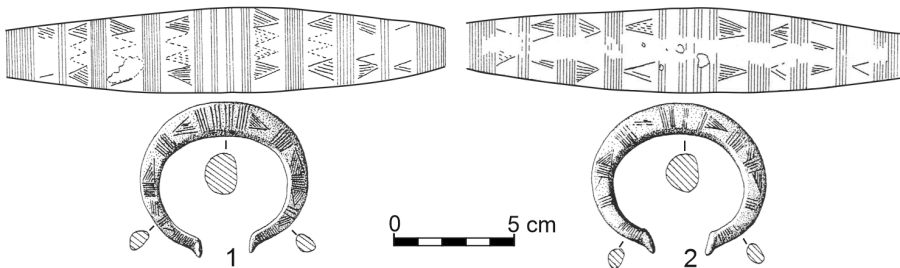
So far, permanent settlement of the Otomani culture (Fig. 2: c) has been confirmed in the Polish Carpathians at the following sites: defensive settlements in Maszkowice, Nowy Sącz dist.; Trzcinica and Brzezówka, Jasło dist.; and Trepcza, Sanok dist.; as well as an open settlement in Jasło. Other finds are concentrated in the river basins of the upper Wisłok and upper Wisłoka Rivers (Pasterkiewicz, Skała 2022, Fig. 4).

Discovered in 2015, gold wire ornaments from Dębowiec, Jasło dist., seem to fit into this picture (Fig. 2: 4). In the region discussed here, this is a unique find. Similar specimens in Silesia, the Czech Republic, Slovakia and Hungary are broadly dated within BrA(BrA2?)-HaB3, but according to the authors who published the Dębowiec finds, the closest analogies are from the Otomani (Otomani-Füzeszabony) culture (Gancarski, Madej 2021a, 183). Gold ornaments of the Sibiu type from the settlement in Trepcza also seem to be related to the Otomani occupation (Ginalski *et al.* 2019).





**FIG. 2.** Hoards in the Polish Carpathians and Carpathian foreland and selected other sites from phase BrB. a – hoards of bronze objects; b – hoard of gold objects; c – settlements of the Otomani culture; d – axes with low flanges (after Pasterkiewicz, Skała 2022); e – major mountain passes; f – edge zone of the Carpathians; 1 – Jaworze Dolne, Dębica dist.; 2 – Koszyce Wielkie, Tarnów dist.; 3 – Stawiszyce, Pińczów dist.; 4 – Dębowiec, Jasło dist.; 5 – Trecza, Sanok dist.; 6 – Trzcina, Jasło dist.; 7 – Jasło; 8 – Brzezówka, Jasło dist.; 9 – Maszkowice, Nowy Sącz dist.; 10 – Izdebki, Brzozów dist.; 11 – Kobyłany, Krosno dist.; 12 – Krościenko Wyżne, Krosno dist.; 13 – Miejsce Piastowe, Krosno dist.; 14 – Nowy Żmigród, Jasło dist.; 15 – Trzcianiec, Bieszczady dist.; 16 – Wola Nieszkowska, Bochnia dist.



**FIG. 3.** Bracelets from the hoard from Koszyce Wielkie, Tarnów dist. (after Szpunar, Okoński 2007)

In the context of the presence of the Otomani culture, it is necessary to mention a phenomenon relatively recently detected: the occurrence of axes with low flanges, which can be dated within phases BrA2/BrB1-BrB2. Currently, about ten such artefacts are known from the upper basins of the Wisłoka, Wisłok and San Rivers. Most of them are stray finds, but some have been found in settlements in Trzcinica and Trepcza (Fig. 2: d). They were jointly discussed on the occasion of the publication of the axe from Izdebki, Brzozów dist. (Pasterkiewicz, Skała 2022, 25-30, Figs. 1-7). Another find possibly from the same period (or slightly later) is an axe from Wola Nieszkowska, Bochnia dist., dated within the BrB-BrD, which has analogies in the Tumulus culture of southern Germany (Materna 2021).

A further stage in the network of distribution of trans-Carpathian bronzes seems to be marked by the hoard from Stawiszycze in the district of Pińczów (Dąbrowski, Okuliczowa 1962), discovered north of the Vistula River (Fig. 2: 3), which also contains three arm-rings with spiral discs of a rare variety, possibly of local manufacture (Dąbrowski, Okuliczowa 1962, 246). A similar specimen is known from nearby Zagajów, Kazimierza Wielka dist. (Kasińska 2010). This, however, is another issue, one concerning studies on the metallurgy of the Trzciniec culture (Makarowicz 2010, 165-178).

As we can see, the hoards known from the Polish Carpathians and which can be dated to BrB come from the peripheries of the area settled or intensively penetrated by people of the Otomani culture. What cultural milieu they were deposited in is a question that should be the subject of further research. Possible candidates are the late phase of the Mierzanowice culture, the early phase of the Trzciniec culture, and the Otomani culture (Jasło group? – cf. Przybyła 2009, 58-63). In a broader Central European perspective, they can be counted among the hoards of the Koszider horizon (Dąbrowski, Okuliczowa 1962, 247; Blajer 1990, 91). With regard to possible routes of contact, the Poprad valley and the Beskid (at the source of the Wisłoka River) and Łupków Passes should be taken into account.

In the western zone of the Carpathian Mountains, a similarly early chronological position (or slightly later, as they are generally dated within 'Bronze Age Period II') can possibly be assigned to artefacts from Żywiec-Turza Góra, most likely representing a collection from a settlement, although sometimes considered as a presumed hoard (Gedl 1980, 67; Blajer 1999, 33, 131, 221; 2001, 320).

## Phases BrC2-BrD

Hoards datable to BrC2-BrD have so far only been discovered in the eastern part of the Polish Carpathians, in the upper San and Wisłoka basins. These include deposits from Stefkowa, Lesko dist., Załęże, Jasło dist., and a recently acquired assemblage from Rzepedź, Sanok dist. (Fig. 4: 1-3).

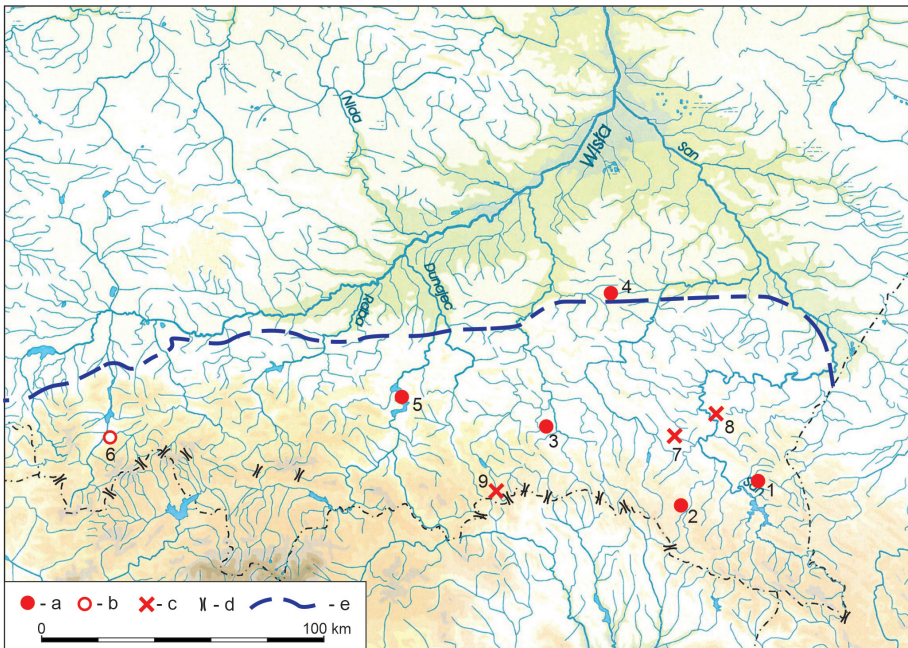
The hoard from Stefkowa, found in the 19th century, is probably slightly earlier. While it contains bracelets with heavily worn ornamentation which can be dated to BrB1 (Blajer 1987, 100-101), the presence of lavishly decorated battle axes with disc-shaped butts, alluding to the Tachlovice type, and analogies to arm-rings with spiral discs of unequal size place this assemblage in BrB2(C1) (Blajer 1987, 97-99, 101-103) or BrC(C2) (Blajer 1990, 30, 92) and allow linking it to the Dreveník I or Dreveník-Blh horizons in Slovakia or the Hungarian Forró horizon (Blajer 1987, 103).

The chronological position of the hoard from Załęże (Krauss 1956) falls within BrC2-BrD, with an indication towards BrD, which would correspond to the Buzica-Aranyos horizon (Blajer 1999, 136).

The hoard from Rzepedź, containing a battle axe with a disc-shaped butt, a bracelet, and spiral ornaments (Fig. 5), can be dated within BrC2-BrD, although the BrD phase seems more likely in this case as well (Kotowicz, Trybała-Zawiślak, Duda 2016).

These three assemblages confirm the connection of the zone extending on the northern side of the Carpathian ridge with the metallurgy of the Piliny culture. Contact may have been maintained through the Łupków Pass, and in the west through the Beskid Pass. Other imports from phases BrC2-BrD (Fig. 4: 7-9), namely a Riegsee-type sword from Wysowa, Gorlice dist. (Moskwa 1976, 335-336 – older literature there, Fig. 86), and battle axes from Strachocina, Sanok dist., and Ulucz, Brzozów dist. (Gedl 2004, 39-40, Pl. 8:53) seem to emphasise the role of the Wysowa and Łupków Passes. This focus on the passes may, however, be misplaced and unnecessary, given that the artefacts from the aforementioned hoards show a certain stylistic distinctiveness in relation to eastern Slovakia and north-eastern Hungary. This observation hints at a local bronze-making activity (perhaps in the local Piliny culture milieu) inspired by patterns from beyond the Carpathians (Blajer 1999, 136; 2003, 248).

The state of research on the settlement or penetration of the Piliny culture population in southern Poland has been summarised by Sylwester Czopek (2012). Such a cultural attribution is widely accepted for several urn graves from Chełmiec, Nowy Sącz dist. Ceramic materials from the cemetery



**FIG. 4.** Hoards and selected other sites from phases BrC-BrD in the Polish Carpathians and Carpathian foreland. a – hoards; b – presumed hoard; c – battle axes and a sword; d – major mountain passes; e – edge zone of the Carpathians; 1 – Stefkowa, Lesko dist.; 2 – Rzepedź, Sanok dist.; 3 – Załęże, Jasło dist.; 4 – Klęczany, Ropczyce-Sędziszów dist.; 5 – Rożnów-Radajowice, Nowy Sącz dist.; 6 – Żywiec; 7 – Strachocina, Sanok dist.; 8 – Ulucz, Brzozów dist.; 9 – Wysowa, Gorlice dist.

in Gwoździec, Tarnów dist., the settlements in Maszkowice and Marcinkowice, Nowy Sącz dist., and Sanok are also considered, as is a vessel from Chełm, Bochnia dist. Still, the aforementioned hoards and single bronze objects make up the majority of the finds considered in this context.

Two unique pins from Klęczany, Ropczyce-Sędziszów dist. (Krauss 1968) most likely also come from BrD. Some of their features (large size, sleeve-shaped heads, dense ornamentation) indicate possible links with the late phase of the Pre-Lusatian culture of the Tumulus Circle (Gedl 1983, 95-100), *i.e.*, with the western direction. These pins can be seen as harbingers of the ‘Sieniawa’ style, characteristic of the next phase. The place and manner of their deposition (in a bog, crossed), along with the length that calls into question their practical use as parts of costume, suggest that the role of these artefacts and the reasons for their deposition should be sought in the sacred sphere.



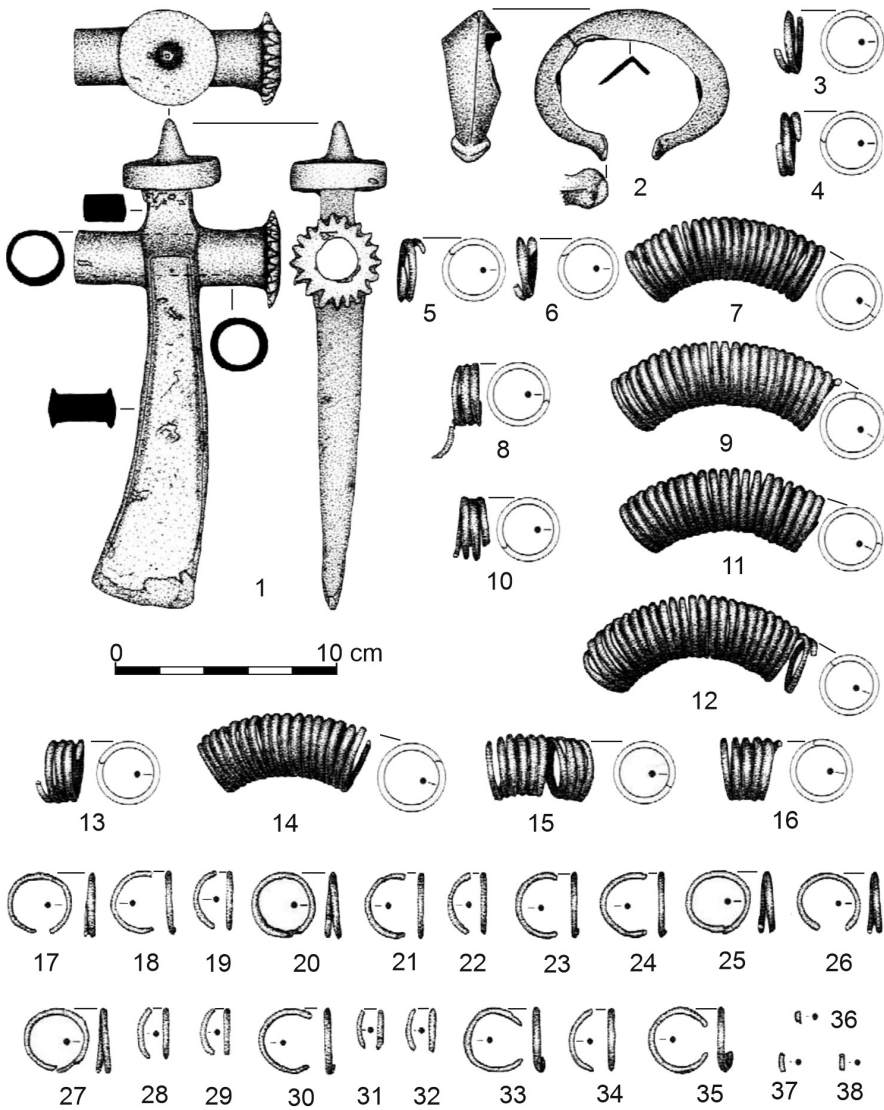


FIG. 5. Hoard from Rzepedź, Sanok dist. (after Kotowicz, Trybała-Zawiślak, Duda 2016)

A similarly early position can be proposed for the hoard from Rożnów-Radajowice, Nowy Sącz dist. In this case as well, the composition of the assemblage entitles us to suggest connections with the west, namely with the Oder River basin. A BrD chronology seems valid because a 'Bohemian type' axe (palstave)

with a funnel-shaped stop-ridge, which has a broader chronological framework (BrD-HaA2 – Blajer 1999, 24), co-occurs here with two bracelets of a somewhat archaic style, having stamp-like ends (Blajer 1999, 61). However, a possibility that this hoard actually comes from HaA1 cannot be completely rejected.

### **Phase HaA1(-HaA2?)**

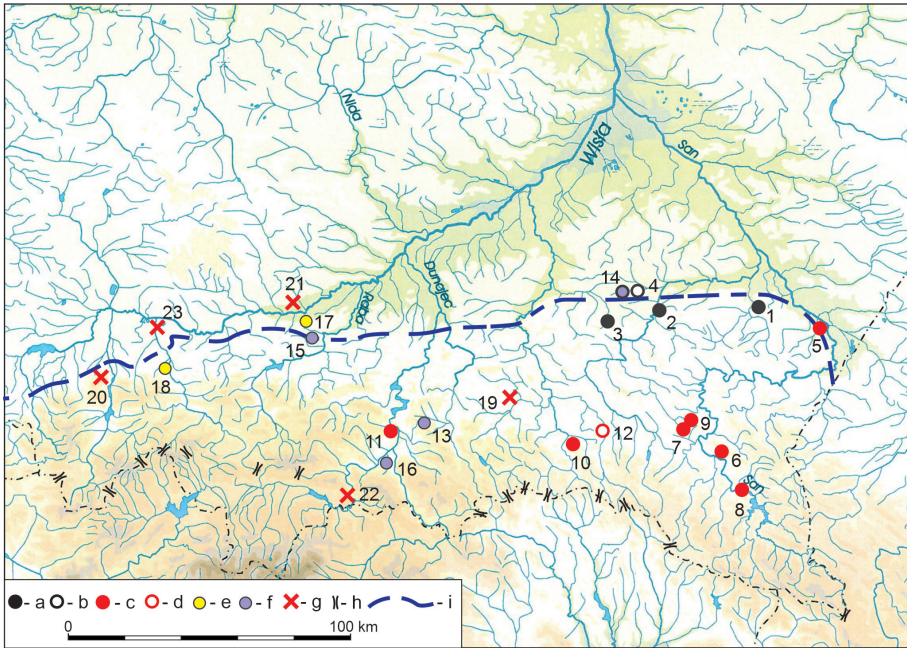
In the region in question, the HaA1 phase is a time when a significant number of hoards was buried (around 20 old and new hoards are known). At the same time, bronze objects show distinct stylistic diversity (Fig. 6: a-f), indicating both links with neighbouring cultural areas and the existence of a local style of metallurgical production, with its centre probably in the middle San basin. In this phase, a significant increase in hoards is characteristic of the entire Oder basin and much of the Vistula basin (Blajer 1999, Maps 2-5; 2001, Maps 3-5).

Three hoards from the early phase of the Tarnobrzeg group (Tarnobrzeg Lusatian Culture – hereafter: TLC) have long been known in the loess Rzeszów Foothills: Maćkówka, Przeworsk dist., Rzeszów, and Wiśniowa, Ropczyce-Sędziszów dist. (Fig. 6: a). They are part of a wider zone marked by the occurrence of richly decorated necklaces and bracelets, encompassing also the Lower San basin and adjacent areas on both sides of the Vistula. These richly decorated ornaments are known as the ‘Sieniawa style’, after the eponymous hoard from Sieniawa, Przeworsk dist. (Żurowski 1925; Gedl 1998, 37-41, 46; Blajer 1999, 48-49, 59-60, 124-125; ; Przybyła 2009, 66-67, Fig. 5).

Found in the early 20<sup>th</sup> century and, unusually for that time, retrieved from the ground in a single lump of earth, the hoard from Maćkówka was transferred to the Lubomirski Museum in Lviv and explored there by Professor Karol Hadaczek, who described 49 artefacts preserved in whole or in fragments. They include artefacts in local style (approx. 55%: five Sieniawa-type rings, seven neck-rings, and fifteen bracelets) and foreign objects, especially those with analogies in the Carpathian Basin (approx. 28.5%: five socketed axes, two discs, four neck-rings, and three bracelets), but also those of western (over 10%: three pins and probably two spiral bracelets) and northern origins (approx. 6%: a flanged axe and perhaps a pair of arm-rings with spiral discs) (Blajer 1987, 111-130 – with older literature, Figs. 7-15).

The hoards from Rzeszów and Wiśniowa – the latter containing a massive Sieniawa-type ring (4595 g) and two extremely massive bracelets (1405 g and 1425 g) – are mostly comprised of local (‘Sieniawa-type’) objects (Blajer 1999, 199-200 – with older literature, 215 – with older literature, Plates 159, 197).





**FIG. 6.** Hoards and selected other sites from phases HaA1(-HaA2?) in the Polish Carpathians and Carpathian foreland. a – hoards with the prevalence of ‘Sieniawa-style’ artefacts; b – presumed hoard with ‘Sieniawa-style’ artefacts; c – hoards with the prevalence of Transcarpathian-style artefacts; d – hoard with artefacts of presumably Transcarpathian provenance; e – hoards with the prevalence of artefacts representing the style of south-western groups of the Lusatian culture; f – hoards of axes with a funnel-shaped stop-ridge of the ‘Bohemian type’; g – full-hilted swords of the Liptov type; h – major mountain passes; i – edge zone of the Carpathians; 1 – Maćkówka, Przeworsk dist.; 2 – Rzeszów; 3 – Wiśniowa, Ropczyce-Sędziszów dist.; 4 – Świlcza, Rzeszów dist.; 5 – Radymno (surroundings), Jarosław dist.; 6 – Załuż, Sanok dist.; 7 – Falejówka, hoard II, Sanok dist.; 8 – Średnia Wieś, hoard II, Lesko dist.; 9 – Falejówka, hoard I, Sanok dist.; 10 – Nowy Żmigród, Jasło dist.; 11 – Marcinkowice, Nowy Sącz dist.; 12 – Wola Niżna, Krosno dist.; 13 – Korzenna (Jasionki), Nowy Sącz dist.; 14 – Trzciana, Rzeszów dist.; 15 – Brzezie, Wieliczka dist.; 16 – Mostki, Nowy Sącz dist.; 17 – Niepołomice, Wieliczka dist.; 18 – Wadowice; 19 – Biecz (surroundings), Gorlice dist.; 20 – Kobiernice, Bielsko-Biała dist.; 21 – Kraków-Wyciąż; 22 – Krościenko, Nowy Targ dist.; 23 – Smolice, Oświęcim dist.

Information about a neck-ring decorated with oblique motifs, found with other artefacts in Świlcza, Rzeszów dist. and taken abroad, suggests that another assemblage related to this metallurgical tradition was found on the northern approaches to the Carpathian Mountains.

Another assemblage that should be placed in the HaA<sub>1</sub> phase is the long-known hoard from the vicinity of Radymno, district of Jarosław, with funnel-shaped pendants and decorated discs characterizing it as an import from the south (Blajer 1999, 95, 98, 136). Such a composition suggests links with the late Piliny culture and with other cultures from the northern part of the Carpathian Basin (Blajer 1999, 95). What requires special comment here are the sheet metal fragments, which for almost 100 years were repeatedly mentioned in publications in the context of this assemblage and were regarded as evidence of the early presence of sheet bronze vessels in the San basin (e.g.: Kostrzewski 1964, 58; Blajer 1999, 108-109, Pl. 147; Gedl 2001, 48-49, Pl. 35:64). More recent research and chemical composition analyses have shown that these are remains of at least two brass vessels, most likely Roman imports, which were presumably mistakenly included in the hoard in the Lubomirski Museum in Lviv in the early 20th century (Biborski 2016; Blajer 2016).

On the upper San, Wisłok and Wisłoka Rivers, the last two decades have brought about discoveries of further hoards, which should also most probably be dated to HaA<sub>1</sub> and associated with the north-eastern zone of the Carpathian Basin (Fig. 6: c). These are the hoard from Załuż and two hoards from Falejówka, Sanok dist., as well as a hoard discovered in Średnia Wieś, Lesko dist., and a hoard from Nowy Żmigród, Jasło dist.

The hoard from Załuż, hoard II from Falejówka, and the hoard from Średnia Wieś are mixed assemblages containing ornaments and tools.

The Załuż assemblage (Zielińska 2005, 61-65, 67, Figs. 1, 3, 4:a-e), especially because of its bracelets decorated with hatched triangles (Fig. 7), is very welcome evidence of the transit role of the Carpathian zone in south-north contacts between the upper Tisza basin, where many similarly ornamented bracelets were found, and the San basin (the cemetery from Grodzisko Dolne, Leżajsk dist., the hoard from Maćkówka – Moskwa 1976, 194, Fig. 20:x,z; Blajer *et al.* 2022, 32-35, Fig. 21).

Apart from bracelets decorated with hatched triangles, hoard II from Falejówka also contains a neck-ring covered with diagonal motifs in the 'Sieniawa style'. This is the first clear argument for contacts in the sphere of metallurgy between TLC and the upper San basin and for the intermediary role of the latter region in the exchange not only from the south to the north but also the other way round. Possible evidence of the latter in the upper Tisza basin includes a fragment of a bar decorated in the Sieniawa style from Bodrog, Trebišov dist. (Novotná 1980, Pl. 60:16) and a pair of bracelets from a late BrD hoard from Makarjovo (Makar'ovo, Mukačivs'kyi dist. – Kobaľ 2015, 291, 296, Fig. 4:3-4).

A large deposit of bronze products was probably found in Średnia Wieś. It only reached archaeologists through photographs, and from these it can be assumed that the hoard contained axes, sickles, circular discs, bracelets, and spiral rings with spiral discs, along with fragments of ornamented sheet metal, ribbons, and wire (Fig. 8). It would therefore be one of the largest bronze deposits from the eastern zone of the Polish Carpathians.

At the current state of research, an axe with a funnel-shaped stop-ridge from Średnia Wieś is the easternmost find of the 'Bohemian type', dated to BrD-HaA2 (cf. notes on the hoard from Rożnów-Radajowice). The socketed axes can be classified within two types: two specimens are undecorated 'beaked' axes, and four represent axes with a symmetrical, arched socket and two mouldings below its mouth. Both types have parallels in the hoard from Maćkówka. The 'beaked' axes, which are numerous south of the Carpathians, date within a broad BrD-HaB framework, and are confirmed in the HaA1-HaA2 phases in Poland, while the axes with two mouldings below the socket mouth have been dated to HaA1 in Poland (Kuśnierz 1998, 11-12). It is difficult to comment confidently on the ornamentation of the Średnia Wieś bracelets, but the motif of hatched triangles discernible on one of the specimens allows us to consider the BrD-HaB1 interval, with an indication towards HaA1 (cf. Blajer *et al.* 2022, 32-35). Analogies to the spiral rings with spiral discs are known on both sides of the Carpathians from times corresponding to BrB1-HaA1, with the closest finds coming from the Rzeszów hoard (Blajer 1999, 92-93, Pl. 159:4-6). Unfortunately, the quality of the photographs does not allow us to comment on the circular discs and the fragments of sheet metal ornaments.

Hoard I from Falejówka (Fig. 9) is an exceptional find. In the first publications it was dated to the times corresponding to phases HaB2-HaB3 (Zielińska 2005, 65-67, Figs. 2, 4:f-h, 5). The unique form of the two fully preserved small sickles inclined some scholars to suggest a casting error. It turns out, however, that there are other sickles, described as *Knopfsicheln mit Spitzenrippchen* (Furmánek, Novotná 2006, Pl. 9:157-161), which have the top part shaped in that manner (Fig. 9: a). Examples come from the hoards from Blatná Polianka, Sobrance dist., Bodrog, Trebišov dist., and from an unknown locality in former Upper Hungary (today Slovakia). Another such sickle comes from hoard I in Lazy (Lazi), Užgorods'kyi dist. (Kobal' 2000, Pl. 49:74). The listed finds are dated south of the Carpathians to times corresponding to the HaA1 phase (Kobal' 2000, 84-85, Fig. 1; Furmánek, Novotná 2006, 36-37). The same, or slightly broader (due to the 'beaked' socketed axes), chronological frameworks can be proposed for the hoard from Tiszaszőlös-Csákányszeg,



**FIG. 7.** Hoard from Załuż, Sanok dist. (after Zielińska 2007)



**FIG. 8.** Lost hoard II from Średnia Wieś, Sanok dist. (Archive of the Historical Museum in Sanok, courtesy of P. Kotowicz)





**FIG. 9.** Hoard I from Falejówka, Sanok dist. (after Zielińska 2007). a – hoards with sickles of the *Knopfsicheln mit Spitzenrippchen* type; 1 – Falejówka, hoard I, Sanok dist.; 2 – Blatná Polianka, Sobrance dist.; 3 – Bodrog, Trebišov dist.; 4 – Lazi, hoard I, Užgorods'kij dist.; 5 – Tiszaszőlős-Csákányszeg, Jász-Nagykun-Szolnok county

Jász-Nagykun-Szolnok county, containing two similar sickles and attributed to the Gáva culture (Kemenczei 1984, 189, Pl. CCIXc:2-3). It is therefore very likely that the Falejówka artefacts originate from the upper Tisza basin and from the same time.

The recent find of four bronze swords from Nowy Żmigród, Jasło dist. (Gancarski, Madej 2021b) – the first assemblage of such composition in southern Poland – is as important as it is impressive. Three short swords with a full hilt with three ribs point to Slovakia, where they are dated to times corresponding to phases HaA2-HaB1 (Novotná 2014, 74-77, Plates 26:116,118-120, 27:121), and are presumably found in the milieu of the early Gáva culture, as well as the Lusatian culture. A similar chronological position is believed to apply to short swords from south-eastern Transylvania (Prejmer and similar types), cast together with the hilts (Bader 1991, 135-137, Pl. 36:328-329). On the other hand, short swords from north-eastern Hungary (type O, variant 1) are dated there to HaA1-HaA2 (Kemenczei 1991, 32-34, Pl. 21:96-99). The assemblage from Nowy Żmigród also contained a flange-hilted sword. It is difficult to assign it to a specific type due to damage, but it may be evidence of contacts with the western zone of central Europe and with northern Europe.

In the northern Carpathian foreland, one flange-hilted sword is known from Kraków-Podgórze (Fogel 1979, 144), and another, incomplete, probably comes from the San basin (Czopek 1993, 164, Fig. 3). The latter falls between Ernst Sprockhoff's type Ib and John David Cowen's Nenzingen type, while in northern Romania such swords are called the Iłșeni type and dated to BrD-HaA1. Swords of a similar design are also known on the upper Dniester River (Żurowski 1949, Pl. XXXII:1-5).

Slightly more numerous in the Polish Carpathians are swords with three ribs on the hilt (the Liptov type), common in the Middle Danube basin. Their finds are concentrated in the western zone and at least five specimens can be mentioned here (Fig. 6: g): Biecz (surroundings), Gorlice dist.; Kobiernice, Bielsko-Biała dist.; Krościenko, Nowy Targ dist.; Kraków-Wyciąże (Fogel 1979, 146); and Smolice, Oświęcim dist. (Reyniak 1986, 318; kindly provided by Krzysztof Tunia, PhD). However, at least seven specimens with similar hilt forms are also known in the upper Dniester basin (Żurowski 1949, Pl. XXXIII).

What draws attention with regard to the four aforementioned hoards from the San valley is their near proximity to the Łupków Pass, while in the case of the swords from Nowy Żmigród, in the Wisłoka valley, the nearby Beskid Pass can be considered.



The local cultural milieu is not well defined, but it is worth recalling the term ‘Warzyce type’ proposed in this connection (Czopek, Poradyło 2008, 180-181, Figs. 128, 130).

On the middle Dunajec River, bronze objects from the Marcinkowice settlement in the district of Nowy Sącz have been known for about 100 years. From the very outset, they have also been surrounded by doubts as to whether and to what extent they can be regarded as closed assemblages. While Żurowski (1927, 35) only speculated that the artefacts discovered in 1923 and 1925 might constitute an assemblage, Zdzisław Durczewski (1948, 210) went further, writing unreservedly about a single hoard. Taking into account the artefacts recovered in 1941, Kostrzewski (1964, 48) assumed that the set could comprise of a hoard and a collection of loose finds from the defensive settlement. Still another approach suggested interpreting the artefacts as remains of three different hoards (Blajer 1999, 181-183, Plates 94-9). Some of the artefacts (decorated shields, a boat-shaped object) point to links with areas south of the Carpathians (Blajer 1999, 98, 110).

References to the west can be found in axes with a funnel-shaped stop-ridge from Korzenna-Jabłonki (Jasionki), Nowy Sącz dist., as well as in those from Trzciana, Rzeszów dist., found together with a ‘beaked’ socketed axe (Blajer 1999, 171, 207-208, Plates 41:9-10, 179). Two new ‘pure’ hoards (containing only artefacts of one category) of similar axes can be added to these old discoveries (Fig. 6: f): Mostki, Nowy Sącz dist., and Brzezcie, Wieliczka dist. An axe with a funnel-shaped stop-ridge was also part of the lost hoard from Średnia Wieś.

On the northern side of the Vistula, the easternmost range of axes with a funnel-shaped stop-ridge of the ‘Bohemian type’ was until recently marked by the deposit of 24 specimens from Pietrzec, Busko-Zdrój dist. (Kostrzewski 1964, 53-54, Pl. XXIII:9), and it has recently been confirmed by the discovery of three specimens in Oficjałów, Opatów dist. (Florek 2016). South of the Vistula, the easternmost find was the hoard from Trzciana. New discoveries have significantly enriched the picture of their distribution in the northern Carpathian foothills, and this may also be important in a broader Central European perspective. Assemblages containing axes with a funnel-shaped stop-ridge are also the earliest dated hoards from the upper Vistula basin, with references to Silesia and Moravia. In Slovakia, a similar specimen occurred at Švedlár, Gelnica dist., in a hoard dated to the Late Tumulus/Early Urnfield period (Novotná 1970, 39-40, Pl. 12:239), which corresponds to BrD.

Discovered in 2001, the hoard from Niepołomice, Wieliczka dist., also reveals links to Silesia and northern Moravia (Reguła 2005). Apart from an

axe with three ribs below the arched socket mouth, it contains, among other things, bracelets decorated with groups of transverse lines, with analogies in the south-western areas of the Lusatian culture (Blajer 1999, 62).

There are some doubts concerning a find from Wadowice, dated to HaA1 (Pieróg 2003). It contained a socketed axe with analogies in specimens from hoards in Žaškov, Dolný Kubín dist., and Komjatná, Liptovský Mikuláš dist., dated to the Kisapáti phase (Novotná 1970, 69, 80, Pl. 31:554,557), *i.e.*, to HaA1. In Poland, this axe has a parallel in a specimen from Maćkówka (Kuśnierz 1998, 12, Pl. 1:10). Apart from the axe, the Wadowice deposit also contained a pin. One should agree with the author of the publication that the pin's head shows similarity to Banka-type specimens, known from the Lusatian culture and the Middle Danube Urnfield culture in Slovakia but dated to the Somotor horizon (Novotná 1980, 132-133, Pl. 39:845-856), *i.e.*, HaB1. Analogies south of the Danube are pins of the Fels am Wagram type from the Middle and early Younger Urnfield period (Říhovský 1983, 38-40, Plates 15:367-370, 16:371-388), *i.e.*, from HaA2-HaB1. Thus, if the analogies to the pin are accurate, either the artefacts from Wadowice were not a closed assemblage, or the axe is slightly older and the hoard should be dated to HaA2 at the earliest. Connections with the Slovakian group of the Lusatian culture are evident here, and the Skawa valley could be conveniently accessed from the Orava and Vah valleys through the Spytkowice Pass.

Another assemblage possibly connected with the phase discussed here is a hoard of twisted arm- or ankle-rings from Niżna Łąka, Krosno dist., although analogies also allow for a slightly broader dating (HaA1-HaB1). The authors of the publication have accepted its association with the Gáva culture as probable (Gancarski, Leszczyński, Madej 2021, 578-580).

## Phase HaB1

The chronology of the assemblage from Podłęże, Wieliczka dist., does not raise any doubts. Both the analysis presented in the original publication (Potocki 1966) and the findings of a more recent study of HaB1 hoards from Poland (Blajer 2013, *passim*) point to this phase and confirm the occurrence of analogies to the Podłęże artefacts in the western and south-western areas of the Lusatian culture: Greater Poland and Silesia, and especially northern Moravia and north-western Slovakia. The hoard from Podłęże can therefore be regarded as evidence of the continuing links in the sphere of metalwork between the Kraków subgroup of the Lusatian culture and the Silesian group.

Hoardings that could be considered specific to the TLC no longer occur in this phase. This disappearance of regional styles is interesting, and it fits a broader issue signalled below. Hoards with references to the upper Tisza basin are not known either.

### Phase HaB<sub>3</sub>

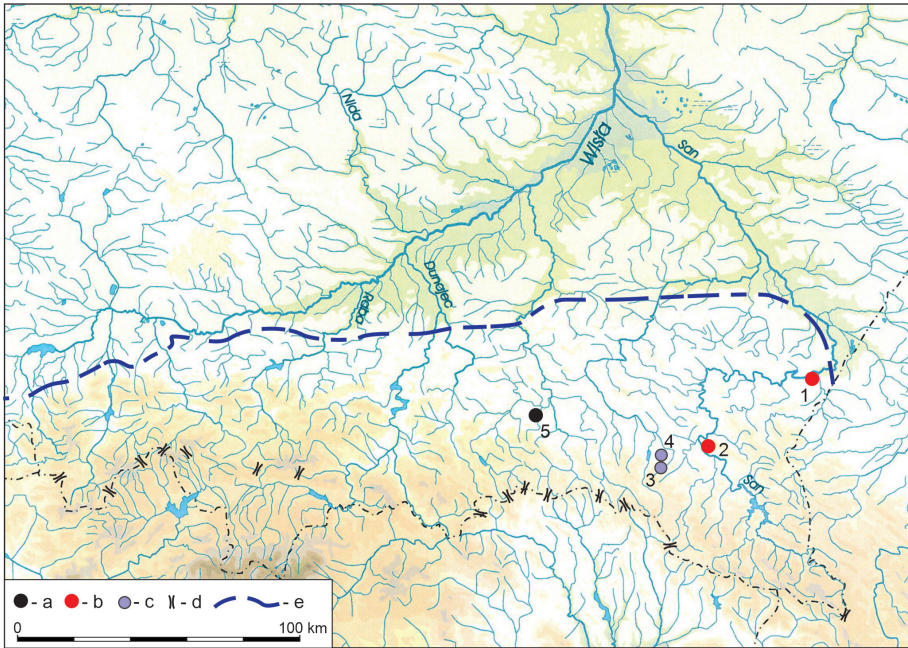
Hoardings that can reasonably be dated to HaB<sub>3</sub> are relatively few and have so far only been confirmed in the eastern part of the Polish Carpathians (Fig. 10). This decrease in the number of deposits is consistent with the trend observed in the eastern part of the Carpathian Basin (e.g., Blajer 2013, 101-108, 121-125).

There are two recent finds with links to the south: hoard II from Zarszyn and a hoard from Wola Sękowa, Sanok dist.

Comprised of five bronze cups, hoard II from Zarszyn stands out as a new phenomenon in southern Poland. It has special links with the Slovakian group of the Lusatian culture, as evidenced by analogies (especially to a unique undecorated specimen) in the hoard from Liptovský Mikuláš, dated to HaB<sub>3</sub> (Novotná 1991, Plates 6:35-38, 7:39-42,44; Blajer *et al.* 2022, 45-47). The Zarszyn hoard provides an argument for including the upper Vistula basin into a wider Central European zone marked by deposition of vessel sets, and it may also be relevant to considering the social determinants of such behaviour. Magnetic surveys have provided grounds for supposing that this hoard was deposited in the vicinity of the remains of an older barrow (Blajer *et al.* 2022, 161-162, 164, Figs. 143:1, 145).

Meanwhile, a small cauldron found at Wola Sękowa (Fig. 11) appears to be a unique find. No satisfactory parallel has been found, and the partial analogies in bronze, gold and clay vessels observed over a vast territory from northern Italy and eastern France to Bulgaria suggest a broad framework corresponding to phases HaB<sub>3</sub>-HaD (Blajer *et al.* 2022, 49-54, Figs. 23-25). Under these circumstances, the dating had to be based on a natural science method: willow twigs preserved inside the spiral tubes found in the vessel produced C<sub>14</sub> dates indicating the 9th century BC, corresponding to the HaB<sub>3</sub> phase. The question of cultural connotations and interpretation of this deposit remains open (Blajer *et al.* 2022, 54-55, Table 1).

The hoards from Przemyśl and Sanok (Biała Góra) (Fig. 10: b) include artefacts specific to the Cimmerian horizon (strap dividers and decorated discs), which may suggest their links with the steppe zone. The chronological position of the finds from Przemyśl, *i.e.*, HaB<sub>3</sub>, is not in doubt (Gedl 1999, 71-72).



**FIG. 10.** Hoards from phase HaB3 in the Polish Carpathians. a – hoard with artefacts in the north-western style; b – hoard with artefacts in the eastern (steppe) style; c – hoard with artefacts in the central- or south-European style; d – major mountain passes; e – edge zone of the Carpathians; 1 – Przemyśl (surroundings); 2 – Sanok (Biała Góra); 3 – Wola Sękowa, Sanok dist.; 4 – Zarszyn, hoard II, Sanok dist.; 5 – Osobnica, Jasło dist.

As for the bimetallic deposit from Sanok (Biała Góra), it contained objects with broad lifespans (tube-shaped fittings, undecorated circular discs) on the one hand, and ornamented circular discs of a rare variety on the other. References to the hoards from Śniatycze, Zamość dist. (Kłosińska 2008) and Mošanec, Dnìstrov's'kij dist., the latter containing numerous objects typical of the Cimmerian horizon (Смирнова, Войнаровський 1994) and dated to the first half of HaB3 (Бандрівський, Крушельницька 2012, 31), justify dating the Sanok (Biała Góra) hoard to HaB3 and connecting it with this horizon (Blajer *et al.* 2022, 55-63).

The find from Osobnica, Jasło dist., also likely dates from this time. It contains a twisted necklace and four flat rings, which are probably elements of a multi-part necklace, an ornament category hitherto unknown in southern Poland. The hoard was initially dated to HaD (Blajer 2001, 364), allowing a broader framework from Bronze Age Period V to HaD (Blajer 2003, 251), but



**FIG. 11.** Hoard from Wola Sękowa, Sanok dist. (Archive of the Historical Museum in Sanok, courtesy of P. Kotowicz)

more recently, it has been proposed to date it to Period V based on analogies from the Vorpommern region (Gancarski, Leszczyński, Madej 2021, 586-587). The north-western analogies indicated in this context may foreshadow changes in the orientation of the cultural connections of the Polish Carpathian zone – from south to north-west – which became clearly evident in the Early Iron Age.

While the hoard from Przemyśl is probably related to the TLC milieu, the cultural situation in the Sanok and Jasło area is unclear, although some references to the Gáva culture have been pointed out in the literature with respect to the local pottery (Gedl 1998, 146), and the working term ‘Siedliska type’ has been proposed (Czopek, Poradyło 2008, 184, Fig. 130).

Over 20 years ago, it was proposed to date the lost hoards from Naszacowice, Nowy Sącz dist., and Szczawnica-Szlachtowa, Nowy Targ dist., to HaB2-HaB3 (Blajer 2001, 348, 352), but this seems poorly justified today. The initial dating was based on the presence of socketed axes and on Żurowski’s comment that ‘there is nothing else we can say about them, except that they most probably came from Montelius Bronze Age Period V’, with the quoted author aptly pointing out: ‘These are, strangely enough, the only specimens of this type of artefact from western Podkarpacie’ (Żurowski 1927, 45-46, 74). The current state of research suggests a broader time frame, namely BrD-HaB3.



It can even be assumed that socketed axes are more frequent in hoards from HaA and have Transcarpathian connections (especially those from Maćkówka and Średnia Wola, but also Niepołomice, Trzciana and Wadowice), while they are rare in HaB1 (Podłęże) and HaB2-HaB3 (Przemyśl). Their potential occurrence in hoards from HaB2-HaB3 would suggest links with the western regions of the Lusatian culture instead, but the presence of late variants of socketed axes, including the 'Lusatian' type, is yet to be confirmed on the upper Dunajec River (Kuśnierz 1998, Plates 42:B, 43:A-B).

### Phases HaC-HaD

Other research problems emerge with the Early Iron Age, when the distribution of finds becomes more even, both across the Oder and Vistula basins – which is particularly evident in the younger phase (*e.g.*, Blajer 2001, 65-71, Map 8) – and in the Polish Carpathians. A profound change took place in that period in the geographic-cultural orientation of the metal objects deposited in the Carpathian hoards, which now reveal connections with the north-west.

At least 20 hoards should be considered in the region under discussion (Fig. 12). While the TLC zone still remains without its own style, three clusters of finds are discernible in the Carpathians and their north-western foothills.

At least seven assemblages can be included in the eastern (Sanok-Jasło) cluster. Those previously known include: Hłomcza, Tyrawa Solna, Zagórz, Zarszyn, hoard I, all of them in the Sanok dist. (Blajer 2001, 360, 368, 369, older literature there). More recent finds are Średnia Wieś, hoard I, Lesko dist.; Lubatówka, Krosno dist.; and Samoklęski, Jasło dist. (Gancarski, Leszczyński, Madej 2021).

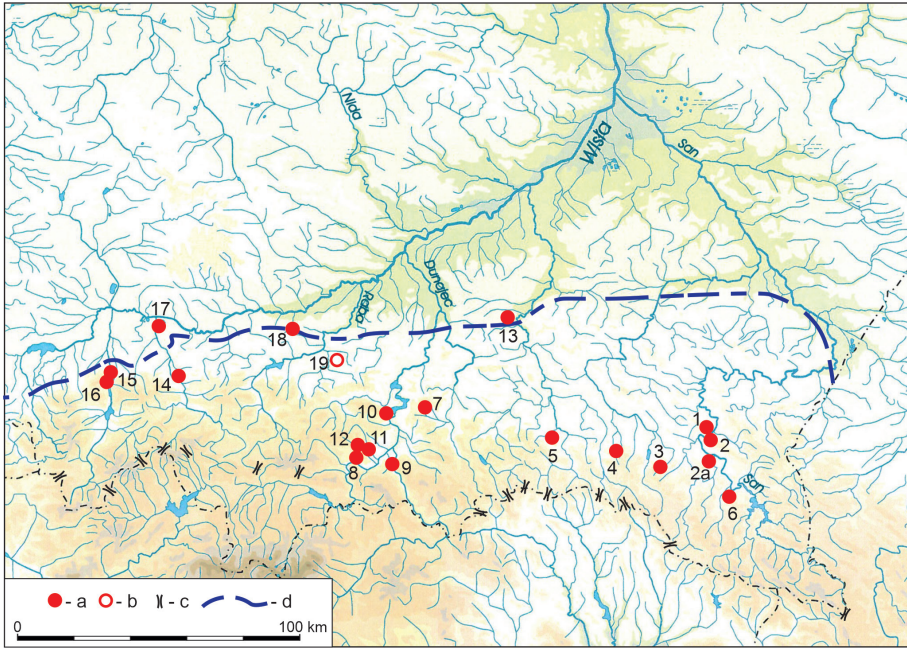
Of particular interest is the hoard from Lubatówka, which consists of bronze bracelets and glass beads and was found along with pottery fragments (including the bottom part of a saltmaking beaker) within the Rymanów Hills, where mineral waters and salt springs occur (Gancarski, Leszczyński 2021).

The bronze artefacts from Samoklęski and Średnia Wieś represent the Sącz (Nowy Sącz) style. In the area of Jasło and Lesko, this is a new observation, indicating a wider spread of this style towards the east, and another new point on the map – albeit outside the Carpathian zone – is a recently discovered hoard of several ornaments from Czerwona Wola near Sieniawa, in the Przeworsk dist.<sup>4</sup>

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4 Information courtesy of Professor Sylwester Czopek.





**FIG. 12.** Hoards from phases HaC-HaD in the Polish Carpathians. a – hoards of bronze and iron objects; b – hoard of bronze objects presumably from phases HaC-HaD; c – major mountain passes; d – edge zone of the Carpathians; 1 – Hłomcza, Sanok dist.; 2 – Tyrawa Solna, Sanok dist.; 2a – Zagórz, Sanok dist.; 3 – Zarszyn, hoard I, Sanok dist.; 4 – Lubatówka, Krosno dist.; 5 – Samokłęski, Jasło dist.; 6 – Średnia Wola, hoard II, Lesko dist.; 7 – Jasienna, Nowy Sącz dist.; 8 – Łącko, Nowy Sącz dist.; 9 – Stary Sącz-Lipie, Nowy Sącz dist.; 10 – Świdnik, Nowy Sącz dist.; 11 – Świdnik, Limanowa dist.; 12 – Łukowica-Wolica, Limanowa dist.; 13 – Lipiny-Kozia Wola, Dębica dist.; 14 – Zagórze, Wadowice dist.; 15 – Kobiernice, Bielsko-Biała dist.; 16 – Porąbka, hoard I-III, Bielsko-Biała dist.; 17 – Smolice, Oświęcim dist.; 18 – Strumiany, Wieliczka dist.; 19 – Sobolów, hoard III, Bochnia dist.

The cultural milieu between Lesko and Jasło remains undefined. A working proposal ('Niepla type' – Czopek, Poradyło 2008, 181, 183-184, Figs. 129-130) has not been developed further.

The Sącz cluster has been known for nearly 100 years (Żurowski 1927), and it includes the following hoards: Jasienna, Łącko, Stary Sącz (Lipie), Świdnik, Nowy Sącz dist.; and Świdnik, Limanowa dist. Of the more recent finds, artefacts (remnants of hoard II) from Łukowica, Limanowa dist., should be mentioned. Each of these hoards contained objects representing the Sącz style.

It is worth noting here the hoard from Świdnik in Limanowa dist. (Fig. 13), which included nail ear-rings, an ornament originating from the Scythian culture. A gold specimen of such an ear-ring was found in the hoard from Lipiny-Kozia Wola, Dębica dist. Artefacts specific to nomadic cultures also occurred among the finds from Łukowica: circular strap dividers for horse harness.

With regard to the cultural situation in this region, the proposed notion of 'Zabrzeż-Podegrodzie horizon' requires further study and verification (Jędrzyk *et al.* 2021, 493-494).

Recent years have brought very interesting observations on the Skawa and Soła Rivers, where another cluster of hoards becomes apparent.

The deposit from Zagórze in the district of Wadowice refers to hoards from the Nowy Sącz region and, due to the place where it was found, it constitutes an important element completing the picture of Lusatian culture settlement in the south-western part of the upper Vistula basin (Blajer *et al.* 2018). It also has analogies in Orava, in the hoard from Krásna Hôrka, Tvrdošín dist. (Lofajová Danielová 2020, 130-131, Fig. 6:1-9) – in this case the contacts were from north to south rather than the other way round, probably through the Spytkowice Pass.

A rich bimetallic hoard of ornaments from Kobiernice, Bielsko-Biała dist. is a similarly surprising novelty, as are three iron hoards found not far from each other in neighbouring Porąbka, Bielsko-Biała dist., some of which contained bipyramidal ingots and ring ornaments (Choraży, Choraży, Pudełko 2022; Matlak (ed.), undated).

These hoards correspond with the Lusatian culture settlement recently found in the northern zone of the Żywiec Basin (Choraży, Choraży 2021).

The hoard of iron neck-rings from Strumiany, Wieliczka dist. (Reguła 1980, 26, Figs. 5:g-h) raises similar issues. In the light of recent findings, it can be dated to HaC2 (Dzięgielewski *et al.* 2020, 239, Table 1).

For the full picture, mention should also be made of the finds from Smolice, Oświęcim dist., where bronze and iron artefacts were found in a gravel pit area at the confluence of the Skawa and Vistula Rivers. They included several ankle rings of the Sącz type, whose similar sizes and shapes suggest that they may originally have constituted an assemblage.<sup>5</sup>

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5 Information courtesy of Dr Krzysztof Tunia.

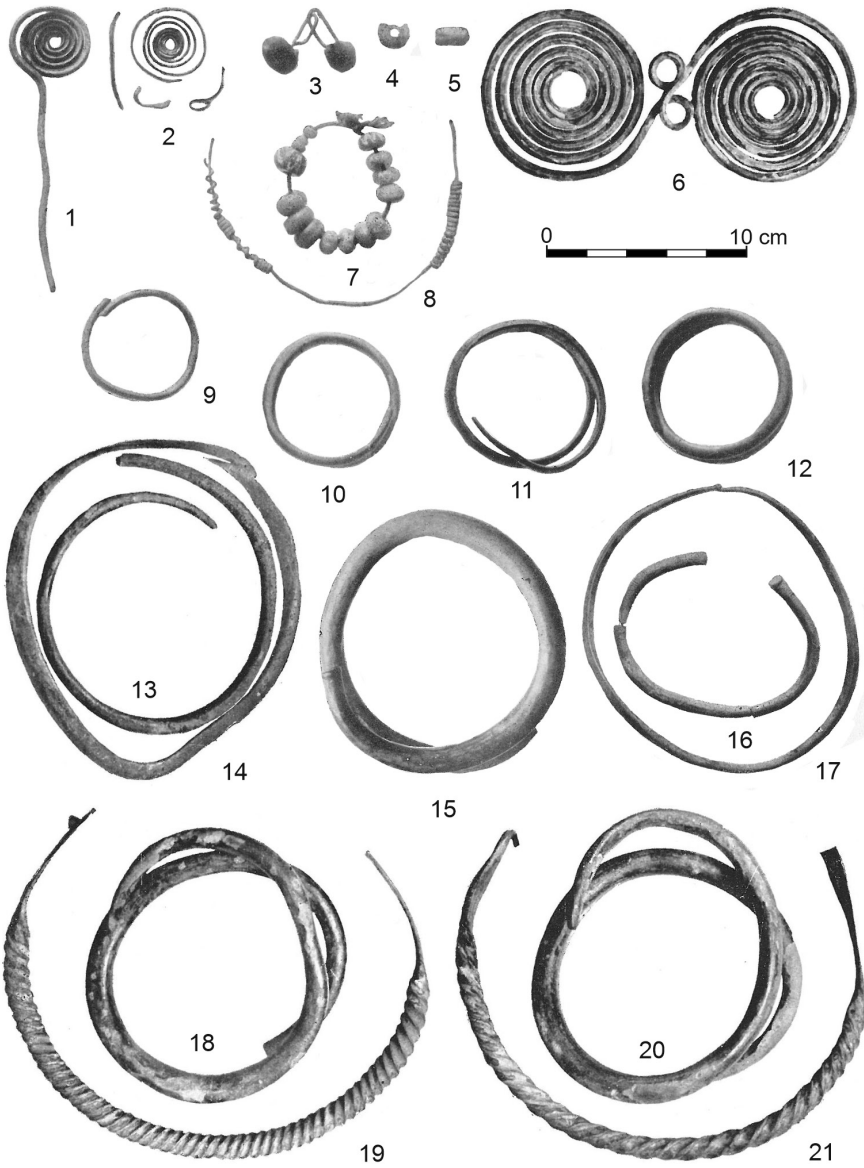


FIG. 13. Hoard from Świdnik, Limanowa dist. (after Żurowski 1927)

There are three issues of a more general nature that merit attention regarding the study of Early Iron Age hoards.

The first problem concerns the correct classification and, consequently, overall perception of bronze objects traditionally included in the 'Stanomin style' and, in the upper Vistula basin, in the 'Sącz style', and their position against the broader Central European background. This especially concerns neck-rings and so-called ankle-rings (Kostrzewski 1964, 20-21, 23-24). The issue has recently been critically discussed by Marcin Maciejewski (2019), but the problem requires further study, also in connection with new finds.

The second problem is the accurate dating of assemblages containing Early Iron Age bronze objects, including those made in the Sącz style. This has already been pointed out by Sabine Pabst-Dörrer (2000, 116-117), who postulated an earlier chronological position than that commonly accepted in the Polish archaeological literature, especially with regard to brooches of the Strzebielinko and Krásna Hôrka types, which she dates to HaC.

This situation also implies the need for a new study of old hoards, especially from the vicinity of Nowy Sącz, but also Sanok, including chemical and metallographic analyses.

The third problem concerns the proper dating of the oldest iron artefacts in their depositional contexts. The supposition that iron ring ornaments appeared in hoards in Poland relatively early – as early as HaC (Blajer 2001, 62, 177, 289) – has been clearly confirmed by more recent studies (Dzięgielewski *et al.* 2020), but the problem requires further research, also with regard to bipyramidal ingots.

### Undated assemblages

We should recall here the above-mentioned lost hoards from Naszacowice and Szczawnica-Szlachtowa, which contained socketed axes, among other artefacts. In light of current knowledge on the occurrence of these tools in the upper Vistula basin, both the HaA1-HaB1 range and, less likely, the HaB2-HaB3 range can be considered.

The chronological position of three deposits found close to each other in Sobolów, Bochnia dist. is not quite certain. In the documentation of the Heritage Protection Services, they are tentatively dated to HaB2-HaB3 (hoard 3) and to HaD (hoards 1 and 2)<sup>6</sup>. Pending detailed analysis, we have to rest on these

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6 Information courtesy of Marek Materna, MA.

assessments, which are very likely correct, especially in the case of hoard 2, where glass beads occurred.

The gold two-coil spirals from hoard III from Falejówka in the district of Sanok represent a simple form, and a review of finds from Poland by Marta Ligęza (2010) shows that they have no equivalents here. Good analogies are also difficult to identify south of the Carpathians.

Hoard I from Łukowica, Limanowa dist., remains undated, as nothing is known about its composition.

Finally, mention should be made of two finds recently brought to our attention by Marcin Maciejewski, who suggested that they may be remnants of hoards. From Dudyńce, Sanok dist., come two small bronze rings of undetermined chronology (Blajer *et al.* 2022, 205, Fig. 181), and in Srogów Górny, Sanok dist., an iron flat axe and a heavily damaged iron spearhead were found about 10 m apart (Blajer *et al.* 2022, 205, Fig. 177:B). The closest analogies to the axe come from the 6th to 5th centuries BC, and possibly from HaD (Blajer, Kotowicz, Biborski 2021, 526-528, Fig. 10), and its possible co-occurrence with the iron spearhead would be very interesting.

## La Tène A-C period

This review can be complemented by hoards from the La Tène period (thereafter: LT) discovered in recent years. Although the question of the degree of continuation or discontinuation of cultural traditions remains debatable, the LT finds show some similarities to those known from the Bronze Age and Early Iron Age.

The oldest among them is a deposit of iron tools and parts of horse tack from Międzybrodzie, Sanok dist., dated to the LTA (Blajer *et al.* 2022, *passim*).

Fragments of two bronze bracelets found on Mount Wroczeń in Pakoszówka, Sanok dist., interpreted as a presumed hoard or grave, come from LTB<sub>2</sub>/C<sub>1</sub>–LTC<sub>1</sub> (Bochnak, Kotowicz 2015). Deposits of iron tools (hoard I) and iron tools and horse bits (hoard II) discovered near the aforementioned bracelets have been assigned a similar chronological position – LTC and LTC<sub>1</sub>, respectively (Bochnak, Kotowicz, Opielewska 2016).

## Find contexts of the hoards

Identifying the cultural milieu in which the hoards were deposited and clarifying their position against other elements of the settlement network remains

the most significant research problem. An important step in this direction is M. Maciejewski's study of deposits from the Sanok area (Blajer *et al.* 2022, 167-212).

The current state of research indicates at least nine finds associated with settlement sites. In approximate chronological order these are: Trepcza, Koszyce Wielkie, Żywiec, Brzezcie, Marcinkowice I-II, Marcinkowice III, Strumiany, Zagórze, and Hłomcza.

Hoard II from Zarszyn and the hoard from Świdnik (Nowy Sącz dist.) were most likely discovered close to barrows, and a connection with a cremation cemetery has been considered for Szczawnica-Szlachtowa.

Deposition in a prominent place has been attested for at least 22 hoards (as well as for all four LT hoards), which is understandable in this landscape zone. However, this general description covers a range of various locations: on the top of a mountain or hill (Załęże, Falejówka I-II, Załuż, Podłęże, Sobolów I-III, Jasienna), on a promontory (Rzepedź, Nowy Żmigród, Osobnica), on a slope (Radojewice, Korzenna-Jabłonki, Mostki, Falejówka III, Zarszyn II, Wola Sękowa, Sanok (Biała Góra), Samokłęski, Porąbka, Międzybrodzie, Pakoszówka (presumed hoard), Pakoszówka I-II), or on a terrace (Niepołomice, Niżna Łąka).

A link to an aquatic environment has been established in five cases. This may be a peat bog (Klęczany), a wet meadow (Świdnik, Nowy Sącz dist.), a gravel pit by a river (Smolice), an oxbow lake (Kobiernice), or the proximity of a watercourse (Lubatówka). The information on drainage works appearing in the context of Maćkówka and Wiśniowa is ambiguous.

The presence of a special zone of deposition is confirmed at Sobolów (possibly from HaB2-HaB3, then in the Early Iron Age), Porąbka (three iron deposits) and Pakoszówka (three LT period deposits). Prolonged deposition (from HaA1 to LTC?) took place on Mount Wroczeń near Sanok. M. Maciejewski pointed out the special importance of Mt. Wroczeń and the close proximity of the hoards from Pakoszówka (Blajer *et al.* 2022, 209).

In addition, three finds (of which at least two are Early Iron Age hoards) from the Limanowa district occurred close to the River Słomka (Słonka), over a 3 km long stretch of land. These are (in approximate north-south order): Łukowica II, Łukowica I and Świdnik.

Such situations justify including the Polish Carpathians in the discussion on the interpretation of similar sites or zones of repeated deposition known in Moravia (*e.g.*, Blučina-Cezavy, Brno-venkov dist.; Štramperk-Kotouč, Nový Jičín dist. – Salaš 2005, 285-306, 454-462, obr. 80-81), Silesia (*e.g.*, Karmin,



Milicz dist. – Baron *et al.* 2019, *passim*), or Slovakia (*e.g.*, Gemer, Revúca dist. – Novotná 1996).

Stone settings or stone coverings have been noted in Niepołomice, Sanok (Biała Góra), and Kobiernice, which means only in relation to discoveries made in the last two decades, including those made in the presence of an archaeologist. There have been no observations concerning the use of fire.

The hoard from Jaworze Dolne was deposited in a ceramic container, and the same was probably true also for the hoards from Rzepedź, Zarszyn II, Hłomcza, Stary Sącz, and Szczawnica-Szlachtowa. The hoard from Załęże, and probably also the hoards from Maćkówka and Sanok, were buried in organic containers.

Observations suggesting a deliberate arrangement have been made regarding the following deposits: Klęczany, probably Maćkówka, Nowy Żmigród (in a small pit), Sanok (Biała Góra) (in a pit), Lubatówka (in a pit), possibly Niepołomice, Zagórz, Kobiernice, Porąbka 2-3, and probably Strumiany.

### Composition of the hoards

The deliberate selection of objects is evident in the ‘pure’ hoards of axes (Brzezie, Mostki, Trzciana), sickles (Falejówka II), swords (Nowy Żmigród), neck-rings (Osobnica, Strumiany), bracelets (Marcinkowice I, Niżna Łąka), ankle rings (Tyrawa Solna), Sibiú-type gold ornaments (Trepcza), gold spirals (Falejówka III), bronze vessels (Zarszyn II), and iron ingots (Porąbka 1).

Many of the deposits are sets of dress items or remnants of such sets, and they do not contain tools, weapons, or other categories of artefacts. There are 25 such deposits: Jaworze Dolne, Koszyce Wielkie, Dębowiec, Rzeszów, Wiśniowa, Radymno, Marcinkowice III, Sanok-Biała Góra, Hłomcza, Zagórz, Zarszyn I, Średnia Wieś I, Lubatówka, Samokłęski, Jasienna, Łącko, Stary Sącz-Lipie, Świdnik (Limanowa dist.), Lipiny-Kozia Wola, Sobolów 1-3, Zagórz, Kobiernice, and Porąbka 3. Most of them are from the Early Iron Age, and with the inclusion of seven ‘pure’ hoards of ornaments the total number grows to 32, which is half of all the finds (not counting the LT hoards).

The artefacts from the hoards do not show traces indicating special treatment, like intentional mechanical or thermal damage. Only Stefkowa and Falejówka II contained a number of worn specimens (the latter hoard also contained a casting cake), and casting waste was found in the Sobolów 3 hoard. At least one of the axes from Średnia Wieś II has a casting jet, and the axes from Trzciana have casting seams that have not been removed.

## Concluding remarks

The above overview has not identified any clear trends or dynamics of change in terms of site selection, object selection, or treatment. This, however, may be due to the fact that the collection in question is not numerous, while at the same time it includes finds from a time span of at least 1,100 years (or around 1,400 years if LT hoards are included).

Nevertheless, many of the finds attest to inter-regional contacts of varying extent, and in this context questions arise about the role of mountain passes. It would, however, be premature to attempt to summarise the dynamics of change. To do so, it would be necessary to include stray finds as fully as possible and to take into account some artefacts found far to the north of the Carpathians (cf. Blajer 2014). It would also be necessary to make a comparison with the situation in Slovakia, which is the closest region beyond the Carpathians, one where many more hoards have been found and which had numerous links with the areas discussed here, especially in BrA-HaB1. This, however, would go well beyond the scope of the present remarks, which nevertheless, even in their present form, may prove helpful as a starting point for further, more general considerations about the place and role of the Polish Carpathians in the Bronze Age and Early Iron Age of Central Europe.

## List of certain and presumed hoards known up to 2001 (Fig. 1: a):

Abbreviations used:

MA – Archaeological Museum; MH – Historical Museum; MO – Regional Museum; MP – Subcarpathian Museum; PAU – Polish Academy of Arts and Sciences; PMA – State Archaeological Museum; ZN IA UJ – Scientific Collections of the Institute of Archaeology of the Jagiellonian University

### 1. Hłomcza, dist. Sanok

During excavations at the multicultural settlement on site 1 in 1995 and 1997, over an area of approx. 3 m<sup>2</sup>, a cluster of artefacts was found in a partially preserved clay vessel: approx. 300 small ornaments (mainly pendants) and their fragments, 14 glass paste beads. HaD? MP Krosno. Muzyczuk, Pohorska-Kleja 1996, 70-82, Plates II-XI; Blajer 2001, 360.

### 2. Jasienna, dist. Nowy Sącz

Ploughed out 'in 1885 from a field on a mountain top': ankle ring, bracelet. HaC2-HaD? Formerly Jagiellonian University Archaeological Room; currently MA Kraków. Żurowski 1927, 36-37, Pl. VIII:1-2; Kostrzewski 1964, 35 (with older literature), Fig. 25.

**3. Jaworze Dolne, dist. Dębica**

When planting trees in 1951, in a clay pot: two bracelets, 32 disc-shaped spiked pendants, ten funnel-shaped pendants, 80 spiral tubes, seven decorative plates, one knob. BrB<sub>1</sub>(-BrB<sub>2</sub>?). MA Kraków. Nosek 1959; Blajer 1990, 112 (with older literature), Plates XL-XLII; 2001, 319.

**4. Klęczany, dist. Ropczyce-Sędziszów**

In a peat bog during land reclamation in 1941, arranged transversely: two large pins with sleeve heads. BrD. MA Kraków; MO Rzeszów; Krauss 1968; Blajer 1999, 170 (with older literature), Pl. 54.

**5. Korzenna-Jabłonki (*recte* Jasionki), dist. Nowy Sącz**

Found in a forest, probably on a southwest-facing slope; donated to the museum in the early 1970s: two axes with a funnel-shaped stop-ridge. (BrD?-)HaA<sub>1</sub>(-HaA<sub>2</sub>?). MO Nowy Sącz. Abłamowiczowie 1989; Blajer 2001, 331, Pl. 41:9-10.

**6. Lipiny-Kozia Wola, dist. Dębica**

Excavated in a field before 1970, at a depth of approximately 2 m: one spiral bracelet, nine spiral pendants (four with a single glass bead), one gold nail ear-ring. HaD? PMA Warszawa. Głosik 1975, 456, Fig. 53 ('vicinity of Tarnów'); Blajer 2003, 251 (with older literature), Fig. 7:d-n.

**7. Łącko, dist. Nowy Sącz**

Excavated in 1930: two twisted neck-rings, half of a twisted neck-ring, two arm-rings. HaC<sub>2</sub>-HaD? MA Kraków. Durczewski 1948, 209-210, Pl. CIII:3-7; Kostrzewski 1964, 45-46 (with older literature), Fig. 45.

**8. Łukowica (surroundings), hoard I, dist. Limanowa**

A few decades before 1874, 'bronzes were ploughed out on Świdniki łukowickie' (on hills near Łukowica and Świdnik). 'There was around half of a bushel of it'. Undated. Żurowski 1927, 47-48; Kostrzewski 1964, 46 (with older literature).

**9. Maćkówka, dist. Przeworsk**

During the draining of a field at Teresin Manor on 14.10.1905, excavated in a single lump of earth; 'the neck-rings (...) lay one on top of the other and formed a sort of cylindrical wall of some kind of bucket or bag, into the interior of which other smaller specimens were inserted': a flanged axe, five socketed axes, five Sieniawa-type rings, seven open neck-rings, four neck-rings of double twisted wire, a pair of arm-rings with spiral discs, 18 bracelets, two spiral bracelets, two large pins, a pin head. HaA<sub>1</sub>. Formerly in Lubomirski Museum in Lviv; currently mostly in MA Kraków, one specimen is in private hands, 13 specimens have possibly been lost. Blajer 1987, 111-117 (with older literature), Figs. 7-15; 1999, 179-180 (with older literature), Plates 87-92.

**10. Marcinkowice, dist. Nowy Sącz**

**Hoard I (?)**: A few years before 1923, bronze 'rings' were dug up in a field 'on the stronghold, in such quantity that they filled the finder's cap entirely'. Only one ring (bracelet) has survived. HaA<sub>1</sub>. Formerly in the MA PAU Kraków, possibly lost. Żurowski 1927, 35-36, Pl. VIII:4; Blajer 1999, 181 – with older literature, Pl. 94:1.

**Hoard II (?)**: In 1925, a spearhead and a pendant were found on the stronghold, presumably on the same site as hoard I (according to J. Żurowski, perhaps part of that hoard). HaA. MA Kraków. Żurowski 1927, 35-36, Pl. VIII:5-6; Blajer 1999, 181-182 (with older literature), Pl. 94:2-4 (the mention about the bracelet and its illustration – Pl. 94:2 – seems to be a mistake and presumably refers to a specimen from the previous find, *i.e.*, hoard I); 2001, 332.

**Hoard III (?)**: Before 1941, on the stronghold, the compactness is questionable: at least five bracelets, fragments of at least three spiral bracelets, four discs, 70 spiked pendants, 144 bronze beads, nine spiral tubes. HaA1. MA Kraków. Blajer 1999, 182-183 (with older literature), Pl. 94:5-18, 95-99; 2001, 332.

#### 11. Naszacowice, dist. Nowy Sącz

Before 1863, in a field on the early medieval stronghold, ‘in addition to bronze chisels, the following was found: a kind of round bowl, seemingly plaited from a bronze bar’ (which means bronze axes were found – compared to ‘celts’, *i.e.*, socketed – and a large spiral disc). HaA1-HaB3? Żurowski 1927, 46-47; Kostrzewski 1964, 51 (with older literature); Blajer 2001, 348.

#### 12. Osobnica, dist. Jasło

In spring 1999, during deep ploughing ‘on a small upland promontory, sloping gently towards the valley of the Bednarka stream’: one twisted neck-ring, four rings of flat ribbon (necklace parts?); a test trench revealed traces of three post holes in one line. HaB2-HaB3? MP Krosno. Blajer 2001, 364; Gancarski, Leszczyński, Madej 2021, 583-587, Figs. 20-22.

#### 13. Podłęże, dist. Wieliczka

In July 1965, when digging pits for posts for a fence near the then Gromadzka Rada Narodowa (local administration) office, at the top of a broad hill a few hundred metres from the Vistula terrace, near the edge from which the hill slopes down towards the south, at a depth of about 80 cm, the following were found along with a clay vessel, ‘but it could not be established whether the vessel stood upright and whether bronze objects were in the vessel’: two socketed axes, six spearheads, three bracelets, two spiral bracelets, one brooch, two decorative discs. HaB1. Institute of Archaeology and Ethnology of the Polish Academy of Sciences Kraków. Potocki 1966; Blajer 2013, 148-149 (with older literature), Plates 56-59.

#### 14. Przemyśl (surroundings)

Before 1897: one spear head, one anvil, one small socketed axe, four double bosses (strap dividers), one spiral disc. HaB3. MA Kraków. Kostrzewski 1964, 55 (with older literature), Fig. 60; Gedl 1999.

#### 15. Radojewice (*recte* Rożnów-Radajowice), dist. Nowy Sącz

Ploughed out in the hamlet of Radajowice in June 1908, ‘on a high mountain, on a slope’: one axe with a funnel-shaped stop ridge, two bracelets. BrD(-HaA1?). MA Kraków. Kostrzewski 1964, 57 (‘Radejowice’, with older literature), Fig. 66; Blajer 1999, 194, Pl. 143:3-5; MAK Archives, Rożnów, 15-19.

**16. Radymno (surroundings), dist. Jarosław**

Excavated in 1882: six ornamental discs, five funnel-shaped pendants and a fragment of a funnel-shaped pendant, approximately 200 small spiked pendants, fragments of two spiral discs, spiral tubes. HaA1. MA Kraków. Kostrzewski 1964, 58 (with older literature), Fig. 68; Blajer 2016 (with older literature).

**17. Rzeszów (surroundings)**

Probably during the construction of a railway line near a mound called Kopic in the Pobitno district, in the 1850s: one necklace, one bracelet, one arm ring with spiral discs, three spiral rings with spiral discs. HaA1? Naturhistorisches Museum Vienna. Moskwa 1976, 282, Fig. 58:g-j; Blajer 1999, 199-200 (with older literature), Pl. 159.

**18. Stary Sącz-Lipie, dist. Nowy Sącz**

When clearing a trunk in March 1884 at Lipie ‘by the side road to Moszczenica’, ‘among fragments of a crushed coarse clay bowl’: two ankle-rings, three bracelets, a fragment of a collar, a pin (questionable association), two pendants, 18 spiral tubes, 62 glass beads, one sherd ‘decorated at the top with a finger-tipped cordon’. HaC2-HaD? ZN IA UJ Kraków. Żurowski 1927, 22-25, Plates I:10, III; Kostrzewski 1964, 68, 70 (with older literature), Fig. 92.

**19. Stefkowa, dist. Lesko**

During the construction of a railway line in the early 1870s: five battle axes with disc-shaped butts, four bracelets, six arm-rings with spiral discs, two arm-ring fragments, one fragment of a rod. BrB2(C1)-BrC(C2). Formerly in Lubomirski Museum Lviv, Dzieduszycki Museum Lviv, MA PAU Kraków, MA Poznań, National Polish Museum in Rapperswil; currently most of the items from the Lviv and Kraków collections are held by MA Kraków (two specimens are missing), and others by MA Poznań and PMA Warszawa (the specimen from Rapperswil). Kostrzewski 1919; Blajer 1987, 91-96 (with older literature), Figs. 1-6; Blajer 1990, 136-137 (with older literature), Plates CVI-CIX; 1999, 203.

**20. Strumiany (Kokotów-Strumiany), dist. Wieliczka**

In 1979, during the excavation of a multicultural settlement at site IV, ‘in the forks of the Zabawka stream and its unnamed left-bank tributary’, on the north-eastern slope of a low hill, in the cultural layer, at a depth of ‘48-22 cm below ground surface’, stacked one on top of the other: six iron neck-rings. HaC2. Cracow Saltworks Museum in Wieliczka. Reguła 1980, 26-27, Figs. 4-5; Dzięgielewski *et. al.* 2020, *passim*.

**21. Szczawnica-Szlachtowa, dist. Nowy Targ**

In 1840, in a forest range beneath Mount Jarmuta, ‘bronze hatchets with eyelets’ and “ornaments”, in pots; perhaps “on the site or in the vicinity of a cremation cemetery”. HaA1-HaB3? Żurowski 1927, 45-46; Kostrzewski 1964, 73 (with older literature); Blajer 2001, 352.

**22. Świdnik, dist. Limanowa**

Ploughed out in 1868 in a field of Pod Kępą Manor, ‘just outside the manor’, between the Rivers Słonka and Olszanka: one ankle ring (association doubtful), four bracelets, one pin, one harp brooch, two nail ear-rings, one neck-ring, one wire



neck-ring fragment, approx. 50 glass beads, two ankle rings, one arm-ring, two twisted neck-rings, one ribbon neck-ring, one binocular brooch, fragments of clay vessels. HaC2-HaD? Formerly Archaeological Room of the Jagiellonian University, now MA Kraków; one glass bead formerly Lubomirski Museum Lviv. Żurowski 1927, 4-21, Plates I:1-9,11-12, II; Kostrzewski 1964, 73 (with older literature), Pl. XXVIII.

### 23. Świdnik, dist. Nowy Sącz

When digging in May 1910, in a wet meadow on the left terrace of a small stream (a tributary of the Dunajec River), at a depth of about 80 cm, scattered or in several groups directly in the ground, at a distance of 'a few dozen steps' from a mound (presumably a barrow): six ankle rings, two ribbon bracelets, one binocular brooch, one wire, one openwork plate, one boss, one iron spearhead, one iron ball. HaC2-HaD? MA Kraków. Żurowski 1927, 25-35 ('Świdnik near Tęgoborze'), Plates IV-VI; Kostrzewski 1964, 73 (with older literature), Pl. XXIX.

### 24. Trepcza, dist. Sanok

At the multicultural stronghold 'Horodyszczce', in 1995, 1998, 1999 and 2018: seven gold hair rings of the Sibiu type or their fragments. BrA2-BrB? MH Sanok. Ginalski *et al.* 2019.

### 25. Trzciana, dist. Rzeszów

In peat in 1936: five axes with a funnel-shaped stop ridge, one socketed axe. (BrD?-) HaA1(-HaA2?). MO Rzeszów. Kostrzewski 1964, 74 (with older literature), Fig. 95; Blajer 1999, 207-208 (with older literature), Pl. 179.

### 26. Tyrawa Solna, dist. Sanok

In 1938 at the site of oil well No. 15 ('Czerniawka'): four arm-rings with slightly thickened ends which almost meet. HaD? PMA Warszawa. Moskwa 1976, 318 (with older literature), Fig. 78.

### 27. Wadowice

Discovered in 1960: one socketed axe, one socket fragment, one pin head (in the axe socket, fused with corrosion), one fragment of a pin shaft. HaA2-HaB1. MA Kraków. Pieróg 2003.

### 28. Wiśniowa, dist. Ropczyce-Śędziszów

During drainage works at the end of 1972: one Sieniawa-type ring, two massive bracelets. HaA1? MO Rzeszów. Moskwa 1976, 326, Fig. 83; Blajer 1999, 215 (with older literature), Pl. 197.

### 29. Zagórz, dist. Sanok

Around 1914, probably in the vicinity of site 2, approx. 100 m north and north-west of the railway station: one neck-ring, two spiral bracelets. HaD? MA Kraków. Kostrzewski 1964, 79 ('Zagórze, pow. przeworski'; with older literature), Fig. 112; Moskwa 1976, 336-337 (with older literature), Fig. 87; MAK Archives, Zagórz, 1.

### 30. Załęże, dist. Jasło

Ploughed out in 1953-1954 on a hilltop, the remainder was unearthed in a wooden container during the excavations in November 1954: five sickles with a button, one

pair of arm-rings with spiral discs, two bracelets, 29 fragments from five spiral bracelets, at least 22 heart-shaped pendants. (BrC2?-)BrD. MO Rzeszów. Krauss 1956; Blajer 1999, 217-218 (with older literature), Plates 206-208.

### 31. Zarszyn, hoard I, dist. Sanok

Found before 1874: five 'flat' neck-rings, two spiral bracelets, two pins, two spiral discs, a piece of wire. HaD? Three specimens in MA Kraków; formerly partly in Lubomirski Museum Lviv. Kostrzewski 1964, 81 (with older literature), Fig. 117; Moskwa 1976, 340-341 (with older literature), Fig. 89; MAK Archives, Zarszyn, 5, 7, 9.

### 32. Żywiec – presumed hoard from Turza Góra

Found before 1858: one damaged dagger, one javelin head. BrB-BrC. Princes Czartoryski Muzeum, Kraków. Kostrzewski 1964, 81-82 (with older literature), Fig. 127; Blajer 1999, 221 (with older literature), Pl. 222:1-2.

List of certain and presumed hoards acquired between 2001 and 2022 (Fig. 1: b):

#### 1. Brzezic, dist. Wieliczka

During archaeological excavations at a multicultural settlement, prior to 2012, with no trace of a feature: two axes with a funnel-shaped stop ridge. (BrD?-)HaA1(-HaA2?). Unpublished; information courtesy of Karol Dziegielewski, MA.

#### 2. Dębowiec, dist. Jasło

Discovered in 2015 on the left bank terrace of the Wisłoka River: gold wire ornaments (three bracelets and one small irregular ring). BrA2-BrB? MP Krosno. Gancarski, Madej 2021a.

#### 3. Falejówka, hoard I, dist. Sanok

In 2003, at the top (according to the map, more likely on a hump falling to the north-west) of Góra Banna hill: three small sickles. HaA1. MH Sanok. Zielińska 2005, s. 65-67, Figs. 2, 4:f-h, 5; 2007, 16-18, 21, Photo 6, Fig. 10.

#### 4. Falejówka, hoard II, dist. Sanok (initially reported as 'Srogów Górny')

The hoard was discovered with a metal detector at the end of 2013, in the southern part of the wooded flattened summit of Mount Wroczeń, approx. 495 m above sea level, at a depth of 25 cm. A damaged neck-ring lay about 3-4 m away: two sickles, one fragment of a socket, two neck-rings, 16 bracelets, one fragment of a bracelet, 11 fragments from at least two spiral bracelets, one remnant of a pin-end protector, one small spiral disc, five wire fragments, one bronze lump. HaA1. MH Sanok. Blajer *et al.* 2022, *passim*.

#### 5. Falejówka, dist. Sanok, hoard III

Found on the eastern slope of an elevated promontory of Mount Wroczeń, around 2015: four two-coil spirals of gold wire, diameters approx. 1.6-2.1 cm. Undated. Private collection. Unpublished; Archive of the Archaeology Department of MH Sanok; information courtesy of Piotr Kotowicz, PhD.

### 6. Kobiernice, dist. Bielsko-Biała

Bimetallic hoard discovered in 2019 in an oxbow lake of the Soła River, near the bank, partly covered and surrounded by sandstone pebbles, in two clusters, at a depth of 26-40 cm, explored by archaeologists: 12 bronze twisted neck-rings, five bronze ribbon spiral bracelets, two bronze pins, two bronze binocular brooches with iron elements, one iron object (pin shaft?). HaC2-HaD? MH Bielsko-Biała. Chorąży, Chorąży, Pudelko 2022; Matlak (ed.) undated.

### 7. Koszyce Wielkie, dist. Tarnów

During ploughing in 2002, on multicultural site 6, on a rise surrounded by oxbow lakes of the Biała Dunajcowa River: two bracelets, fragments of a clay vessel, and 'large perforated beads'. BrB1(-BrB2?). Museum of the History of Tarnów and the Tarnów Region. Szpunar, Okoński 2007.

### 8. Lubatówka, dist. Krosno

In 2016, on the slope of a deep valley of a small watercourse, 442 m above sea level, in a small pit: three spiral bracelets, four small wire fragments (perhaps from a spiral disc), ten whole glass beads and nine fragments, fragments of two ceramic vessels (including a saltmaking beaker). HaC2-HaD? MP Krosno. Gancarski, Leszczyński 2021.

### 9. Łukowica (Łukowica-Wolica), hoard II, dist. Limanowa

Artefacts found on a field from spring 2016 to autumn 2017; probably a hoard damaged by ploughing, including, among others: one binocular brooch, two bracelets, strap dividers and fragments thereof. HaC2-HaD? MO Nowy Sącz. Publication in preparation; information courtesy of Bartłomiej Urbański, MA.

### 10. Mostki, dist. Nowy Sącz

Found in a forest using a metal detector in 2020, on the south-western slope of a prominent hump: four axes with a funnel-shaped stop ridge. (BrD?-)HaA1(-HaA2?). Seweryn Udziela Regional Museum in Stary Sącz. Unpublished; information courtesy of Bartłomiej Urbański, MA.

### 11. Niepołomice, dist. Wieliczka

In March 2001, while digging a pit in Ogródowa Street, on a broad flattening of the Vistula terrace, 195 m above sea level, close to the former riverbed, at a depth of 80-85 cm, in a compact cluster between two erratic stones: one socketed axe, 47 bracelets, one small bracelet, two spiral bracelets, two spirals. Cracow Saltworks Museum in Wieliczka. HaA1-HaA2. Reguła 2005; Fraś, Kolebuk, Rzońca (in preparation).

### 12. Niżna Łąka, dist. Krosno

Found in 2010, on the culmination of the higher terrace of the Jasiołka River, in a ploughed field: six twisted rings. HaA1-HaB1? MP Krosno. Gancarski, Leszczyński, Madej 2021, 578-580, Figs. 14-16.

### 13. Nowy Żmigród, dist. Jasło

In May 2016, on a promontory in the Beskid Niski mountains, in a small cavity: one tanged sword with a damaged tang, three swords with full hilts decorated with three circumferential ribs (including two cast together with the hilt). HaA2? MP Krosno. Gancarski, Madej 2021b.

**14. Porąbka, dist. Bielsko-Biała**

During metal detector surveys from autumn 2019 to spring 2021, in a forest on the slope of a high hill in the Beskid Mały mountains:

**Hoard 1:** At a depth of approximately 10 cm: two iron bipyramidal ingots. HaC-HaD?

**Hoard 2:** Approximately 70 m south of hoard 1, near the bed of a former watercourse, at a depth of 15-35cm: seven iron bipyramidal ingots in a parallel arrangement one on top of the other, with an iron ankle ring underneath. HaC-HaD?

**Hoard 3:** Near the bed of a former watercourse, at a depth of 20-30 cm, 30 cm apart, vertically placed: two iron rings (an ankle ring and a bracelet?). HaC-HaD?

MH Bielsko-Biała. Chorąży, Chorąży, Pudełko 2022; Matlak (ed.) undated.

**15. Rzepedź, dist. Sanok**

Discovered in 2015, on a promontory rising above the valley of the Rzepedka River, probably in a clay vessel: one battle axe with a disc-shaped butt, one bracelet, numerous spirals and their fragments. (BrC2?-)BrD. MH Sanok. Kotowicz, Trybała-Zawisła, Duda 2016.

**16. Samokłęski, dist. Jasło**

Discovered by chance in 2017, 'on the almost flat slope of a hump in the Jasło Foot-hills, between Samokłęski and Pielgrzymka': two ankle rings, one damaged bracelet, one broken neck-ring. HaC2-HaD? MP Krosno. Gancarski, Leszczyński, Madej 2021, 587-590, Figs. 24-26; Archive of the Archaeological Department of the MP Krosno (courtesy of Tomasz Leszczyński, MA).

**17. Sanok (Biała Góra)**

A bimetallic hoard, discovered on 27.05.2019 using a metal detector as part of work carried out with official permission, on the south-western slope of the western range of the Słonne Mountains, under a stone, at a depth of approx. 35-50 cm, in an roughly quadrangular pit approximately 63x54 cm with traces of a leached organic structure (a container approx. 33x27 cm in size), lined with plant material (millet straw); the artefacts were recovered in a lump of soil that was later explored under laboratory conditions: four decorated and three undecorated circular bronze discs, 336 tube-shaped bronze fittings and their fragments, 21 lenticular bronze plates with bent ends (fittings?), two narrow bronze plates rolled into spiral tubes, a trapezoidal bronze pendant, a small bronze ring with a circular disc, five iron beads, 41 iron fittings and their fragments, remains of calfskin preserved inside the bronze fittings, pottery fragments near the hoard. HaB3. MH Sanok. Blajer *et al.* 2022, *passim*.

**18. Smolice, dist. Oświęcim**

Bronze and iron artefacts were discovered at the confluence of the Skawa and Vistula rivers, according to the finders in the same part of a gravel pit: among others, several bronze rings (ankle rings). HaC2-HaD? Irena and Mieczysław Mazaraki Museum Chrzanów, MA Kraków, Towarzystwo Miłośników Ziemi Zatorskiej, private collection. Reyniak 1986, 318-319, Fig. 2; information courtesy of Krzysztof Tunia, PhD; publication in preparation.

**19. Sobolów, dist. Bochnia**

Discovered approximately 10-20 m apart:

**Deposit no. 1:** Discovered by amateur explorers in 2003, in the south-eastern part of the summit of a high promontory in the Beskid Wyspowy range: a twisted neck-ring, two spiral bracelets of ribbon. HaD?

**Deposit no. 2:** Discovered by amateur explorers in 2003, in the eastern part of the summit of a high promontory in the Beskid Wyspowy range: fragments of heavily damaged 'composite' bracelets (made of bronze and organic material), one large decorated disc, one large undecorated disc, one small undecorated disc, four spiral tubes, one fragment of a rod, one plate, 18 large and 33 small glass beads, two fragments of glass beads, two large and nine small amber beads. HaD?

**Deposit no. 3:** Discovered in 2014 during verification of the discovery site of deposits 1 and 2 by staff of the Heritage Protection Service in Tarnów, in the northern zone of the summit of a high promontory in the Beskid Wyspowy range: 28 fragments of a clay vessel, one small binocular pendant, one disc, one spiked disc, one disc (from a plate brooch?), one pin (from a plate brooch?), two rings, 31 fragments of plates, two small fragments of spiral discs (?), three pieces of casting waste, bronze scraps (?). HaB2-HaB3?

Stanisław Fischer Museum Bochnia. Unpublished; information courtesy of Marek Materna, MA.

**20. Średnia Wieś, hoard I (?), dist. Lesko**

In the fields between Średnia Wieś and Żerdenka around 1995: one bracelet, one ankle ring. HaC2-HaD? Private collection. Unpublished; information courtesy of Elżbieta Pohorska-Kleja, MA; Archive of the Archaeology Department of MH Sanok (courtesy of Piotr Kotowicz, PhD).

**21. Średnia Wieś (?), hoard II, dist. Lesko**

Discovered by amateur explorers and presumably taken abroad in 2020; composition (based on photographs): one axe with a funnel-shaped stop-ridge, one damaged socketed axe with a casting jet, two whole and three damaged socketed axes (including one specimen with a casting jet or a fragment of another object in the socket), two sickles with a button, one damaged circular disc with an eyelet, one small circular disc with a knob (tutulus?), one small circular (slightly conical?) disc, two massive and five thinner rod bracelets with tapering ends and dense decoration (on the massive ones: groups of transverse strokes and hatched triangles, on the thinner ones: transverse strokes?), three ribbon fragments (from a multi-coil bracelet or ankle ring?). HaA1? Unpublished; Archive of the Archaeology Department of the MH Sanok (courtesy of Piotr Kotowicz, PhD).

**22. Świlcza, dist. Rzeszów**

Probably a hoard; a necklace decorated in the 'Sieniawa style' was (in the first decade of the 21st century?) taken abroad as personal jewellery. HaA1? Unpublished; information courtesy of Krzysztof Ormian, PhD.



**23. Wola Sękowa, dist. Sanok**

The hoard was discovered with a metal detector around 2013, on the wooded culmination of the slope of a hill in the Bukowica range, in the part called Kiczery, approx. 485 m above sea level, at a depth of approx. 70 cm; one bronze cauldron on a foot, 30 spiral tubes, remains of willow twigs survived inside the tubes; the bronze vessel was lying on its side, with the spiral tubes inside. HaB3? MH Sanok. Blajer *et al.* 2022, *passim*.

**24. Zagórze, dist. Wadowice**

In 2012, during excavations preceding the construction of a reservoir on the Skawa River, at the north-eastern periphery of multicultural site 8, at the foot of a long slope, after the removal of a layer of soil, at a depth of 10-20 cm, in oval feature No. 401/12 (0.39x0.34 m in size), close together: three twisted neck-rings, three spiral bracelets made of ribbon, one Strzebielinko-type brooch. The neck-rings were inserted into one of the spiral bracelets. HaC2-HaD? Municipal Museum in Sucha Beskidzka. Blajer *et al.* 2018.

**25. Załuż, dist. Sanok**

In 1999, on Mount Paproć, 'on a forest path, a few centimetres below the surface, directly in the ground: a socketed chisel, two necklaces, two bracelets, 22 fragments of spiral bracelets, two multi-coil ribbon bracelets, 12 whole or fragmentarily preserved multi-coil wire rings, about 50 tubular spiral beads and their fragments. HaA1? MH Sanok. Zielińska 2005, 61-65, 67, Figs. 1, 3, 4:a-e; 2007, 14-18, 25-26, Photo 5, Figs. 7-9.

**26. Zarszyn, hoard II, dist. Sanok**

Discovered 'while digging horseradish', 06.04.2016, on the grassy northern slope of a hill, at an altitude of approx. 313 m above sea level, at a depth of approx. 40 cm; five bronze cups, several dozen pottery fragments; the vessels were inserted one into the other; a magnetometric survey by Marcin M. Przybyła provides grounds for assuming that at a distance of approx. 60-90 m south-east of the hoard discovery site there are traces of an older barrow. HaB3. MH Sanok. Blajer *et al.* 2022, *passim*.

**Hoard from the La Tène period:****1. Międzybrodzie, dist. Sanok**

A hoard of iron objects discovered on 04.02.2016 with a metal detector on the wooded north-western slope of the western ridge of the Słonne Mountains, above the source of an unnamed stream flowing into the San River, about 385 m above sea level, in humus and yellow bedrock clay, at a depth of about 30-40 cm: five sickle knives, two knives, one horse bit; the sickle knives lay joined together, slightly higher than the horse bit; the knives lay one on top of the other. LTA. MH Sanok. Blajer *et al.* 2022, *passim*.

**2. Pakoszówka, dist. Sanok**

**Hoard or grave:** Discovered in February 2015, using a metal detector, on the slope of a wooded hill: fragments of two bronze bracelets of the BR-F3 type. LTB2/C1-LTC1. MH Sanok. Bochnak, Kotowicz 2015.

**Hoard I:** Iron objects discovered in August 2015 using a metal detector on the slope of a wooded hill, a few metres from the bronze bracelets: one half-scythe, one plough share, one knife, two adzes, one axe. LTC. MH Sanok. Lit.: Bochnak, Kotowicz, Opielowska 2016.

**Hoard II:** Iron objects discovered in September 2015 using a metal detector approximately 175 m from hoard I: four sickles, one half-scythe, two chisels, three horse bits, one ring. LTC1. MH Sanok. Bochnak, Kotowicz, Opielowska 2016.

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