

A Roman gilt finger ring from Přelouč and other Roman-Period settlement finds

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ABSTRACT

A collection of Roman Period metal objects was acquired with the help of a metal detector survey in the vicinity of Přelouč. The artefacts were handed over to the City Museum in Přelouč. Of special importance among this collection is a Roman gilt finger ring made from a copper alloy, dated back to the 2nd–3rd centuries AD, and a pyriform balsamarium of the type Bienert 102/103. The collection is dominated by brooches, which can be dated from the end of the 1st century until the 4th century. Most of them belong to the Late or Final Roman Iron Age. This might indicate that the settlement reached its peak within this time period.

KEYWORDS

Roman imports; finger ring; small metal objects; Roman Iron Age; Roman-barbarian relations; East Bohemia.

INTRODUCTION

Until recently, the surroundings of Přelouč could be counted among the regions with very few Roman Iron Age finds (cf. most recently JÍLEK 2013). The amount of finds distinctly rose after the year 2000, mainly due to collaboration with the informed public.¹ One of the aims of this material study is to introduce Roman Iron Age metal finds, stored in the collections of the City Museum in Přelouč and the East Bohemian Museum in Pardubice (**Tab. 1**). The occurrence of Roman artefacts enables us to outline possible Roman-barbarian² relations and to set them into a wider context of East Bohemia. In the studied site we identified several Roman coins, which can be generally dated to the time-span of the 2nd to the 4th century. Numismatic material will be treated in a separate text.

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- 1 At the end of January 2021, the museum in Přelouč already had four long-term collaborators. The most significant among them is Mr. Petr Šimák, who has been engaged in surface prospection and metal detector surveying since about 2006. He has collaborated with the museum since 2015 and has handed in about 539 units with finds. Since 2015, many finds have also been donated by Jiří Forchtner, who has been occupied with surface prospection since about 2013. He has handed in about 195 units with finds.
 - 2 The authors employ the term 'barbarian' to describe the local population which, in a historical interpretation, can be associated with Germanic tribes of the Roman Imperial period. The term is used without any judgemental value and merely as a descriptive instrument meant to distinguish locally produced material culture from the artefacts of Roman-provincial provenance.

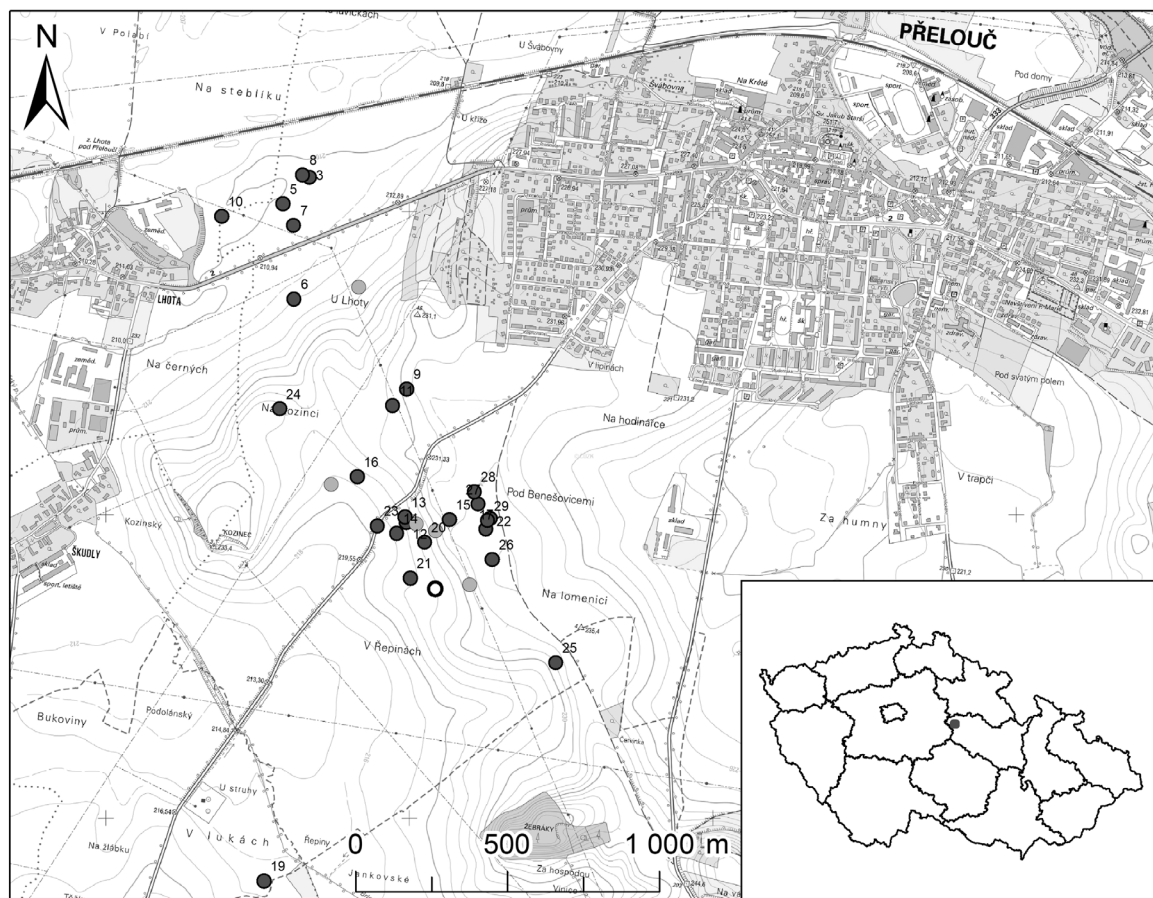


Fig. 1: Spatial distribution of finds in the cadastral districts of Přebouč and Jankovice, dist. Pardubice, light grey dots - Roman coins, dark grey dots - metal finds from the Roman Period, empty dot - Roman finger ring (elaborated by P. Urban).

The majority of new finds come from an extensive area (**Fig. 1**) surrounding Přebouč from the northwest to the southeast. The field is currently divided by several roads, which are located in the places of former historical roads that were built from the Middle Ages to the 19th century. It begins near the railway track, then it is interrupted by the road No. I/2 and ascends over the whole area as far as the border of the village of Lhota and the road leading to Jankovice. Behind the road it continues as far as the road to Benešovice village (it even runs into a field in the built-up area of Přebouč, near the location V lipinách). The territory in the sector between Lhota and Benešovice is delimited by the Brložský stream (Brložský potok). It encompasses the cadastral areas of the municipalities of Přebouč, Lhota pod Přebouč, Škudly, and Benešovice. The local plot names in this area are 'U Lhoty', 'Na černých', 'Na Kozinci', 'V Řepinách', 'Pod Benešovicemi', 'Na lomenici', 'Na hodinářce', and 'V lipinách'. The overall area is about 3.5 km². In the vicinity of the delimited territory, there are hills named Kozinec, with a height of 233 m.a.s.l., and Žebráky with a height of 252 m.a.s.l. The majority of the territory is situated approximately within the altitude of 205–252 m.a.s.l.³

3 Calculated with the application Analýza výškopisu (<https://ags.cuzk.cz/av/>).

Tab. 1: List of studied items (created by P. Urban and J. Jílek). Attribution: R = Roman, B = Barbaric; L = Length; W/W* = Width / Width of the knee; Found by: JF = Jiří Forchtner, PŠ = Petr Šimák, ZV = Zdeňěk Viktorin; Kept in: MP = Museum Přelouč, VČMP = Museum of Eastern Bohemia in Pardubice.

ID	description	Chronology (stage of the RIA)	attribution	L (mm)	W/W* (mm)	figure	Found at	X	Y	Found by	Kept in	-sachet n° -Acc n° -Inv. n°
1	bronze brooch; type Hrušica	C2 Late. C3	R	33	14	Fig. 4:4; Pl. 4/2:3	Přelouč	15.3212983	50.214402	PŠ	MP	-8 -73/2016 -A266a
2	bronze brooch; Almgren group VII	B2/C1. C1	B	24	2 / 2*	Fig. 5:1	Přelouč	15.3212983	50.214402	PŠ	MP	-8 -73/2016 -A266b
3	bronze knee brooch; type Jobst 12 A/B	B2/C1	R	31	24	Fig. 4:2; Pl. 4/2:2	Přelouč	15.5381022	50.0376364	PŠ	MP	-16 -81/2016 -A274
4	bronze brooch; Almgren group VII	C1	B	41	7 / 4*	Fig. 5:2	Přelouč	15.3157320	50.27229	PŠ	MP	-30 -94/2016 -A287
5	bronze brooch fragment	C1-C3	B	26	4	Fig. 4:5	Přelouč	15.5370522	50.0367689	PŠ	MP	-56 -112/2016 -A305
9	bronze brooch - 'Elbefibel'	C1b-C2	B	30	6*	Fig. 5:4	Přelouč	15.5437286	50.0317700	PŠ	MP	-242 -190/2016 -A376
10	bronze belt buckle cast; type ML G/28	B2-C1a	B	27	13	Fig. 4:8; Pl. 4/2:4	Přelouč	15.5343222	50.0361847	PŠ	MP	-280 -213/2016 -A399a
12	bronze brooch fragment	C1-C3	B	25	6	Fig. 5:11	Přelouč	15.54445	50.02785	PŠ	MP	-283 -215/2016 -A401
13	bronze brooch - 'Elbefibel'	C1b-C2	B	31	6*	Fig. 5:5	Přelouč	15.54437	50.028	PŠ	MP	-284 -216/2016 -A402
14	bronze nail	unknown	?	28	12	Fig. 4:3	Přelouč	15.5440892	50.0274883	PŠ	MP	-296 -224/2016 -A410

ID	description	Chronology (stage of the RIA)	attribution	L (mm)	W/W* (mm)	figure	Found at	X	Y	Found by	Kept in	-sachet n° -Acc n° -Inv. n°
15	bronze brooch - <i>Elbefibel</i>	C1b-C2	B	50	5 / 7*	Fig. 5:7	Přelouč	15.54641	50.02808	PŠ	MP	-297 -225/2016 -A411
16	bronze brooch - <i>Elbefibel</i>	C1b-C2	B	36	7*	Fig. 5:6	Přelouč	15.54196	50.02901	PŠ	MP	-298 -226/2016 -A412
17	bronze brooch; type Schulze 169/185, <i>Elbefibel</i>	C1b-C2	B	45	7 / 7*	Fig. 5:8	Přelouč	15.5481325	50.0279286	JF	MP	- -70/2017 -A459
18	Roman bronze gilded ring	2 nd -3 rd cen- tury AD	R	32		Fig. 2; Pl. 4/1:1	Přelouč	15.546154	50.025993	PŠ	MP	-360 -204/2017 -A465
19	iron spur; type Ginalski E5b	B2b-B2/C1	B	30	47	Fig. 4:7	Jankovice	15.53996	50.01679	PŠ	MP	-360 -205/2017 -A466
20	bronze brooch; type Schulze 169/185, <i>Elbefibel</i>	C1b-C2	B	43	7 / 4*	Fig. 5:9	Přelouč	15.545413	50.02733	PŠ	MP	-362 -206/2017 -A467
21	bronze brooch - <i>Elbefibel</i>	C1b-C2	B	44	5*	Fig. 5:10	Přelouč	15.544949	50.0262222	PŠ	MP	-363 -207/2017 -A468
22	bronze brooch; type Schulze 106	C3	B	51	7 / 5*	Fig. 4:9	Přelouč	15.548257	50.02826	PŠ	MP	-364 -208/2017 -A469
23	bronze brooch; type A70/73	B1c-B2a	R	46	9 / 3*	Fig. 4:1; Pl. 4/2:1	Přelouč	15.543156	50.02764	PŠ	MP	-365 -209/2017 -A470
24	bronze brooch - <i>Elbefibel</i>	C1b-C2	B	41	8	Fig. 5:12	Přelouč	15.538034	50.030727	PŠ	MP	-366 -210/2017 -A471

ID	description	Chronology (stage of the RIA)	attribution	L (mm)	W/W* (mm)	figure	Found at	X	Y	Found by	Kept in	-sachet n° -Acc n° -Inv. n°
26	bronze brooch with pointed/rectangular foot; Almgren group VI/2	C1-C3	B	50	4	Fig. 5:3	Přelouč	15.5485935	50.027065	PŠ	MP	-411 -251/2017 -A503
29	crossbow brooch with a knob on the head - <i>Bügelknopffibel</i>	Late C2. C3	B	37	5*	Fig. 4:6	Přelouč	15.5481622	50.0281864	JF	MP	- -311/2020 -A647
55	bronze balsamarium fragment; type Bienert 102/103	1 st -3 rd /4 th century AD	R	35	29	Fig. 3:1	Přelouč. V Řepinách			ZV	VČMP	- -550/2016 -AR011211
56	iron knife blade fragment with a bronze sleeve	1 st -6 th century	B	54	18	Fig. 4:10	Přelouč. V Řepinách, plot n°1054/2			ZV	VČMP	- -553/2016 -AR011474

NATURAL ENVIRONMENT

The settlement is located at the south-eastern edge of the Bohemian Cretaceous Basin. The bedrock in the whole area is composed of marlstones of the Upper Cretaceous Jizera Formation. At the southern border of the site, these marlstones were overlaid in the Middle Pleistocene by a Mindelian river terrace, from which only a small relic of the surrounding gravels are preserved to this day. Much more extensive relics of a younger Rissian river terrace are preserved in the central part of the site. A narrow strip of aeolian sands, which were blown out from the uncovered Würmian alluvial deposits of the River Elbe, is preserved south of the state road No. I/2. The youngest sediments are Holocene alluvial deposits along the Elbe and the Brložský stream (SW edge of the territory, the name is not mentioned in the cut-out) and the deluvio-fluvial sediments lining these deposits. The gravel-sand layer of the alluvial plain emerged gradually during the Holocene, the origins of the loam layer are chronologically related to the deforestation of the foothills that are located higher in the river basin, i.e., to the intensive colonisation of the foothills of the Krkonoše Mountains and the Orlické Mountains (Orlické hory). In terms of geomorphology,⁴ the site is situated in the subsystem of the East Bohemian Plain, in the geomorphological unit Svitavská pahorkatina, sub-unit Chrudimská tabule and district Heřmanoměstská tabule.⁵

4 For a general overview of natural environment cf. <https://aopkcr.maps.arcgis.com/apps/webappviewer/index.html?id=ee190990a1be4ac685d5f7c69c637ae4>

5 The author of the paragraph about geological conditions is Jiří Šura (East Bohemian Museum in Pardubice).

The landscape cover is composed of arable land, agricultural areas with cultural steppe. Natural vegetation is represented by oak-hornbeam groves, riparian woodland and alder forests. The climate is determined by its location in Central Europe, the site is situated in the warm zone T2. The average annual temperature varies between 8 and 9 °C, the average July temperature is above 18 °C. The natural course of the River Elbe is situated in the vicinity, about 1.1–3.6 kilometres away from the site (BRZICOVÁ 2016).⁶

HISTORY OF RESEARCH

‘Archaeological excavations might still bring many more surprises in the future, but nowadays we can only say that tangible or written evidence of permanent settlement, older than a thousand years, is missing so far’ (VOREL 1999, 6). The historian Petr Vorel included these words in the first chapter of the first volume of the 1999 book *Dějiny města Přelouče* (History of the town of Přelouč). At the beginning of 2021, we can say that archaeological knowledge of the prehistoric, protohistoric, and early medieval period in the history of Přelouč and the surrounding region is already more extensive than it was in the late 1990s. New finds discovered in the past six years have shed a little light on these periods. In connection with a gradual restoration of the activity of the City Museum in Přelouč (the museum lost its legal identity in 1992 after a ninety-year-long existence and its collections were administered by non-professional curators from the early 1990s to 2012), a successful collaboration has been developed since 2015 between the curator of museum collections and amateurs interested in surface prospection and detector surveying.⁷ They hand their finds in to the archaeological collection of the museum in Přelouč, which consults with the Archaeological department of the East Bohemian Museum in Pardubice (J. Jílek, T. Jošková, and J. Musil) about these finds. Until now, we did not yet know of any finds from the site in question. In other words, none of the archaeological objects previously kept in the museum in Přelouč (or in nearby museums) can be reliably localised to this site. From among the recent finds acquired after the year 2000, fragments of Bronze Age axes (BRZICOVÁ 2016, obr. 1), La Tène artefacts (JOŠKOVÁ – MILITKÝ – PEŠTA 2020, 311–325), fragment of a Migration Period brooch (MATOUŠKOVÁ 2015, 517, obr. 2 B), and high medieval strap end fittings (MUSIL 2020, 165–172) have been published so far.

STATISTICS – NEW ACQUISITIONS OF THE MUSEUM IN PŘELOUČ

The statistical evaluation of newly acquired archaeological finds is a little problematic because the registration system of newly acquired objects is not unified. We can often find more sub-numbers under the same inventory number. For the purpose of statistic calculations in this article we therefore prefer to use the number of units. Their number increased by about 784 from 2015 until 31st January 2021. From the area outlined above we know of 573 units, that

6 The distance was measured through <https://ags.cuzk.cz/geoprohlizec/>.

7 The archaeological collection of the museum in Přelouč developed in a first phase from its origins after 1902 to about the 1950s. In this first phase, a total of 252 inventory numbers were added to the collection. This collection was recently treated in a Master’s Thesis by Matouš Krátký under the supervision of J. Jílek (KRÁTKÝ 2019). This numerical series then continued in a second phase after 2015 and on 31st January 2021, the collection already included 670 inventory numbers. This implies that 418 new inventory numbers were added. Unlike the first phase, they represent smaller objects, mostly made from metal. The objects are dated to the time period from the Bronze Age to the 20th century.

is 73 % of the total. The remaining units come from cadastral areas of other municipalities in the region around Přebouč or from other locations in the vicinity of Přebouč.

The finds, of course, are often dated either to a particular century or to a specific period of time thus forming larger groups, therefore, they have been divided based on chronology. It follows from their basic statistics that most objects date to the modern period (16.93 %). This is followed by medieval through modern-era finds (14.48 %), and then finds whose date cannot be specified within a broad period spanning from the Bronze Age to the 20th century (11.52 %). Also frequent is the Bronze Age (8.38 %) and, surprisingly enough, also the Roman Iron Age (6.98 %). Over five per cent are finds from the Early Modern Age (6.80 %) and objects from the Bronze Age to the Middle Ages (6.81 %). As indicated in the Introduction, the present paper will focus on the Roman Iron Age finds.

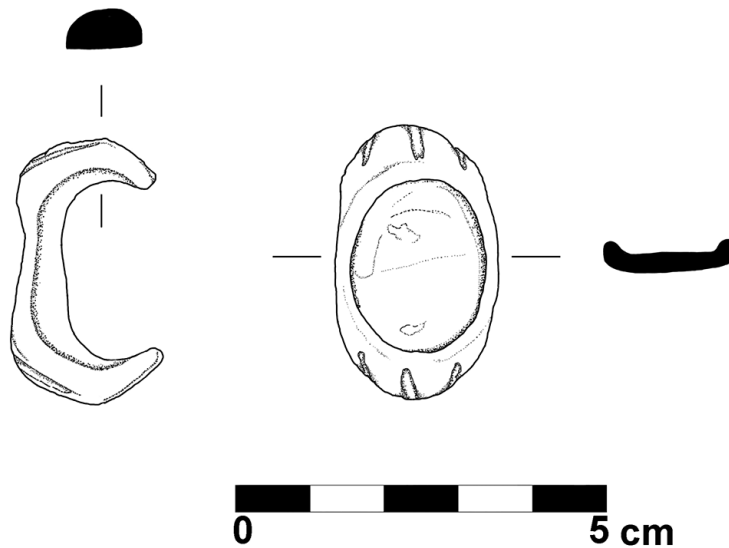


Fig. 2: Přebouč, Pardubice Dist., Roman bronze gilt finger ring (drawing by A. Pukanczová).

ARTEFACTUAL ANALYSIS

ROMAN ARTEFACTS

Bronze-gilt finger ring

The hexagonal ring weighing 16.31 g was made from solid metal (Tab. 1:18; Fig. 2; Pl. 4/1:1). The hoop has bevelled shoulders, which widen towards the bezel. Each shoulder bears three longitudinal grooves with gilding residues preserved both inside the grooves and in the inner part of the hoop. The bezel plate, with a slightly raised edge, is considerably deformed. It originally bore an inset precious-stone or glass-paste or metal inlay (probably an intaglio) sized 18.10 × 14.48 mm. Unfortunately, no remnants of the adhesive with which the intaglio was attached are preserved in the ring bezel or even detected by the elemental analysis. The presence of an intaglio is assumed based on stylistic analysis and on parallels available to the Přebouč ring (e.g., HUMER ed. 2009, 397, Kat. Nr. 1544; HENKEL 1913, 119, Cat. No. 1302). The hoop of the ring is not complete. The measurable inner diameter of the hoop is 21.75 mm, the outer diameter is 32.0 mm.

The described ring resembles the type Guiraud 3, which was particularly popular in the 3rd century (GUIRAUD 1989, 185, fig. 21: 53). The bevelled hoop makes it also similar to the type III after A. Facsády (2009, 36–37), which is generally dated to the turn of the 2nd and 3rd centuries. This type of finger ring finds analogies in Carnuntum (Pl. 4/1:3; HUMER ed. 2009, 397, cat. no. 1544), or Cologne/Colonia Claudia Ara Agrippinensium (Pl. 4/1:4; HENKEL 1913, 119, cat. no. 1302). Another example might be a bronze-gilt finger ring without a specified context, kept in the J. Paul Getty Museum (Pl. 4/1:2; SPIER 1992, 128, cat. no. 343). All these examples represent bronze-gilt rings. However, similar forms of rings also occur in silver, gold or only bronze and iron versions (HUMER ed. 2009, 395–397, Kat. Nr. 1499, 1539, 1540, 1542–1545; SPIER 1992, 128, cat. no. 343; MARSHALL 1907, 46–47, 93, 215–216, 220, cat. no. 263, 268, 550, 1403, 1404, 1440; HENKEL 1913, 30, 53, 61, 118–119, 127, 164, Kat. Nr. 205, 206, 386, 443, 1301, 1303, 1386, 1814, 1815). With regard to shape and decoration, the ring from Přelouč can be dated back to the 3rd century AD. During the 2nd and 3rd centuries, finger ring hoops were given an elliptical shape, often polygonal, with shoulders inclined to the outside from the bezel (LASER 1985, 134). In the course of the 3rd century, the shoulders became distinct and sharp and were often decorated with grooves, volutes or crescent-shaped openings (LASER 1985, 134). The diameter of these rings in almost all cases varies between 22 mm and 35 mm, which clearly indicates that they were probably made for and worn by men (SWIFT 2017, 152).

Tab. 2: Přelouč, Pardubice distr., elemental composition of the Roman bronze gilt finger ring (created by A. Pukanczová).

	gilt parts (%)	cast body of the ring (%)
Ti	0.28	0.12
Fe	4.39	4.93
Ni	0.06	0.03
Cu	55.68	57.62
Zn	3.15	3.35
As	0.51	0.89
Ag	0.5	0.49
Sn	15.2	15.09
Sb	0.36	0.39
Au	13.98	0.1
Hg	1.15	ND
Pb	12.59	17.85

The ring was subjected to elemental analysis using a Delta professional handheld X-ray analyser. Out of a total of eight measurements, set to analytical mode with 60 second screening time, four measurements were focused on places with gilding residues (the middle grooves on both sides of the bezel, the inner side of the shoulders) and four measurements were focused on the non-gilt parts of the ring (the bezel, the outer side of the shoulders) (see **Tab. 2**). The gilt parts exhibit on average a high proportion of copper (55.68 %), tin (15.2 %), gold (13.98 %), and lead (12.59 %), a lower percentage of iron (4.39 %), zinc (3.15 %), mercury (1.15 %), and a trace amount of silver (0.5 %). The cast body of the ring shows average elemental values of copper (57.62 %), lead (17.85 %), tin (15.09 %), iron (4.93 %), and zinc (3.35 %). Two measurements have

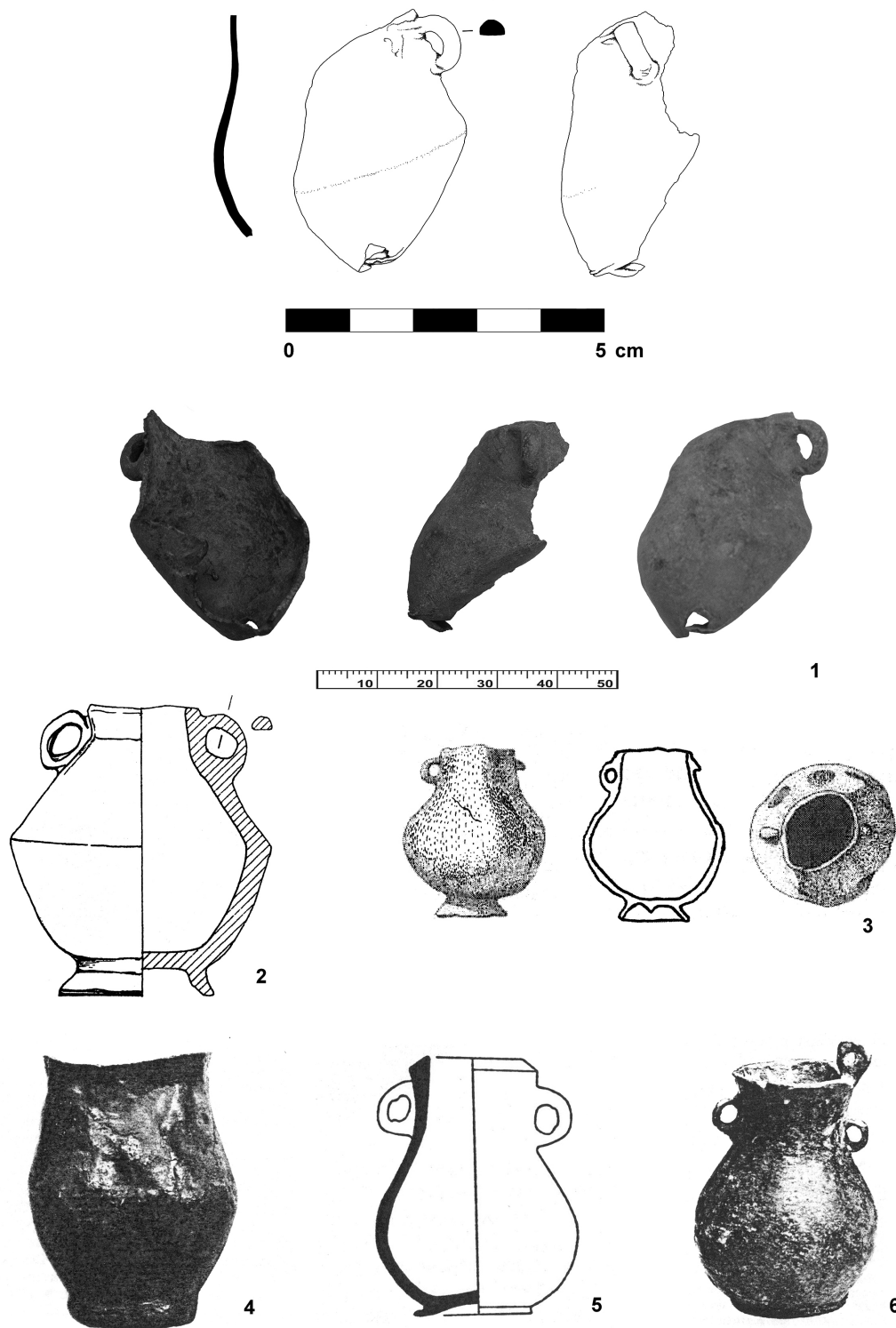


Fig. 3: Přelouč, Pardubice Dist. 1 - Roman bronze pyriform balsamarium (drawing and photo by A. Pukanczová); 2 - bronze balsamarium from the collection of the Regional Museum and Gallery in Jičín (after ULRYCHOVÁ 2020); 3 - parallels from the territory of the Roman Empire: Rottweil - Arae Flaviae (after FLÜGEL 1994); 4-6 - Tawern and specimens with unspecified provenance (after BIENERT 2007) (2-6: not to scale).

yielded traces of arsenic (0.89 %) and silver (0.49 %). The surface treatment by gilding certainly increased the attractiveness of objects. Over the course of time, metalworkers invented many methods for gilding silver and copper alloys (GIUMLIA-MAIR 2020, 1). Bronze with 15 % tin content gains by itself a golden gloss. The subsequent metal coating of such an alloy was widely used in the Roman Period and was applied to small decorative objects (GIUMLIA-MAIR 2001, 770). In the case of the ring from Přelouč, it might be the so-called mercury gilding or fire gilding. This type of gilding is relatively cheap because the necessary amount of gold is much smaller than with other methods (GIUMLIA-MAIR 2020, 5). The residual mercury content in gold in this type of gilding varies between 3 and 25 % and the lead content is reduced to 2–5 % due to the formation of undesirable spots (GIUMLIA-MAIR 2020, 7). In the analysed parts of the gilt surface, mercury is present only at 1.15 % and the lead content is 12.59 %. The ring from Přelouč was most probably treated with the technique of so-called cold mercury gilding, which was mostly used to gild large objects, such as sculptures (GIUMLIA-MAIR 2020, 7). In the case of cold mercury gilding, mercury is spread over the object's surface, then gold leaf is applied so that an amalgam is formed. The object is left at room temperature for several weeks to dry. The mercury gradually evaporates and the gold leaf is tightly connected to the object's surface (GIUMLIA-MAIR 2020, 7). The above-mentioned type of surface treatment would also explain the poor preservation of the golden parts, where the oxidation of tin and lead in copper alloys (the body of the ring) caused the thin gold layer to not perfectly adhere to the surface and for it to flake off (GIUMLIA-MAIR 2020, 7).

It follows from the elemental analysis that the body of the ring was made from lead bronze. Its usage in the production of brooches and small-size military equipment rose constantly from the 2nd to the 4th century AD (JOUTTIJÄRVI 2016, 12). With regard to the zinc content in the cast body of the ring, we can also suppose that the hoop was made from brass. The usual zinc content in small brass objects varies between 10 and 13 % (JOUTTIJÄRVI 2016, 12), but the corrosion causes the exhaustion of the copper content in bronze objects and often also leaching of zinc from brass objects (ROXBURGH *et al.* 2018, 10–11). We must keep in mind that the elemental composition of the corrosion layer covering the body of the ring will be different from the composition of the non-corroded core. The Portable X-ray Fluorescence Spectrometry (pXRF) has only limited possibilities – the samples are scanned only on the surface, where the changes in the elemental composition may be induced by the inhomogeneity of the sample, by the above-mentioned corrosion effects, or by an unevenness of the surface (ROXBURGH *et al.* 2018, 2). The elemental composition of the analysis whose results were slightly altered by the thin corrosion layer, makes it clear, based on the predominance of tin over zinc in the alloy, that the body of the ring was probably made of lead bronze.

Bronze pyriform balsamarium

Bronze vessels are represented in the studied collection by a loop-handled wall fragment of a small pyriform unguentarium of the type Bienert 102/103 (**Tab. 1:55; Fig. 3:1**; BIENERT 2007, 239–240). This type of unguentaria differs from the quality vessels of the type Den Boesterd 303, dated to the time-span of the 1st–3rd century (DEN BOESTERD 1956, 86, pl. XII:303), which were cast and then finished on a lathe (NUBER 1988, 114–115, Abb. 94). The studied unguentarium thus represents a 'coarser' provincial product, which was not turned on a lathe but worked with a file (BIENERT 2007, 233). Exact parallels are mainly known from the territory of the western provinces. Among them there are specimens of unspecified dating (**Fig. 3:3**) from the castellum of *Arae Flaviae* (Rottweil) (FLÜGEL 1994, 213, 217, Abb. 3:9, Taf. 5), from the vicus of Tawern, and specimens without known provenance (**Fig. 3:4–6**) (BIENERT 2007, 239–240, cat. no. 274–275, 277).

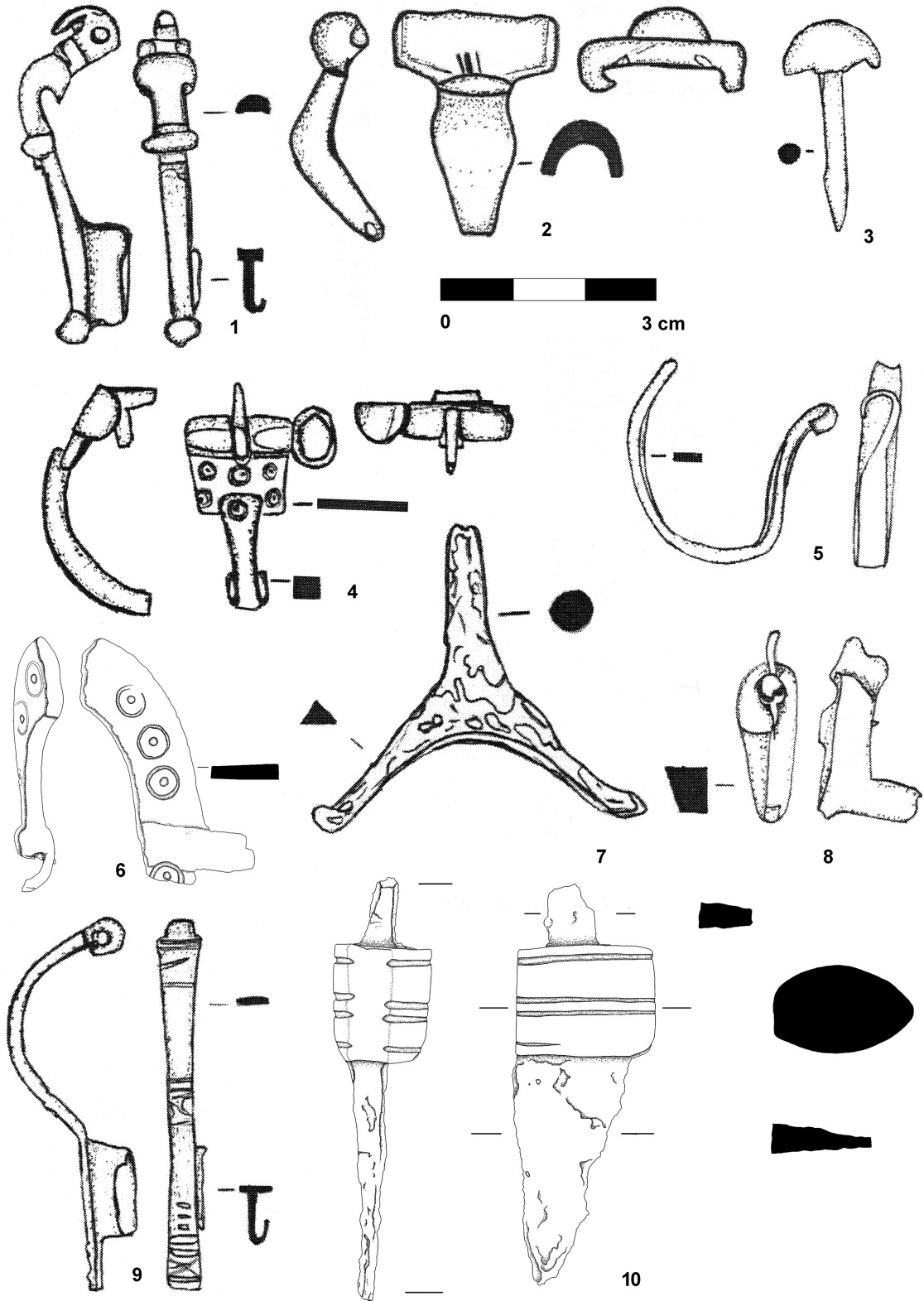


Fig. 4: Přelouč and Jankovice, Pardubice distr., brooches and other finds from the Roman Iron Age (drawing by A. Pukanczová - 6, 10 - and R. Brzicová - 1-5, 7-9).

Unguentaria (also referred to as balsamaria) served as containers for aromatic oils, ointments, and maybe also perfumes. Together with strigils they belonged to necessary bath equipment. Small loop-handles testify that these vessels were suspended on a chain (HOLLIGER – HOLLIGER 1985, 26). The above-mentioned objects (unguentaria in general) found in the provinces clearly refer to the adoption of several elements of the Mediterranean lifestyle in the territory north and east of the Alps (BIENERT 2007, 233; comprehensively MRÁV 2013). Various types of unguentaria are of course a rarity in a barbarian context.

A small biconical unguentarium with two loop-handles is said to have been found in Češov in the vicinity of Jičín (**Fig. 3:2**) (ULRYCHOVÁ – JANČO 2004, 97–103; ULRYCHOVÁ 2020, 3, 7, obr. 3) though the find circumstances are problematic and the location therefore dubious; it is indeed possible that the object reached the Jičín region secondarily. This possibility must still be verified by archival sources. The vessel, except for its biconical shape, resembles very much the find from Přelouč. Its dating to the Final Roman Iron Age and Migration Period is not founded on clear arguments and is only based on the idea of a concentration of Late Roman products in the given region. Apart from the above-mentioned problematic specimen, we know of only two other published bronze finds in the Middle Danube region, one of them belonging to the aryballos-shaped type Radnóti 84 and the other to the type Szabó 11 (JÍLEK 2012; 2015; SEDLMAYER 1999; 2016). The explanation for a different spatial distribution can be sought in different cultural and hygienic (?) habits in the territory of the Roman Empire and in the barbarian territory. But how to interpret the find from Přelouč? One possible explanation is to associate the vessel with the hypothetical processing of non-ferrous metals on the site, because the object from Přelouč may have lost its significance and the barbarians may have used it only as scrap or a non-ferrous metal reserve (on the topic, see BECKER 2016, 6; KLEMET 2016).

Roman provincial brooches

Three Roman provincial brooches have been identified in the studied collection of finds. The first one is a fibula of the Almgren 70/73(c?) type (**Tab. 1:23; Fig. 5:1; Pl. 4/2:1**), which probably represents the earliest brooch examined within this study. It is a very well-preserved two-piece fibula, but the coiled spring and the pin are missing. From a typological point of view, it is a strongly profiled brooch with a knob and a rectangular catch-plate. Fibulae of this type represent one of the evolution stages in the development of strongly profiled brooches. They comprise one-piece or later two-piece brooches with a full catch-plate of a rectangular, square or trapezoidal shape. The origin of these brooches, similarly to the older strongly profiled brooches, is to be sought in Raetia, Noricum, and Pannonia, which is evidenced by numerous stratified finds from Cambodunum/Kempten (SCHLEIERMACHER 1993, 20), Virunum/Klagenfurt (GUGL 1995, 13), Lauriacum/Enns (JOBST 1975, 33), Magdalensberg (SEDLMAYER 2009, 34, 277, Taf. 23), Ovilava/Wels (SEDLMAYER 1995, 18–25), and Vindobona/Vienna (SCHMID 2010, 22–25). In Bohemia, we know finds from Sedlec, Jiřice, Hradiště u Písku, and from other sites (DROBERJAR 2016, 829–831; DROBERJAR – JOHN – ZAVŘEL 2017, 206, 2013). In the area of Boskovická brázda, David Vích registered several specimens of brooches of the type A70/73 (VÍCH 2014, 715). Tomáš Zeman analysed and evaluated surface finds of these brooches from Moravia (ZEMAN 2017, 70, 71, obr. 12). In the Roman provincial milieu, these brooches are dated to the time-span stretching from the end of the 1st century until the late first third of the 2nd century AD (SCHLEIERMACHER 1993, 20; GUGL 1995, 16; SEDLMAYER 2009, 34; SCHMID 2010, 22–23), which corresponds with the relative chronological phases B1c through B2a (ZEMAN 2017, 12). We thus date the fibula to phases B1c through B2a.

Another Roman provincial brooch represented in the collection is a knee fibula (**Tab. 1:3; Fig. 4:2; Pl. 4/2:2**). The brooch is missing the coiled string and the catch-plate and its head is of

a cylindrical shape. This form can be approximately identified as the Jobst type 12 A/B (JOBST 1975, 59–60, Taf. 15, 18:124). Knee brooches count among the most numerous groups of Roman Iron Age brooches – they are known both from the Limes and from the civilian milieu of the provinces of Noricum, Pannonia, and Raetia (JOBST 1975, 59–60; GUGL 1995, 35; SEDLMAYER 1995, 45–47; SCHMID 2010, 34) as well as from the barbarian territory (DROBERJAR 2016, 122; ZEMAN 2017, 78; JÍLEK – KUČA 2017, 251–252; JÍLEK 2020, 164; KOMORÓCZY *et al.* 2020). Their main chronological distribution falls within the period stretching from the second half of the 2nd century to the beginning of the 3rd century and in the barbarian territory, they are associated with the transitional horizon B2/C1, i.e., with the period of the so-called Marcomannic Wars (SEDLMAYER 1995, 44–45; ZEMAN 2017, 12, 78; JÍLEK 2020, 164).

The last Roman provincial brooch is a brooch of the type Hrušica (**Tab. 1:1; Fig. 4:4; Pl. 4/2:3**). It is a late antique provincial hinged-pin brooch (HÖCK 2009, 55). This type has a typical semi-circular bow, bent rectangular catch-plate, and a knob on the foot. The brooch has a trapezoidal flat head with knobs on both sides of the string. The bow, catch-plate, and head could be decorated with an engraved wolf teeth pattern or with punched eyes. Anton Höck distinguished several specific types based on decoration, dimensions of the bow, and shape of the head (HÖCK 2009, 60). This brooch type was mainly popular in the Eastern Alpine area and it spread as far as the Danube Limes (GUGL 1995, 41; ORTISI – PRÖTTEL 2002, 100; HÖCK 2009, 56, fig. 1; HUMER *et al.* eds. 2014, 181, 183, no. 312). In terms of chronology, these brooches fall within the last third of the 3rd century and continue over the 4th century (HÖCK 2009, 56–57, 59; ORTISI – PRÖTTEL 2002, 100) only to fade out at the beginning of the 5th century (GUGL 1995, 41; MILAVEC 2011, 23–24, pl. 2:10–14). The brooch from Přelouč is preserved in the form of a trapezoidal head with one knob missing, decorated with six punched eyes, and one part of the bow. The closest parallel to the brooch from Přelouč is a metal detector find from Polkovice-Dyjákovice, which was published in 2010 and is so far the only published brooch of this type in the Czech Republic (ČIŽMÁŘ *et al.* 2010, 135, obr. 9).

OBJECTS OF BARBARIAN PROVENANCE

Barbarian brooches

The survey of the studied site has yielded a total of 15 fragments of brooches (**Tab. 1**) made from copper alloys. The following text presents in brief the results of their basic analysis. More attention will be paid to specimens, which are not yet very numerous in East Bohemia.

The earliest barbarian brooches in the collection are two-piece crossbow brooches of the group VII according to the classification by Almgren (1923, Taf. IX) (**Tab. 1:2, 4; Fig. 5:1–2**). These brooches were very popular at the end of the 2nd century and mainly in the first half of the 3rd century. Their fade-out phase dates to the second half of the 3rd century (SCHULTE 2011, 166–170; MAČZYŃSKA 2011, 63–66, with references to earlier literature; JÍLEK 2017, 147–148, obr. 3: 2–5; ZEMAN 2017, 112–113, obr. 28–29). The occurrence of brooches of group VII in the territory of Bohemia and Moravia is well illustrated by the recently published detector finds (e.g., ZEMAN 2017, obr. 28–29; BENEŠ 2020, 56, obr. 61; DROBERJAR – MILITKÝ 2020, 475, obr. 4:4, 6–16, 6:4–7; KORNHÄUSEROVÁ 2020, 70–71, 75, 78, tab. 12:1, 6).

One fragmentarily preserved specimen (**Tab. 1:26; Fig. 5:3**) can be classified among one-piece brooches with a pointed/rectangular foot of group VI/2 after Almgren (1923). The foot is unfortunately damaged, so that we cannot decide to which type it belongs. The affiliation with the first mentioned group (with a pointed foot) might be indicated by a strip-shaped cross-section of the bow (VARSIK 2017, 321), but this attribute does not strictly apply (ZEMAN 2017, 123–126, obr. 33:17). The brooch can thus be only generally dated

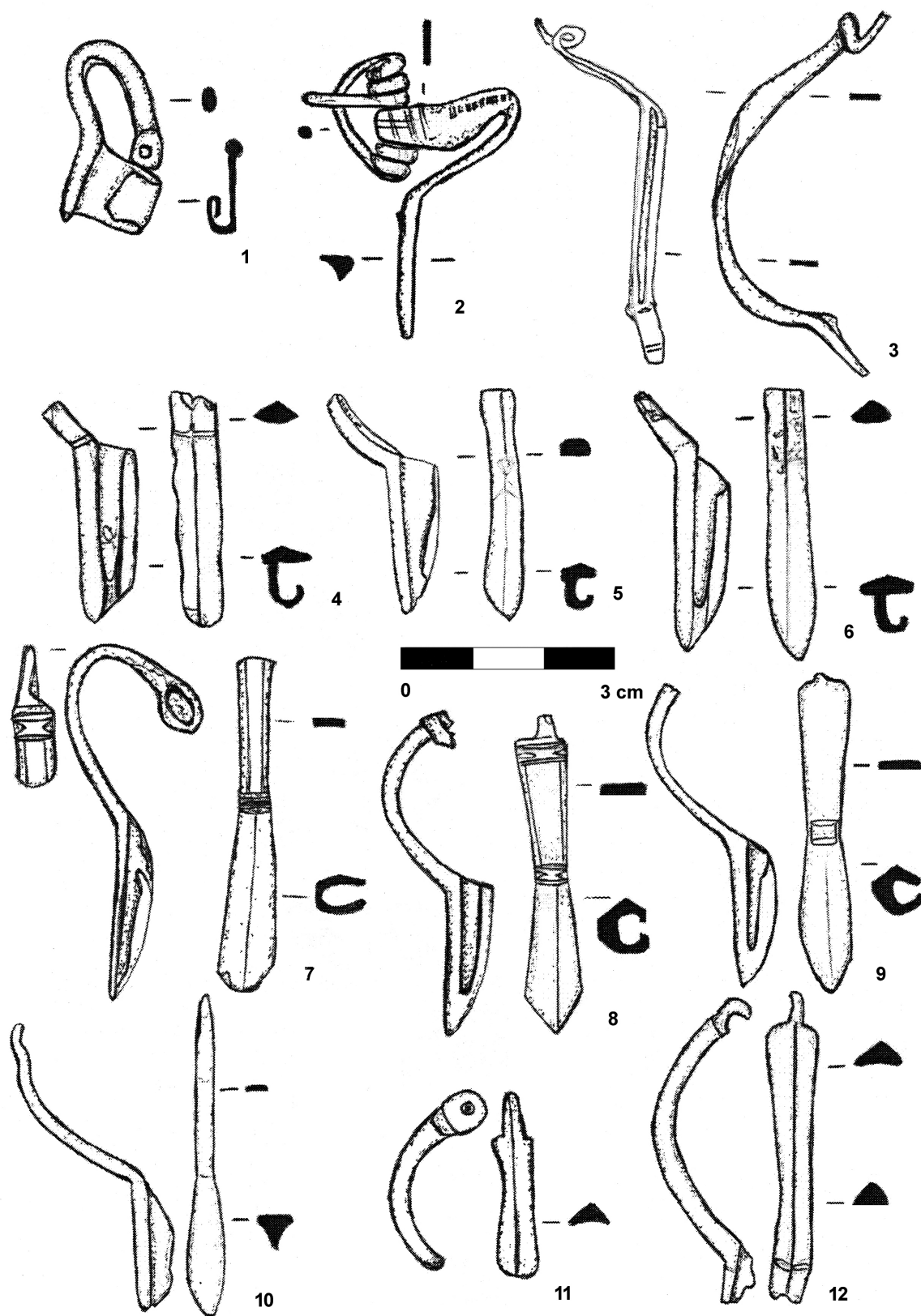


Fig. 5: Přelouč, Pardubice distr., barbarian brooches from the Roman Period (drawing by R. Brzicová).

to the stages C1 through C3 (on the dating of both groups, see VARSÍK 2017, 333–334; ZEMAN 2017, 120, 123, 125).

The analysed collection also includes eight pieces of brooches, which belong to the group of so-called Elbe brooches (*Elbefibeln*) (Tab. 1:9, 13, 15, 16, 17, 20, 21, 24; Fig. 5:4–10, 12). In the majority of the studied examples, we cannot decide whether they represent two-piece or one-piece brooches because the only preserved parts are the lower portions of bows and feet. We can generally place them among the group VI/2 by Almgren (1923). None of the presented specimens is equipped with the so-called short catch-plate, which is rather typical of the late representatives of Elbe brooches (cf. DROBERJAR – JOHN – ZAVŘEL 2017, 209). A characteristic attribute of the described group is a wedge- or oval-shaped foot, several specimens are decorated with metope ornaments (Tab. 1:15, 17, 20). The catch-plates of these brooches are usually closed – pocket-shaped (Tab. 1:13, 15, 16, 17, 20; Fig. 5:5–9), or elongated (Tab. 1:9, 21; Fig. 5:4, 10). The brooches with identification numbers ID 17, 20 (Fig. 5:8, 9) can be classified as types Schulze 169, or 185 respectively. These groups are dated to the second half of the 3rd century and to the first decades of the 4th century (SCHULZE 1977, 96–97, 106–107, Taf. 12–13). The so-called Elbe brooches are among very frequent finds within the Elbe Germanic sphere (see e.g., ĎUGA – VACHŮTOVÁ – ZEMAN 2017, 277; DROBERJAR – JOHN – ZAVŘEL 2017, 209–210; JÍLEK – JOŠTOVÁ 2020, 56, tab. 30:11–12; DROBERJAR – MILITKÝ 2020, 476, obr. 4:1–2). Their most common occurrence is to be found in the phase C1b and mainly in the stage C2 (JÍLEK 2017).

The studied collection contains a distinctive two-piece bronze brooch with a short catch-plate and with a foot decorated with engraved ornaments and metope fields (Tab. 1:22; Fig. 4:9), which can be classed among the group Schulze 106 (SCHULZE 1977, 66, Taf. 8). The chronological classification of this group falls mainly within the 4th century. Remote parallels, which differ in the length of their catch-plate or in the decoration on the bow, can be followed up e.g., in a richly furnished inhumation grave at Žiželice, which dates back to the mid-4th century, or to stage C3 respectively (SVOBODA 1948, 169, obr. 31:6; TEJRAL 1992, 229; BLAŽEK 1995, 150, 155, Abb. 18:4–5; BEKOVÁ – DROBERJAR 2005, 425). Somewhat closer to the specimen from Přelouč is an example from Runder Berg bei Urach, which dates from the 4th century and the peak of its occurrence is to be found in the stage C3 (KOCH 1984, 26, Taf. 2:2). Another close analogy belonged to the funerary equipment No. Bf 802 from the site of Fienstedt. The grave was dated to the stage C3 (SCHMIDT 2014, 63, 282, Taf. 5:82).

A bronze bow and foot fragment of a brooch with a knob on the bow (*Bügelknopffibel*) can be classified as the chronologically youngest brooch from the settlement at Přelouč (Tab. 1:29; Fig. 4:6). The wide bow is decorated with punched ornaments in the form of circles with a central dot. The fragmentary state of preservation hinders any more specific typological determination. The chronological classification of brooches with a knob on the bow corresponds to the end of the stage C2 (ca. AD 270–320), but mainly to the stage C3, where these brooches were most popular. Their gradual fade-out is to be found at the beginning of the Migration Period (JÍLEK – HORNÍK – KOPŘIVOVÁ 2019, 180–182; most recently HORNÍK – KMOŠEK 2020, obr. 4, tab. 1, here also the current listing for Bohemia).

The collection of brooches is supplemented with unspecifiable fragments (Tab. 1:5, 12; Fig. 4:5, 5:11), which can be generally dated to the period after the Marcomannic Wars.

Other finds

Apart from Roman products and brooches, several other objects were also found at the site. Equestrian equipment is represented by an iron knob spur Ginalski type E5b (Tab. 1: 19; Fig. 4:7), dated to the interval from the phase B2b to the transitional stage B2/C1 (GINALSKI 1991, 62–63, ryc. 11:18–19). The spurs of type Ginalski E5 rank among frequent finds from barbarian

settlements and graves, particularly in the Middle Danube region, where they also represent one of the characteristic finds from the second half of the 2nd century (ZEMAN 2017, 151; KRAJČOVIČ 2020, graf 4).

The fragment of an unfinished bronze buckle – a blank (**Tab. 1:10; Fig. 4:8; Pl. 4/2:4**) might also be dated to the Roman Iron Age. The artefact most probably represents a miscast buckle belonging to the group ML G/type 28, which dates back to the time-span of the stages B2 to C1a (MADYDA-LEGUTKO 1986, 51, 57, Taf. 15:28). Its presence at the site can be considered indirect evidence for the production of objects from non-ferrous metals in the settlement. However, this assumption cannot be reliably proved due to the find context. The artefact must therefore be regarded as a find of the '4th category *Anzeichen einer Verarbeitung*' according to H. U. VOß (VOSS – HAMMER – LUTZ eds. 1998, 131–132, Tab. 4). Indisputable evidence for the on-site production of this buckle is to be confirmed by archaeological excavation.

Considering the category of tools, we have to mention one part of an iron knife with a bronze socket decorated with incised lines (**Tab. 1: 56; Fig. 4:10**). The socket might have been part of a wooden/bone/antler grip or it might have reinforced the knife grip. This type of knife in various modifications is already identifiable among the material from the Early (SCHMIDT – NITZSCHKE 1989, 89, Taf. 71:g; KOLNÍK 1980, p. 36, Taf. XXIII:c) and Late (RYBOVÁ 1970, 35, 91, Taf. XX:4) Roman Iron Age and it also occurs in the early (SVOBODA 1965, 265, Tab. XLV:8; PESCHECK 1978, 42, Taf. 30:13) and late (GEISLER 1998, 65, Taf. 61:3) stages of the Migration Period. The sockets are usually made both from iron and from non-ferrous metals and are often decorated with linear engravings. As it follows from the chronological distribution, this type of knife does not count among chronologically significant finds.

Due to its find context, a bronze nail with a hemispherical/mushroom-shaped head (**Tab. 1:14; Fig. 4:3**) can be dated only within a broad time-span. However, parallels are also known from the Roman Iron Age, when similar nails were used to fasten fittings to wooden caskets (cf. JÍLEK *et al.* 2020, 269, obr. 6:25, also with further literature).

CONCLUSIONS

Metal detector surveys of the studied settlement site have yielded 24 objects, out of which five were Roman imports (**Tab. 1**). The most numerous find type in the collection are brooches, of which a total of 18 pieces were identified (15 barbarian and 3 Roman provincial brooches). A special position in the collection is occupied by a gild bronze male finger ring, which can be dated on the basis of a comparison with Roman provincial finds to the late 2nd through the 3rd centuries AD. This dating is also supported by the elemental composition of the alloy, which was analysed with the help of the pXRF method. The results have revealed that the ring was made from leaded bronze, which occurred with higher frequency beginning in the 2nd century. It is to be mentioned that this type of Roman jewellery is not really frequent in the Czech lands. From the Germanic settlement milieu, we can name the earlier published specimens from Kadaň-Jezerka (KRUTA 1972, 326, tab. I:3), Tuklaty (PÍČ 1897, 378–379, tab. XXXVI:4), Prosiměřice (JÍLEK – ŘEBOUNOVÁ 2009), and from other sites (see BECKMANN 1969, 91–92; ONDŘEJOVÁ 1983; DROBERJAR 2002, 268).

Tab. 3: Chronological distribution of finds (created by J. Jílek).

Stage/Phase	Number of finds	Period	Number of finds
B1c–B2a	1	early RIA	1
B2–C1a	1	middle RIA	5
B2b, B2/C1	1	middle RIA	
B2/C1, C1	2	middle RIA	
B2–C1b/C2	1	middle/late RIA	
C1b, C2	8	late RIA	8
C2 late, C3	3	final RIA	3

If we turn our attention to the settlement chronology (**Tab. 3**), the first human activities in the site can be traced to the Early Roman Period. They are documented by a so far isolated find of a brooch type A 70/73, dated to the end of the 1st century and to the first third of the 2nd century (phases B1c through B2a; for details about chronology, see JÍLEK 2013). This chronological horizon is already well identified in barbarian settlements in East Bohemia (JÍLEK – JOŠTOVÁ 2020, 58, tab. E, graf 3). A higher number of finds come from the Middle Roman Period from which we know of a Roman provincial knee brooch Jobst type 12 A/B, an iron spur Ginalski type E5b, and a fragment of a miscast bronze buckle ML G/28. The occurrence of a Roman knee brooch at the site is in accordance with development tendencies, which are known both from the territory of East Bohemia (JÍLEK – JOŠTOVÁ 2020) and from the Middle Danube region (JÍLEK 2020, tab. 1, fig. 10).

Unfortunately, the fragment of a Roman pyriform unguentarium Bienert type 102/103 cannot be dated precisely, mainly due to the absence of any well dated contexts in the territory of the Roman Empire. The majority of brooches come from the Late Roman Period, particularly from the phase C1b and the stage C2 (**Tab. 3**). It is in this stage that the majority of barbarian brooches (8 pieces in total) fall. The occurrence of artefacts from the stage C3 is not very high, but not insignificant. By these we mean a fragment of the catch-plate of a brooch with a knob on the bow, a brooch from the group Schulze 106 and, of course, a Roman provincial brooch of the type Hrušica. This brooch neatly completes the picture of the distribution of Late Roman products in East Bohemia, which is where the last notable influx of Roman imports to Bohemia occurred (on this topic most recently JÍLEK – HORNÍK 2019, Tab. 1, Abb. 5–6).

But how to interpret the collection as a whole? The unstratified detector finds, however attractive they might be for an antiquarian analysis, do not provide much information due to their specific find context. Of certain significance, considering the study of manufacturing activities, is the fragment of a miscast buckle, which indirectly indicates the processing of copper alloys.

As regards the Roman bronze gilt finger ring, it is difficult to resist the urge to speculate that this personal ornament may have reached the territory of East Bohemia as a result of interactions with the Roman milieu. However, we cannot yet reliably answer whether it is evidence of trade relations with Danube regional centres, or of the return of a warrior who served in the Roman auxiliary forces (on this possibility narratively e.g., WELLS 2001). The gilt Roman ring can be also considered a status symbol, belonging to the category of so-called prestige goods (cf. SKÓRA 2015, 177–178).

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Pl. 4/1: Přelouč, Pardubice Dist., Roman bronze gilt finger ring (1), (photo by A. Pukanczová), Roman bronze gilt finger ring without specified context, stored in the J. Paul Getty Museum in California (after SPIER 1992) (2), Roman bronze gilt finger ring from Carnuntum (after HUMER ed. 2009) (3), Roman bronze gilt finger ring from Cologne (after HENKEL 1913) (4).



Pl. 4/2: Přelouč, Pardubice Dist., Roman brooches (1-3) and miscast buckle (4), (photo by A. Pukanczová).