Late La Tène scabbards with non-ferrous openwork plates

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Izvleček

V članku obravnavamo skupino nožnic in pripadajočih mečev iz obdobja prehoda pozne prazgodovine v rimsko dobo, za katero je Werner (1977) predpostavil noriški izvor, v novejših objavah pa domnevajo, da so jih izdelovali tudi na področju Treverov.

Naše raziskave so pokazale, da je barvna kovina pri vseh štirih primerkih iz Slovenije, pri katerih smo ugotavljali njeno sestavo, čista medenina. Enako velja za tri primerke obravnavane skupine nožnic iz Nemčije in s Slovaške. Uporaba čiste medenine in žig z latinskim imenom na eni izmed nožnic s Poljske govorijo za njihovo izdelavo v keltsko-rimskem okolju, glede na njihovo razširjenost morda v severovzhodnem delu rimske Italije.

Ključne besede: pozna latenska doba, zgodnja rimska doba, predrti okras, nožnice, meči, medenina

Abstract

This article looks at a group of swords and associated scabbards from the transition of the Late La Tène to the Roman period. Werner (1977) put forward the hypothesis of their Norican origin, while in later publications their production on the territory of the Treveri is also presumed.

Our research has shown that parts of all four items from Slovenia for which the composition of the metal has been determined, are of pure brass. In view of the fact that the same applies to the three analysed items of this group from Germany and Slovakia, as well as the finding that the name stamp on one of the swords of the group reveals a Latin name, we assume that they were made in a Celto-Roman milieu; their distribution seems to suggest North-Eastern ancient Italy as the possible area of their production.

Keywords: Late La Tène, Early Roman period, openwork decoration, scabbards, swords, brass

1. INTRODUCTION

This article looks at a group of swords and associated scabbards from the transition of the Late La Tène to the Roman period. Joachim Werner (1977) put forward the hypothesis of their Norican origin. An openwork fitting on the front of the scabbard seems to be the most distinctive feature of the group. The motifs of the elaborate openwork decoration include, with few exceptions, stylised arcades, ovals and bars.

Our research was based on a detailed examination of two items from the group: a sword with scabbard from the River Ljubljanica in central Slovenia (in publications before 2003, Vrhnika is given as its find-spot) and another one from Strmec above Bela Cerkev near Šmarjeta in Do-

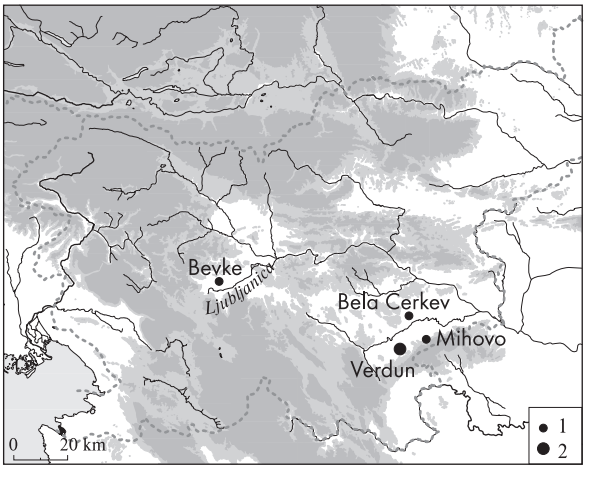


Fig. 1: Find-spots of scabbards with brass openwork plates in Slovenia.
Sl. 1: Najdišča nožnic z okovom iz bakrove zlitine, okrašenim v predrti tehniki v Sloveniji.

lenjska (earlier publications give Šmarjeta as its find-spot, since it is the first major settlement near the actual find-spot; *fig. 1:* 1,2). We were able to make a detailed comparison with two swords from the same group from the cemetery at Verdun near Stopiče in Dolenjska; with kind permission of Danilo Breščak. The sword from Mihovo was studied only from the photographs provided by Naturhistorisches Museum Wien and from notes written by Dragan Božič during his examination of the item in Vienna.

2. THE SURVEY OF PREVIOUS RESEARCH

The fundamental study of the group of Late La Tène scabbards with openwork (*opus interrasile*) copper-alloy or silver plates and associated swords was published by Joachim Werner. In his 1977 paper he defined their characteristics, pointed to their wide distribution particularly among the Celtic and Germanic tribes, proposed their Norican origin and dated them to within the Augustan period.[1] He indicated the key unsolved questions and suggested the direction of any follow-up research. Furthermore, he drew attention to the scabbards with iron fittings decorated with simple openwork, and interpreted them as imitations of Norican scabbards (Werner 1977).

More than 30 years on, we can draw on detailed publications of scabbards with openwork copper-alloy or silver plates and associated swords from Büchel, Wederath-Belginum, Badenheim and Göblingen-Nospelt (Böhme-Schönberger 1998; Haffner 1995; Metzler, Gaeng 2009, 243–249, fig. 65: 22a), as well as on an in-depth survey by Astrid Böhme-Schönberger (1998). The most recent publication is by Metzler and Gaeng (2009, 243–249).

Bochnak and Czarnecka (2004–2005, 29–33, fig. 4) discussed scabbards with iron openwork plates (the only reliable example seems to come from the cemetery at Kamieńczyk), which do not seem to differ, either in the quality of the workmanship or in the motifs, from the ones made of copper alloy. They drew attention to various iron openwork examples from the Celtic world and assumed that the discussed scabbards with iron openwork were Celtic products.

According to the latest two publications (Böhme-Schönberger 1998, 235, 239, fig. 6; Metzler, Gaeng 2009, 248, fig. 216), the swords and scabbards in question come from sites around the River Moselle in Germany and Luxemburg, in central and northern Germany, in Poland, Slovakia, southern Austria, Slovenia and Bulgaria; one item was also found in Sweden and another in Ukraine. They derive from rich graves, which would indicate that their owners belonged to the political and military elite (Böhme-Schönberger 1998, 244; Łuckiewicz 2000, 375).

Numerous Roman artefacts in grave B at Göblingen-Nospelt date this grave to between 30 and 15 B.C. or around 20 B.C. (Martin-Kilcher, Tretola Martinez, Vogt 2009, 354; Metzler, Gaeng 2009, 455–458) and provide the narrowest date-span for the scabbards and swords under discussion. Grave 784 from Wederath and the grave from Büchel (Haffner 1995, 149) are most likely roughly from the same period. Böhme-Schönberger (1998, 242–243; 2001, 83, 86) suggested an earlier date for the beginning of their manufacture, between 60 and 50 B.C.

There is no consensus regarding the origin of these swords and scabbards. In addition to the thesis of their Norican origin (Werner 1977; Bockius 1991, 289–291; Böhme-Schönberger 1998, 240, 243), Frey (1986, 51–52) suggested that they were produced in various regions and that the Norican production site at Magdalensberg was only one of them. Haffner (1995, 150–151), in his paper dealing with swords and scabbards from Büchel, Wederth and Göblingen, assumed they were made in various workshops and in different regions, including the region inhabited by the Treveri.

Böhme-Schönberger (1998, 225–226, 241) rejected Werner's division of the scabbards into those made in Noricum and imitations made elsewhere (followed by Bockius 1991), based on the quality of the openwork decoration made from observation of the drawings of the objects. According to her, the scabbards with *opus interrasile* plates and associated swords form one single group for which the same manufacturing technique and date apply. She divided them into three groups, on the basis of the form of their chapes and variations in openwork decoration: scabbards with a spur-like chape-end and openwork plate, where the campanulate end is clearly separated by a horizontal stripe (e.g. the scabbard from Büchel); scabbards with a boat-shaped chape-end and openwork plate, where the decoration continues uninterrupted into

[1] Werner (1977) mentioned the dating in the early Augustan (1977, 380, 389), middle Augustan (o.c. 379) as well as late Augustan (o.c. 379) period.

the campanulate end (the scabbard from Badenheim); and scabbards with a wheel-motif on the openwork decoration (e. g. the scabbards from Magdalensberg; o.c., 237–238, fig. 6).

Examining the Polish examples, Łuckiewicz (2000, 370–375) suggested that scabbards with bronze openwork plates were imported (Celtic), whereas the ones with an iron fitting with a much simpler decoration (i.e. net-like decoration), were Germanic. The latter were defined as a group by Böhme-Schönberger (1998, fig. 7) and later studied by Czarnecka (2002).

Scientific research of the swords and scabbards from Zemplín, Büchel and Badenheim was carried out by Pleiner (1993, 97–98, fig. 11, pl. 30–32), Schwab (2005) and Westphal (1998).

The sword and scabbard from Badenheim were damaged on the funeral pyre, making it impossible to determine the forging technique of the sword. The composition of the copper alloy of the scabbard's front plate and openwork fitting was not determined. Construction details are thoroughly described (Westphal 1998).

The metallographic analysis of the sword from Büchel showed that its quality was in no way superior to that of the common Celtic swords (Schwab 2005, 334), challenging an important argument for locating the production of this group in the Norican region. Werner (1977, 386) and several others (most recently Böhme-Schönberger 1998, 240) assumed that richly decorated scabbards contained first-rate swords, which they associated with the high-quality Norican iron (*ferrum noricum*) mentioned in Pliny. The copper-alloy of the scabbard from Büchel is gunmetal and contains zinc, tin and lead (Schwab 2005, 332).

The metallographic research of the sword blade with a name stamp from Zemplín (grave 78) showed it was decorated on the surface and made by pattern welding (Pleiner 1993, 97–98; Schwab 2005, 330). The copper alloy of this scabbard[2] was also determined: it is brass with 18 % zinc (Longauerová, Longauer 1990).

[2] It is very likely that the analysis refers to the scabbard from grave 78. The article namely does not give the number of the grave which contained the analysed fragments. However, it does say they were found together with an iron mail (Longauerová, Longauer 1990, 349), which was found in grave 78.

3. OBJECTIVES, RESEARCH STRATEGY, ANALYTICAL METHODS, RESEARCH METHODS AND TECHNIQUES

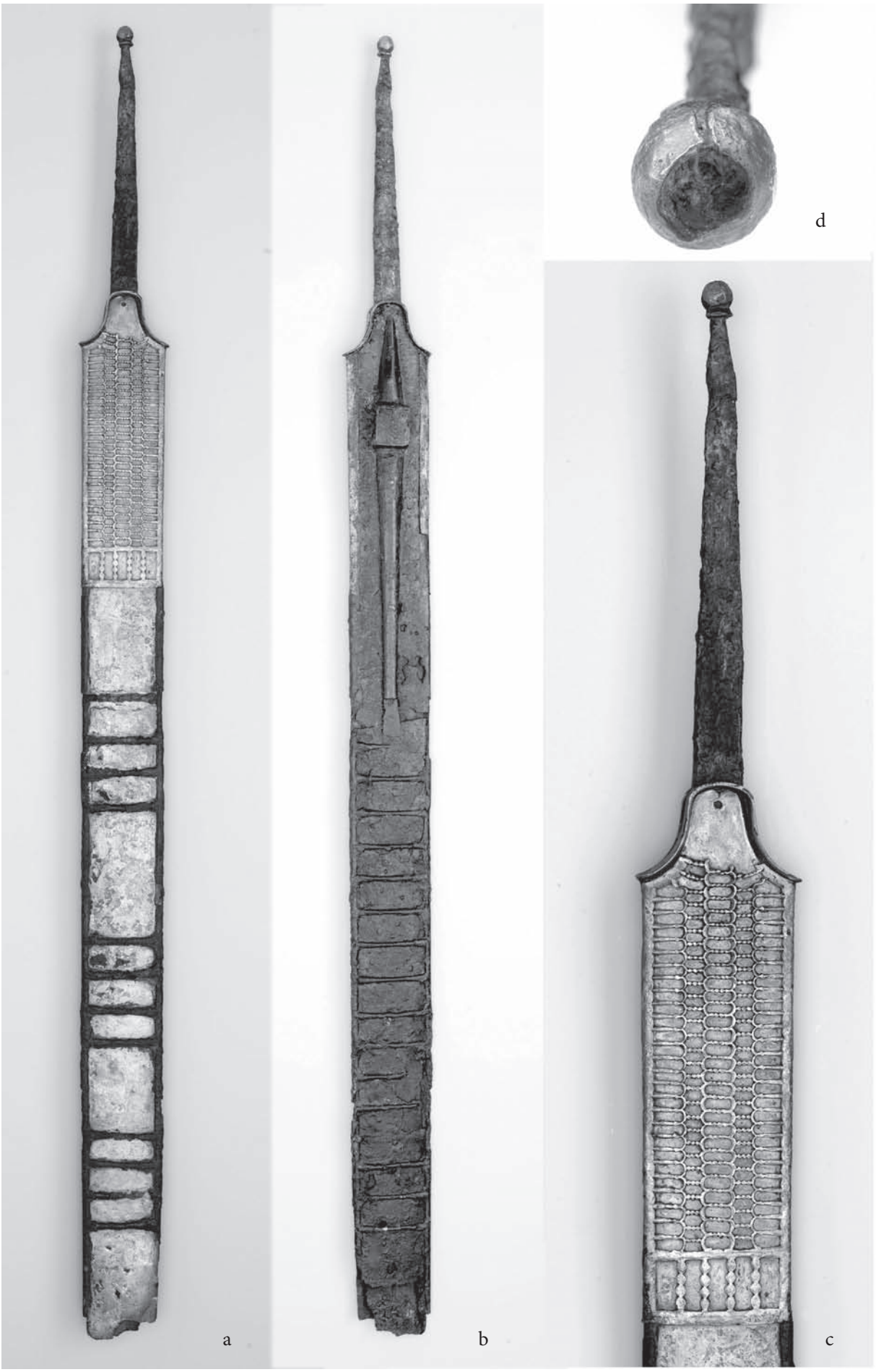
The paper discusses scabbards with copper-alloy or silver openwork (*opus interrasile*) plates and associated swords. Scabbards with iron plates decorated with a relatively simple (openwork) decoration will not be included; neither will the scabbard from Kamieńczyk with an iron openwork plate, which seems to differ from the ones of copper alloy only in terms of its material (cf. *section 2* and *list:* 16).

Of particular interest to us was the comment in Werner's article that Stane Gabrovec told him that the scabbards from the River Ljubljanica and Strmec above Bela Cerkev were of brass. Since apparently no analysis was made (Werner 1977, 394–395), it is not known how this conclusion was reached.

The information regarding brass is extremely interesting as in the 1st century B.C. the use of brass in Europe was closely related to the Romans. It is generally assumed that it was the Romans who spread the use of brass through Europe (Craddock, Cowell, Stead 2004; Istenič, Šmit 2007). The close link between the use of brass and the Romans is even more relevant for pure brass, i.e. undiluted brass, which was produced intentionally, by cementation, and typically contained about 20 % zinc and very little lead and tin (cf. Craddock, Lambert 1985, 164; Jackson, Craddock 1995, 93–94).

Brass is also an important dating element. The Romans started to produce and use brass about 60 B.C. (Istenič 2005, 189–190, 198–201; Istenič, Šmit 2007). Published analyses suggest that from the Augustan period, brass was widely used in coinage, Roman military equipment and brooches (Istenič 2009c, 238, fn. 12, 13). In the early period the use of brass seems to be linked primarily to the imperial coinage and the Roman army, both of which were controlled by the central administration (Istenič 2009c, 242).

Two techniques were used to examine the composition of the metals from which the scabbards and swords were made. Energy dispersive X-ray fluorescence spectroscopy (XRF), carried out at the National Museum of Slovenia by Zoran Milić, was applied to the unprepared surface of the objects and provided only an estimate of the metal composition. Proton induced X-ray emission spectrometry (PIXE) was used on unprepared and prepared areas (Šmit, Istenič, Perovšek 2010).


a
b
d
c

←

Fig. 2: Sword in its scabbard from the River Ljubljanica, Bevke: a – front view, b – back view, c – openwork plate, d – top of the tang. Not to scale (photo: Tomaž Lauko, National Museum of Slovenia).
Sl. 2: Ljubljanica pri Bevkah. Meč v nožnici: a – sprednja stran, b – hrbtna stran, c – okrasni okov, d –zaključek ročaja. Brez merila (foto: Tomaž Lauko, Narodni muzej Slovenije).

A more detailed description of the techniques is found in Šmit et al. 2005 (214–215).

Binocular microscope and X-ray photography were used to research the manufacturing techniques. Additionally, as part of the research into the manufacture of the laddered chapes, the chape on the scabbard from the Ljubljanica was carefully treated by Sonja Perovšek (Conservation Dept., National Museum of Slovenia) to remove the corrosion as well as the plastic parts, added during restoration.

4. SWORD CORRODED IN ITS SCABBARD FROM THE RIVER LJUBLJANICA NEAR BEVKE

(figs. 1–3; insert 1)

4.1 The find-spot, circumstances of discovery, previous publications and storage

In its original publication (Stare 1953), the sword and associated scabbard (*fig. 2; insert 1*) were treated as part of the hoard from around Vrhnika. This find-spot was later cited by everyone who wrote about them (Tackenberg 1970; Werner 1977, 368, fig. 1: 1; Frey 1986, 49–52, fig. 4: 1; Horvat 1990, 238–239, 293–294, pl. 27: 1; Böhme-Schönberger 1998, 221, fn. 9, 235, fig. 6: 21).

Our research has shown that the so-called Hoard of Vrhnika did not exist; the objects were merely a collection of finds from the River Ljubljanica, presumably from around Bevke (Istenič 2003). A detailed examination of the archival sources (Bras Kernel 2006) shed some more light on the circumstances of the find, indicating that the objects came from the Ljubljanica near Bevke (*fig. 1*), or, more precisely, from the section of the river by the farm called Kamin. The examination of the object under binocular microscope during research related to this paper has further shown clear traces of purple algae, typical of the objects from the Ljubljanica (cf. Milić et al. 2009, 30, fig. 24).

The sword in its scabbard was purchased by the Deželni muzej za Kranjsko (Provincial Museum for Carniola, predecessor of the National Museum of Slovenia) in 1913; it later disappeared to be finally sold, some time after 1953, to Mestni muzej (Town Museum), now Muzej in galerije mesta Ljubljana (Museum and Galleries of the City of Ljubljana; Bras Kernel 2006, 12–13, 17), where it is kept under Inv. No. 510:LJU;32582.

4.2 Description

The sword corroded in the scabbard (*figs. 2, 3; insert 1*) was treated for conservation and restoration in the Römisch-Germanisches Zentralmuseum in Mainz in 1980.[3]

The overall surviving length, with sword in scabbard, is 75.3 cm. The lower parts and the ends of the two objects were not preserved.

The iron blade of the sword shows through on various parts of the back, where the scabbard is damaged, most noticeably in its lower-most part, where it is 3 cm wide. At the centre of the blade (0.7 cm in length) there is a distinct groove 0.2 cm wide. 35.5 cm higher up, where a small part of the blade (presumably with its original edge) is exposed, its width can be estimated at 3.8 cm. The surviving length of the blade is 59 cm. The X-rays have shown that the central groove runs along the entire length of the sword (*fig. 3c*). The exposed parts of the sword and the width of the scabbard suggest that the blade of the sword tapered very slowly and evenly towards its tip.

The tang, 18 cm long and rectangular in section, tapers towards its top which is covered by a brass sheet (*figs. 2a, 3a;* Šmit, Istenič, Perovšek 2010, tab. 1: 7,8). The high campanulate hilt-end is also of brass (Šmit, Istenič, Perovšek 2010, tab. 1: 7,8).

The scabbard, 4.9 cm wide at the top, survives to a length of 58.3 cm. It consists of five parts: a front and a back plate, a long laddered chape, an openwork fitting and a loop-plate.

The front plate is of brass, whereas the back one is made of an iron sheet. Both are about 0.5 mm thick and form a campanulate mouth at the top. A small hole on the front, 0.5 cm below the mouth, marks the position of a rivet.

[3] The author would like to thank Ernst Künzl and Markus Egg from Römisch-Germanisches Zentralmuseum for this information.

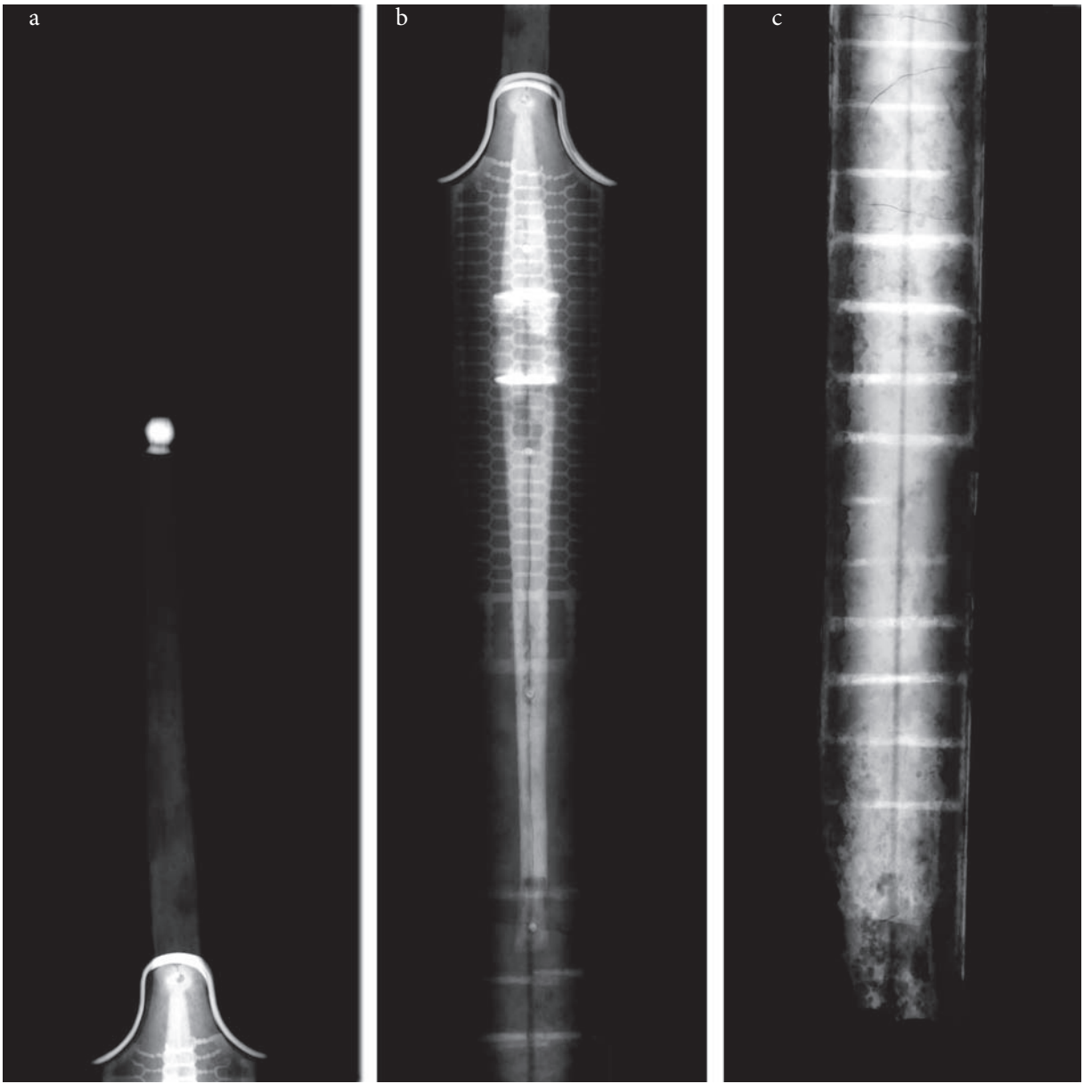


Fig. 3: Radiographs of the sword in its scabbard from the River Ljubljanica, Bevke: a – handle, b – upper part, c – lower part. Not to scale (photo: Zoran Milić, National Museum of Slovenia).
Sl. 3: Ljubljanica pri Bevkah. Rentgenski posnetki meča v nožnici: a – ročaj, b – zgornji del, c – spodnji del (foto: Zoran Milić, Narodni muzej Slovenije).

The brass fitting is 14.6 cm long, with elaborate openwork decoration (French *à jour,* German *Durchbruchsarbeit; fig. 2c*) on the front plate. Its top does not survive entirely. Parallels (cf. Werner 1977, figs. 9, 14, 18; Metzler, Gaeng 2009, fig. 65: 22a; Deimel 1987, pl. 69: 6,7) indicate that it was originally campanulate in shape and reached the top of the scabbard mouth; the small hole on the top of the front plate indicates it was riveted to the underlying brass sheet.

The openwork fitting overlaps the back plate, forming a guttering 13.7 cm long and about 0.4 cm to 0.7 cm wide. The lower 3.5 cm of the guttering on the back does not survive, but its imprint is discernable in the corrosion layer of the iron back plate.

The decoration of the fitting is divided into two fields of distinctively different heights, separated by a stripe of undecorated sheet about 3 mm wide. The upper field survives to a length of 12.2 cm. It is decorated by five vertical, symmetrically placed openwork stripes. The central stripe consists of

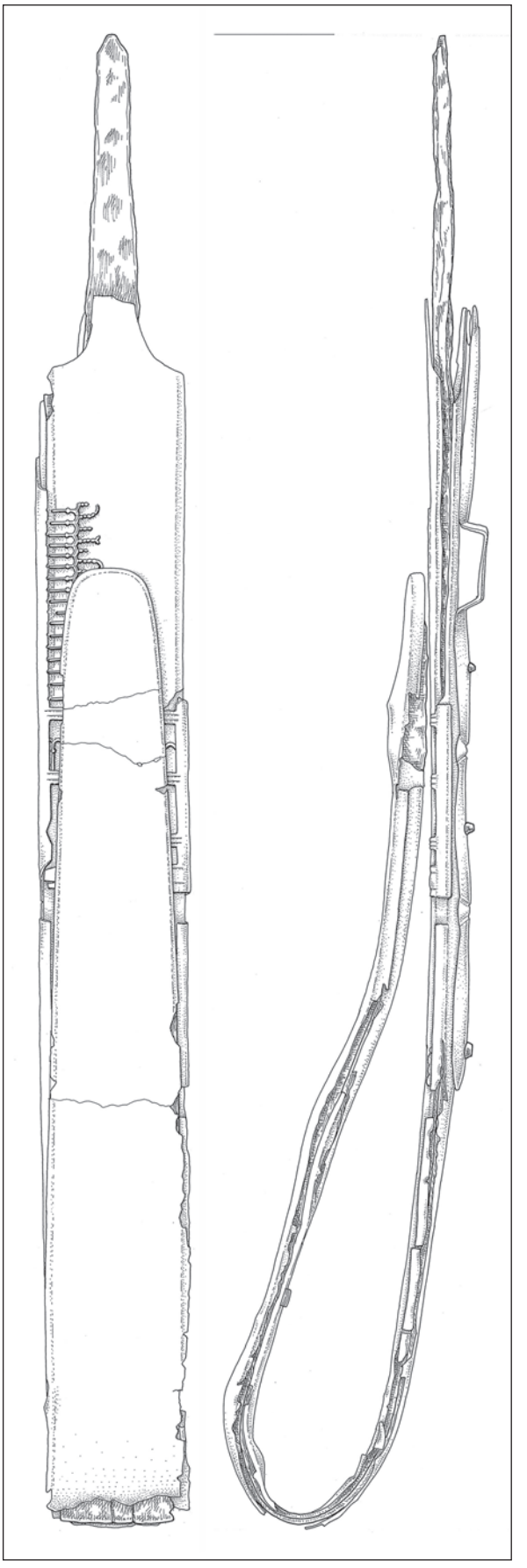


Fig. 4: Strmec above Bela Cerkev. Sword in its scabbard, in its present state. Scale 1:2 (by Ida Murgelj, National Museum of Slovenia).
Sl. 4: Strmec nad Belo Cerkvijo. Meč v nožnici, dejansko stanje. M. = 1:2 (risba: Ida Murgelj, Narodni muzej Slovenije).

horizontally placed ovals with circular enlargements along their longer sides (three on each side), whereas the two outer stripes consist of horizontally placed arcades. The central stripe is connected to each of the outer ones by horizontal bars decorated by circular enlargements. The lower field is 1.5–1.7 cm high and decorated by four relatively long and wide bars, with four circular enlargements each.

A laddered iron chape survives to a length of about 33 cm. It had three groups of four rungs on the front and 18 or 19 rungs at the back (15 survive, while the position of another three can be discerned in the corrosion layer on the back plate). The rungs are narrower and higher in the middle and wider and lower on the sides. In cross-section they are flat on the bottom and rounded on the top. This shape of the rungs made the chape stronger than it would have been, had they been flat. Each of the rungs at the front, which are wider than the ones at the back, has a long and shallow groove in the middle.

In the gap of about 6 cm between the openwork fitting and the laddered chape, the back plate overlaps the front by about 0.5 cm.

A long iron suspension loop-plate is attached to the back plate with four iron and one brass rivet (*figs. 2b, 3b, insert 1;* Šmit, Istenič, Perovšek 2010, tab. 1: 5). The suspension loop is rectangular. The upper loop plate tapers towards the circular reinforcement at the top of the scabbard. The lower loop-plate ends in a flat and nearly rectangular reinforcement, to which it tapers.

5. SWORD CORRODED IN ITS SCABBARD FROM STRMEC ABOVE BELA CERKEV
(*figs. 4–7; insert 2*)

5.1 The find-spot, circumstances of discovery, previous publications and storage

The sword comes from a grave discovered in early 1897 at the cemetery of Strmec above Bela Cerkev in the Dolenjska region (*fig. 1*). By February of that year it had already been acquired by Deželni muzej za Kranjsko (predecessor of the National Museum of Slovenia); the inventory book gave the nearest major settlement of Šmarjeta as its find-spot, which

Fig. 5: Strmec above Bela Cerkev. Sword in its scabbard: a – front view, b – back view, c – detail of the bend of the sword and scabbard. Not to scale (photo:Tomaž Lauko, National Museum of Slovenia).
Sl. 5: Strmec nad Belo Cerkvijo: a – sprednja stran, b – hrbtna stran, c – detajl, meč in nožnica v prepogibu. Brez merila (foto: Tomaž Lauko, Narodni muzej Slovenije).

was customary at the time. The grave group, which Dragan Božič (1999, 199; 1992, 91–102) managed to partly reconstruct from archive sources and called "Grave 1 from the Košak B plot", also contained a bronze helmet of Novo mesto type (Božič 1992, 103–104, pl. 21; Guštin 1984, pl. 48; Stare 1973, 25, no. 127, pl. 14: 1–4), a round iron shield boss (Stare 1973, 25, no. 128, pl. 11: 6; Božič 1992, 103–104,

Fig. 6: Strmec above Bela Cerkev. Tip of the sword, exposed during conservation. Not to scale (photo: Sonja Perovšek, National Museum of Slovenia).
Sl. 6: Strmec nad Belo Cerkvijo. Konica meča v nožnici med konservacijo. Brez merila (foto: Sonja Perovšek, Narodni muzej Slovenije).

pl. 20: 3), and a long curved knife (Stare 1973, 24, no. 84, pl. 8: 2; Božič 1992, 103, pl. 20: 1).

During the later part of the Late La Tène period, cremated remains of the dead were buried at Strmec above Bela Cerkev. In the case of Grave 1 from the Košak B plot, a cremation is also indicated by the fact that the sword in its scabbard and the knife were deliberately bent, which is a practice associated with cremation burials (Božič 1999, 199). Yet it is worth mentioning that the scabbard and the sword exhibit no damage consistent with fire and high temperatures, which leads us to conclude that they were not on the funeral pyre at the time of the cremation.

The sword in its scabbard was originally published, with a photograph, by Alfonz Müllner (1900, pl. 39: 8). The first drawing of its major parts, together with a short description, was published by Hermann Müller-Karpe (1951, 675, fig. 18: 1), followed by Tackenberg (1970, 252–253, fig. 2 – a drawing of a lesser quality), Vida Stare (1973, 24, no. 101, pl. 7: 3) and Joachim Werner (1977, 368, fig. 1: 2).

The find is kept by the National Museum of Slovenia (Inv. No. P 4371). In 2001 it was conserved by Sonja Perovšek (the National Museum of Slovenia Conservation department).

5.2 Description

The sword and the scabbard to which it is corroded had been sharply bent forward and folded back on itself. As a result, the front of the scabbard's end touches the front of the openwork plate (*fig. 4*).

The sword's tang is rectangular in section and tapers towards the top, which does not survive (*fig. 5a, b*). The iron blade is exposed at the bend and at its end, where one or both plates are damaged (*figs. 4, 6; insert 2*). At the bend, the blade is at least 3.5 cm wide and has two grooves about 1 mm wide on the front and the back. The grooves are also clearly seen on the radiographs (cf. *fig. 7*). The ends of the blade taper sharply and form a point (*figs. 6, 7b*). The surviving length of the sword, when not bent, would be about 77 cm, and the length of the blade about 65.4 cm.

The scabbard is about 4.5 cm wide and 66.2 cm long. All the preserved parts, apart from four rivets, are of pure brass (Šmit, Istenič, Perovšek 2010, tab. 2).

The plates are made of brass sheet about 0.5 mm thick. In its present state, the front plate is positioned about 0.7 cm higher than the back plate and the blade. Presumably this displacement happened when the sword and the scabbard were bent. The campanulate mouth survives completely at the back, but lacks its top at the front. On the upper part of the scabbard, the front and the back plate are fixed by the openwork fitting, which overlaps the back by about 0.5 cm (*figs. 5, 6; insert 2*). On the remaining part of the scabbard the back plate overlaps the front.

Surviving parts of the openwork plate indicate four fields of decoration, divided by approximately 4 mm wide stripes, decorated only by two parallel grooves. The upper field, which is the largest, contains five partially preserved vertical and symmetrically placed rows of geometrical motifs. The central row consists of horizontally placed ovals with circular enlargements along their longer sides, whereas the two outer rows consist of horizontally placed arcades. The central row is connected to

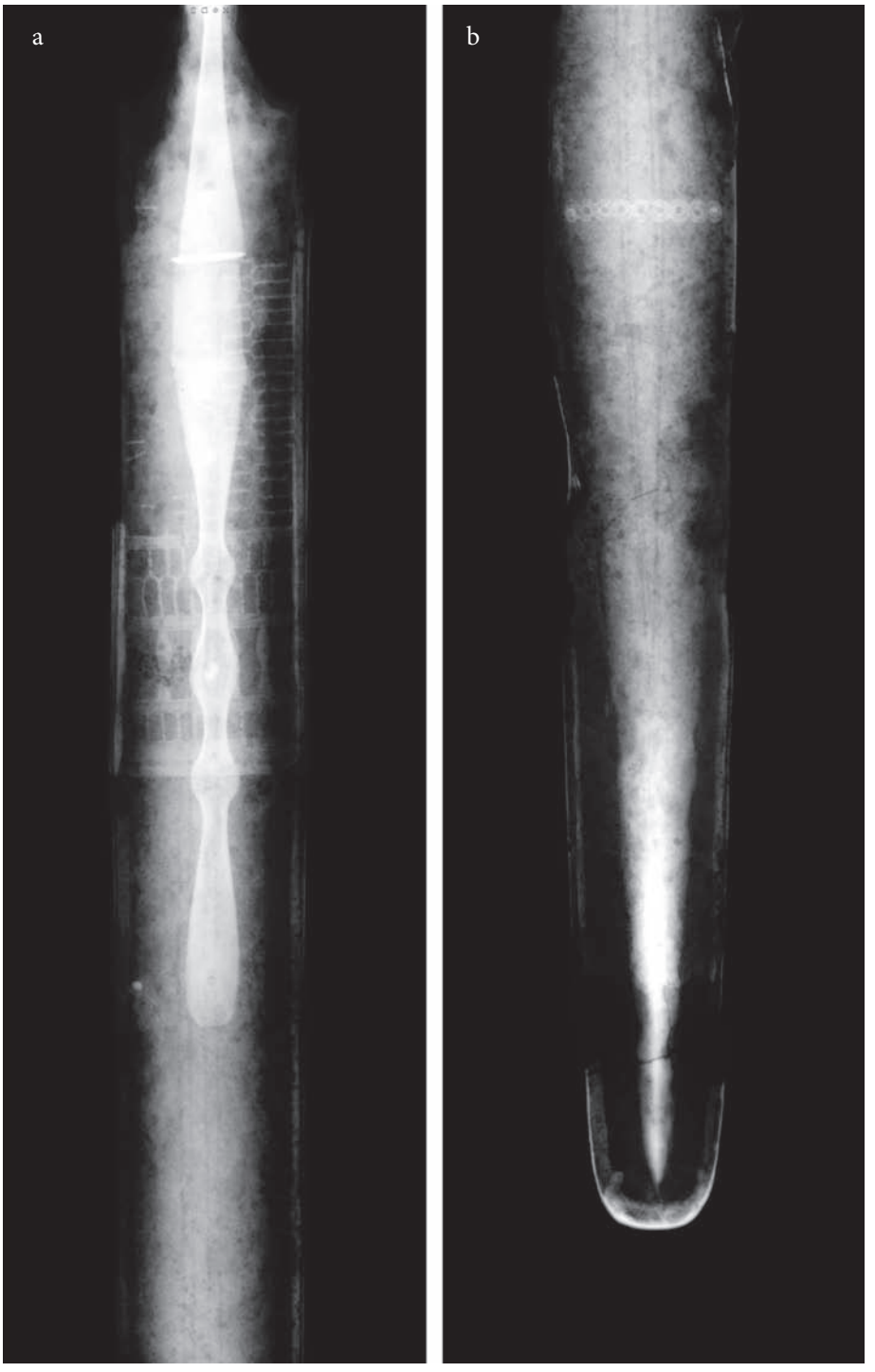


Fig. 7: Strmec above Bela Cerkev. Radiographs of the sword in its scabbard: a – upper part, b – lower part. Not to scale (photo: Zoran Milić, National Museum of Slovenia).
Sl. 7: Strmec nad Belo Cerkvijo. Rentgenska posnetka meča v nožnici: a – zgornji del, b – spodnji del. Brez merila (foto: Zoran Milić, Narodni muzej Slovenije).

each of the outer ones by a line of horizontally placed bars with four circular enlargements each. The second field repeats the motif of columns and arcades, this time vertically placed. The third field, of approximately the same size as the second one, contains an ornament of four vertically placed spear-like motifs. The fourth field, only about 5 mm wide, contained ten vertical bars with four circular enlargements (nine bars survive, partially or in full).

A plate, about 0.5 cm high, decorated with a line of concentric circular grooves with central holes, is riveted to the front plate of the scabbard (*insert 2)*. The rivets are clearly seen on the X-ray photograph (*fig. 7b*). A small part of a very similar decorative plate survives 4.5 cm below the openwork plate. Only one rivet (probably of brass) can be distinguished (*fig. 7a*); the position of the other one is indicated by its imprint on the front plate. A 23.7 cm long suspension loop plate is riveted with four iron rivets to the back of the scabbard (*fig. 7a*).

The sword and the scabbard do not exhibit any traces of fire damage. This indicates that the blade was relatively soft, otherwise it would not have been possible to bend it without previously putting it in the fire.

6. SWORD CORRODED IN ITS SCABBARD FROM VERDUN, GRAVE 37

(figs. 8–9; insert 3)

6.1 The find-spot, circumstances of discovery, previous publications and storage

Two swords in scabbards belonging to the group under discussion were discovered at the cemetery of Verdun near Stopiče (*fig. 1*).

The cemetery has been briefly described several times (Breščak 1986; 1987; 1989; Breščak et al. 2002, 92–94, 135–143), while a detailed study by Breščak is forthcoming.[4]

Grave 37 contained a well preserved sword in its scabbard. The openwork plate, typical of the group, did not survive; however, it definitely belongs to the group of scabbards under discussion. The grave also contained a shield boss, a spearhead, two brooches, a belt-hook and a ribbed pottery vessel of La Tène form (Božič 2008, 53, fig. 25; Breščak 1989, 12; Breščak 2002, 93, 135–136, cat. no. 68; Božič 1999, 199).

The sword and associated scabbard are kept in Dolenjski muzej (Dolenjska Museum) under Inv. No. A 1776. In 1986 it was restored in the Römisch-Germanisches Zentralmuseum in Mainz.[5] The following description applies to the conserved sword.

[4] Danilo Breščak kindly allowed us to include them in our paper.

[5] The author would like to thank Danilo Breščak (ZVKDS) and Markus Egg (Römisch-Germanisches Zentralmuseum) for this information.

6. 2. Description

18.5 cm of the blade are exposed in the upper part. It is 3.6 cm wide at the mouth and has sloping, asymmetrical shoulders. Two distinct 1.5 mm wide grooves run parallel along the centre of the blade. The original form of the blade's edges does not survive (*figs. 8a,c; insert 3*).

The tang is 17 cm long and tapers towards its narrow top, covered by a 1.5 cm high and 1 mm thick brass sheet (Šmit, Istenič, Perovšek 2010, tab. 3: 3). The lower part of the brass sheet is pressed against the tang, giving the impression of a knob with a vase-like base (*fig. 8e; insert 3*).

The total length of the sword is 82 cm; the length of the blade is 65 cm. The X-rays reveal a long and distinct tip (*fig. 9b*).

The entire length of the scabbard survives (72.5 cm); its greatest surviving width is 4.7 cm. The scabbard consists of a 2 mm thick iron back plate with a campanulate top, a front plate made of a thin (about 1 mm?) brass sheet (Šmit, Istenič, Perovšek 2010, tab. 3: 2,3) that is only preserved in the lower two thirds of the scabbard, a laddered iron chape and a loop-plate.

The laddered chape covers approximately the lower two thirds of the scabbard. It ends with a horizontal rung at the top – one on the front and one the back. Both are rectangular in section, the front one is 6 mm wide and the back one is 4 mm wide. The chape tapers into a spur-like tip at the bottom. It has 33 rungs on the front and five groups of three rungs on the back. All of them, similarly to the rungs of the scabbard from the Ljubljanica, are wider and lower at the sides and narrower and higher in the middle. The last two rungs on the front are linked by two additional rungs at an angle.

The openwork fitting did not survive. The upper part of the front plate is not preserved either, which is rather surprising, since parallels show that these plates were made of a single sheet.

The loop-plate is well preserved. It was fastened to the iron plate by two iron and two probably brass rivets (*fig. 9a; insert 3;* cf. scabbard from the Ljubljanica). The asymmetrically and irregularly shaped bottom end of the plate (*fig. 8d; insert 3*) would suggest it is not entirely preserved. The fastening details of the plate in this part are unusual. A flat iron lining is inserted under the plate and the upper-most rung of the laddered chape, through which the loop-plate is attached to the back plate. This was done presumably to reinforce the back plate and prevent the loop-plate from tearing off.

Fig. 8: Verdun, grave 37. Sword in its scabbard: a – front view, b – back view, c – front view, upper part, d – back view, upper part, e – top of the tang. Not to scale (photo: Tomaž Lauko, National Museum of Slovenia).
Sl. 8: Verdun, grob 37. Meč v nožnici: a – sprednja stran, b – hrbtna stran, c – zgornji del sprednje strani, d – zgornji del hrbtne strani, e – zgornji zaključek ročaja (foto Tomaž Lauko, Narodni muzej Slovenije).

It seems possible that initially the loop-plate had been fastened directly to the iron plate, as is the case with comparable scabbards (cf. e.g. the Ljubljanica, Strmec above Bela Cerkev), and was only later repaired with the iron lining. We found no other instances of such a fastening in any scabbard of the type under discussion.

Interestingly, unlike the laddered chapes of the scabbards from the Ljubljanica and grave 131 at Verdun, this one has the groups of rungs (five groups of three) at the back rather than the front.

7. SWORD CORRODED IN ITS SCABBARD FROM VERDUN, GRAVE 131

(*figs. 10, 11; insert 4*)

7.1 The find-spot, circumstances of discovery, previous publications and storage

Another sword in its scabbard of the group under discussion was found in grave 131 at Verdun (*fig. 1*), so far unpublished. The grave-goods comprise, in addition to many other items, of a shield boss of the type known from grave 37 at Verdun (cf. Božič 2008, fig. 25), a spearhead with

Fig. 9: Verdun, grave 37. Radiographs of the sword in its scabbard: a – upper part, b – lower part. Not to scale (photo: Zoran Milić, National Museum of Slovenia).
Sl. 9: Verdun, grob 37. Rentgenska posnetka meča v nožnici: a – zgornji del, b – spodnji del. Brez merila (foto: Zoran Milić, Narodni muzej Slovenije).

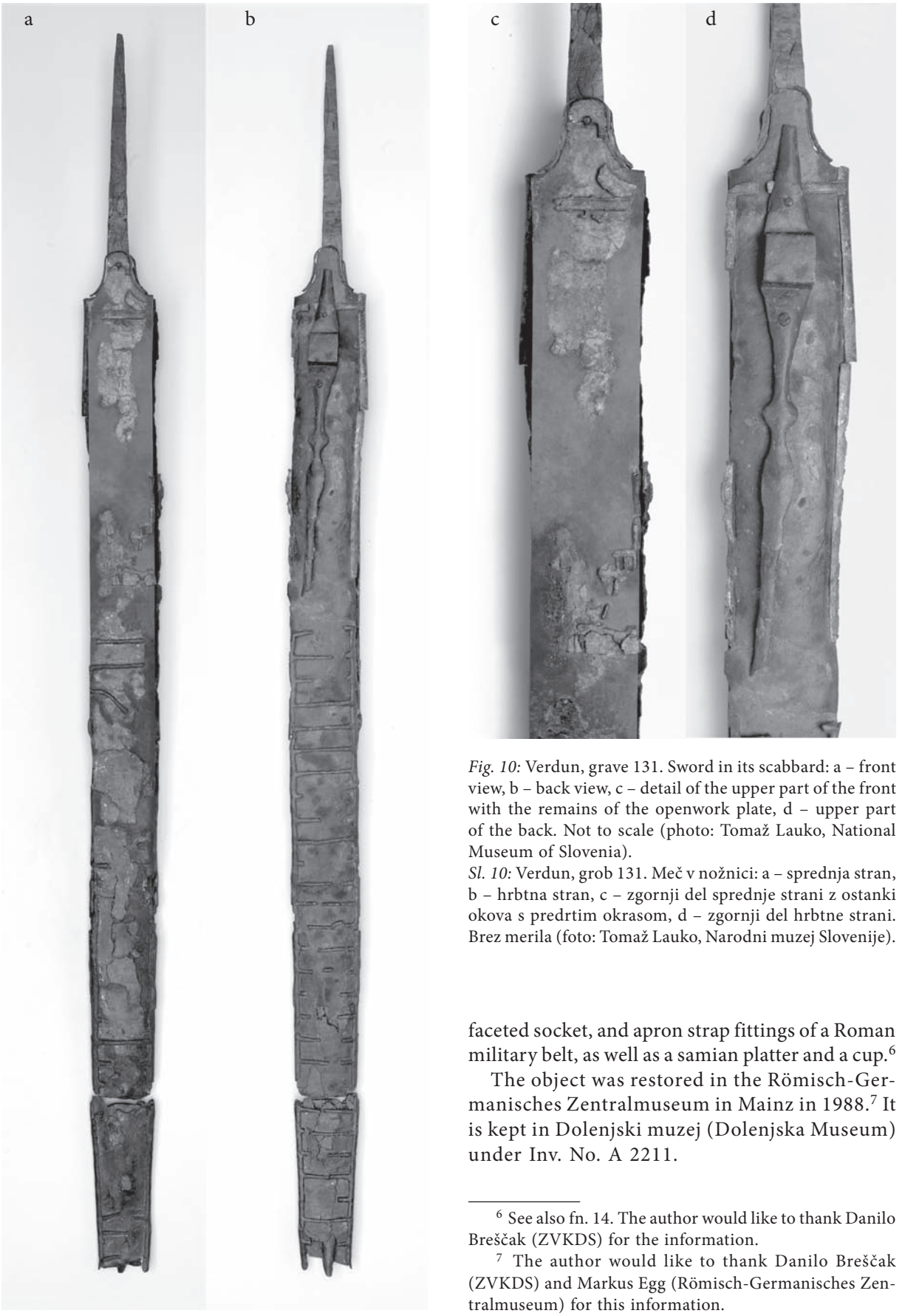


Fig. 10: Verdun, grave 131. Sword in its scabbard: a – front view, b – back view, c – detail of the upper part of the front with the remains of the openwork plate, d – upper part of the back. Not to scale (photo: Tomaž Lauko, National Museum of Slovenia).
Sl. 10: Verdun, grob 131. Meč v nožnici: a – sprednja stran, b – hrbtna stran, c – zgornji del sprednje strani z ostanki okova s predrtim okrasom, d – zgornji del hrbtne strani. Brez merila (foto: Tomaž Lauko, Narodni muzej Slovenije).

faceted socket, and apron strap fittings of a Roman military belt, as well as a samian platter and a cup.[6]

The object was restored in the Römisch-Germanisches Zentralmuseum in Mainz in 1988.[7] It is kept in Dolenjski muzej (Dolenjska Museum) under Inv. No. A 2211.

[6] See also fn. 14. The author would like to thank Danilo Breščak (ZVKDS) for the information.

[7] The author would like to thank Danilo Breščak (ZVKDS) and Markus Egg (Römisch-Germanisches Zentralmuseum) for this information.

Fig. 11: Verdun, grave 131. Radiograph of the tip of the sword and scabbard. Not to scale (photo: Sonja Perovšek, National Museum of Slovenia).
Sl. 11: Verdun, grob 131. Rentgenski posnetek konice meča v nožnici. Brez merila (foto: Sonja Perovšek, Narodni muzej Slovenije).

7.2 Description

The sword and scabbard are relatively poorly preserved, consequently, the PIXE analysis was made only on the broken-off bottom piece of the sword and scabbard. The upper part of the same plate was analysed by EDS XRF.

The sword and scabbard are broken in two: there is a 70.5 cm long upper part and about 12.3 cm of a piece from the lower end of the blade, which most likely joins the upper part (*fig. 10; insert 4*).

The tang is approximately 16.6 cm long and rectangular in section; it is 1.5 cm wide at the bottom and tapers towards the top. A large part of the campanulate hilt-end, made of copper alloy (presumably brass), is preserved. The blade was about 65 cm long, with a wide groove running along its central part. Its surviving width at the mouth is 4.1 cm. The X-rays reveal a distinctly pointed lower end of the blade (*fig. 11*) of which the last 2.8 cm is exposed at the back.

The scabbard is 68 cm long and almost its entire length is preserved, save for the bottom terminal. It is widest at its mouth (4.8 cm), tapering slowly towards the tip, where the end of the surviving part is 3.5 cm wide. A brass plate (Šmit, Istenič, Perovšek 2010, tab. 4: 2) made from a thin sheet partly survives at the front of the scabbard. In its upper section it is only preserved in parts; in its present state, it is mostly replaced by a plastic reconstruction. Its thickness could not be measured.

Only fragments of the lower and upper parts of the 21.6 cm long brass[8] openwork plate survive. It was divided into at least five decorative fields: three fields (*c*. 0.6, 1.2 and 0.6 cm high) at the bottom, a campanulate field (3.7 cm high) with a preserved rivet at the top, and at least one field in the middle (*fig. 10c*). The lateral campanulate-shaped fragment near the top of the plate is positioned about half a centimetre too low, which is probably the result of the restoration. At the bottom, the fitting ends with a 0.8cm-high stripe decorated with horizontal grooves. The openwork plate overlapped the back by about 0.6 cm on both sides. It was also fastened to the back by a 5 mm wide rung, placed 5 mm below the top of the U-shaped lateral part of the plate.

In its present state, the back iron plate is about 2 mm thick. It has a campanulate upper part. An iron loop-plate is attached to the back plate by two iron rivets. The upper and lower terminals of the loop-plate do not survive.

The lower two thirds of the scabbard were covered by an iron chape. Its lower, and probably also upper end, do not survive. The chape probably extended to the openwork fitting (cf. the scabbard from grave 37 at Verdun, *figs. 8, 9; insert 3,* and the scabbard from Büchel, Haffner 1995, 140, 142, 145, pl. 1). There are 28 (partly) preserved and evenly distributed horizontal rungs at the back; the ones on the front are so poorly preserved, we can only assume they were in four groups of three. The rungs are slightly narrower in the middle, as was the case with the scabbards from grave 37 at Verdun and from the River Ljubljanica.

[8] The results of the EDS XRF analysis: 86.4 % Cu and 11.6 % Zn.


a
b
c

8. SWORD CORRODED IN ITS SCABBARD FROM MIHOVO, GRAVE 1657/8
(*fig. 12*)

Another scabbard with an openwork copper-alloy fitting was found in the territory of Slovenia. It comes from the cemetery at Mihovo below Gorjanci (*fig. 1:* 4), excavated in the late 19th century. The finds are kept in the Natural History Museum in Vienna.

Dragan Božič, who examined the finds from Mihovo, brought to our attention the sword in a scabbard from grave 1657/8 (Inv. No. 52526; *fig. 12*) and provided us with his notes on the object. According to them, the object is 66 cm long, with a 22 cm long loop-plate and 8 rungs at 2.2 cm intervals at the back of the scabbard. He also noted a campanulate hilt-end, an openwork plate of copper alloy and 7 rungs on the front. According to the sketch, the openwork plate has three decorative fields, a longer one followed by two shorter, all decorated with vertical ribbed bars.

The object was drawn and described by Helmut Windl (1975, 60, pl. 26: 9) in his unpublished doctorial thesis. From the very sketchy drawing it is not clear whether the sword and scabbard belong to the group under discussion. The description is more revealing and is quoted here in full: "Eisernes Schwert mit vielen anhaftenden Resten der Scheide. Rascher geschwungener Übergang des Blattes in die lange Griffangel, an deren Spitze scheinbar ein vollrunder Knopf sitzt. Das ziemlich gleichbreite Blatt (obere Breite 4,6, untere 3,9) endet zungenformig. Der Scheidenmund ist analog der Klinge und schickt einen kleinen Fortsatz auf die Griffangel hinauf. Die Schlaufe ist ein rechteckiges Band mit langen, rechteckigen Nietplatten. Länge 74,0; der Griffangel 18,5; der eigentlichen Schlaufe 2,8; ihre B 2,0; einer Nietplatte mindestens 4,3; Länge des Scheidenvorsprungs auf die Angel mindestens 2,1."

Anton Kern (Natural Museum in Vienna) kindly provided us with a photograph of the object (*fig. 12*) from which it appears to be covered by a thick layer of corrosion products. The openwork copper-alloy plate can be seen on the front of the scabbard. The form of the top of the tang resembles the sword from grave 37 at Verdun. The laddered chape is not discernable. It seems that the bottom end of the sword and scabbard are not preserved.

The available information would suggest that the scabbard had a characteristic openwork plate and a laddered chape. The length of the surviving part of the sword and scabbard is not clear (Božič: 66 cm; Windl: 74 cm). Any future research of the object would necessarily have to include conservation.

According to the information provided by Windl (1975, 60, pl. 26: 8,9), the only other object in grave 1657/8 was a spearhead (50.5 cm in length) with a socket, round in section, and a severely damaged blade. In the opinion of Dragan Božič (pers. comm.), the grave-groups from Mihovo are not reliable.

Fig. 12: Mihovo, grave 1657/8. Sword in its scabbard: a – front view, b – back view, c – remains of the openwork plate at the front of the scabbard. Not to scale (photo: Alice Schumacher, © NHM Wien).
Sl. 12: Mihovo, grob 1657/8. Meč v nožnici: a – sprednja stran, b – hrbtna stran, c – zgornji del sprednje strani z ostanki okova s predrtim okrasom. Brez merila (foto: Alice Schumacher, © NHM Wien).

9. MANUFACTURING TECHNIQUE

Werner (1977, 369, 379, 385–386) did not express a clear opinion regarding the manufacturing technique of the openwork plates of the supposedly Norican scabbards. It seems he thought their decoration was cut out of the sheet metal (made by casting or hammering) and then filed. Haffner (1995, 140) quoted the restorer H. Born, who suggested the openwork plate on the scabbard from Büchl was made by removing the material (with a die stamp or a chisel – German *Punze,* files and saws) from a hammered thin sheet metal. Haffner presumed the openwork plates from the scabbards found at Büchel, Wederath and Göblingen-Nospelt were made by chisels and files, because the latter revealed traces consistent with these tools (ibid., 145, 150).

Böhme-Schönberger (1998, 222, 225, 229) misunderstood Werner and thought he meant that the decoration on the supposedly Norican openwork plates was made by casting. She showed convincingly that the openwork plate of the scabbard from Badenheim, as well as other scabbards of the group under discussion was beaten into shape and its ornament made by removing the material from the sheet metal by drilling, chiselling, sawing and filing (*durch Bohren, Meißeln, Sägen und Feilen;* ibid., 222, 229). On the other hand, Metzler and Gaeng (2009, 249) reject the possibility that the openwork plates on the scabbards from Göblingen-Nospelt, Titelberg and Wederath were made by removing

the material from the sheet metal and claim that the plates and their decoration were cast (Metzler, Gaeng 2009, 249).

We agree with Böhme-Schönberger (1999, 222) that the openwork plates under discussion could not have been cast, because they are very thin. After careful examination of the scabbards from Slovenia, it seems clear that the basic shape of their openwork plates was formed by hammering and the decoration was made by various chisels, used to remove the excess metal and also for chasing.[9]

In his study of the scabbard from Badenheim, Westphal (1998) broached the interesting question of how the laddered chapes were made, but failed to give an answer. Haffner (1995, 140) suggested that the laddered chape of the scabbard from Büchel was made by forge welding.[10]

In our opinion forge welding is rather unlikely, because the inside of the chape was very narrow, and the appropriate anvil would be difficult to use. For the major part of the chape, the problem could be avoided by making a pipe-like chape and then flattening it. However, it is hard to imagine how the spur-like terminal could be formed by forge welding.

Laddered chapes were not cast, because iron forging, rather than casting, was in use in Europe during the Late Iron Age and Roman periods; cast iron would also be too brittle for such a chape (Manning 1976, 143; Tylecote 1992, 48; Craddock 1995, 235, 239).

For these reasons we decided to thoroughly examine the laddered chapes of the scabbards described in *sections 4, 6* and *7*. A careful inspection of the surface produced no indication of how and where the chapes were welded, soldered[11] or riveted. The X-rays also did not show any traces of soldering or rivets. However, a meticulous research of the surface of the scabbard from the Ljubljanica by Sonja Perovšek (Conservation Dept. of the National Museum of Slovenia) which included removal of several plastic parts added during conservation in 1980, did yield results. It revealed very thin (less than 0.1 mm), yet compact layers of bronze with about 4–7 % tin in the rungs on the front of the scabbard, as well as on the inner side of a part of the guttering (Šmit, Istenič, Perovšek 2010, tab. 1: 11,12a,13–15). In the cross-section of the rungs two or three such layers are discernable. Metallographic analysis indicates that the bronze layers in the rungs were molten (Kosec et al. 2011). In addition, in one part of the guttering a brass layer with about 5 % zinc was discovered, less than a millimetre thick (Šmit, Istenič, Perovšek 2010, tab. 1: 9).

The results show the front rungs of the laddered chape were soldered, which indicates how the chape was constructed. The full report of the findings, together with photographic documentation, is forthcoming (Kosec et al. 2011).

10. COMPARATIVE ANALYSIS OF SCABBARDS AND THE ASSOCIATED SWORDS FROM THE LJUBLJANICA, STRMEC ABOVE BELA CERKEV AND VERDUN

The four swords described in this paper are very similar. They are (or were) about 82 cm long (the swords from Verdun graves 37 and 131 survive full length, while the one from Strmec above Bela Cerkev lacks only the very top of the tang). Their blades are about 65 cm long and narrow (from 3.6 to 4.1 cm), have sloping shoulders, a narrow and distinctive tip (preserved on all the swords but the one from the Ljubljanica) and have a narrow (the Ljubljanica) or a wide groove (Verdun grave 131), or two narrow vertical grooves (Verdun grave 37, Strmec above Bela Cerkev) on the front and the back of the blade. Of the hilts only tangs and hilt-ends survive. The tangs are rectangular in cross-section and taper towards the top, which is covered by a brass sheet and gives an impression of a knob with a trumpet-like base (preserved in the sword from the Ljubljanica and grave 37 at Verdun). The brass hilt-ends survive on the swords from the Ljubljanica and grave 131 at Verdun. Both fully preserved tangs (from the Ljubljanica and grave 37 at Verdun) are 17 to 18 cm long.

The most distinctive feature shared by the scabbards from the Ljubljanica, Strmec and Verdun are their openwork copper-alloy plates. They are from 16.7 (the Ljubljanica) to 21.5 cm (Verdun grave 37) long and were riveted to the top of the front plate (a rivet or its hole survive on scabbards from the Ljubljanica and grave 131 at Verdun). They overlapped the back by about 6 mm. The three surviving plates were decorated in the same technique, by removing the material. A comparison

[9] For the description of the technique see Braun-Feldweg 1988, 184

[10] In forge welding the previously heated metal parts are joined by hammering.

[11] In soldering, metal parts are joined by a solder (a metal or an alloy).

of the openwork plates from the Ljubljanica and Strmec can be made, as both are well-preserved. Their largest decorated fields are very similar; they consist of the same motifs with the same layout. The ornamental compositions in their lower parts, however, are different.

Furthermore, the scabbards from the Ljubljanica and Verdun all consist of five parts: a back iron plate, a front brass plate, an openwork brass plate (not surviving on the scabbard from grave 37 at Verdun), an iron laddered chape on the bottom two thirds of the scabbard and an iron loop-plate, riveted to the back plate. They are (or originally were) approximately 72 cm long, and 4.7 (Verdun, grave 37) to 4.9 cm (the Ljubljanica, Verdun, grave 131) wide. Despite strong similarities, there are also subtle differences in terms of their construction (for example: the laddered chape of the scabbard from the Ljubljanica does not extend to the openwork plate, so the back plate overlaps the front in this part of the scabbard), as well as their decoration (see above).

The scabbard from Strmec above Bela Cerkev is different: it is made entirely of brass and has no laddered chape. It has a front and a back plate, a decorated fitting and a loop-plate. In its upper part, the fitting overlaps the back, whereas along the rest of the length the back plate overlaps the front. Attached to the front plate are two narrow horizontal decorative plates, which the rest of the scabbards lack.

The scabbards from the Ljubljanica and Verdun have excellent parallels among other scabbards with openwork copper-alloy plates (*list*). In addition to the openwork plate, they also have the campanulate mouth and the same five-part construction consisting of a back plate, a laddered chape and a loop-plate, all made of iron, as well as a copper alloy front plate and openwork plate. Similarly to the examples from the Ljubljanica, Strmec and Verdun, the decorated plates are fixed to their scabbards by overlapping the back plate (exception: Badenheim; *list:* 5) and, in most cases, also by a rivet below the top of the fitting (Göblingen-Nospelt, Wederath, Rządz, Wesółki grave 50, Witaszewice, Zemplín grave 77 – *list:* 1, 4, 11, 14b, 15, 17a). The scabbards from Slovenia, Göblingen-Nospelt, Titelberg, Wederath, Büchel, Badenheim, Eggeby, Magdalensberg, and probably also Wesółki graves 3 and 50 (*list:* 1–5, 9, 14a, b, 16; cf. Metzler, Gaeng 2009, fig. 215) also have in common a very similar central and largest field on the openwork plate. It is decorated by identical or very similar motifs with an identical layout. There are only subtle differences between them, e.g. in the motifs to the left and right of the central vertical decorative row: mostly, they consist of horizontally positioned bars, whereas on the fittings from Göblingen-Nospelt and Wederath the two rows consist of S-shaped ornaments formed by two semicircles, placed opposite each other. Another variation is the arcaded ends of the ovals in the central vertical row on the scabbard from Badenheim (cf. Metzler, Gaeng 2009, fig. 215).

In that it is made entirely of non-ferrous metal and has no iron laddered chape, the scabbard from Strmec resembles the copper-alloy scabbard from grave 108 at Zemplín (cf. Cosack 1977) and possibly also the one from grave 128 from the same cemetery (*list:* 17c, d); as well as the silver scabbard from the Axel Guttmann collection (*list:* 26); the copper-alloy scabbard with silver fitting from Belozem (*list:* 25); and probably also the scabbard from grave 147/1937 from Witaszewice (*list:* 15; its front plate overlapped the back one, which does not survive; cf. Kaszewska 1977, 109, fig. 1: 5). Apart from the scabbard from grave 108 at Zemplín that is quite different from the one from Strmec (and other scabbards with openwork plate), the rest of them seem to make up a small, homogenous subgroup of the scabbards under discussion. Another common feature of the subgroup is a similarly shaped scabbard end (see below).

Apart from the examples from Slovenia, there are twelve other swords that were found either in scabbards with openwork plate (*list:* 1–5, 12, 13, 14a, 15, 17b, 23) or come from graves with such scabbards (*list:* 17d). They all have a copper-alloy campanulate hilt-end, sloping shoulders, a narrow blade (3,6–4,1 cm wide) and a long tang with a copper-alloy knob at the top. The latter is easily recognised; on the swords from Büchel and grave 78 from Zemplín (*list:* 3, 17b), it is indicated by a thorn-like projection at the top of the tang. In contrast to the others, the swords from Slovenian sites are shorter (their length is *c.* 82cm) and have a long and distinct tip of the blade.

The blades vary in cross-section. They have either one wide groove (grave 131 from Verdun; *list:* 21b), two wide grooves (Göblingen-Nospelt?,[12]

[12] According to the drawing showing the front view of the blade, it did not have any grooves, but the illustration of the section of the blade, given at two spots (in both cases at spots where the blade could not be observed because of the well preserved scabbard!) suggests two wide longitudinal grooves on both sides of the blade.

Büchel, Wederath, Stara Wieś; *list:* 1, 3, 4, 12), one narrow groove (Badenheim, Ljubljanica; *list:* 1, 5), two narrow grooves (Strmec near Bela Cerkev, grave 37 from Verdun, Danube; *list:* 20, 21a, 23) or three narrow grooves (Witaszewice; graves 78 and 128 from Zemplín; *list:* 15, 17b, d).

11. THE SUBGROUPS OF SCABBARDS WITH COPPER-ALLOY OR SILVER OPENWORK PLATE AND ASSOCIATED SWORDS

Together with other examples (*list*), the scabbards from the Ljubljanica, Strmec, Verdun and Mihovo make up a clearly defined group. There are, however, differences within the group with regards, for example, the scabbard ends. These are either spur-shaped (Büchel, Stara Wieś, Ciecierzyn, Verdun grave 37; *list:* 3, 12, 13, 21a), rounded and slightly pointed (grave 108 in Zemplín, Strmec above Bela Cerkev, Belozem and the example from the Axel Guttmann collection; *list:* 17c, 20, 25, 26) or, in one case, boat-shaped (Badenheim; *list:* 5). The scabbards with spur- or boat-shaped ends have a laddered chape and are made of iron and copper alloy, while the scabbards with rounded ends are of copper alloys or silver only, have no laddered chape and are also shorter (about 70 cm long).

Böhme-Schönberger (1998, 237–238, fig. 6) suggested the classification of the scabbards according to their chapes and the decoration of their openwork plates (cf. *section 2*). The scabbard from the Axel Guttman collection with the openwork plate (*list:* 26), which has characteristics of two different Böhme-Schönberger subgroups (the wheel motif and the horizontal partition of the campanulate part of the plate), would suggest the criteria of this division were not well chosen.

In our opinion, two subgroups of the scabbards under discussion emerge from the differences in their length. The first group is characterized by a length of about 70 cm. It comprises all five examples from Slovenian find-spots, the scabbard from Wesołki grave 3 and the one from the Axel Guttmann collection (*list:* 14a, 19–22, 26). The second subgroup consists of scabbards which are about 80 cm long (Göblingen-Nospelt, Büchel, Wederath, Badenheim, Stara Wieś, Donava, Belozem; *list:* 1, 3, 4, 5, 12, 23, 25).

The two length-groups of the scabbards correspond well with the swords. The first subgroup of swords comprises of items *c.* 82 cm in length (Strmec above Bela Cerkev, both items from Verdun, grave 3 from Wesółki and, based on its presumed length, also the sword from Ljubljanica; *list:* 14a, 19, 20, 21a, b); the swords belonging to the second subgroup are 90–95cm long (according to their preserved or presumed length: Büchel, Wederath, graves 78 and 128 from Zemplín, Danube; *list:* 3, 4, 17b, d, 23). The shorter swords have a long and distinctive tip to the blade, resembling Roman gladii, while the longer swords either have a short (Büchel, Wederath; *list:* 3, 4) or a long tip to the blade (graves 78 and 128 from Zemplín, Donube; *list:* 17b, d, 25).[13]

12. THE DATING OF SCABBARDS WITH OPENWORK COPPER-ALLOY OR SILVER PLATE

Five scabbards with openwork plate of copper-alloy or their fragments were found in graves, associated with other items, which allow for a relatively precise dating: grave B from Göblingen-Nospelt, dated to between 30 and 15 B.C. or around 20 B.C. (Martin-Kilcher, Tretola Martinez, Vogt, 2009, 354; Metzler, Gaeng 2009, 455–458), three La Tène D2 graves – grave 108 from Zemplín, grave 37 from Verdun and the grave from Strmec above Bela Cerkev (Božič 1999, 199–200) – as well as grave 131 from Verdun, which cannot be earlier than (late) Tiberian.[14]

Haffner (1995, 149) dated the two graves from Büchel and Wederath, which contained no Roman objects, to between 30 and 15 B.C., and the time of the manufacture of the two swords and scabbards from these graves to between 40 and 25 B.C. According to Böhme-Schönberger (1998, 242–243) the grave from Badenheim, which also

[13] Dragan Božič drew my attention to the differences in the form of the blades' tips.

[14] Such a dating is indicated by a samian platter of form Consp. 20.4 with a stamp ATICI in planta pedis and a cup of form Consp. 27.1 (Conspectus 86–87, 100–101; C V Arr, nos. 324, 325). Weapons of La Tène tradition – in addition to the sword and scabbard under discussion, also a shield boss of type Verdun grave 37 (cf. Božič 1999, 199) and a spearhead with a faceted socket – were no doubt old objects when they were deposited in the grave. This is not the case, however, with the apron strap fittings of a Roman military belt from the grave. Such fitments were namely in use from the Augustan period to the end of the 1st century AD (cf. Deschler-Erb 1999, 46–47). The author would like to thank Danilo Breščak for allowing her to examine the drawings of the grave goods.

did not contain any Roman objects, belongs to the end of La Tène D1 or to the beginning of D2, that is, in her opinion, roughly between 60 and 50 B.C. (o.c. 242, 243). Her argument for this early dating was her equally early dating of the grave 108 from Zemplín, to which there are relevant objections (Božič 1999, 200, 211).

On the basis of the graves they were found in, the wider time span of the scabbards in question seems to be La Tène D2. In the Eastern Alpine region this begins in about 70/60 B.C.[15] and ends with the beginning of the middle Augustan period *c*. 15 B.C. (Božič 1999, 211–212; 2008, 145). Grave B from Göblingen-Nospelt, which provides the

[15] Božič 1988 (86–87) suggested the beginning of Lt D2 around 70 B.C. The dating of the relative stages 2b and 2c of the Ornavasso – San Bernardo cemetery (Martin-Kilcher 1998, 249) positions it between 70 and 60 B.C. The dating of the Alesia group brooches would suggest its beginning around 60 B.C. (cf. Istenič 2005).

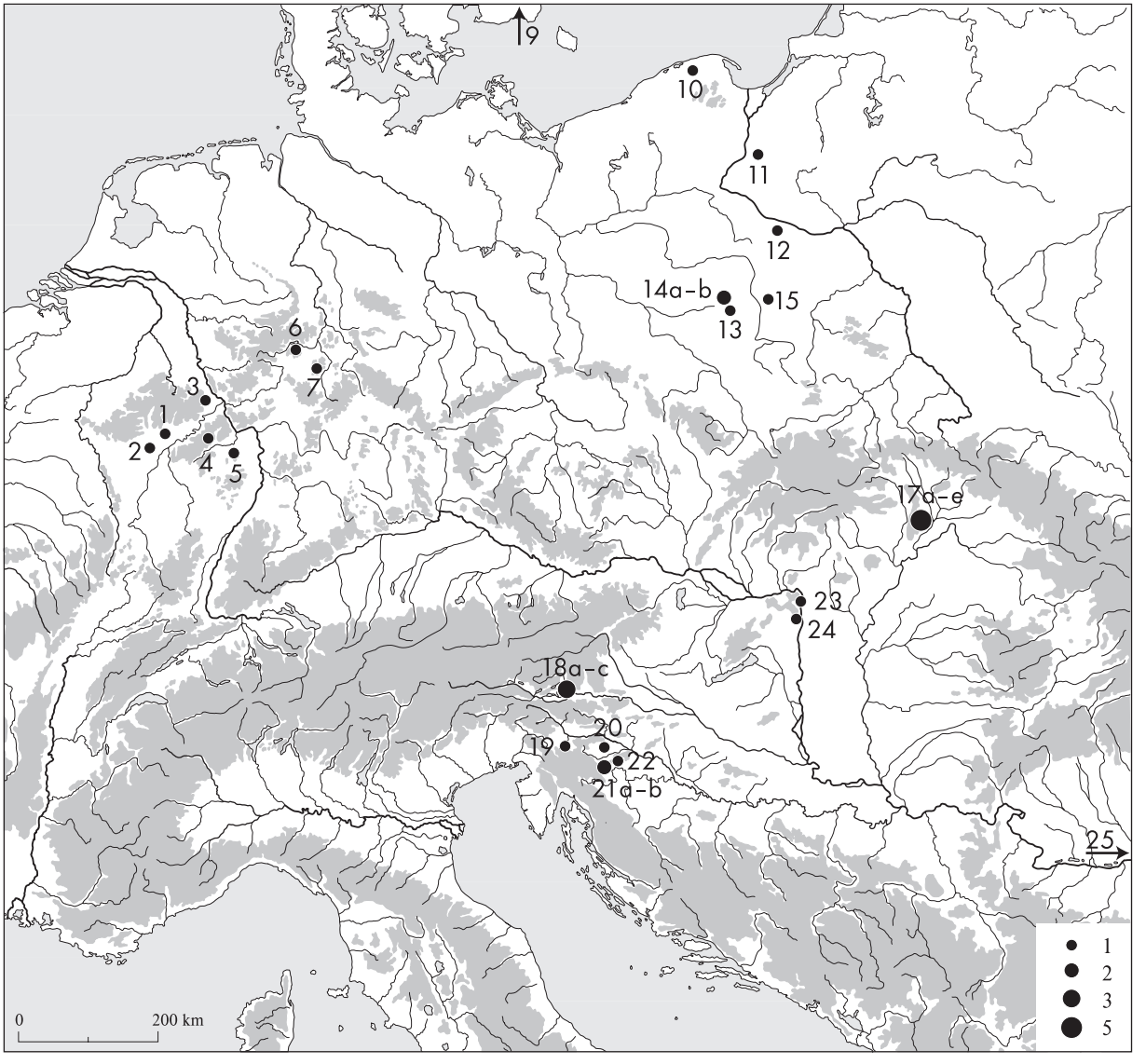


Fig. 13: Distribution of scabbards with openwork copper alloy or silver plates or their fragments. Nos. 8 and 16 are omitted. See *List*.
1 Göblingen-Nospelt, **2** Titelberg, **3** Büchel, **4** Wederath, **5** Badenheim, **6** Groβromstedt, **7** Schkopau, **9** Eggeby, **10** Kopaniewo, **11** Rządz, **12** Stara Wieś-Kolonia, **13** Ciecierzyn, **14a–b** Wesołki, **15** Witaszewice, **17a–e** Zemplín, **18a–c** Magdalensberg / Štalenska Gora, **19** Ljubljanica (Bevke), **20** Strmec above Bela Cerkev / nad Belo Cerkvijo, **21a–b** Verdun, **22** Mihovo, **23** Danube near Pomáz / Donava pri Pomázu, **24** Nagytétény, **25** Belozem.
Sl. 13: Najdišča nožnic z okovom iz bakrove zlitine ali srebra, z okrasom narejenim v predrti tehniki. Številki 8 in 16 sta izpuščeni. Primerjaj *Seznam*.

only reliable narrow dating for this type of scabbard, would suggest a more precise dating between 40/30 and 15 B.C. The scabbard from grave 131 at Verdun would support this dating.

To summarise: the scabbards with openwork plates were no doubt in use between 40/30 and 15 B.C. although an earlier date, but not before about 60 B.C., cannot be excluded.

13. THE DISTRIBUTION OF SCABBARDS WITH OPENWORK COPPER-ALLOY OR SILVER PLATE

Sites where scabbards with openwork copper-alloy or silver plates or their fragments have been found are included in *list* (nos. 1–7, 9–15, 17–26) and mapped on *fig. 13*. Most of them are situated between Luxemburg in the west and eastern Poland and Slovakia in the east, and between northern Poland in the north and Slovenia in the south; one item also comes from southern Sweden and one or two from Bulgaria. The distribution of the scabbards indicates that they were used in the areas inhabited by Celtic and Germanic tribes; one or two examples come from the Thracian area. Distinctly high concentrations (five examples) appear in the wider area of the Moselle and on the territory of central and southeastern Slovenia; also notable are the finds from Magdalensberg, Zemplín and Poland.

Of the 32 scabbards of the group or their fragments, a clear majority (i.e. 29 items) come from graves; two come from rivers (*list:* 19, 23) and for one the details regarding its find-spot are unknown (*list:* 26). Their distribution is therefore probably related to the distribution of the graves with weapons (swords) of that period.

A survey of weapons in the graves from the second half of 1st century B.C. in central Gaul (Riquier 2008) indicates that the scabbards from the group under discussion were most likely not in use there. The burial grounds of Ornavasso and Giubiasco would indicate the same for the region of Southern Alps (Pernet et al. 2006; Graue 1974). In southern Germany, Bohemia, Moravia, Hungary, northern Croatia and northern Serbia, the absence of scabbards is consistent with the scarcity or absence of graves (with weapons) from the second half of 1st century B.C.

It can be concluded that the distribution of the scabbards under discussion is probably related not only to the regions where they were used, but also to the traditions involved in the burial of the dead. It would seem, however, that inside the Roman Empire, these swords and scabbards were used in the wider areas of the Moselle, the Middle Rhine and eastern Alps, which were inhabited by the Treveri, Norici and Taurisci. In the early Augustan period, these regions were already part of the Roman state or in close friendship with it. The scabbard and its associated sword from Belozem (and perhaps also the example from the Axel Guttmann collection) suggest their sporadic occurrence in Thracian tribes, as well. The leaders of some of them, and their warriors, took part in the civil wars following Caesar's death (in the battle of Philippi 42 B.C. with 3000 cavalrymen on each side, and in the battle of Actium 31 B.C.), and after the middle Augustan period, when a vassal kingdom was established there, its men fought on Roman side in many wars, including the Dalmatian-Pannonian war of 6–9 A.D. (Danov 1979, 121–132). In the regions which never became part of the Roman Empire, the swords and scabbards under discussion appear in the wide territory inhabited by various tribes called *Germani* by the Romans.

14. THE ORIGIN OF THE SCABBARDS WITH OPENWORK COPPER-ALLOY OR SILVER PLATE AND ASSOCIATED SWORDS

The scabbards of the group originate in the La Tène tradition, as indicated by their construction from two metal plates and the way they are secured, by the campanulate top and the loop-plate, as well as the laddered chape.

The front and the back plate of these scabbards were secured by a combination of two methods: by an overlapping plate and by a laddered chape. The first method is typical of Celtic swords from the Early La Tène period onwards (cf. Pernet et al. 2006, 36). The laddered chapes are typical of La Tène D2 (Lejars 1996, 92–93, fig. 7: 9–11; Sievers 2001, 153, 217–219, cat. nos. 138–139, 141–142, 144–145, 147–149, pls. 49–52[16]) and seem to derive from the La Tène D1 scabbards of the Alizay and Ludwigshafen types, characteristic of western Celtic regions (Haffner 1989, 203–206; Lejars 1996, fig. 7: 3–8; Metzler, Gaeng 2009, figs. 209, 210).

Laddered chapes can have a spur-shaped end, which appears not only on scabbards with openwork copper-alloy plates, but also on iron scabbards with iron net-like fittings as well as on other types of

[16] The numbering on pl. 51 is incorrect..

scabbards. Spur-shaped chape ends were found in Germany and Poland; one example was also discovered in northern France, one in Slovenia (Verdun) and another one in Djerdap. They first appeared at the beginning of the Late La Tène period and seem to be of Germanic or perhaps Celtic origin (Gleser 1999, 77–83, 86–88, fig. 29, list 2; Gleser 2005, 118–124). Boat-shaped terminals are typical of the west-Celtic La Tène D1 scabbards of the Alizay and Ludwigshafen types (cf. Metzler, Gaeng 2009, fig. 209: 1,3, fig. 210; Pernet et al. 2006, 41–42, fig. 2.9: 3c), and the laddered chapes with a rounded end appear in several La Tène D2 graves from the western Celtic regions (Lejars 1996, fig. 7: 10,11; Pernet et al. 2006, 40, 42, fig. 2.9: 3a).

Also of Celtic origin is the technique of openwork decoration made by removing the material from the metal sheet, which was already in use among the Celts during the early stages of the Late Iron Age (Schönfelder 2002, 122). The same technique was used in the openwork decoration of iron fittings on the wagon from the Late La Tène grave of a Celtic aristocrat from Boé in Aquitania (Schönfelder 2002, 115–126, figs. 78–80).

The motifs of the openwork decoration of the scabbards in question have not been studied in detail by the author. In the opinion of Metzler and Gaeng (2009, 247), they consist of Celtic and non-Celtic motifs (arcades). Arcades are a dominant motif in nearly all the openwork plates in question and have been recognised as a Mediterranean motif by Künzl (1996, 397).

The use of copper alloy for scabbards is rare during the Middle La Tène period (Guštin 1981, 228–229, pl. 46), but it is common from the beginning of Late La Tène onwards, when the scabbards of Ludwigshafen type start appearing (Pernet et al. 2006, 40–42; Lejars 1996, 79; Metzler, Gaeng 2009, 237–240, figs. 209, 210; Wyss, Rey, Müller 2002, cat. nos. 20–23, 37).

The swords belonging to the scabbards under discussion also exhibit La Tène characteristics, such as the campanulate hilt-end and sloping shoulders. Long and narrow blades, tapering towards the pointed ends, (which is possibly a Roman influence), appear on some of the Late La Tène swords (cf. Lejars 1996, 90, fig. 6: 4; Wysss, Rey, Müller 2002, pls. 9–14: nos. 26,28,32,33,34,36,39–42,44). The knob-like top of the hilt is also known from other La Tène swords (e. g. Wyss, Rey, Müller 2002, 57, pls. 23, 24, 33, cat. no. 74; Sievers 2001, 217–219, cat. nos. 140, 141, pl. 50: 140,141). Metallographic features of two of the examined sword blades seem to be another indication of Celtic tradition (Schwab 2005, 327–331).

It can be concluded that the shape of the scabbards and swords under discussion exhibit Celtic characteristics. The same applies to the technique of the openwork decoration, while part of its motifs and the long and pointed ends of the blades (cf. *section 11*) seem to exhibit Roman influence.

Considering the obvious links of these scabbards and swords to Celtic tradition, it is surprising that all the copper-alloy parts of the items from Slovenia were of pure brass; the same goes for the scabbards from grave 78 in Zemplín (cf. Longauerová, Longauer 1990), grave 784 at Wederath and the one from Badenheim,[17] while on the scabbard from Büchel brass diluted by tin and lead was applied (cf. Schwab 2005, 332, tab. 2).

The fact that the scabbards' front plate and openwork plate as well as the swords' hilt-end and knob were of pure brass (i.e. brass with about 20 % zinc) clearly shows that freshly made pure brass (brass ingots: cf. Müller 2002, pl. 120: 1488; Riederer 2002, 132, cat. 1488) was used for their manufacture rather than melted brass objects (cf. Nieto 2004), since when brass is melted, the proportion of zinc is reduced (cf. Nieto 2004). An addition of other alloys to the molten brass would be even more obvious from its composition (cf. the scabbard from Büchel – Schwab 2005, tab. 2 and a brooch – Šmit et al. 2005, tab. 3).

The Celts did not produce brass, but the Romans produced and used it from *c.* 60 B.C. (Istenič 2005, 204–205, 209–211; Istenič, Šmit 2007). The interpretation of the use of pure brass in the scabbards and swords under discussion is made difficult by the fact that the elemental composition of only a very few Late La Tène metal objects has been published. Such is the case with the swords with metal discs (of iron or copper alloy) on the tang. The swords of this kind from graves 805 and 809 at Wederath, dated to *c.* 30 B.C., suggest this group of swords is roughly contemporaneous with the swords and scabbards discussed in this paper. They appear on the north-eastern periphery of Gaul (there is a concentration of six find-spots in the Netherlands) and also to the east of the Rhine (Haffner 1989, 229–238; Roymans 2004, 108– 112, figs. 7.4, 7.5). The analysis of the discs from three

[17] The author would like to thank Roland Schwab (Curt-Engelhorn-Zentrum Archäometrie, Mannheim) for the information regarding the composition of copper alloy of the scabbards from Wederath and Badenheim.

swords from Netherlands has shown they were of bronze (Verwers, Ypey 1975, 87, 88, tab. 1).[18] On the other hand, two swords of the group, from the River Scheldt near Denain and from Rögatz, have brass discs (Roymans 2004, 110–111; Verwers, Ypey 1975, 90–91). The analysed disc from Rögatz is of copper and zinc alloy (the relative proportions are not given; Verwers, Ypey 1975, 90–91); the absence of tin suggests pure brass. One of the discs on the sword from the Scheldt was analysed, probably on its surface; the result (copper with c. 12 % zinc and 1.5 % tin; Hantute, Leman-Delerive 1982, 90) seems to suggest that the disc was not made of pure brass.[19]

It can be concluded that in some of the swords with metal discs bronze was used, whereas in others brass was applied. Further research, which would have to include detailed analysis of a large number of swords, might show what kind of brass it was, how often it was used with these swords and what influenced the choice of the alloy (e.g. date and/or place of their production).

In comparison to the swords with discs on their handle, the use of pure brass on the scabbards with openwork plates is more consistent, as it appears on seven (of the eight analysed) scabbards (from Zemplín, Badenheim and Wederath and four from Slovenia). The copper alloy of the eighth scabbard was probably made of pure brass to which a small amount of tin and lead was added.

In the context of the question regarding the origin of the scabbards and swords under discussion, we would like to draw attention to two swords with a name stamp on the upper part of their blade, which can be more or less closely linked to the scabbards under discussion: the sword with the VTILICI stamp from grave 78 at Zemplín in Slovakia (*list:* 17b) and the sword with the ALLIVS PA stamp from grave 20 at Wesołki in Poland (Dąbrowska, Dąbrowski 1967, 28, fig. 23: 6, pl. 8: 3). The stamp on the sword from Wesołki has regular and clear lettering, whereas the lettering on the Zemplín stamp, judging from the photograph, seems relatively irregular and unclear.

The shape of its shoulders, the grooves on the blade and particularly the form of the top end of the tang (cf. sword from Büchel, *list:* 3) link the sword from grave 78 in Zemplín to the swords which are associated with the scabbards under discussion (cf. *list*). Its length (95 cm) corresponds to their longer versions. In grave 78 from Zemplín, only parts of the scabbard survive; they are melted onto the blade of the sword. The published drawings alone do not allow classification as one of the scabbards under discussion, however Pleiner's description is clear: he mentions "fragments of copper/bronze scabbard, ornamented in an openwork style of Late La Tène Noric type" (Pleiner 1993, 97). Analysis has shown that the scabbards' fragments included pure brass with about 18 % zinc (Longauerová, Longauer 1990).

The sword from Wesołki – with the shape of the shoulders and blade, the "brass" knob (as it says in the description, although analysis probably has not been made) and its length (82.5 cm; Dąbrowska, Dąbrowski 1967, 28, fig. 23: 6) – matches well with the group of shorter swords, typical of the scabbards under discussion (cf. above, *section* 11). It comes from a cremation grave, where it was associated with a lower loop-plate from a scabbard (ibid., 23, fig. 23: 7). The plate is made of copper alloy[20] and resembles the end of the lower loop-plate on the scabbard from Strmec above Bela Cerkev (*fig. 5b; insert 2*), which is of brass.

Allius is a relatively common Latin name. It was used as a nomen, as well as a cognomen, and is known particularly in Italy, Hispania, Gaul and Dalmatia (Onomasticon I, 43–44). The stamp VTILICI is less clear. There is no known name that would correspond to the genitive or dative Utilici; the word resembles the Latin adjective utilis.[21]

In both cases the stamps probably refer to the maker of the sword. In the first case, the person no doubt had a Latin name (Allius), whereas in the second case this is not certain.

La Tène swords (or rather, their blades) that we know of, carry, with one exception, anepigraphic stamps (Dulęba 2009; Wyss, Rey, Müller 2002, 37–39). We know of no early Roman swords with stamps, with possibly one exception.[22]

[18] Six discs from three swords were analysed; their composition differs in all the three swords: on one of them the discs were of leaded bronze (5% of lead and 5–6 % of tin), on the second one of bronze with 12 % of tin and on the third one of leaded bronze with 5 % of lead and 12 % of tin.

[19] It is not the relatively small percentage of zinc, but 1.5 % of tin that suggest the disc is not of pure brass; it is namely usual that the share of zinc is lower on the patinated (corroded) surface than in the core (cf. Istenič, Šmit 2007, 143).

[20] K. Czarnecka, pers. comm. Cf. also *Appendix*.

[21] The author would like to thank Julijana Visočnik from Nadškofijski arhiv Ljubljana for this explanation.

[22] Haffner (1989, p. 271) mentions a gladius with a stamp on its tang, from a destroyed burial ground at Bell (Mayen-Koblenz). The publication was unavailable to us, so we couldn't verify it..

It can be concluded that the scabbards and swords under discussion follow the La Tène tradition; some of the motifs of the openwork decoration and the long and pointed tips of the blades, observed on several swords, would indicate Roman influence. This is also evident in the use of pure brass. The name stamps on two of the swords, of which one certainly and the other probably belonged to the scabbards in question, would indicate that Romans were involved in their manufacture.

The distribution of the scabbards under discussion (*fig. 13*), concentrated in Celtic and Germanic regions, in our opinion, does not necessarily reflect relations between the Celts and their eastern neighbours. It is also possible that they reflect Roman contacts with the Celts and other peoples of the newly conquered regions, as well as the ones from the Barbaricum, in the last decades B.C.

The Treveri had had intense links to the Roman army as early as Caesar's Gallic wars (alternately as allies and enemies). Rich cavalry graves from Göblingen-Nospelt, including grave B with the sword and scabbard under discussion, are linked to the members of Treveri aristocracy (Metzler, Gaeng 2009, 513–519, 521), which commanded their military forces within the Roman army.

The link of the Taurisci to the Roman army during the middle and late Augustan period and also later is indicated by the graves with Roman-type military equipment from Verdun (e.g. graves 1, 41, 84, 112, 136; cf. Breščak 1989, 10, 13; Breščak et al. 2002, 139, 141–142, cat. nos. 74, 82)[23] and Mihovo (Windl 1975, graves 1656/58, 1657/16, 1657/59, 1657/110, 1846/3, 1661/1, pls. 21: 1–5, 28: 1–3, 43: 1–5, 51: 15–19, 61: 5–7). In our opinion grave 1 from the Košak B plot at Strmec above Bela Cerkev and grave 37 from Verdun, dated to between 60/30 and 15 B.C., also belonged to Tauriscan warriors, who were presumably members of the ruling class with military-political relations with the Romans. In addition to the discussed swords and scabbards, which show Roman influence, they used their traditional weapons and attire and were buried with La Tène type pottery (cf. Božič 1999, 211; Mihaljević, Dizdar 2007). Considering the narrower date-span of the scabbards in question, the most probable dating of the said graves would seem to be between 40/30 and 15 B.C. This would be consistent with the new situation which developed in the South-Eastern Alps after Octavian's Illyrian wars (35–33 B.C.).

[23] Only the published graves are included.

In the case of the Treveri and Taurisci, we can assume the scabbards and swords under discussion were most likely used by their ruling men, who cooperated with the Romans. Their weapons were still completely traditional; only the scabbards and swords under discussion exhibit – in addition to predominant La Tène elements – clear Roman influence.

The use of pure brass in the scabbards and swords under discussion, which generally exhibit Celtic characteristics in form and appearance, indicate they were produced in a milieu of intense Celto-Roman relations. A Latin name stamp on one of the swords suggests that Romans took part in their production. They were made in the Celtic tradition, with some Roman influence in form and decoration, and with materials used in the production of Roman weapons (brass).

These observations, as well as the distribution of the discussed weapons lead us to the assumption that their production and distribution were in Roman hands. They were intended for cooperating Celts and others, who valued Celtic swords and were accustomed to using them. The Romans distributed these weapons as trade goods and/or as gifts. Their presence at Zemplín and on sites in Poland might reflect Roman gifts in the regions along the Amber Route.

The hitherto presumed regions of origin of the scabbards and swords under discussion, i.e. the territories of the Norici and Treveri, were already partly Romanised Celtic environments in the period between 40/30 and 15 B.C., where we can well imagine the manufacture of such weapons. However, this does not apply to the third obvious concentration of the discussed weapons, i.e. the territory of Dolenjska (Slovenia), inhabited by the Taurisci. This leads us to the assumption that the concentrations of the discussed weapons on the territories of the Treveri, Norici and Taurisci are more likely to be related to the burial rites of these tribes and the cooperation of their leading men with the Romans than to the production of these weapons. The latter occurred in a region where the relations between the Celts and the Romans were close and from where a wide distribution of products to the territories indicated by the find-spots of these items can be expected (*fig. 13; list*). In our opinion, the eastern part of Gallia Cisalpina, the province which became part of Italy in 42 B.C., seems to best meet the described requirements.

The two lengths of the scabbards and swords (see *section 11*) might indicate that the longer ones

(Göblingen-Nospelt, Büchel, Wederath, Badenheim, Stara Wieś, Zemplín – graves 78 and 128, Danube and Belozem) were made for cavalrymen, while the shorter ones were intended for infantrymen. This assumption is in accordance with grave B from Göblingen-Nospelt and grave 129 from Zemplín, in which relatively long scabbards and swords of the discussed group were associated with spurs (Metzler, Gaeng 2009, fig. 65: 70a, b; Budinský-Krička, Lamiová-Schmiedlová 1990, pl. 18: 1,2). It is also supported by the fact that only the longer items come from the territory of the Treveri. They had a strong cavalry, which cooperated with the Romans during the Gallic wars and was valued by Caesar (Metzler, Gaeng 2009, 513, 514). All four scabbards and swords from the territory of the Taurisci fall in the subgroup of shorter items (*list:* 19–21),[24] which contains only two other examples (grave 3 from Wesołki and the example from the Axel Guttmann collection; *list:* 14a, 19–22, 26).

15. CONCLUSIONS

Scabbards with openwork copper-alloy or silver plates make up a relatively homogenous group of La Tène weapons, which, according to the available information, add up to at least 32 examples. They come from graves and, in two cases, from rivers. No known examples come from settlements. They were produced and used roughly between 40/30 and 15 B.C. An earlier dating from about 60 B.C. seems unlikely, but cannot be excluded. Grave 131 from Verdun indicates that some of these items were kept for a long time.

The scabbards and swords under discussion exhibit Late La Tène Celtic characteristics, but also a clear Roman influence. The use of pure brass, established for seven items (four from Slovenia, two from Germany and one from Slovakia) and a stamp bearing a Roman name on the sword from Wesołki, indicate strong links between their production and the Romans. It follows from our research that they were made in a milieu characterised by intense Celto–Roman relations, perhaps in eastern Gallia Cisalpina, and were produced for Celtic Roman allies as well as for others (i.e. Germanic tribes), who valued Celtic swords and had a tradition of using them.

[24] The scabbard and sword from Mihovo could not be considered

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Translation: Katarina Jerin, language editing: Alex Croom

LIST
(*fig. 13*)

A list of Late La Tène scabbards with copper-alloy or silver openwork plates or their fragments.[25] For each of

[25] In our opinion, the copper alloy openwork plate from Tuczno (Poland; Makiewicz 1975, 139, pl. 9: 4; Werner 1977, 382, fig. 11, 3) and the net-like iron plate from Sofia Podueni (Bolgaria; Popov 1921, 33–34, figs. 34, 35) should not be included in the group under discussion (for different opinions see Böhme-Schönberger 1998, fig. 6: 6 and Czarnecka 2002, 97, 98, no. 12, 25). The published information would also seem to exclude from the group the sword with the remains of a scabbard from Sanzkow (Germany; Werner 1977, 388, fig. 16) and a fragment of the scabbard from Zvenihorod-Zaguminki, grave 7 (Ukraina; Werner 1977, 384, fig. 12: 1; Kropotkin 1977, 185, fig. 12: 1; Łuckiewicz 2000, 374, fig. 15). Böhme-Schönberger (1998, fig. 6: 3,13) and Czarnecka (2002, 97–98, no. 9, 18) are of a different opinion.

In the case of the item from Lučka (Ukraina), the information published by Łuckiewicz (2000, tab. 1) does not indicate that it should be included in the group. The publication quoted by Czarnecka (2002, 98, no. 19), who included it in the group, was not available to the author.

the items the latest publication with illustration is cited, as well as other publications relevant for determining the scabbard or its find-spot.

Luxemburg

1. Göblingen-Nospelt, grave B; scabbard and associated sword.

Metzler-Gaeng 2009, 80, 84, 243–244, figs. 65: 22a, 213, 215: 1.

2. Titelberg, area of the eastern cemetery and Celto-Roman sanctuary; upper part of the sword and scabbard with openwork plate.

Metzler-Gaeng 2009, 248–249, figs. 214, 215: 2.

Germany

3. Büchel, grave; scabbard and associated sword.

Haffner 1995, 137–142, 148, figs. 2, 3, 9: 1, Falttafel 1; Schwab 2005.

4. Wederath, grave 784; scabbard and associated sword.

Haffner 1995, 141–143, figures 4, 9: 2, folding plate 1.

5. Badenheim, grave; scabbard and associated sword.

Böhme-Schönberger 1998, 218–223, figs. 11–13, *Beilage* 4.

6. Groβ Romstedt, from a grave; small fragment of a sword's blade and a scabbard's openwork plate.

Czarnecka 2002, 97, št. 6; Werner 1977, 381–382, fig. 11: 2.

7. Schkopau, cemetery, no information regarding the grave-group; fragment of the upper part of a scabbard with openwork plate.

Schmidt, Nitzschke 1989, 93, E 7, pl. 78: 7.

8. Harsefeld, grave 8; openwork plate and scabbard end.

Werner 1977, 383, 387, 400, fn. 45, fig. 15; Böhme-Schönberger 1998, 233–234, 237, fig. 5.

Werner (1977, 383) describes the openwork plate as being quite substantial (*recht massiv*), suggests it was cast and presumes it is a Germanic imitation of a "Norican" item. According to Böhme-Schönberger, the openwork plate is an unfinished product, which was mounted upside down.

The fragment of the scabbard end (Werner 1977, fig. 15: 2) clearly differs from other scabbards in the group. A sword with a stamp in the form of a rosette was found with the fragments of the scabbard (Werner 1977, 400, fn. 45).

It seems very doubtful that the original scabbard belonged to the group under discussion, therefore it was not included in *fig. 13*.

Sweden

9. Eggeby, barrow; openwork plate.

Böhme-Schönberger 1998, 232–233, fig. 4; Böhme-Schönberger 2001, 79–80, fig. 1.

Poland

10. Kopaniewo (germ. Koppenow), grave 10; fragment of a scabbard with an openwork plate.

Werner 1977, 377, fig. 6; Wołągiewicz, Wołągiewicz 1963, 99, pl. 1: 11.

11. Rządz (germ. Rondsen), cemetery, no information regarding the grave-group; fragment of an openwork plate.

Werner 1977, 382–383, fig. 11: 1.

12. Stara Wieś-Kolonia, grave 1; scabbard and associated sword.

Werner 1977, 390, fig. 17; Kaszewska 1977, 119, no. 21, fig. 3; Böhme-Schönberger 1998, 226, fn. 22, 26.

13. Ciecierzyn, grave 118; scabbard and associated sword.

Martyniak, Pastwiński, Pazda 1997, 28, t. 117: 1,2.

14a. Wesołki, gr. 3; scabbard and associated sword.

Dąbrowska, Dąbrowski 1967, 14, sl. 7: 8; Kokowski 2003a, 107, cat. no. 214, fig. 16; Kokowski 2003b, 482–483.

Only iron is mentioned amongst the metals in the published description of the scabbard (Dąbrowska, Dąbrowski 1967, 14; Kokowski 2003b, 482–483; cf. also Łuckiewicz 2000, 370, tab. 1), but according to Bochnak and Czarnecka (2004–2005, 29), the openwork plate is of bronze or copper coated iron.

14b. Wesołki, grave 50; openwork plate and spur-like chape-end.

Dąbrowska, Dąbrowski 1967, 56, fig. 57: 1,8; Łuckiewicz 2000, 370, tab. 1, fig. 13: 1,8.

15. Witaszewice, grave 147/1937; fragments of scabbard and associated sword.

Werner 1977, 391–392, fig. 18; Kaszewska 1977, 108, 120, no. 46, fig. 1: 3–5; Łuckiewicz 2000, 370, tab. 1, 376, fig. 17.

16. Kamieńczyk, gr. 301; scabbard and associated sword.

Dąbrowska 1997, 62, 90, pl. 138: 4, 201: 1; Bochnak, Czarnecka 2004–2005, 29, fig. 4.

This scabbard seems to be the only one with an iron openwork plate, which is of the same quality and decorated with the same motifs as the plates of copper alloy. Nevertheless, we have included the item in the *list,* but excluded it from further discussion and *fig. 13*.

Slovakia

17a. Zemplín, grave 77; two fragments of an openwork plate.

Budinský-Krička, Lamiová-Schmiedlová 1990, 253, 255, pl. 11: 10,11.

17b. Zemplín, grave 78; sword with remains of a scabbard.

Budinský-Krička, Lamiová-Schmiedlová 1990, 255, fig. 20a, pl. 11: 20; Lamiová 1993, 25, 27, fig. 18, 19, 25; Pleiner 1993, 97.

The affiliation to the scabbards with copper alloy or silver openwork plates was made on the basis of a comment by Pleiner (1993, 97) that the openwork plate was decorated in "Norican style".

The motifs and composition of the scabbard plate from Stara Zagora (Bolgaria; Werner 1977, 392–394, fig. 19; Popov 1921, 33–34, figs. 33, 34) do not correspond to the ones of the group under discussion.

17c. Zemplín, gr. 108, two fragments of a scabbard: a fragment of its upper part with openwork plate and a fragment of its end.

Cosack 1977; Budinský-Krička, Lamiová-Schmiedlová 1990, 260–261, pl. 15: 30,31; Böhme-Schönberger 1998, 227, 233, 234, 237, fig. 3.

It seems that the whole scabbard was of copper alloy (Cosack 1977). The end of the scabbard differs from the others in the group (it is longer and narrower; with four rivets on the front of the horseshoe-shaped end of the chape, and what seems like a rod-like fitting at the back). The openwork plate might be unfinished (cf. Böhme-Schönberger 1998, 227, 237, fig. 3).

17d. Zemplín, grave 128; fragment of an openwork plate and a fragment of a chape.

Budinský-Krička/Lamiová-Schmiedlova 1990, 265, pl. 18: 11,13.

17e. Zemplín, grave 136; small fragment of openwork plate.

Budinský-Krička/Lamiová-Schmiedlova 1990, 267, pl. 18: 27.

Austria

18a–c. Magdalensberg, Lugbichl, cemetery; fragments of three openwork plates.

Deimel 1987, 263–264, pl. 69: 6–8.

Slovenija (*fig. 1*)

19. The River Ljubljanica near Bevke; scabbard and associated sword (*figs. 2–3; insert 1*).

20. Strmec above Bela Cerkev, grave 1 from the Košak B plot; scabbard and associated sword (*figs. 4–7; insert 2*).

21a. Verdun, grave 37; scabbard and associated sword (*figs. 8–9; insert 3*).

21b. Verdun, grave 131; scabbard and associated sword (*figs. 10–11; insert 4*).

22. Mihovo, grave 1657/8; scabbard and associated sword (*fig. 12*).

Hungary

23. The Danube, near Pomáz and Szentendre, single find; scabbard and associated sword.

Hunyady 1942–1944, 115–116, pl. 44: 5,5a,b (photograph); Bóna 1963, 253, pl. 38: 4 (information regarding the find-spot); Hellebrandt 1999, 35–36, t. 4: 4 (poor quality drawing and information regarding the find-spot).

24. Nagytétény, grave; scabbard and associated sword.

Information by András Márton; some of the items from the same grave are published in Zsidi 2009, 111, nos. 294–296.

Bulgaria

25. Belozem, barrow; scabbard and associated sword.

Werner 1977, 372, fig. 3: 1, 378, 379, fig. 8.

26. Unknown site, perhaps in Bulgaria (cf. Böhme-Schönberger 1998, 230, fn. 42); scabbard and associated sword.

http://www.christies.com/LotFinder/lot_details.aspx?pos=8&intObjectID=4265305&sid [date of accession Okt. 2010].

APPENDIX

Just before the paper went to print, K. Czarnecka drew our attention to two papers by K. Dąbrowski and J. Kolendo (Z badań nad mieczami rzymskimi w Europie środkowej i północnej (odkrycie miecza z odciskiem stempla w Wesółkach, pow. Kalisz), *Archeologia Polski* 12, 1967, 383–426; Les épées romaines découvertes en Europe centrale et septentrionale, *Archaeologia Polona* 13, 1972, 59–109). They include some important information about grave 20 from Wesołki. The osteological analysis suggests that a 30–45-year old man was buried in the grave. The knob at the sword's tang was analysed (brass with 10% Zn); there were remains of brass on the sword's blade (remains of the scabbard); the lower loop-plate is of iron (cf. this paper p. 162). The authors discussed the name ALLIVS PA and concluded that the maker of the sword originated from Italy.

BOCHNAK, T. and K. CZARNECKA 2004–2005, Iron scabbard-plates decorated in openwork technique (opus interrasile) in Central Europe. Celtic import or locally made copy?. – *Anodos. Studies of the Ancient World* 4–5, 25–34.

BOCKIUS, R. 1991, Fremdimpulse am Ende der Latènezeit im Rhein-Main-Moselgebiet. – In: A. Haffner, A. Miron (eds.), *Studien zur Eisenzeit im Hunsrück-Nahe-Raum. Symposium Birkenfeld 1987,* Trierer Zeitschrift 13, 281–294.

BÖHME-SCHÖNBERGER, A. 1998, Das Grab eines vornehmen Kriegers der Spätlatènezeit aus Badenheim. – *Germania* 76, 217–256.

BÖHME-SCHÖNBERGER, A. 2001, Das silberne Zierblech von Eggeby. – *Fornvännen* 96, 79–88.

BÓNA, I. 1963, Beiträge zur Archäologie und Geschichte der Quaden. – *Acta Archaeologica Academiae Scientiarum Hungaricae* 15, 239–307.

BOŽIČ, D. 1992, Mokronoška skupina latenske kulture v poznolatenskem obdobju. – Unpublished doctoral thesis / Neobjavljena disertacija, Ljubljana.

BOŽIČ, D. 1999, Die Erforschung der Latènezeit in Slowenien seit Jahr 1964 / Raziskovanje latenske dobe na Slovenskem po letu 1964. – *Arheološki vestnik* 50, 189–213.

BOŽIČ, D. 2008, *Late La Tène-Roman cemetery in Novo mesto / Poznolatensko- rimsko grobišče v Novem mestu.* – Katalogi in monografije 39, Ljubljana.

BRAS KERNEL, H. 2006, "Vrhniški zaklad" je del zbirke najdb iz Ljubljanice pri Bevkah. – *Argo* 49/2, 11–24.

BRAUN-FELDWEG, W. 1988, *Metall. Werkformen und Arbeitsweisen.* – Hannover.

BREŠČAK, D. 1986, Verdun pri Stopičah. – *Varstvo spomenikov* 28, 276.

BREŠČAK, D. 1987, Verdun pri Stopičah. – *Varstvo spomenikov* 29, 271.

BREŠČAK, D. 1989, *Verdun*. Razstavni katalog. – Novo mesto.

BREŠČAK, D., I. GALOVIĆ, Z. GREGL, B. KRIŽ, J. RADOVČIĆ and Ž. ŠKOBERNE 2002, *Oživljene kulture : arheološka odkritja na Gorjancih/Žumberku od prazgodovine do zgodnjega srednjega veka / Revived cultures : archaeological excavations in the Gorjanci/Žumberak Hills from prehistory to the early Middle Ages*. – Ljubljana.

BUDINSKÝ-KRIČKA, V. and M. LAMIOVÁ-SCHMIEDLOVÁ 1990, A late 1st century B.C.-2nd century A.D. cemetery at Zemplín. – *Slovenská archeólogia* 38/2, 245–344.

Conspectus = E. Ettlinger et al., *Conspectus formarum terrae sigillatae Italico mondo confectae*. – Materialien zur römisch-germanischen Keramik 10, Bonn 1990.

COSACK, E. 1977, Zur spätlatènezeitlichen Schwertscheide von Zemplín, Bez. Trebišov (Slowakei). – In: *Symposium Ausklang der Latène-Zivilisation und Anfänge der Germanischen Besiedlung im mittleren Donaugebiet,* 41–46, Bratislava.

CRADDOCK, P. T. 1995, *Early Metal Mining and Production*. – Edinburgh.

CRADDOCK, P. T., M. COWELL and I. STEAD 2004, Britain's first brass. – *The Antiquaries Journal* 84, 339–346.

CRADDOCK, P. T. and J. LAMBERT 1985, The Composition of the Trappings. – In: I. Jenkins, A Group of Silvered-Bronze Horse-Trappings from Xanten (*Castra Vetera*), *Britannia* 16, 141–164.

CZARNECKA, K. 2002, Die Schwertscheiden mit dem Gittermusterornament in Mitteleuropa um die Zeitwende. – In: C. Carnap Bornheim et al. (eds.), *Bewaffnung der Germanen und ihrer Nachbarn in den letzten Jahrhunderten vor Christi Geburt,* Akten der Internationalen Tagung in Nałęczów, 23. bis 25. September 1999, Lublin.

DĄBROWSKA, I. and K. DĄBROWSKI 1967, *Cmentarzysko z okresów późnolateńskiego i wpływów rzymskich w Wesółkach, Pow. Kalisz.* – Wrocław, Warszawa, Kraków.

DĄBROWSKA, T. 1997, *Kemieńczyk. Ein Gräberfeld der Przeworsk-Kultur in Ostmasowien.* – Monumenta archaeologica barbarica 3, Kraków.

DANOV, C. M. 1979, Die Thraker auf dem Ostbalkan von der hellenistischen Zeit bis zur Gründung Konstantinopels. – In: *Aufstieg und Niedergang der römischen Welt* 2/7, 21–185, Berlin, New York.

DEIMEL, M. 1987, *Die Bronzekleinfunde vom Magdalensberg.* – Kärntner Museumsschriften 71, Klagenfurt.

DEMETZ, St. 1999, *Fibeln der spätltène- und frühen römischen Kaiserzeit in den Alpenländern.* – Frühgeschichtliche und Provinzialrömische Archäologie, Materialien und Forschungen 4, Rahden/Westf.

DESCHLER-ERB, E. 1999, *Ad arma!* – Forschungen in Augst 28, Augst.

DULĘBA, P. 2009, Celtic Long Swords with Punchmarks. – *Barbaricum* 8, 53–76 (in print).

FEUGÈRE, M. 1985, *Les fibules en Gaule Méridionale de la conquête à la fin du V^e s. ap. J.-C.* – Revue archéologique de Narbonnaise, Suppl. 12, Paris.

FREY, O.-H. 1986, Einige Überlegungen zu den Beziehungen zwischen Kelten und Germanen in der Spätlatènezeit. – In: *Gedenkschrift für Gero von Merhart,* Marburger Studien zur Vor- und Frühgeschichte 7, 45–79.

GLESER, R. 1999, Studie zum spätkeltischen Häuptlingsgrab 23 mit Wagenteilen und Bewaffnung aus der Nekropole von Hoppstädten-Weiersbach. – *Mitteilungen des Vereins für Heimatkunde im Landkreis Birkenfeld* 73, 29–100.

GLESER, R. 2005, *Studien zu sozialen Strukturen der historischen Kelten in Mitteleuropa aufgrund der Gräberanalyse.* – Saarbrücker Beiträge zur Altertumskunde 81, Bonn.

GRAUE, J. 1974, *Die Gräberfelder von Ornavasso.* – Hamburger Beiträge zur Archäologie Beiheft 1, Hamburg.

GUŠTIN, M. 1981, Keltische Gräber aus Dobova, Slowenien. – *Archäologisches Korrespondenzblatt* 11, 223–229.

GUŠTIN, M. 1984, Die Kelten in Jugoslawien. – *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 31, 305–363.

HAFFNER, A. 1989, *Gräber – Spiegel des Lebens.* – Mainz.

HAFFNER, A. 1995, Spätkeltische Prunkschwerter aus dem Treverergebiet. – In: H.-H. Wegner (ed.), *Berichte zur Archäologie an Mittelrhein und Mosel* 4, Trierer Zeitschrift Beiheft 20, 137–151, Trier.

HANTUTE, G. and G. LEMAN-DELERIVE 1982, Une épée gauloise du Musée de Denain (nord). – *Études celtiques* 19, 83–92 (with contributions by P. Caby and J. Bonte).

HELLEBRANDT, M. 1999, *Celtic finds from Northern Hungary.* – Budapest.

HORVAT, J. 1990, *Nauportus (Vrhnika).* – Dela 1. razreda SAZU 33, Ljubljana.

HUNYADY, I. 1942–1944, *Die Kelten im Karpatenbecken.* – Dissertationes Pannonicae 2/18, Budapest.

ISTENIČ, J. 2000, A Roman late-republican gladius from the River Ljubljanica (Slovenia). – *Arheološki vestnik,* 51, 71–182.

ISTENIČ, J. 2003, The early Roman "Hoard of Vrhnika": a collection finds from the river Ljubljanica / Zgodnjerimski "Zaklad z Vrhnike": zbirka najdb iz reke Ljubljanice. – *Arheološki vestnik* 54, str. 281–298.

ISTENIČ, J. 2005, Brooches of the Alesia group in Slovenia / Fibule skupine Alesia v Sloveniji. – *Arheološki vestnik* 56, 187–212.

ISTENIČ, J. 2009a, Roman period. – In: P. Turk et al. (eds.), *The Ljubljanica – a river and its past,* 265–317, Ljubljana.

ISTENIČ, J. 2009b, Rimsko obdobje. – In: Turk, Peter et al. (eds.), *Ljubljanica – kulturna dediščina reke,* 241–293, Ljubljana.

ISTENIČ, J. 2009c, Roman military equipment and the beginnings of the Roman use of brass in Europe. – *Xantener Berichte* 16, 237–242.

ISTENIČ, J. and Ž. ŠMIT 2007, The beginning of the use of brass in Europe with particular reference to the southeastern Alpine region. – In: S. La Niece, D. R. Hook, P. T. Craddock (eds.), *Metals and mines: studies in archaeometallurgy,* 140–147, London.

JACKSON, R. P. J and P. T. CRADDOCK 1995, The Ribchester Hoard: A Descriptive and Technical Study. – In: B. Raftery (ed.), *Sites and Sights of the Iron Age,* 75–102, Oxford.

KASZEWSKA, E. 1977, Problem der keltischen Besiedlung in Mittel und Nordpolen. – In: *Symposium Ausklang*

der Latène-Zivilisation und Anfänge der Germanischen Besiedlung im mittleren Donaugebiet, 107–122, Bratislava.

KOKOWSKI, A. 2003a, Die Przeworsk-Kultur. Ein Völkerverband zwischen 200 vor Chr. und 375 nach Chr. – In: *Die Vandalen,* 77–184, Nordstemmen.

KOKOWSKI, A. 2003b, [214.1727-1728] Wesołki. – In: *Die Vandalen.* Katalogteil. Die Przeworsk-Kultur, 482–483, Nordstemmen.

KOSEC, L., J. ISTENIČ, S. PEROVŠEK and M. GOSAR, Raziskave lestvičastega okova poznolatenske nožnice s predrtim okrasom iz Ljubljanice. – *Arheološki vestnik* 62, 2011 (forthcoming).

KROPOTKIN, V. V. 1977, Denkmäler der Przeworsk - Kultur in der Westukraine und ihre Beziehungen zur Lipica- und Černjachov- Kultur. – In: *Symposium Ausklang der Latène-Zivilisation und Anfänge der Germanischen Besiedlung im mittleren Donaugebiet,* 173–200, Bratislava.

KÜNZL, E. 1996, Gladiusdekorationen der frühen römischen Kaiserzeit: dynastische Legitimation, Victoria und Aurea Aetas. – *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 43, 383–474.

LAMIOVÁ, M. 1993, *Zemplín*. – Košice.

LEJARS, T. 1996, L'armement des Celts en Gaule du nord à la fin de l'époque gauloise. Revue archéologique de Picardie 3/4, 79–103.

LONGAUEROVÁ, M. and S. LONGAUER 1990, Structural analysis of a scabbard and a ring mail from Zemplín. – *Slovenská archeológia* 38, 349–354.

ŁUCZKIEWICZ, P. 2000, Zur späteisenzeitlichen Bewaffnung in Polen. Stand der Forschung. – *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 47, 355–437.

MAKIEWICZ, T. 1975, Materiały ze zniszczonego cmentarzyska kultury prezeworskiej w Tucznie. – *Fontes Archaeologici Posnanienses* 26, 125–149.

MANNING, W. H. 1976, Blacksmithing. – In: D. Strong, D. Brown (eds.), *Roman Crafts,* 143–154, London.

MARTIN-KILCHER, St. 1998, Gräber der späten Republik und der frühen Kaiserzeit am Lago Maggiore: Tradition und Romanisierung. – *Xantener Berichte* 7, 191–252.

MARTIN-KILCHER, St., D. C. TRETOLA MARTINEZ and R. VOGT 2009, Die Amphoren aus dem Grabbezirk von Goeblingen-Nospelt. – In: Metzler, Gaeng 2009, 333–393.

MARTYNIAK, G., R. PASTWIŃSKI and S. PAZDA 1997, *Cmentarzysko kultury przeworskiej w Ciecierzynie, gmina Byczyna, woj. opolskie.* – Wrocław.

METZLER, J. and C. GAENG 2009, *Goeblange-Nospelt, une nécropole aristoratique trévire*. Dossiers d'archeologie 13. – Luxembourg.

METZLER-ZENS, N., J. METZLER-ZENS and P. MÉNIEL 1999, *Lamadelaine, une nécropole de l'oppidum du Titelberg.* – Dossiers d'archeologie 6, Luxembourg.

MIHALJEVIĆ, M. and M. DIZDAR 2007, Late La Tène bronze helmet from the River Sava near Stara Gradiška. – *Vjesnik Arheološkog muzeja u Zagrebu* 40, 117–146.

MILIĆ, Z., G. LEMAJIČ, S. PEROVŠEK and J. ISTENIČ 2009, Konserviranje in restavriranje najdb iz Ljubljanice. – In: P. Turk et al. (eds.), *Ljubljanica, kulturna dediščina reke,* 30–35, Ljubljana.

MÜLLER, M. 2002, *Die römischen Buntmetallfunde von Haltern.* – Bodenaltertümer Westfalens 37, Mainz.

MÜLLER-KARPE, H. 1951, Zeugnisse der Taurisker in Kärnten. – *Carinthia* I 141, 594–677.

MÜLLNER, A. 1900, Typische Formen aus den archäologischen Sammlungen des krainischen Landesmuseums "Rudolfinum" in Laibach in photographischen Reproductionen. – Laibach.

NIETO, S. 2004, Monnaies arvernes (Vercingétorix, Cas) en orichalque. – *Revue Numismatique* 160, 5–25.

Onomasticon I = *Onomasticon provinciarum Europae Latinarum*. Vol. I: *Aba-Bysanus*. Ex materia ab A. Mócsy et al. collecta composuit et correxit B. Lőrincz, Budapest 2005.

PERNET, L., E. CARLEVARO, L. TORI, G. VIETTI, Ph. DELLA CASA and B. SCHMID-SIKIMIĆ 2006, *La necropoli di Giubiasco (Ti)* II. – Collectio arhaeologica 4, Zürich.

PLEINER, R. 1993, *The Celtic sword*. – Oxford.

POPOV, R. 1921, Materiali za proučvane na predistoričeskata epoha v Sofijskata Kotlovina. – In: *Predistoričeski i strarochristjanski pametnici ot Sofija i okolnost'ta,* Materiali za istorjata na Sofija 5, 1–36, Sofia.

RIDERER, J. 2002, Die Metallanalyse der Funde aus Kupferlegierungen von Haltern. – In: Müller 2002, 109–145.

RIQUIER, S. 2008, L'armament républicain dans les sépultures de Gaule centrale. – In: M. Poux (ed.), *Sur les traces de César,* Bibracte 14, Glux-en-Glenne.

ROYMANS, N. 2004, *Ethnic Identity and Imperial Power.* – Amsterdam.

SCHMIDT, B. and W. NITZSCHKE 1989, *Ein Gräberfeld der Spätlatènzeit und der frührömischen Kaiserzeit bei Schkopau, Kr. Merseburg.* – Veröffentlichungen des Landemuseums für Vorgeschichte in Halle 42, Berlin.

SCHÖNFELDER, M. 2002, *Das spätkeltische Wagengrab von Boé (Dépt. Lot-et-Garonne).* – Römisch-Germanisches Zentralmuseum, Monographien 54, Mainz.

SCHWAB, R. 2005, Untersuchung eines spätkeltischen Prunkschwertes von Büchel, Kreis Cochem-Zell. – In: H.-H. Wegner (ed.), *Berichte zur Archäologie an Mittelrhein und Mosel* 10, Trierer Zeitschrift Beiheft 29, 327–336, Trier.

SIEVERS, S. 2001, Les armes d'Alésia. – In: M. Reddé, S. von Schnurbein, *Alésia. Mémoires de l'Académie des inscriptions et belles-lettres* 22, 121–241, Paris.

STARE, F. 1953, Pomemben zaklad z Vrhnike (Nauportus). – *Arheološki vestnik* 4, 94–104.

STARE, V. 1973, *Prazgodovina Šmarjete.* – Katalogi in monografije 10, Ljubljana.

ŠMIT, Ž., J. ISTENIČ, V. GERDUN, Z. MILIĆ and A. MLADENOVIĆ 2005, Archaeometric analysis of Alesia group brooches from sites in Slovenia / Arheometrične analize fibul skupine Alesia s slovenskih najdišč. – *Arheološki vestnik* 56, 213–233.

ŠMIT, Ž., J. ISTENIČ and S. PEROVŠEK 2010, PIXE analysis of late La Tène scabbards with non-ferrous openwork plates (and associated swords) from Slovenia / PIXE analize poznolatenskih nožnic s predrtimi okovi (in pripadajočih mečev) iz Slovenije. – *Arheološki vestnik* 61, 165–173.

TACKENBERG, K. 1970, Ein spätlatènezeitlicher Schwertscheidenbeschlag aus Vrhnika (Nauportus) und seine Parallelen. – In: *Adriatica praehistorica et antiqua,* Festschrift Grga Novak, 251–264, Zagreb.

TYLECOTE, R. F. 1992, *A history of metallurgy.* – London, Brookfield.

WERNER, J. 1977, Spätlatène-Schwerter norischer Herkunft. – In: *Symposium Ausklang der Latène-Zivilisation und Anfänge der Germanischen Besiedlung im mittleren Donaugebiet,* 367–401, Bratislava.
WESTPHAL, H. H. 1998, Die Untersuchung des Schwertes aus Badenheim. – In: Böhme-Schönberger 1998, 248–256.
WINDL, H. 1975, *Das latène- und kaiserzeitliche Gräberfeld von Mihovo, Unterkrain (Dolenjsko).* – Unpublished doctoral thesis / neobjavljena disertacija, University of Vienna.
WOŁĄGIEWICZ, M. D. and R. WOŁAGIEWICZ 1963, Uzbrojenie ludności Pomorza zachodniego u progu naszej ery. – *Materiały Zachodnio-Pomorskie* 9, 9–166.
VERWERS, G. J. and J. YPEY 1975, Six iron swords from the Netherlands. – *Analecta Praehistorica Leidensia* 8, 79–91.
WYSS, R., T. REY and F. MÜLLER 2002, *Gewässerfunde aus Port und Umgebung.* – Bern.
ZSIDI, P. 2009, *The Visual Store at Aquincum.* – Budapest.

Poznolatenske nožnice s predrtim okrasnim okovom iz bakrove zlitine ali srebra

1. UVOD

V članku obravnavamo skupino mečev z nožnicami s prehoda poznega latena v rimsko dobo, za katere je Joachim Werner (1977) domneval noriški izvor. Najočitnejša značilnost te skupine so nožnice, ki imajo na sprednji strani okov z drobnim okrasom, izdelanim v predrti tehniki. Ta med drugim, razen pri par izjemah, prikazuje stilizirane arkade, ovale in stebričke.

Naše raziskave temeljijo na podrobni preučitvi dveh predmetov te skupine: meča z nožnico iz reke Ljubljanice pri Bevkah v osrednji Sloveniji (v literaturi pred letom 2003 kot najdišče tega meča in nožnice navajajo Vrhniko) in s Strmca nad Belo Cerkvijo na Dolenjskem (v starejši literaturi kot najdišče navajajo Šmarjeto, tj. prvi večji kraj v bližini dejanskega najdišča; *sl. 1*). Natančno smo ju lahko primerjali z mečema in nožnicama iste skupine z grobišča v Verdunu blizu Stopič na Dolenjskem, za katere je Danilo Breščak (Zavod za varstvo kulturne dediščine Slovenije, Območna enota Novo mesto) prijazno dovolil, da jih vključimo v našo študijo. Primerek iz Mihovega pa obravnavamo le na podlagi fotografij, ki smo jih prejeli iz Naravoslovnega muzeja na Dunaju, in opažanj Dragana Božiča, ki si je predmet ogledal v naravi.

2. STANJE RAZISKAV

Temeljno delo o poznolatenskih nožnicah z okovom iz bakrove zlitine ali srebra s predrtim okrasom (*opus interrasile*) je članek Joachima Wernerja iz leta 1977, v katerem je izhajal prav iz meča z nožnico iz Ljubljanice in iz primerka s Strmca nad Belo Cerkvijo. V njem je opredelil značilnosti te skupine, pokazal na njeno široko razširjenost predvsem pri Keltih in Germanih in postavil tezo o njenem izvoru v Noriku ter dataciji v avgustejsko dobo.[1] Navedel je tudi ključna odprta vprašanja in nakazal smeri nadaljnjih raziskav. Poleg tega je opozoril na nožnice, ki jih krasi železen okov s preprostejšim predrtim okrasom, in jih opredelil kot posnetke noriških nožnic.

Več kot 30 let kasneje razpolagamo z natančnimi objavami nožnic z okovom iz bakrove zlitine ali srebra s predrtim okrasom ter pripadajočih mečev iz Büchla, Wederatha, Badenheima in Göblingen-Nospelta (Haffner 1995; Böhme-Schönberger 1998; Metzler, Gaeng 2009, 243–249, sl. 65: 22a) in s pregledno študijo Astrid Böhme-Schönberger (1998). Zadnji obravnavi teh mečev sta Czarnecka 2002 in Metzler, Gaeng 2009, 243–249.

Bochnak in Czarnecka 2004–2005 (29–33, sl. 4) sta obravnavala nožnice z železnim okrasnim okovom (edini razmeroma zanesljivi primerek je z grobišča Kamieńczyk), za katere se zdi, da se njihov okras po motivih in kvaliteti ne razlikuje od obravnavanih primerkov iz bakrove zlitine. Poudarila sta, da poznamo z območij, ki so jih poseljevali Kelti, številne primerke železne pločevine s predrtim okrasom, in postavila domnevo, da so nožnice z omenjenimi železnimi okovi keltski izdelki.

Najdišča nožnic z okovom s predrtim okrasom iz bakrove zlitine oz. njihovih delov ležijo, glede na zadnji objavi (Böhme-Schönberger 1998, 235, 239, sl. 6; Metzler, Gaeng 2009, 248, sl. 216), na območjih ob reki Mozeli v Nemčiji in v Luksemburgu, v srednji in severni Nemčiji, na Poljskem in Slovaškem ter v južni Avstriji, Sloveniji in Bolgariji, po en primerek pa sta znana iz Švedske in Ukrajine. Izvirajo iz bogatih grobov, zato domnevajo, da so bili njihovi lastniki pripadniki politično-vojaške elite (Böhme-Schönberger 1998, 244; Łuczkiewicz 2000, 375).

Najnatančneje, tj. med 30 in 15 oziroma okoli 20 pr. Kr., je na podlagi številnih rimskih predmetov datiran meč v nožnici iz groba B grobišča Göblingen-Nospelt (Martin-Kilcher, Tretola Martinez, Vogt 2009, 354; Metzler, Gaeng 2009, 455–458). Približno iz istega obdobja sta verjetno grob 784 iz Wederatha in grob iz Büchla (Haffner 1995, 149). Böhme-Schönbergerjeva (1998, 242–243; 2001, 83, 86) je za začetek izdelave obravnavanih nožnic predlagala zgodnejšo datacijo, med 60 in 50 pr. Kr.

O izvoru obravnavanih mečev in nožnic so mnenja različna. Ob bok tezi o njihovem noriškem izvoru (Werner 1977; Bockius 1991, 289–291; Böhme-Schönberger 1998, 240, 243) je Haffner ob objavi primerkov z najdišč Büchel, Wederath in Göblingen-Nospelt postavil domnevo, da so jih izdelovali v več delavnicah na različnih območjih, med drugim tudi na območju Treverov (Haffner 1995, 150–151). Že Frey (1986, 51–52) pa je menil, da so nožnice s predrtim okrasom izdelovali v več delavnicah, med drugim tudi v noriških delavnicah na Štalenski gori.

Böhme-Schönbergerjeva (1998, 225–226, 241) je ugotovila, da Wernerjeva delitev nožnic na noriške izdelke in njihove posnetke, ki je temeljila na ugotavljanju kvalitete

[1] Werner omenja datacijo v zgodnjeavgustejsko (1977, 380, 389), srednjeavgustejsko (o.c. 379) in celo poznoavgustejsko (o.c. 379) dobo.

izdelave predrtega okrasa po risbah teh predmetov, ni ustrezna. Nožnice z okrasom *opus interrasile* in pripadajoči meči so po njenem mnenju po načinu izdelave in dataciji enotni. Po zaključku nožnice in okrasnem okovu jih je razdelila v tri skupine: nožnice z ostrogastim zaključkom in predrtim okovom, pri katerem je zvončasti del jasno ločen z vodoravnim pasom (npr. primerek iz Büchla), nožnico s čolničastim zaključkom in predrtim okovom, pri katerem okras neprekinjeno prehaja v zvončasti del (primerek iz Badenheima) in nožnice z motivom kolesa na predrtem okrasu (npr. primerki s Štalenske gore; o. c., 237–238, sl. 6).

Łuczkiewicz (2000, 370–375) je pri obravnavi poljskih primerkov menil, da so nožnice z bronastimi predrtimi okovi uvoženi (keltski) izdelki, tiste z železnimi okrasnimi okovi in z dosti preprostejšim, t. i. mrežastim predrtim okrasom, pa germanski. Zadnje je izpostavila že Böhme-Schönberger (1998, sl. 7), obravnavala pa jih je tudi Czarnecka (2002).

Narejene so bile raziskave materialov meča in nožnice iz Badenheima (Westphal 1998) in Büchla (Schwab 2005) ter raziskava rezila meča iz groba 78 v Zemplínu (Pleiner 1993, 97–98, sl. 11, t. 30–32).

Nožnica in meč iz Badenheima sta bila poškodovana v ognju na grmadi, zato ni bilo mogoče ugotavljati tehnike kovanja. Sestave barvne kovine, iz katere sta bila prednja platica nožnice in okrasni okov, niso določili, konstrukcijske podrobnosti pa so natančno opisane (Westphal 1998).

Metalografske raziskave meča iz Büchla so pokazale, da meč po kakovosti v ničemer ne presega običajnih keltskih mečev (Schwab 2005, 334), s čimer je bil ovržen pomemben argument za lociranje delavnic obravnavane skupine na noriško območje. Werner (1977, 386) in številni za njim (nazadnje Böhme-Schönberger 1998, 240) so namreč domnevali, da so bili v bogato okrašenih nožnicah posebej dobri meči, ki so jih povezovali s kvalitetnim noriškim železom (*ferrum noricum*), omenjenim pri Pliniju. Barvna kovina nožnice iz Büchla je bakrova litina s cinkom, kositrom in svincem (Schwab 2005, 332).

Rezilo meča z imenskim pečatom iz Zemplína (grob 78) je na površini okrašeno in je bilo izdelano v kovaški tehniki lamelnega damasciranja (Pleiner 1993, 97–98; Schwab 2005, 330).

Ugotovljena je bila tudi sestava barvne kovine ostankov nožnice iz groba 78 grobišča v Zemplínu[2]: medenina z okoli 18 % cinka (Longauerová, Longauer 1990).

3. IZHODIŠČA, CILJI, STRATEGIJA, METODE IN TEHNIKE RAZISKAV

V prispevku bomo obravnavali nožnice z okrasnim okovom iz bakrove zlitine ali srebra s predrtim okrasom (*opus interrasile*). Nožnicam z železnimi okrasnimi okovi z dosti preprostejšim, t. i. mrežastim predrtim okrasom v našem prispevku ne bomo posvečali pozornosti. Iz obravnave smo izločili tudi primerek iz Kamieńczyka, pri katerem se okov s predrtim okrasom od obravnavanih okovov iz bakrove zlitine ali srebra razlikuje po tem, da je iz železa (prim. *pogl. 2* in *seznam:* 16).

V Wernerjevem članku je našo pozornost posebej pritegnila navedba, da je Stane Gabrovec Wernerju sporočil, da sta nožnici iz Ljubljanice pri Bevkah in s Strmca nad Belo Cerkvijo iz medenine. Iz česa je prof. Gabrovec to sklepal, ne vemo, saj piše, da analize niso bile narejene (Werner 1977, 394–395).

Podatek o medenini je izredno zanimiv, ker je njena uporaba v Evropi v 1. stol. pr. Kr. tesno povezana z Rimljani. Na splošno namreč velja, da so široko uporabo medenine v Evropo prinesli Rimljani (Craddock, Cowell, Stead 2004; Istenič, Šmit 2007). Tesna povezava uporabe medenine z Rimljani še posebej izrazito velja za t. i. čisto medenino, tj. nerazredčeno medenino, ki je nastala ob cementacijskem postopku in je vsebovala okoli 20 % cinka in zelo malo svinca in železa (Craddock, Lambert 1985, 164; Jackson, Craddock 1995, 93–94).

Prisotnost medenine je tudi pomemben datacijski element. Rimljani so medenino namreč začeli pridobivati in uporabljati okoli 60 pr. Kr. (Istenič 2005, 204–205, 209–211; Istenič, Šmit 2007). Razpoložljivi podatki kažejo, da se je njena uporaba močno razmahnila v avgustejski dobi, predvsem pri kovanju denarja in izdelavi rimske vojaške opreme ter fibul (Istenič 2009c, 238, op.12, 13). Zdi se, da je bila uporaba medenine v zgodnjem obdobju povezana predvsem z imperialnim novčništvom in rimsko vojsko, tj. z dvema področjema, ki ju je nadzorovala centralna uprava (Istenič 2009c, 242).

Podatek o medenini smo se torej odločili preveriti. Sestavo kovin smo ugotavljali najprej z rentgensko fluorescenco (EDS XRF), ki nam je omogočila osnovno, grobo opredelitev. Meritve je izvedel Zoran Milić na napravi v Narodnem muzeju Slovenije. Podrobnejšo sestavo kovin smo ugotavljali z metodo protonsko vzbujenih rentgenskih žarkov (PIXE; Šmit, Istenič, Perovšek 2010). Obe tehniki in postopke analiz smo že opisali (Šmit et al. 2005, 228–229).

Zanimalo nas je tudi, kako so bile nožnice narejene. To smo skušali ugotoviti z opazovanjem (makroskopskim in pod optičnim mikroskopom) in s pomočjo rentgenskih fotografij. Posebej dobre rezultate pa so dale raziskovalne sonde (previdna in postopna odstranitev ob rekonstrukciji dodanega materiala in korozije na izbranih mestih), ki jih je na nožnici iz Ljubljanice na več mestih naredila Sonja Perovšek (Konservatorski oddelek, Narodni muzej Slovenije).

4. MEČ Z NOŽNICO IZ REKE LJUBLJANICE PRI BEVKAH

(*sl. 1–3; pril. 1*)

4.1 Najdišče, najdiščne okoliščine, predhodne objave in hramba

V prvi objavi (Stare 1953) je bil meč v nožnici (*sl. 2; pril. 1*) predstavljen kot del zaklada iz okolice Vrhnike. Ta najdiščni podatek so povzeli vsi, ki so se kasneje ukvarjali s tem mečem in nožnico (Tackenberg 1970; Werner 1977, 368,

[2] Ni povsem zanesljivo, zdi pa se zelo verjetno, da se analiza nanaša na nožnico meča iz groba 78. V objavi namreč ni zapisana številka groba, iz katerega so analizirani vzorci nožnice, piše pa, da so bili najdeni skupaj ("were found together in a cremation cemetery") z železno srajco (Longauerová, Longauer 1990, 349), ki izvira iz groba 78.

sl. 1: 1; Frey 1986, 49–52, sl. 4: 1; Horvat 1990, 135–136, t. 27: 1; Böhme-Schönberger 1998, 221, op. 9, 235, sl. 6: 21).

V objavi iz leta 2003 smo pokazali, da t. i. vrhniški zaklad ni obstajal, predmeti, ki naj bi ga sestavljali, pa so zbirka najdb iz reke Ljubljanice, domnevno iz okolice Bevk (Istenič 2003). Dodatno je najdiščne okoliščine osvetlil poglobljen pregled arhivskih virov (Bras Kernel 2006), iz katerega izhaja, da predmeti izvirajo iz odseka Ljubljanice pri Bevkah (*sl. 1*), natančneje iz reke ob kmetiji z domačim imenom Kamin. Med podrobnim pregledovanjem meča in nožnice ob pisanju tega članka smo ugotovili, da so pod mikroskopom na predmetu jasno vidni ostanki vijoličnih alg, ki so značilne za predmete iz reke Ljubljanice (prim. Milić et al. 2009, 30, sl. 24).

Meč v nožnici je odkupil Deželni muzej za Kranjsko (predhodnik Narodnega muzeja Slovenije), iz katerega pa je bil kasneje odtujen. Po letu 1953 ga je od svojega restavratorja Janka Vertina kupil Mestni muzej (danes Muzej in galerije mesta Ljubljana; Bras Kernel 2006, 17), kjer je inventariziran pod številko 510:LJU;32582.

4.2 Opis predmeta

Meč v nožnici (*sl. 2–3; pril. 1*) je bil konserviran in restavriran v Rimsko-germanskem osrednjem muzeju (Römisch-Germanisches Zentralmuseum) v Mainzu leta 1980.[3] Meč v nožnici je ohranjen v dolžini 73,3 cm. Spodnji del obeh manjka.

Rezilo železnega meča je vidno na več mestih na hrbtni strani, kjer je nožnica poškodovana, najbolje v skrajnem spodnjem delu, kjer je široko 3 cm. V sredini rezila se (v dolžini 0,7 cm) jasno vidi 0,2 cm širok žleb. 35,5 cm višje, kjer je viden delček rezila meča, za katerega se zdi, da ima ohranjen prvotni rob rezila, njegovo širino ocenjujemo na 3,8 cm. Ohranjena dolžina rezila je okoli 59 cm. Iz rentgenskih fotografij je jasno razvidno, da žleb v sredini rezila poteka po vsej dolžini meča (*sl. 3c*). Glede na vidne dele meča in širino nožnice ocenjujemo, da se je rezilo meča zelo počasi in enakomerno ožilo proti konici.

Odlično je ohranjen ročajni trn, ki je dolg okoli 18 cm in ima pravokoten presek ter se oži od rezila proti vrhu ročaja, kjer je zaključek trna prevlečen z medeninasto (Šmit, Istenič, Perovšek 2010, tab. 1: 7) pločevino (*sl. 2a, 3a*). K ročaju sodi tudi medeninast (Šmit, Istenič, Perovšek 2010, tab. 1: 7, 8) branik zvončaste oblike.

Nožnica je ohranjena v dolžini 58,3 cm, njena največja širina pa je 4,9 cm. Sestavljena je iz petih delov: hrbtne in sprednje platice, lestvičastega okova, okrasnega okova in okova z zanko za obešanje.

Platici sta iz okoli 0,5 mm debele pločevine; hrbtna je iz železa, sprednja pa iz medenine. V zgornjem delu sta zvončasto oblikovani. Pol centimetra pod vrhom sprednje platice je luknja od zakovice.

V zgornjem delu nožnice je na sprednji strani 14,6 cm dolg medeninast okov z izredno finim, v t. i. predrti tehniki (francosko "à jour", nemško "Durchbruchsarbeit") izdelanim okrasom, ki spominja na čipko (*sl. 2c*). Okov ima spodaj raven zaključek, zgoraj pa se prilagaja zvončasti obliki zgornjega zaključka nožnice, vendar ni v celoti ohranjen. Prvotno je segal do vrha nožnice, kjer je bil z zakovico pritrjen na sprednjo medeninasto platico, na kateri je ohranjena luknja od zakovice. Primerjave namreč kažejo, da so okrasni okovi na takih nožnicah segali do vrha zvončastega zaključka (cf. Werner 1977, sl. 9, 14, 18; Metzler, Gaeng 2009, sl. 65: 22a; Deimel 1987, t. 69: 6,7).

Okov je ob podolžnih straneh zavit na hrbtno stran tako da tvori 13,7 cm dolg in okoli 4 mm (na sprednji strani) oziroma okoli 7 mm (na hrbtni strani) širok robni okov s presekom v obliki črke U. Spodnjih 3,5 cm tega okova na hrbtni strani manjka, viden pa je njegov odtis v koroziji železne pločevine.

Okras na tem okovu je razdeljen v dve izrazito različno visoki polji, ki ju loči okoli 3 mm visok pas neokrašene pločevine. Zgornje polje je ohranjeno v višini 12,2 cm. V njem si z leve proti desni sledi pet navpičnih pasov, ki so postavljeni simetrično. V sredini je pas vodoravno ležečih ovalov z zaobljeno narebrenimi vodoravnimi stranicami (na vsaki stranici so tri odebelitve), ob obeh zunanjih straneh pa pasova vodoravno ležečih arkad. Sredinski pas s stranskima povezujejo vodoravna rebra, ki so okrašena s po tremi odebelitvami. Sledi spodnje, 1,5–1,7 cm visoko polje s štirimi razmeroma visokimi in širokimi stebrički s po štirimi odebelitvami.

Na spodnjih pribl. 33 cm nožnice platici objema železen robni okov s presekom v obliki črke U, ki ga na sprednji in hrbtni strani povezujejo železne prečke: na sprednji strani so bile na ohranjenem delu tri skupine po štirih prečk, na hrbtni strani nožnice pa 18 ali 19 prečk (ohranjenih je 15, od treh pa so vidni jasni odtisi na koroziji železne pločevine). V prečnem preseku so rahlo izbočene, v sredini bolj izrazito kot ob robovih, zato so v narisu v sredini tudi ožje kot ob straneh. Taka oblika prečk je okovu dajala večjo trdnost, kot bi jo imel, če bi bile ploščate. Prečke na sprednji strani nožnice imajo po vsej dolžini v sredini plitev žleb in so širše kot prečke na hrbtni strani nožnice.

V vmesnem delu, med medeninastim in železnim, z lestvičastimi prečkami povezanim robnim okovom, sta robova nožnice zavarovana tako, da je hrbtna železna platica prepognjena okoli roba in pribl. 5 mm prekriva sprednjo stran.

Na hrbtno stran nožnice je s štirimi železnimi in eno medeninasto zakovico (*sl. 2b, 3b; pril. 1;* Šmit, Istenič, Perovšek 2010, tab. 1: 5) pritrjen dolg železen okov z zanko. Okov se od pravokotne zanke, ki je približno na koncu zgornje tretjine okova, zožuje proti zgornjemu koncu, kjer se zaključi v obliki kroga na ustju nožnice, in proti spodnjemu koncu, kjer se splošči in konča trapezasto.

5. MEČ Z NOŽNICO S STRMCA NAD BELO CERKVIJO
(*sl. 4–7; pril. 2*)

5.1 Najdišče, najdiščne okoliščine, predhodne objave in hramba

Meč v nožnici izvira iz groba, ki so ga našli v začetku leta 1897 na grobišču Strmec nad Belo Cerkvijo na Dolenj-

[3] Za podatek se zahvaljujem Ernstu Künzlu in Markusu Eggu (Römisch-Germanisches Zentralmuseum).

skem (*sl. 1:* 2). Februarja istega leta ga je Deželni muzej za Kranjsko (predhodnik Narodnega muzeja Slovenije) že pridobil, v inventarni knjigi pa so, kot je bilo tedaj običajno, kot najdišče zabeležili prvi večji kraj v bližini, tj. Šmarjeto. Grobna celota, ki jo je Draganu Božiču (1999, 211; 1992, 91–102) s pomočjo arhivskih virov uspelo delno rekonstruirati in jo je poimenoval "Grob 1 s parcele Košak B", je vsebovala še bronasto čelado vrste Novo mesto (Božič 1992, 103–104, t. 21; Guštin 1984, t. 48; Stare 1973, 25, št. 127, t. 14: 1–4), okroglo železno ščitno grbo (Stare 1973, 25, št. 128, t. 11: 6; Božič 1992, 103–104, t. 20: 3) in dolg ukrivljen nož (Stare 1973, 24, št. 84, t. 8: 2; Božič 1992, 103, t. 20: 1).

V mlajšem delu poznega latena so na grobišču Strmec nad Belo Cerkvijo pokopavali sežgane ostanke pokojnikov. V obravnavanem primeru govori za to, da je bil grob žgan, tudi dejstvo, da sta bila meč v nožnici in nož namenoma zvita, saj je ta pojav povezan z žganimi pokopi (Božič 1999, 211). Velja pa omeniti, da na nožnici in meču ni videti poškodb, ki bi jih povzročila ogenj in visoke temperature, iz česar sklepamo, da ob sežigu pokojnika nista bila na grmadi.

Meč v nožnici je prvič, skupaj s fotografijo, objavil Alfonz Müllner (Müllner 1900, t. 39: 8). Prvo risbo najpomembnejših delov predmeta in njegov kratek opis je podal Hermann Müller-Karpe (1951, 675, sl. 18: 1), nato pa Tackenberg (1970, 252–253, sl. 2 – slabša risba) in Vida Stare (1973, 24, št. 101, t. 7: 3) ter Joachim Werner (1977, 368, sl. 1: 2).

Predmet hrani Narodni muzej Slovenije (inv. št. P 4371). Leta 2001 ga je konservirala Sonja Perovšek (Konservatorski oddelek Narodnega muzeja Slovenije).

5.2 Opis predmeta

Meč in nožnica, v kateri leži, sta prepognjena naprej, tako da se sprednji del zaključka nožnice dotika sprednje strani zgornjega dela nožnice (*sl. 4*).

Od ročaja meča je ohranjen trn pravokotnega preseka, ki se proti vrhu ročaja oži in ni ohranjen v celoti (*sl. 5a, b*). Rezilo železnega meča je dobro vidno na mestu, kjer platici nista ohranjeni (*sl. 4, 6; pril. 2*). Na prepogibu sta vidna okoli 1mm široka vzporedna žlebova v sredini sprednje in hrbtne strani rezila (*sl. 5c*). Žlebova sta jasno razvidna tudi z rentgenskih fotografij (*sl. 7*). Širina rezila na tem mestu je najmanj 3,5 cm. Zaključek meča je izrazito koničast (*sl. 6, 7b*). Meč bi bil v iztegnjenem stanju dolg 77 cm (zgornji del ročajnega trna ni ohranjen!), od tega je njegovo rezilo merilo 65,4 cm.

Nožnica je dolga 66,2 cm in široka 4,5 cm. Vsi ohranjeni deli razen štirih zakovic so iz medenine (Šmit, Istenič, Perovšek 2010, tab. 2).

Sprednjo in hrbtno stran nožnice sestavljata platici iz okoli 0,5 mm debele pločevine. Sprednja platica v obstoječem stanju sega 0,7 cm višje kot hrbtna platica in rezilo meča. Domnevamo, da je do zamika prišlo, ko so meč in nožnico prepognili. Zvončasto oblikovan zgornji zaključek je na hrbtni platici ohranjen v celoti, pri sprednji pa mu manjka vrhnji del. V zgornji četrtini nožnice obe pločevini medsebojno povezuje okov s predrtim okrasom, ki je nameščen na sprednji strani in je ob stranskih robovih zapognjen tako, da sega okoli 0,5 cm na hrbtno stran nožnice (*sl. 5,6; pril. 2*). Na spodnjih pribl. treh četrtinah nožnice je hrbtna pločevina zapognjena okoli stranskega roba nožnice, tako da sega okoli 4 mm na sprednjo stran in na ta način povezuje sprednjo in hrbtno pločevino.

Ohranjeni del okrasnega okova je razdeljen na štiri pravokotna okrasna polja. Ta so med seboj ločena z okoli 4 mm širokimi pasovi pločevine, ki so okrašeni le s po dvema vzporednima žlebičema. Največje je zgornje polje, na katerem je delno ohranjenih pet navpičnih in simetrično postavljenih vrst geometrijskih motivov. V sredini je pas vodoravno ležečih ovalov z zaobljeno narebrenimi vodoravnimi stranicami, ob obeh zunanjih straneh pa pasova vodoravno ležečih arkad. Sredinski pas s stranskima pasovoma povezujejo vodoravna rebra, ki so okrašena s po štirimi odebelitvami. Sledita dve približno enako visoki ornamentalni polji. V zgornjem, tj. drugem polju (gledano od ustja nožnice navzdol) se ponovi motiv arkad in stebričkov s po štirimi odebelitvami, ki je že v prvem okrasnem polju, le da je tu postavljen navpično. V spodnjem (tretjem) polju so upodobljeni štirje navpično postavljeni suličasti predmeti. V zadnjem, četrtem polju, ki je visoko le okoli 5 mm, je bilo navpično nanizanih deset stebričkov s po štirimi odebelitvami, od katerih jih je v celoti ali deloma ohranjenih devet.

Na spodnji del sprednje strani nožnice je z zakovicama, ki sta jasno vidni na rentgenski fotografiji (*sl. 7b*), pritrjen okoli 0,5 cm širok okov z okrasom koncentričnih krogov, ki imajo na sredini luknjico (*pril. 2*). Ohranjen je tudi majhen del podobnega okova, ki je bil z dvema zakovicama pritrjen 4,5 cm pod okov s predrtim okrasom. Na tem okovu se je ohranila le ena, verjetno medeninasta zakovica (*sl. 7a*), drugo pa nakazuje odtis na pločevini.

Na zgornji del hrbtne strani nožnice je s štirimi železnimi zakovicami (*sl. 7a*) pritrjen 23,7 cm dolg okov z zanko.

Meč in nožnica sta prepognjena, ne kažeta pa sledov poškodb, ki bi jih povzročilo žganje na grmadi. Rezilo meča je moralo biti torej razmeroma mehko, da ga je bilo mogoče ukriviti, ne da bi ga razžareli.

6. MEČ Z NOŽNICO IZ GROBA 37 V VERDUNU (*sl. 8–9; pril. 3*)

6.1 Najdišče, najdiščne okoliščine, predhodne objave in hramba

Na grobišču v Verdunu blizu Stopič (*sl. 1:* 3) sta bila najdena dva meča v nožnicah obravnavane skupine.

Grobišče je bilo že večkrat kratko predstavljeno (Breščak 1986; 1987; 1989; Breščak et al. 2002, 92–94, 135–143), celostna objava pa je v pripravi.[4]

Iz groba 37 izvira dobro ohranjen meč v nožnici, na kateri značilni okrasni okov sicer ni ohranjen, vendar nedvomno sodi v obravnavno skupino nožnic. Grob je vseboval še ščitno grbo, sulično ost, dve fibuli, obročasto pasno spono in narebreno keramično pokalno posodo latenske oblike

[4] Danilo Breščak nam je prijazno dovolil njuno obravnavo v tem članku.

(Božič 2008, 53, sl. 25; Breščak 1989, 12; Breščak et al. 2002, 94, 135–136, kat. št. 68; Božič 1999, 211).

Meč v nožnici hrani Dolenjski muzej v Novem mestu pod inv. št. A 1776. Leta 1986 je bil restavriran v Rimsko-germanskem osrednjem muzeju (Römisch-Germanisches Zentralmuseum) v Mainzu.[5] Opis se nanaša na meč po konservaciji.

6.2 Opis predmeta

Rezilo meča je vidno v zgornjem delu v dolžini 18,5 cm in je ob ustju široko 3,6 cm. Ramena so poševna oz. usločena in asimetrična. Dobro sta vidna okoli 1,5 mm široka žlebova, ki potekata vzporedno po sredini rezila. Robova rezila nimata prvotne oblike. Njuna sedanja debelina, ki je posledica konservacije, znaša od 2 do 6 mm (*sl. 8a, c; pril. 3*).

Trnast nastavek ročaja meča je dolg 17 cm in se zožuje proti vrhu, kjer se nesimetrično in močno zoži ter je prevlečen z okoli 1 mm debelo medeninasto (Šmit, Istenič, Perovšek 2010, tab. 3: 3) pločevino, ki je v spodnjem delu stisnjena, tako da daje vtis gumba z vazasto razširitvijo (*sl. 8e; pril. 3*).

Spodnji zaključek meča je zaradi dobro ohranjene nožnice viden le na rentgenskem posnetku (*sl. 9b*), ki kaže dolgo in izrazito konico. Celotna dolžina meča je 82 cm, dolžina rezila pa 65 cm.

Nožnica je ohranjena v celi dolžni, ki znaša 72,5 cm, njena ohranjena največja širina pa je 4,7 cm. Sestavljajo jo hrbtna železna platica debeline okoli 2 mm, ki je v zgornjem delu zvončasto oblikovana, tanjša sprednja (debel. okoli 1 mm?) platica iz medeninaste (Šmit, Istenič, Perovšek 2010, tab. 3: 2,3) pločevine, ki je ohranjena le pribl. v spodnjih dveh tretjinah nožnice, robni železen okov s prečnimi lestvičastimi povezavami in okov z zanko za pripenjanje nožnice na jermen.

Lestvičast okov pokriva pribl. spodnji dve tretjini nožnice. Zgoraj je zaključen z vodoravno prečko pravokotnega preseka širine 6 mm (spredaj) oz. 4 mm (zadaj), spodaj pa se zoži v zaključek, ki po obliki zaradi izrazite konice spominja na ostogo. Stranici okova povezuje na sprednji strani 33 prečk, na hrbtni strani pa pet skupin prečk po tri prečke. Vse so oblikovane podobno, kot pri nožnici iz Ljubljanice: ob straneh so širše in nižje, v sredini pa ožje in višje. Na sprednji strani konice nožnice sta zadnji dve prečki povezani poševno.

Okov s predrtim okrasom in del sprednje platice, ki je bil pod njim, nista ohranjena. Preseneča, da se ni ohranilo nič od zgornjega dela sprednje platice. Primerjave namreč kažejo, da so bile te platice iz enega kosa pločevine.

Okov z zanko je dobro ohranjen. V železno platico je bil pritrjen z dvema železnima in dvema verjetno medeninastima (prim. nožnico iz Ljubljanice) zakovicama (*sl. 9a*). Asimetričnost in nepravilna oblika spodnjega zaključka okova (*sl. 8d; pril. 3*) kažeta, da ni v celoti ohranjen, podrobnosti njegove pritrditve na tem mestu pa so nenavadne. Pod spodnji del okova in obenem tudi pod najvišjo prečko lestvičastega robnega okova je namreč zaklinjena ploščata železna podloga, skozi katero je okov pritrjen na železno platico. Zdi se, da so na ta način ojačali podlago, tj. železno platico, da se okov iz nje ne bi iztrgal. Ni izključeno, da je bil okov prvotno pritrjen brez te podloge, neposredno v platico, kot je to pri primerljivih nožnicah (prim. npr. Ljubljanica, Strmec nad Belo Cerkvijo), in so železno podlogo dodali ob popravilu nožnice. Takega pritrjevanja okovov z zanko namreč nismo opazili na nobeni drugi nožnici obravnavanega tipa.

Zanimivo je, da ima lestvičasti okov skupine prečk (5 × 3 prečke) na hrbtni in ne na sprednji strani, kot je to npr. pri nožnicah iz Ljubljanice in iz groba 131 v Verdunu.

7. MEČ Z NOŽNICO IZ GROBA 131 V VERDUNU
(*sl. 10, 11; pril. 4*)

7.1 Najdišče, najdiščne okoliščine, predhodne objave in hramba

Meč v nožnici obravnavane skupine je bil najden tudi v grobu 131 iz Verduna (*sl. 1*), ki še ni bil objavljen. Poleg meča v nožnici je med drugim vseboval ščitno grbo z odlično vzporednico v grobu 37 iz Verduna (cf. Božič 2008, sl. 25), sulično ost s fasetiranim tulcem, okove jermenov, ki so viseli z rimskega vojaškega pasu, ter sigilatni krožnik in skodelico.[6]

Predmet je bil konserviran v Rimsko-germanskem osrednjem muzeju (Römisch-Germanisches Zentralmuseum) v Mainzu leta 1988.[7] Hrani ga Dolenjski muzej v Novem mestu pod inv. št. A 2211.

7.2 Opis predmeta in načina izdelave

Meč in nožnica sta razmeroma slabo ohranjena, zato smo PIXE analize naredili le na odlomljenem spodnjem delu meča in nožnice. Isto platico smo v zgornjem delu analizirali z EDS XRF.

Meč in nožnica sta razlomljena v dva dela: 70,5 cm dolg zgornji del in okoli 12,3 cm dolg skrajni spodnji del (konico), ki je najverjetneje neposredno nadaljevanje zgornjega dela (*sl. 10; pril. 4*).

Meč ima okoli 16,6 cm dolg ročajni trn pravokotnega preseka, ki je spodaj širok 1,5 cm in se proti vrhu oži. Ohranjen je velik del branika zvončaste oblike, ki je iz bakrove zlitine – domnevamo, da iz medenine. Rezilo meča je bilo dolgo okoli 65 cm in ima v sredini širok žleb. Ohranjena širina rezila ob ustju je okoli 4,1 cm. Rentgenski posnetek kaže izrazito koničast spodnji zaključek meča (*sl. 11*), katerega skrajni, 2,8 cm dolg del, je viden na hrbtni strani.

Nožnica meri 68 cm in je ohranjena skoraj v celi dolžini, manjka le spodnji zaključek. Najširša je ob ustju (4,8 cm) in se počasi oži proti konici, kjer na koncu ohranjenega

[5] Za podatek se zahvaljujem Danilu Breščaku (ZVKDS) in Markusu Eggu (Römisch-Germanisches Zentralmuseum).

[6] Glej tudi op. 14. Za podatke se zahvaljujem Danilu Breščaku (ZVKDS).

[7] Za podatek se zahvaljujem Danilu Breščaku (ZVKDS) in Markusu Eggu (Römisch-Germanisches Zentralmuseum).

dela meri 3,5 cm. Na sprednji strani nožnice je bila medeninasta platica (Šmit, Istenič, Perovšek 2010, tab. 4: 2) iz tanke pločevine. V zgornjem delu je ohranjena le na posameznih mestih; v obstoječem stanju jo večji del nadomešča rekonstrukcija iz plastike. Njene debeline ni bilo mogoče izmeriti. V zgornjem delu je bil čez to platico položen 21,6 cm dolg medeninast[8] okov s predrtim okrasom, od katerega so ohranjeni le odlomki spodnjega in zgornjega dela. Ta okov je bil razdeljen na najmanj pet okrasnih polj: spodaj tri polja višine okoli 0,6, 1,2 in 0,6 cm, na vrhu zvončasto oblikovano polje višine 3,7 cm z ohranjeno zakovico, s katero je bil okov pritrjen na podlago, in najmanj eno vmesno polje (*sl. 10c*). Odlomek stranskega dela zvončasto oblikovanega zgornjega dela okova so pri restavriranju verjetno namestili prenizko. Okov se spodaj končuje z okoli 0,8 cm visokim robom z vodoravnimi žlebiči. Ob straneh je bil okov s prednje strani zavihan na hrbtno stran tako, da jo objema v širini okoli 6 mm. Poleg tega je bil okov pričvrščen s 5 mm široko prečko na hrbtni strani, ki je nameščena 5 mm pod zgornjim zaključkom robnega dela okova.

Hrbtna železna platica je v sedanjem stanju debela okoli 2 mm. V zgornjem delu je zvončasto oblikovana. Nanjo je z dvema železnima zakovicama pritrjen okov z zanko. Zgornji in spodnji zaključek tega okova nista ohranjena.

Železen robni okov je pokrival pribl. spodnji dve tretjini nožnice. Njegov spodnji in verjetno tudi zgornji zaključek nista ohranjena. Verjetno je segal do okova s predrtim okrasom (prim. nožnico iz groba 37 v Verdunu, *sl. 8, 9, pril. 3* in nožnico iz Büchla, Haffner 1995, 140, 142, 145, t. 1, zgoraj). Na hrbtni strani je (delno) ohranjenih 28 enakomerno razporejenih vodoravnih prečk, na sprednji pa so tako slabo ohranjene, da lahko le domnevamo, da so bile razporejene v štiri skupine s po tremi prečkami. Prečke so v sredini rahlo ožje kot ob robovih, kot smo opazili tudi pri nožnicah iz groba 37 v Verdunu in iz Ljubljanice.

8. MEČ Z NOŽNICO IZ MIHOVEGA, GROB 1657/8 (*sl. 12*)

Iz Slovenije poznamo še en primerek obravnavanih nožnic z okovom iz bakrove zlitine s predrtim okrasom. Izvira z grobišča Mihovo pod Gorjanci (*sl. 1*), ki je bilo raziskano ob koncu 19. stoletja, najdbe pa so shranjene v Naravoslovnem muzeju na Dunaju. Ogledal si jih je Dragan Božič, ki nas je tudi opozoril na nožnico iz groba 1657/8 (inv. št. 52526; *sl. 12*) ter nam dal na razpolago zapiske, ki jih je naredil ob ogledu. Iz njih izhaja, da je dolžina predmeta 66 cm in dolžina okova z zanko 22 cm ter da je na hrbtni strani nožnice osem prečk v medsebojni razdalji 2,2 cm. Na sprednji strani je videl ostanke zvončastega branika iz bakrove zlitine in predrtega okova (skica prikazuje okras v treh poljih, spodnjem višjem in nad njim dvema nižjima; vsi so okrašeni z navpičnimi stebrički z okroglimi razširitvami) ter sedem prečk.

Predmet je v okviru svoje doktorske disertacije, ki je ostala neobjavljena, obravnaval Helmut Windl (1975, 60, t. 26: 9). Risba predmeta je zelo shematska in iz nje ni razvidno, da gre za meč in nožnico obravnavane skupine, bolj izpoveden pa je opis, ki ga v celoti navajamo: "Eisernes Schwert mit vielen anhaftenden Resten der Scheide. Rascher geschwungener Übergang des Blattes in die lange Griffangel, an deren Spitze scheinbar ein vollrunder Knopf sitzt. Das ziemlich gleichbreite Blatt (obere Breite 4,6, untere 3,9) endet zungenformig. Der Scheidenmund ist analog der Klinge und schickt einen kleinen Fortsatz auf die Griffangel hinauf. Die Schlaufe ist ein rechteckiges Band mit langen, rechteckigen Nietplatten. Länge 74,0; der Griffangel 18,5; der eigentlichen Schlaufe 2,8; ihre B 2,0; einer Nietplatte mindestens 4,3; Länge des Scheidenvorsprungs auf die Angel mindestens 2,1."

Naravoslovni muzej z Dunaja nam je prijazno posredoval fotografijo tega predmeta (*sl. 12*). Zdi se, da je pokrit z debelo plastjo korozijskih produktov. Na sprednji strani nožnice je viden okov s predrtim okrasom iz bakrove zlitine. Zaključek ročajnega trna spominja na primerek iz groba 37 v Verdunu. Lestvičasti okov ni viden. Zdi se, da sta spodnja, zaključna dela meča in nožnice odlomljena.

Iz razpoložljivih podatkov torej izhaja, da je imela nožnica značilen okrasni okov in sprednjo platico iz bakrove zlitine ter v spodnjem delu lestvičasti okov. Dolžina ohranjenega dela meča in nožnice ni točno opredeljena (Božič: 66 cm; Windl: 74 cm). Proučitev tega predmeta bi nujno zahtevala vključitev konservatorskega postopka.

Po podatkih, ki jih navaja Windl (1975, 60, t. 26: 8,9), a so po mnenju Dragana Božiča nezanesljivi, je bila v grobu 1657/8 poleg meča z nožnico le še sulična ost (dolžina 50,5 cm) s tulcem okroglega preseka z močno poškodovanim listom.

9. NAČIN IZDELAVE

Werner se o izdelavi okovov s predrtim okrasom domnevnih noriških nožnic ni jasno izrazil. Zdi se, da je menil, da so bili narejeni z izsekavanjem in piljenjem pločevine, ki je nastala s tolčenjem ali z ulivanjem (Werner 1977, 369, 379, 385–386). Haffner (1995, 140) je navedel mnenje restavratorja H. Borna, da je bil okrasni okov nožnice iz Büchla narejen z odstranjevanjem materiala (s punco oziroma dletom, nem. "Punze", žaganjem in piljenjem) iz tanko skovane pločevine. Po Haffnerjevem mnenju so bili okrasni okovi iz Büchla, Wederatha in Göblingen-Nospelta narejeni z dleti in pilami, kajti na slednjem je namreč opazil sledove uporabe pile in dleta (ibid. 145, 150).

Böhme-Schönbergerjeva (1998, 222, 223, 225) je napačno povzela Wernerja, ki naj bi po njenem mnenju o domnevnih noriških nožnicah napisal, da je bil njihov predrti okras narejen z ulivanjem. Za nožnico iz Badenheima je menila, da je bil njen predrti okov narejen z vrtanjem, sekanjem, žaganjem in piljenjem (ibid. 222, 229; *durch Bohren, Meißeln, Sägen und Feilen*). Nasprotno pa Metzler in Gaengova zavračata možnost, da bi bili okrasni okovi nožnic iz Göblingen-Nospelta, Titelberga in Wederatha narejeni z odstranjevanjem materiala iz pločevine, ter menita, da so bili ti okovi skupaj z okrasom uliti (Metzler, Gaeng 2009, 249).

Strinjamo se z Böhme-Schönbergerjevo (1999, 222), da ulivanje obravnavanih okrasnih okovov zaradi njihove izredno majhne debeline tehnično ni izvedljivo. Po podrobnem pregledu zgoraj opisanih nožnic iz Slovenije

[8] Rezultati analize EDS XRF: 86,4 % Cu in 11,6 % Zn.

ne dvomimo, da so pločevino njihovih okrasnih okovov izdelali s tolčenjem, okras pa s pomočjo dlet z različno oblikovanimi delovnimi površinami, s katerimi so odstranili odvečno pločevino, in tudi puncirali.[9]

Zanimivo vprašanje, kako so bili narejeni lestvičati okovi, je pri obravnavi nožnice iz Badenheima odprl Westphal (1998), ki pa mu nanj ni uspelo odgovoriti. Haffner (1995, 140) je za lestvičasti okov nožnice iz Büchla menil, da je bil izdelan v tehniki kovaškega varjenja.[10]

Izdelava takih okovov s kovaškim varjenjem se nam zdi malo verjetna, saj je notranja širina okova zelo majhna in bi zato težko uporabili za tako varjenje potrebno nakovalo. V večjem delu okova bi to težavo lahko zaobšli tako, da bi najprej naredili cevast okov, ki bi ga nato sploščili. Vendar pa se zdi nemogoče, da bi na tak način v enem kosu oblikovali tudi ostrogasti zaključek.

Lestvičastih okovov tudi niso ulili, saj železa v Evropi v mlajši železni in rimski dobi še niso ulivali, temveč so ga kovali; poleg tega bi bilo ulito železo zaradi svoje krhkosti za tak okov neprimerno (Manning 1976, 143; Tylecote 1992, 48; Craddock 1995, 235, 239).

Iz navedenih razlogov smo se odločili lestvičaste okove v *poglavjih 4, 6* in *7* opisanih nožnic podrobno raziskati. Pri ogledu smo ugotovili, da nikjer na površini ni videti, kako in kje so bili ti okovi varjeni, spajkani[11] ali zakovičeni. Rentgenski posnetki prav tako niso pokazali sledov spajkanja ali zakovic. Rezultate pa je obrodilo restavratorsko raziskovanje lestvičastega okova nožnice iz Ljubljanice, ki ga je izvedla Sonja Perovšek. Na več mestih je odstranila rekonstruirane dele okova iz plastične mase in ostanke korozije. V prečkah na sprednji strani nožnice in na enem mestu tudi v robnem okovu so se ob tem pokazale zelo tenke (manj kot 0,1 mm), a kompaktne plasti rdečkaste zlitine brona z okoli 4–7 % kositra (Šmit, Istenič, Perovšek 2010, tab. 1: 11,12a,13–15). V preseku prečk so vidne po dve ali tri take bronaste plasti, za katere so metalografske raziskave pokazale, da so staljene (Kosec et al. 2011). Poleg tega smo na enem mestu na notranji strani robnega, v U oblikovanega dela železnega lestvičastega okova odkrili manj kot milimeter debelo medeninasto plast z okoli 5 % cinka (Šmit, Istenič, Perovšek 2010, tab. 1: 9); na sprednji strani je nalegala na medeninasto platico.

Opisani izsledki, ki bodo podrobno in z ustrezno fotografsko dokumentacijo objavljeni naknadno (Kosec et al. 2011), kažejo, da je bil lestvičasti okov nožnice iz Ljubljanice spajkan na prečkah sprednje strani, kar nakazuje način njegove izdelave.

10. PRIMERJALNA ANALIZA MEČEV IN NOŽNIC IZ LJUBLJANICE, S STRMCA NAD BELO CERKVIJO IN IZ VERDUNA

Vsi štirje obravnavani meči so si zelo podobni. Dolgi so (oziroma so bili) okoli 82 cm (cela dolžina je ohranjena pri obeh primerkih iz Verduna, meču s Strmca nad Belo Cerkvijo pa manjka le vrh ročajnega trna), njihova rezila v dolžino merijo okoli 65 cm in so ozka (od 3,6 do 4,1 cm), imajo poševna ali rahlo usločena ramena, izrazito (dolgo) konico (ohranjena je pri vseh primerkih, razen pri meču iz Ljubljanice) ter en ozek (Ljubljanica) ali širok (grob 131 iz Verduna) žlebič oziroma dva ozka (grob 37 iz Verduna, Strmec nad Belo Cerkvijo) žlebiča na sprednji in hrbtni strani. Od ročajev so ohranjeni trni ploščatega preseka, ki se proti vrhu ožijo in so zaključeni z medeninasto oblogo, oblikovano tako, da daje vtis kroglastega zaključka s trombasto bazo (ohranjena pri mečih iz Ljubljanice in iz groba 37 v Verdunu), in medeninasti braniki, ki so ročaje zaključevali na spodnjem delu (ohranjeni so na primerkih iz Ljubljanice in groba 131 iz Verduna). Oba v celoti ohranjena ročajna trna (Ljubljanica, grob 37 iz Verduna) sta dolga 17–18 cm.

Skupna in najizrazitejša značilnost nožnic iz Ljubljanice, s Strmca in iz Verduna so okrasni okovi iz medenine s predrtim okrasom. Njihove dolžine merijo od 16,7 (Ljubljanica) do 21,5 cm (Verdun grob 37). Na nožnico so bili pritrjeni tako, da so bili na sprednji strani na vrhu prikovičeni na sprednjo platico (ohranjeno pri nožnicah iz Ljubljanice in groba 131 v Verdunu) in na robovih zapognjeni čez rob, tako da okoli 6 mm objemajo hrbtno platico. Okrasni okovi vseh treh nožnic, na katerih so ohranjeni, so narejeni v enaki tehniki, tj. z odstranjevanjem materiala. Motive in kompozicijo lahko primerjamo pri nožnicah iz Ljubljanice in s Strmca, kjer sta okova dobro ohranjena. Oba imata izredno podobno največje okrasno polje, saj je sestavljeno iz enakih motivov, ki so tudi enako razporejeni. V spodnjem delu pa imata različni kompoziciji okrasa.

Nožnice iz Ljubljanice in Verduna druži tudi konstrukcija iz petih delov, tj. hrbtne železne platice, sprednje medeninaste platice, okrasnega medeninastega okova s predrtim okrasom (pri primerku iz groba 37 iz Verduna ni ohranjen), železnega lestvičastega okova v pribl. spodnjih dveh tretjinah nožnice in železnega okova z zanko, ki je prikovičen na hrbtno platico. V dolžino merijo ali so prvotno merile okoli 72 cm, široke pa so od 4,7 (grob 37 iz Verduna) do 4,9 cm (Ljubljanica, grob 131 iz Verduna). Kljub izraziti podobnosti pa se te nožnice razlikujejo v podrobnostih, tako glede konstrukcije (npr.: pri primerku iz Ljubljanice lestvičasti okov ne sega do okrasnega okova, zato je v vmesnem delu hrbtna platica zavihana na sprednjo stran) kot glede okrasa (glej zgoraj).

Od opisanih nožnic odstopa tista s Strmca nad Belo Cerkvijo, ki je cela iz medenine in nima lestvičastega okova. Sestavljena je iz sprednje in hrbtne platice, okrasnega okova in okova z zanko. Platici sta povezani tako, da je okrasni okov v zgornjem delu zavihan na hrbtno stran, na preostali dolžini pa je hrbtna platica zavihana na sprednjo. Na sprednjo platico sta pritrjena ozka prečna okrasna okova, ki ju druge obravnavane nožnice nimajo.

Nožnice iz Ljubljanice in Verduna imajo odlične primerjave med drugimi nožnicami, ki jih krasijo okovi iz bakrove zlitine z okrasom, izdelanim v predrti tehniki (*seznam*). Poleg omenjenega okova jih z njimi družijo zvončast zgornji zaključek in enaka petdelna konstrukcija, sestavljena iz železne hrbtne platice, železnega lestvičastega okova, železnega okova z zanko ter iz sprednje platice in

[9] Opis tehnike: Braun-Feldweg 1988, 184.

[10] Pri kovaškem varjenju z udarci (tj. kovanjem) spajamo do zmehčanja ali rahlega taljenja segrete dele.

[11] Pri spajkanju kovinske dele spaja temu namenjena kovina ali zlitina (spajka).

okrasnega okova, ki sta iz bakrove zlitine. Enako kot pri primerkih iz Ljubljanice, s Strmca in iz Verduna so bili tudi drugi okrasni okovi na nožnico pritrjeni tako, da so objeli rob nožnice (izjema: Badenheim; *seznam:* št. 5), in v večini primerov tudi z zakovico pod vrhom okova (Göblingen-Nospelt, Wederath, Rządz, Wesółki – grob 50, Witaszewice, Zemplín – grob 77; *seznam:* št. 1, 4, 11, 14b, 15, 17a). Nožnice iz Slovenije s primerki iz Göblingen-Nospelta, s Titelberga, iz Wederatha, Büchla, Badenheima, Eggebyja in s Štalenske gore ter verjetno grobov 3 in 50 grobišča Wesółki (*seznam:* št. 1–5, 9, 14a, b, 16; prim. Metzler, Gaeng 2009, sl. 215) dodatno druži podobnost okrasnih okovov: osrednje, tj. največje polje ima v vseh navedenih primerih enake ali izredno podobne motive, ki so tudi enako razporejeni. Razlike se kažejo v podrobnostih, npr. v motivih v obeh navpičnih pasovih levo in desno od osrednje navpične linije: pri večini okovov ta dva pasova sestavljajo vodoravno ležeča rebra, ki so lahko okrašena z odebelitvami, na okovih iz Göblingen-Nospelta in Wederatha pa imajo ta rebra obliko črke S, sestavljeno iz dveh nasproti ležečih polkrogov; izstopajo tudi arkadni zaključki ovalov v osrednji navpični liniji okrasa nožnice iz Badenheima (prim. Metzler, Gaeng 2009, sl. 215).

Nožnici s Strmca so po tem, da so izdelane le iz barvnih kovin in da nimajo železnega lestvičastega okova, podobne nožnica iz bakrove zlitine iz groba 108 (prim. Cosack 1977) in morda tudi iz groba 128 v Zemplínu (*seznam:* št. 17c, d), srebrna nožnica iz zbirke Axla Guttmanna (*seznam:* št. 26) in nožnica iz bakrove zlitine s srebrnim okrasnim okovom iz Belozema (*seznam:* št. 25) ter verjetno nožnica iz groba 147/1937 grobišča Witaszewice (*seznam:* št. 15), pri kateri je sprednja platica zavihana na hrbtno stran, kjer je na robu prekrivala hrbtno platico, ki ni ohranjena (Kaszewska 1977, 109, sl. 1: 5). Nožnica iz groba 108 v Zemplínu se od nožnice s Strmca (in tudi drugih nožnic s predrtim okrasom) precej razlikuje, za ostale pa se zdi, da sestavljajo majhno in homogeno podskupino nožnic s predrtim okrasom. Druži jih tudi podobno oblikovan zaključek nožnice (glej dalje).

Ob primerkih iz Slovenije je znanih 12 mečev, ki so bili najdeni v nožnicah s predrtim okrasom iz bakrove zlitine ali srebra (*seznam:* št. 1–5, 12, 13, 14a, 15, 17b, 23) ali pa izvirajo iz grobov z obravnavanimi nožnicami (*seznam:* št. 17d). Slovenske in ostale meče družijo zvončast branik iz bakrove zlitine, poševna ramena, ozko rezilo (največja širina okoli 3,6–4,1 cm) in dolg ročajni trn z zaključkom iz bakrove zlitine, ki je odličen razpoznavni znak in ga pri meču iz Büchla in groba 78 v Zemplínu (*seznam:* št. 3, 17b) nakazuje trnast nastavek na koncu ročajnega trna. Sicer pa se primerki iz Slovenije od večine ostalih razlikujejo po manjši dolžini (okoli 82 cm) in po tem, da imajo daljšo in izrazitejšo konico.

Preseki rezil obravnavanih mečev so različni. Na sprednji in hrbtni strani imajo po en širok žleb (grob 131 iz Verduna; *seznam:* št. 21b), dva široka žlebova (Göblingen-Nospelt?,[12] Büchel, Wederath, Stara Wieś; *seznam:* št. 1, 3, 4, 12), en ozek žleb (Badenheim, Ljubljanica; *seznam:* št. 1, 5), dva ozka žlebova (Strmec pri Beli Cerkvi, gr. 37 iz Verduna, Donava; *seznam:* št. 20, 21a, 23) ali tri ozke podolžne žlebove (Witaszewice; grobova 78 in 128 iz Zemplína; *seznam:* št. 15, 17b, d).

11. PODSKUPINE NOŽNIC Z OKOVOM IZ BAKROVE ZLITINE ALI SREBRA S PREDRTIM OKRASOM IN PRIPADAJOČIH MEČEV

Nožnice iz Ljubljanice, s Strmca, iz Verduna in Mihovega torej skupaj z drugimi primerki (prim. *seznam*) sestavljajo jasno opredeljeno skupino. Znotraj nje pa se nakazujejo razlike, npr. pri zaključkih nožnic, ki so lahko v oblike ostroge (Büchel, Stara Wieś, Ciecierzyn, grob 37 iz Verduna; *seznam:* št. 3, 12, 13, 21a), zaobljeni in rahlo koničasti (grob 108 v Zemplínu, Strmec nad Belo Cerkvijo, Belozem in primerek iz zbirke Axla Guttmanna; *seznam:* št. 17c, 20, 25, 26) ali v enem primeru čolničasti (Badenheim; *seznam:* št. 5). Nožnice z ostrogastim in tista s čolničastim zaključkom imajo lestvičast okov ter so narejene iz železa in bakrove zlitine, nožnice z rahlo zaobljenim koničastim zaključkom pa so izdelane le iz barvnih kovin (bakrove zlitine ali srebra), nimajo lestvičastega okova in so krajše (dolžina okoli 70 cm).

Böhme-Schönbergerjeva (1998, 237–238, sl. 6) je predlagala delitev nožnic, ki izhaja iz razlik v njihovem predrtem okrasu in iz različnih zaključkov nožnic (prim. *pogl. 2*). Nožnica iz zbirke Axla Guttmanna (*seznam:* št. 26) z okrasnim okovom, ki združuje značilnosti dveh različnih skupin (motiv kolesa in vodoravno oddeljenega zvončastega dela okova), nakazuje, da omenjena delitev nima dobre podlage.

Pri obravnavanih nožnicah se po našem mnenju kažeta dve podskupini glede na njihovo dolžino. Prvo podskupino sestavljajo nožnice dolžine okoli 70 cm (pet primerkov s slovenskih najdišč, Wesółki – gr. 3, primerek iz zbirke Axla Guttmanna; *seznam:* 14a, 19–22, 26), drugo pa daljše nožnice dolžine okoli 80 cm (Göblingen-Nospelt, Büchel, Wederath, Badenheim, Stara Wieś, Donava, Belozem; *seznam:* 1, 3–5, 12, 23, 25),

Z dvema velikostnima skupinama nožnic se ujema delitev z njimi povezanih mečev. V prvo podskupino sodijo meči dolžine okoli 82 cm (Strmec nad Belo Cerkvijo, oba primerka iz Verduna, meč iz groba 3 z grobišča Wesółki in glede na domnevno dolžino celega meča tudi primerek iz Ljubljanice; *seznam:* št. 14a, 19, 20, 21a, b), drugo pa sestavljajo 90–95cm dolgi meči (glede na ugotovljene ali pa na podlagi ohranjenega dela meča domnevane dolžine v to podskupino sodijo primerki iz Büchla, Wederatha, grobov 78 in 128 iz Zemplína in iz Donave; *seznam:* 3, 4, 17b, d, 23). Vsi krajši meči imajo dolgo in izrazito konico, ki močno spominja na rimske gladije, med daljšimi meči pa so zastopani primerki s kratko (Büchel, Wederath; *seznam:* 3, 4) in dolgo konico (grob 78 in 128 iz Zemplína, Donava; *seznam:* 17b, d, 25).[13]

[12] Glede na naris rezilo tega meča ni imelo žlebov, risbi preseka rezila (obakrat risani na mestih, kjer je nožnica tako dobro ohranjena, da rezilo meča ni vidno!) pa kažeta po dva široka žlebova na vsaki strani.

[13] Na razlike v oblikovanosti konic obravnavanih mečev me je opozoril Dragan Božič.

12. DATACIJA NOŽNIC Z OKOVOM S PREDRTIM OKRASOM IZ BAKROVE ZLITINE ALI SREBRA

Pet nožnic obravnavane skupine oziroma njihovih delov je bilo najdenih v grobovih, pri katerih ostali grobni pridatki omogočajo razmeroma ozko datacijo. To so grob B iz Göblingen-Nospelta, datiran med 30 in 15 oz. okoli 20 pr. Kr. (Martin-Kilcher, Tretola Martinez, Vogt, R. 2009, 354; Metzler, Gaeng 2009, 455–458), trije grobovi relativnokronološke stopnje LT D2 – grob 108 iz Zemplína, grob 37 iz Verduna in grob s Strmca nad Belo Cerkvijo (Božič 1999, 211–212) ter grob 131 iz Verduna, ki ne more biti starejši kot (pozno)tiberijski.[14]

Haffner (1995, 149) je grobova iz Büchla in Wederatha, ki ne vsebujeta rimskih predmetov, datiral med 30 in 15 pr. Kr., čas izdelave v njima najdenih mečev in nožnic pa med 40 in 25 pr. Kr. Böhme-Schönbergerjeva (1998, 242–243) je grob iz Badenheima, ki prav tako ne vsebuje rimskih predmetov, umestila na konec stopnje LT D1 ali začetek relativnokronološke stopnje LT D2, oziroma pred sredino 1. stoletja (o. c. 242) ali 60/50 pr. Kr. (o. c. 243). Zgodnjo datacijo začetka obravnavanih nožnic je podkrepila z enako zgodnjo datacijo groba 108 iz Zemplína, ki pa, kot je pokazal Božič (1999, 200), ni utemeljena.

Širši časovni okvir grobov z obravnavanimi nožnicami je torej glede na grobove, v katerih so bile najdene, relativnokronološka stopnja LT D2, ki se je na vzhodnoalpskem območju začela okoli 70/60 pr. Kr.[15] in končala z začetkom srednjeavgustejske dobe okoli 15 pr. Kr. (Božič 1999, 211–212; 2008, 87, 145). Edini zanesljivo ožje datirani grob z obravnavano nožnico, tj. grob B iz Göblingen-Nospelta, nakazuje ožjo datacijo med 40/30–15 pr. Kr. Z njo se sklada tudi prisotnost take nožnice v (pozno)tiberijskem ali celo mlajšem grobu 131 iz Verduna.

Skratka: obravnavane nožnice s predrtim okrasom so zanesljivo izdelovali in uporabljali med okoli 40/30 in 15 pr. Kr.; njihova zgodnejša datacija ni izključena, vendar ne pred okoli 60 pr. Kr.

[14] Datacijo groba narekujeta sigilatni krožnik oblike Consp. 20.4 s pečatom ATICI in planta pedis in skodelica oblike Consp. 27.1 (Conspectus 86–87, 100–101; C V Arr, št. 324 in 325). Orožje latenske tradicije – poleg meča v nožnici obravnavanega tipa še ščitna grba tipa Verdun 37 (prim. Božič 1999, 211) in sulična ost s fasetiranim tulcem predstavljajo v grobu stare predmete, česar pa ne moremo trditi za okove visečega jermena rimskega vojaškega pasu, saj so bili v uporabi od avgustejske dobe do najmanj konca 1. stoletja (prim. Deschler-Erb 1999, 46–47). Za možnost vpogleda v risbe predmetov iz groba se zahvaljujem Danilu Breščaku (ZVKD).

[15] Božič 1988 (86–87) je predlagal njen začetek okoli 70 pr. Kr., iz datacije relativnih stopenj 2b in 2c grobišča Ornavasso – San Bernardo (Martin-Kilcher 1998, 249) pa izhaja njen začetek med 70 in 60 pr. Kr. Zdi se, da datacija fibul skupine Alesia nakazuje začetek stopnje LT D2 okoli leta 60 (prim. Istenič 2005).

13. RAZŠIRJENOST NOŽNIC S PREDRTIM OKRASOM NA OKOVU IZ BAKROVE ZLITINE ALI SREBRA

V *seznamu* (z izjemo št. 8 in 16) in na *sliki 13* smo zajeli nožnice z okovi iz bakrove zlitine ali srebra s predrtim okrasom oziroma njihove dele (običajno okrasne okove). Razširjene so med Luksemburgom na zahodu in vzhodno Poljsko ter Slovaško na vzhodu in med severno Poljsko na severu in Slovenijo na jugu. Najdba iz južne Švedske in eden ali dva primerka iz Bolgarije sta posamezna primerka, ki izstopata z siceršnjega okvira razširjenosti. Obravnavane nožnice in meči so torej razširjene na območjih, ki so jih naseljevala keltska in germanska ljudstva, en ali dva primerka pa izvirata s tračanskega območja. Izraziti zgoščenosti (po pet primerkov) sta na širšem območju reke Mozele, v osrednji ter južni Sloveniji, izstopajo pa tudi Štalenska gora, Zemplín in najdišča današnje Poljske.

Od 32 nožnic obravnavane skupine oz. njihovih odlomkov jih velika večina, tj. 29, izvira iz grobov, dve iz rek (*seznam:* št. 19, 23), pri eni pa najdiščne okoliščine niso znane (*seznam:* št. 26). Na sliko njihove razširjenosti torej verjetno vpliva prisotnost oziroma odsotnost sočasnih grobov z orožjem oziroma z meči.

Pregled orožja v grobovih druge polovice 1. stol. pr. Kr. v srednji Galiji (Riquier 2008) kaže, da tam obravnavanih nožnic zelo verjetno niso uporabljali. Enako nakazujeta grobišči Ornavasso in Giubiasco za območje južnih Alp (Pernet et al. 2006; Graue 1974). V južni Nemčiji, na Češkem, Moravskem, v Madžarski, severni Hrvaški in severni Srbiji pa se praznina na karti razširjenosti sklada z redkostjo ali odsotnostjo grobov (z orožjem) druge polovice 1. stoletja pr. Kr.

Slika razširjenosti obravnavanih nožnic torej verjetno le deloma kaže območja, kjer so jih uporabljali, saj je odvisna od običajev, povezanih s pokopom umrlih. Kljub temu nakazuje, da so jih na območjih, ki so bila v zgodnjeavgustejski dobi že del rimske države ali z njo v tesnih prijateljskih stikih, uporabljali Kelti ob Mozeli in srednjem Renu ter v vzhodnih Alpah, ki jih lahko povežemo s Treveri, Tavriski in Noriki. Primerek iz Belozema (in morda tudi tisti iz zbirke Axla Guttmanna) nakazuje njihovo prisotnost pri tračanskih plemenih. Voditelji nekaterih med njimi so s svojimi možmi sodelovali v rimskih notranjih bojih po Cezarjevi smrti (v bitki pri Filipih 42 pr. Kr. s po 3.000 konjeniki na obeh sprtih straneh; v bitki pri Akciju 31 pr. Kr.), v srednjeavgustejski dobi pa je južno od Donave nastalo klientelno kraljestvo, ki je kot rimski zaveznik s svojimi možmi sodelovalo pri zatrtju panonsko-delmatskega upora v letih 6–9 (Danov 1979, 121–132). Na ozemljih, ki nikoli niso bila del rimske države, pa so obravnavane nožnice razširjene na območjih, poseljenih z različnimi ljudstvi, ki so jih Rimljani imenovali Germani.

14. IZVOR NOŽNIC S PREDRTIM OKRASOM NA OKOVU IZ BAKROVE ZLITINE ALI SREBRA

Izvor obravnavanih nožnic je v latenski tradiciji. To kažejo konstrukcija iz dveh kovinskih platic in način njune

povezave, zvončast zgornji zaključek ter okov z zanko za pripenjanje, pa tudi lestvičasti okov.

Pri povezavi sprednje in hrbtne platice obravnavanih nožnic so uporabili kombinacijo dveh načinov: v zgornjem delu z zavojem ene platice čez rob, tako da objema rob druge platice, v spodnjih dveh tretjinah nožnice pa z robnim okovom, ki je povezan z lestvičasto postavljenimi prečkami. Prvi način je običajen za keltske meče od zgodnjelatenske dobe dalje (prim. Pernet et al. 2006, 36). Lestvičasti okovi so značilni za mlajši del poznega latena (Lejars 1996, 92–93, sl. 7: 9–11; Sievers 2001, 153, 217–219, kat. št. 138–139, 141–142, 144–145, 147–149, t. 49–52[16]), izhajajo pa iz podobnih okovov na nožnicah tipa Alizay in Ludwigshafen, ki so značilni za LT D1 v zahodnem delu keltskega sveta (Haffner 1989, 203–206; Lejars 1996, sl. 7: 3–8; Metzler, Gaeng 2009, sl. 209 in 210).

Lestvičasti okovi nožnic imajo lahko ostrogasto oblikovan zaključek. Razen na nožnicah z okovom iz bakrove zlitine s predrtim okrasom take zaključke najdemo na železnih nožnicah z železnim mrežastim okrasnim okovom in tudi na drugih vrstah nožnic. Znani so iz Nemčije in Poljske, po en primerek pa iz severne Francije, Slovenije (Verdun) in Djerdapa. Zdi se, da so germanskega ali morda keltskega izvora, njihovi začetki pa segajo na začetek poznolatenske dobe (Gleser 1999, 77– 83, 86–88, sl. 29, seznam 2; Gleser 2005, 118–124). Čolničasti zaključki nožnic so značilni za zahodnokeltska tipa poznolatenskih (LT D1) nožnic Alizay in Ludwigshafen (Metzler, Gaeng 2009, sl. 209: 1, 3, sl. 210; Pernet et al. 2006, 41–42, sl. 2.9: 3c), lestvičaste okove z rahlo ali izraziteje zoženim in zaobljenim zaključkom pa najdemo v grobovih mlajšega dela poznega latena (LT D2) prav tako zahodnega keltskega sveta (Lejars 1996, sl. 7: 10,11; Pernet et al. 2006, 40, 42, sl. 2.9: 3a).

Keltskega izvora je tudi tehnika izdelave predrtih okrasov z odstranjevanjem materiala, ki so jo Kelti poznali že v zgodnji mlajši železni dobi (Schönfelder 2002, 122). V taki tehniki je narejen tudi predrti okras železnih okovov voza iz poznolatenskega (LT D2) groba keltskega veljaka z najdišča Boé v Akvitaniji (Schönfelder 2002, 115–126, sl. 78–80).

V motive predrtih okrasov obravnavanih nožnic se nismo poglobili. Metzler in Gaeng (2009, 247) menita, da združujejo keltske in nekeltske motive (arkade). Arkade, ki so prevladujoč motiv na skorajda vseh predrtih okrasih obravnavanih nožnic, je kot sredozemski motiv na okrasih obravnavanih nožnic omenil že Künzl (1996, 397).

Uporaba bakrove zlitine za nožnice je v srednjelatenski dobi redka (Guštin 1981, 228–229, t. 46), pogosta pa je od začetka poznolatenske dobe, ko se pojavijo nožnice tipa Ludwigshafen (Pernet et al. 2006, 40–42; Lejars 1996, 79; Metzler, Gaeng 2009, 237–240, sl. 209, 210; Wyss, Rey, Müller 2002, kat. št. 20–23, 37).

Pri mečih, ki pripadajo obravnavanim nožnicam, prav tako prevladujejo latenske značilnosti, kot so zvončast branik in poševna ramena. Dolga in ozka rezila s koničastim zaključkom, ki so lahko posledica rimskih vplivov, poznamo z dela poznolatenskih mečev (prim. Lejars 1996, 90, sl. 6: 4; Wysss, Rey, Müller 2002, t. 9–14: št. 26,28,32–34,36,39–42,44). Gumbu podoben zaključek ročaja meča imajo tudi drugi latenski meči (npr. Wyss, Rey, Müller 2002, 57, t. 23, 24, 33, kat. št. 74; Sievers 2001, 217–219, kat. št. 140, 141, t. 50: 140,141). Metalografske značilnosti obeh rezil mečev, ki sta bila raziskana s tega vidika, prav tako ne kažejo odstopanj od keltske tradicije (Schwab 2005, 327–331).

Oblika obravnavanih nožnic in mečev kaže torej keltske značilnosti. Enako velja za tehniko izdelave predrtega okrasa, medtem ko del motivov tega okrasa ter dolge in ozke konice dela obravnavanih mečev (prim. *pogl. 11*) verjetno odsevajo rimske vplive.

Glede na jasno povezanost obravnavanih nožnic in mečev s keltskim svetom je izredno presenetljiva ugotovitev, da so pri primerkih iz Slovenije vsi deli iz barvne kovine narejeni iz čiste medenine in da isto velja za nožnice iz groba 78 v Zemplínu (cf. Longauerová, Longauer 1990), groba 784 v Wederathu in iz Badenheima[17] ter da so na nožnici iz Büchla prav tako uporabili zlitino bakra in cinka (okoli 12 %), ki pa vsebuje tudi kositer in svinec (Schwab 2005, 332, pregl. 2).

Dejstvo, da so sprednja platica in okrasni okov teh nožnic in branik ter vrhnji zaključki ročajev mečev iz čiste medenine (tj. medenine z okoli 20 % cinka), jasno kaže, da so za njihovo izdelavo uporabili svežo čisto medenino oziroma medeninaste ingote (prim. Müller 2002, t. 120: 1488; Riederer 2002, 132, kat. 1488), ne pa medeninastih predmetov, ki bi jih pretalili (prim. npr. Nieto 2004). Pri taljenju medenine se namreč delež cinka zmanjša (prim. npr. Nieto 2004), dodajanje drugih kovin staljeni medenini pa je v sestavi zlitine še očitneje (prim. npr. zlitino nožnice iz Büchla – Schwab 2005, pregl. 2 in sponke – Šmit et al. 2005, pregl. 3).

Kelti medenine niso izdelovali, Rimljani pa so jo pridobivali in uporabljali od okoli 60 pr. Kr. (Istenič 2005, 204–205, 209–211; Istenič, Šmit 2007). Interpretacijo njene uporabe pri obravnavanih nožnicah in mečih otežuje dejstvo, da je elementna sestava ugotovljena in objavljena le za zelo redke kovinske predmete poznolatenske dobe. Med njimi so meči s številnimi ovalnimi kovinskimi (iz barvne kovine ali železa) ploščicami na ročajnem trnu, ki so sočasni v tem članku obravnavanim mečem in nožnicami, saj primerek iz grobov 805 in 809 grobišča v Wederathu kaže na datacijo okoli 30 pr. Kr. Znani so s severovzhodnega obrobja Galije (največ, tj. šest najdišč je na Nizozemskem) ter tudi najdišč vzhodno od Rena (Haffner 1989, 229–238; Roymans 2004, 108–112, sl. 7.4, 7.5). Analize ploščic na ročajih treh mečev iz Nizozemske kažejo, da so iz brona (Verwers, Ypey 1975, 87, 88, tab. 1).[18] Na dveh mečih te skupine, iz reke Scheldt pri kraju Denain in iz Rögatza, pa so take ploščice medeninaste (Roymans 2004, 110–111; Verwers, Ypey 1975, 90–91). Analizirana ploščica na meču iz Rögatza je iz bakra in cinka (razmerja niso podana) in ne vsebuje kositra (Verwers, Ypey o. c.), kar kaže na čisto

[16] Risbe na t. 51 so napačno številčene.

[17] Za podatka o sestavi nožnic iz Wederatha in Badenheima se zahvaljujem Rolandu Schwabu (Curt-Engelhorn-Zentrum Archäometrie, Mannheim).

[18] Analiziranih je bilo šest ploščic s treh mečev; sestava brona se pri vseh treh mečih razlikuje (svinčev bron s 5 % svinca in 5–6 % kositra; bron z 12 % kositra in svinčev bron s 5 % svinca in 12 % kositra).

medenino. Na primerku iz reke Scheldt so analizirali le eno ploščico, verjetno na patinirani površini, zato lahko glede na rezultate (Cu z okoli 12 % Zn in 1,5 % Sn; Hantute, Leman-Delerive 1982, 90) le domnevamo, da ploščica ni iz povsem čiste medenine.[19]

Dosedanji rezultati raziskav mečev s kovinskimi ploščicami na ročaju torej kažejo, da so pri enem delu teh mečev uporabili bron, pri drugem pa medenino. Nadaljnje raziskave, ki bi vključevale natančnejše analize in bi zajele več primerkov, bi lahko pokazale, kakšno medenino so uporabili, kako pogosta je bila in kaj je vplivalo na izbiro zlitine (npr. čas in/ali kraj izdelave).

V primerjavi z meči z obročki na ročaju se zdi uporaba čiste medenine na nožnicah z okovom s predrtim okrasom skorajda dosledna, saj je bila ugotovljena pri sedmih nožnicah od osmih analiziranih (štirje primerki iz Slovenije ter nožnice iz Zemplína, Badenheima in Wederatha). Osmi primerek vsebuje visok delež cinka, kar nakazuje, da so dele te nožnice naredili iz medenine, ki so ji dodali malo kositra in svinca.

V zvezi z vprašanjem izvora nožnic s predrtim okrasom iz bakrove zlitine ali srebra sta pomembna dva meča, ki imata na zgornjem delu rezila imenski pečat in ju lahko bolj ali manj tesno povežemo z obravnavanimi nožnicami. To sta meč s pečatom VTILICI iz groba 78 v Zemplínu na Slovaškem (*seznam:* št. 17b) in meč s pečatom ALLIVS PA iz groba 20 grobišča Wesołki na Poljskem (Dąbrowska, Dąbrowski 1967, 28, sl. 23: 6, t. 8: 3). Pečat meča z grobišča Wesołki ima pravilne in jasno vidne črke, tisti iz Zemplína pa se zdi glede na objavljeno fotografijo razmeroma nepravilen in težje berljiv.

Meč iz žganega groba 78 v Zemplínu se po obliki ramen, rezila in žlebovih na rezilu in tudi po zaključku ročajnega trna (prim. meč iz Büchla, *seznam:* št. 3) dobro sklada z meči, ki so bili najdeni skupaj z obravnavanimi nožnicami (prim. *seznam*). Njegova dolžina (95 cm) ustreza daljšim primerkom obravnavanih mečev. V grobu 78 iz Zemplína so bili ohranjeni le deli nožnice, ki so pritaljeni na rezilo meča. Objavljene risbe ne dovoljujejo njene opredelitve med nožnice z okovom, okrašenim v predrti tehniki, vendar pa na to jasno kaže Pleinerjev opis, ki omenja "fragments of copper/bronze scabbard, ornamented in an openwork style of Late La Tène Noric type" (Pleiner 1993, 97). Analize so pokazale, da so ostanki te nožnice iz čiste medenine z okoli 18 % cinka (Longauerová, Longauer 1990).

Meč s pečatom iz groba 20 grobišča Wesołki po "medeninastem" (tako piše v opisu, vendar analize najverjetneje niso bile narejene) zaključku ročaja, po obliki ramen in rezila ter po dolžini (82,5 cm; Dąbrowska, Dąbrowski 1967, 28, sl. 23: 6) ustreza krajši podskupini obravnavanih mečev (prim. zgoraj, *pogl. 11*). Izvira iz žganega groba, v katerem se je od nožnice meča ohranil le spodnji del okova z zanko za obešanje (ibid. 23, sl. 23: 7) iz bakrove zlitine,[20] ki je precej podoben zaključku medeninastega okova z zanko s Strmca nad Belo Cerkvijo (*sl. 5b; pril. 2*).

Allius je latinsko ime, ki je razmeroma pogosto. Uporabljali so ga kot gentilno ime in tudi kot kognomen, izpričano pa je predvsem v Italiji, Hispaniji, Galijah in Dalmaciji (*Onomasticon* I, 43–44). Pri pečatu VTILICI je zadeva manj jasna. Ime, ki bi ustrezalo genitivu ali dativu Utilici, ni znano, beseda pa spominja na latinski pridevnik utilis.[21]

V obeh primerih se pečata verjetno nanašata na izdelovalca meča. V prvem primeru je ta oseba nedvomno imela latinsko ime (Allius), v drugem pa to ni zanesljivo.

Z latenskih mečev poznamo, z eno izjemo, anepigrafske pečate (Dulęba 2009; Wyss, Rey, Müller 2002, 37–39). Z zgodnjerimskih mečev pečati niso znani, razen morda enega primerka.[22]

Obravnavane nožnice in meči torej izhajajo iz keltske tradicije, del okrasnih motivov predrtega okrasa nožnic, dolge in izrazite konice rezil dela mečev ter predvsem uporaba čiste medenine pa jasno kažejo rimske vplive. Imenska pečata na dveh mečih, od katerih eden zanesljivo, drugi pa verjetno sodi k obravnavanim nožnicam, nakazujeta, da so bili v njihovo izdelavo vključeni Rimljani.

Razširjenost obravnavanih nožnic (*sl. 13*), ki ima težišče na keltskih in germanskih območjih, torej po našem mnenju ne odseva nujno povezav med Kelti in njihovimi vzhodnimi sosedi. Morda kaže na stike Rimljanov s keltskimi in drugimi ljudstvi na novo osvojenih območjih in zunaj rimske države v zadnjih desetletjih pr. Kr.

Treverski vojščaki so bili z rimsko vojsko v intenzivnih stikih že v Cezarjevih galskih vojnah (izmenjujoče kot zavezniki ali sovražniki), kar se je nadaljevalo tudi kasneje. Bogate grobove konjenikov, med katere sodi tudi grob B z obravnavanim mečem in nožnico z grobišča Göblingen-Nospelt, povezujejo s predstavniki visoke treverske aristokracije (Metzler, Gaeng 2009, 513–519, 521), ki je vodila svoje vojaške oddelke v sklopu rimske vojske.

Pri Tavriskih na delovanje domačinov v rimski vojski v srednje- in poznoavgustejski dobi ter tudi še kasneje kažejo grobovi z orožjem rimskih tipov iz Verduna (npr. grobovi 1, 41, 84, 112, 136; Breščak 1989, 10, 13; Breščak et al. 2002, 139, 141–142, kat. 74, 82)[23] in Mihovega (Windl 1975, grobovi 1656/58, 1657/16, 1657/59, 1657/110, 1846/3, 1661/1, t. 21: 1–5, 28: 1–3, 43: 1–5, 51: 15–19, 61: 5–7). Po našem mnenju sta v grobu 1 s parcele Košak B s Strmca nad Belo Cerkvijo in grobu 37 iz Verduna prav tako pokopana tavriščanska vojščaka, verjetno iz vodilnega sloja, iz obdobja med 60/30 in 15 pr. Kr, ki sta sodelovala z Rimljani, verjetno tudi na vojaškem področju. Poleg obravnavanih mečev in nožnic, ki kažejo rimske vplive, sta uporabljala svojo tradicionalno oborožitev in nošo ter sta pokopana s keramiko latenskega tipa (Božič 1999, 211; Mihaljević, Dizdar 2007). Glede na ožjo datacijo obravnavanih nožnic se zdi verjeten časovni okvir omenjenih grobov med okoli 40/30 in 15 pr. Kr. Ta se sklada z novo situacijo, ki je v jugovzhodnih Alpah nastala po Oktavijanovih ilirskih vojnah (35–33 pr. Kr.).

[19] K taki domnevi nas ne navaja delež cinka, ki je v patini običajno precej nižji kot v jedru (prim. Istenič, Šmit 2007, 143), temveč 1,5 % kositra.

[20] K. Czarnecka, pers. comm. Prim. *Dodatek*.

[21] Za opredelitev se zahvaljujem Julijani Visočnik, Nadškofijski arhiv Ljubljana.

[22] Haffner (1989, 271) omenja gladij s pečatom na ročajnem trnu iz uničenega grobišča Bell (Mayen-Koblenz). Zaradi nedosegljivosti literature tega nisem mogla preveriti.

[23] Navajam le doslej objavljene grobove.

Pri Treverih in Tavriskih so torej obravnavane nožnice in meče najverjetneje uporabljali njihovi vodilni možje, ki so sodelovali z Rimljani. Njihova oborožitev je še povsem tradicionalna, le obravnavane nožnice in meči kažejo poleg prevladujočih latenskih tudi nedvomne rimske elemente.

Uporaba medenine pri obravnavanih mečih in nožnicah, pri katerih sicer prevladujejo keltski elementi, ter rimsko ime na najmanj enem od obravnavanih mečev kažeta na njihovo izdelavo na območju, kjer so bili stiki med Kelti in Rimljani intenzivni, pa tudi na vpletenost Rimljanov v njihovo izdelavo. Narejeni so v keltski tradiciji, vendar so opazni tudi rimski vplivi (motivi okrasa in oblika konice meča), in z materiali, ki so jih uporabljali pri izdelavi rimskega orožja (medenina).

Iz navedenega in razširjenosti obravnavanih predmetov izhaja naša domneva, da sta bili izdelava in distribucija tega orožja v rimskih rokah. Namenjeno je bilo Keltom, ki so sodelovali z Rimljani, in drugim, ki jim je bilo keltsko orožje všeč ter so ga bili navajeni uporabljati. Domnevamo, da so jih posredovali predvsem kot darila in morda tudi kot trgovsko blago. Prisotnost obravnavanih predmetov na Rimljanom odmaknjenih območjih današnje Poljske in v Zemplínu je morda povezana z rimskimi darili na območjih ob jantarni poti.

Doslej domnevani območji izdelave obravnavanih nožnic in mečev, to je noriško in treversko območje, sta med 40/30 in 15 pr. Kr. predstavljali razmeroma romanizirano keltsko okolje, v kakršnem bi obravnavane meče in nožnice lahko izdelovali; za tavriščansko območje, kjer je tudi izrazita zgoščenost teh nožnic in mečev, pa se to ne zdi verjetno. Zgoščenost obravnavanih nožnic na območjih, ki so jih poseljevali Treveri in Tavriski ter tudi Noriki, je zato po našem mnenju bolj verjetno povezana z njihovim pogrebnim kultom in s sodelovanjem njihovih vodilnih mož z Rimljani, kot pa z območjem izdelave teh predmetov. To morda lahko domnevamo na prostoru, kjer so bili stiki med Rimljani in Kelti intenzivni in od koder lahko predvidevamo široko distribucijo izdelkov na območja razširjenosti obravnavanih nožnic in mečev, čemur se zdi, da najbolje ustreza vzhodni del province Gallie Cisalpine, ki je bila leta 42 pr. Kr. vključena v Italijo.

Dve velikostni skupini obravnavanih nožnic in mečev (glej *pogl. 11*) morda nakazujeta, da so bili daljši primerki (Göblingen-Nospelt, Büchel, Wederath, Badenheim, Stara Wieś, Zemplín – gr. 78 in 128, Donava in Belozem) namenjeni bojevnikom, ki so se borili na konju, krajši pa tistim, ki so se borili peš. S to domnevo se sklada dejstvo, da sta v obeh grobovih z obravnavanimi meči in nožnicami, ki vsebujeta ostroge (grob B iz Göblingen-Nospelta – Metzler, Gaeng 2009, sl. 65: 70a,b; grob 129 iz Zemplína – Budinský-Krička, Lamiová-Schmiedlová 1990, t. 18: 1,2), daljša meča. Njej v prid govori tudi prisotnost zgolj daljših primerkov pri Treverih. Ti so namreč imeli močno konjenico, ki je z Rimljani sodelovala že v času galskih vojn in jo je Cezar cenil (Metzler, Gaeng 2009, 513, 514). Vse štiri nožnice in meči z območja, ki so ga poseljevali Tavriski, sodijo med krajše primerke (*seznam:* 19–21)[24], ki so sicer zastopani samo še dvakrat (Wesołki – gr. 3 in nožnica z mečem iz zbirke Axla Guttmanna; *seznam:* 14a, 19–22, 26).

15. SKLEP

Nožnice s predrtim okrasom na okovu iz bakrove zlitine ali srebra sestavljajo posebno skupino poznolatenskega orožja, ki po razpoložljivih podatkih šteje najmanj 32 primerkov. Izvirajo iz grobov in v dveh primerih iz rek. Iz naselbin jih ne poznamo. Uporabljali so jih med 40/30 in 15 pr. Kr.; njihova zgodnejša uporaba, od okoli 60 pr. Kr. dalje, se ne zdi verjetna, ni pa izključena. Grob 131 iz Verduna nakazuje, da so bili posamezni primerki v uporabi tudi še kasneje.

Obravnavana skupina nožnic in mečev ima poznolatenske keltske značilnosti, kaže pa tudi rimske vplive. Uporaba čiste medenine, ugotovljena pri sedmih primerkih (štirih iz Slovenije, dveh iz Nemčije in enem iz Slovaške) ter pečat z latinskim imenom na meču z grobišča Wesółki nakazujeta povezanost njihove izdelave z Rimljani. Te nožnice in meče so najverjetneje izdelovali na območju, kjer so bili stiki med Rimljani in Kelti intenzivni, morda v vzhodnem delu Gallie Cisalpine, in sicer za keltske zaveznike (predvsem njihove vodilne može) in druge (npr. Germane), ki so bili navajeni uporabljati keltske meče in so jih cenili.

Zahvale

Danilo Breščak (ZVKDS, OE Novo mesto) in Bernarda Županek (Muzeji in galerije mesta Ljubljana) sta dovolila, da smo v raziskavo vključili primerke iz Verduna in Ljubljanice. Bernarda Županek se je strinjala tudi z delno obnovo konservacije nožnice iz Ljubljanice in s tem povezanimi raziskavami. Vse našteto je bilo za izvedbo raziskave bistvenega pomena.

Sonja Perovšek, Zoran Milić in Igor Ravbar (Konservatorski oddelek Narodnega muzeja Slovenije) so sodelovali pri razmišljanjih in pogovorih o načinu izdelave lestvičastih okovov. Sonja Perovšek je poleg tega izredno zavzeto in skrbno izvedla raziskovalne posege na nožnici iz Ljubljanice.

Julijana Visočnik (Nadškofijski arhiv Ljubljana) je prispevala opredelitev obeh napisov na pečatih obravnavanih mečev.

Za napotke glede literature, koristne podatke, diskusijo in kritične pripombe k rokopisu smo hvaležni Draganu Božiču (Inštitut za arheologijo ZRC SAZU). Dragocene pripombe k rokopisu so prispevali Peter Turk, Neva Trampuž Orel in Boštjan Laharnar (vsi Narodni muzej Slovenije) in še posebej Jana Horvat (Inštitut za arheologijo ZRC SAZU), ki je naše raziskave tudi spodbujala. Pri urejanju besedila in slikovnega gradiva sta bili v veliko pomoč Helena Bras Kernel in Barbara Jerin (obe Narodni muzej Slovenije).

Katarzyna Czarnecka (Państwowe Muzeum Archeologiczne, Varšava) nam je prijazno posredovala podatke o obravnavanih predmetih iz grobov 3 in 50 grobišča Wesołki in groba 301 grobišča Kamieńczyk.

Besedilo sta iz slovenskega v angleški jezik prevedli Katarina Jerin in avtorica. Angleško besedilo je lektorirala Alex Croom.

Vsem navedenim se iskreno zahvaljujemo.

[24] Primerka iz Mihovega tu nismo mogli upoštevati.

SEZNAM
(*sl. 13*)

Najdišča nožnic z okovom iz bakrove zlitine ali srebra z visoko kvalitetnim predrtim okrasom.[25] Pri vsaki nožnici ali njenem delu je navedeno najnovejše delo, ki vsebuje ilustracijo, in druga dela, ki so relevantna za opredelitev nožnice oziroma njenega dela ali njenega najdišča.

Luksemburg

1. Göblingen-Nospelt, grob B; nožnica z mečem.
Metzler-Gaeng 2009, 80, 84, 243–244, sl. 65: 22a, 213, 215: 1.

2. Titelberg, vzhodno grobišče, brez ožjega konteksta (najdba iz groba ali keltskega in keltsko-rimskega svetišča); zgornji del meča in nožnice z okovom s predrtim okrasom.
Metzler-Gaeng 2009, 248–249, sl. 214, 215: 2.

Nemčija

3. Büchel, grob; nožnica z mečem.
Haffner 1995, 137–142, 148, sl. 2, 3, 9: 1, t. 1: zgoraj; Schwab 2005.

4. Wederath, grob 784; nožnica z mečem.
Haffner 1995, 141–143, sl. 4, 9: 2, t. 1: spodaj.

5. Badenheim, grob; nožnica z mečem.
Böhme-Schönberger 1998, 218–223, sl. 11–13, pril. 4.

6. Groβ Romstedt, grobna najdba; majhen odlomek meča in okova nožnice s predrtim okrasom.
Werner 1977, 381–382, sl. 11: 2; Czarnecka 2002, 97, št. 6.

7. Schkopau, grobišče, posamezna najdba; odlomek zgornjega dela nožnice z okovom s predrtim okrasom.
Schmidt, Nitzschke 1989, 93, E 7, t. 78: 7.

8. Harsefeld, grob 8; okov s predrtim okrasom in zaključek nožnice.
Böhme-Schönberger 1998, 233–234, 237, sl. 5; Werner 1977, 383, 387, 400, op. 45, sl. 15.
Werner (1977, 383) okrasni okov opisuje kot ulit in "recht massiv" ter domneva, da je germanski posnetek "noriških" nožnic. Po mnenju Böhme-Schönberger je to nedokončan okov, ki je bil na narobe pritrjen!
Zaključek nožnice (Werner 1977, sl. 15: 2) se od primerkov obravnavane skupine izrazito razlikuje. Zraven delov nožnice je bil najden meč s pečatom v obliki rozete, njegova risba ni objavljena (Werner 1977, 400, op. 45).
Pripadnost nožnice in meča k obravnavani skupini se nam zdi zelo vprašljiva, zato je tudi nismo vključili v *sliko 13.*

Švedska

9. Eggeby, gomila; okov s predrtim okrasom.
Böhme-Schönberger 1998, 232–233, sl. 4; ead. 2001, 79–80, sl. 1.

Poljska

10. Kopaniewo (nem. Koppenow), grob 10; odlomek nožnice z okovom s predrtim okrasom.
Werner 1977, 377, sl. 6; Wołągiewicz, Wołągiewicz 1963, 99, t. 1: 11.

11. Rządz (nem. Rondsen), grobišče (grobna celota ni poznana); odlomek okova s predrtim okrasom.
Werner 1977, 382–383, sl. 11: 1.

12. Stara Wieś-Kolonia, grob 1; nožnica z mečem.
Werner 1977, 390, sl. 17; Kaszewska 1977, 119, št. 21, sl. 3; Böhme-Schönberger 1998, 226, op. 22 in 26.

13. Ciecierzyn, grob 118; nožnica z mečem.
Martyniak, Pastwiński, Pazda 1997, 28, t. 117: 1,2.

14a. Wesołki, grob 3; nožnica z mečem.
Dąbrowska, Dąbrowski 1967, 14, sl. 7: 8; Kokowski 2003a, 107, kat. št. 214, sl. 16; Kokowski 2003b 482–483.
V opisu meča in nožnice (Dąbrowska, Dąbrowski 1967, 14; Kokowski 2003b, 482–483; prim. tudi Łuckiewicz 2000, 370, pregl. 1) je omenjeno samo železo, Bochnak in Czarnecka (2001–2005, 29) pa menita, da je okrasni okov iz železa, ki je bilo na površini prekrito z bakrom ali bronom

14b. Wesołki, grob 50; okov s predrtim okrasom in ostrogast zaključek nožnice.
Dąbrowska, Dąbrowski 1967, 56, sl. 57: 1,8; Łuckiewicz 2000, 370, pregl. 1, sl. 13: 1,8.

15. Witaszewice, grob 147/1937; deli nožnice in pripadajoči meč.
Werner 1977, 391–392, sl. 18; Kaszewska 1977, 108, 120, št. 46, sl. 1: 3–5; Łuckiewicz 2000, 370, pregl. 1, 376, sl. 17.

16. Kamieńczyk, grob 301; nožnica z mečem.
Dąbrowska 1997, 62, 90, t. 138: 4; 201: 1; Bochnak, Czarnecka 2004–2005, 29, sl. 4.
Ta nožnica je edina, na kateri je po sedaj razpoložljivih podatkih okov s predrtim okrasom iz železa, motivi in

[25] Okov iz bakrove zlitine s predrtim okrasom iz Tuczna (Poljska; Makiewicz 1975, 139, t. 9: 4; Werner 1977, 382, sl. 11: 3) in železen mrežasti okov z najdišča Sofija Podueni (Bolgarija; Popov 1921, 33–34, sl. 34, 35) po našem mnenju ne sodita v obravnavano skupino (drugačnega mnenja glede nožnic enega oziroma obeh najdišč: Böhme-Schönberger 1998, sl. 6: 6; Czarnecka 2002, 97, 98, št. 12 in 25). Vanjo na podlagi podatkov v dosegljivi literaturi prav tako nismo mogli uvrstiti meča z ostanki nožnice iz Sanzkowa (Nemčija; Werner 1977, 388, sl. 16) in odlomka nožnice iz groba 7 grobišča Zvenihorod-Zaguminki (Ukrajina; Werner 1977, 384, sl. 12: 1; Kropotkin 1977, 185, sl. 12: 1; Łuckiewicz 2000, 374, sl. 15), v čemer se razhajamo z Böhme-Schönberger (1998, sl. 6: 3, 13) in Czarnecko (2002, 97–98, št. 9, 18). Za primerek iz Lučke (Ukrajina) podatki v Łuckiewicz 2000, pregl. 1 ne kažejo, da gre za nožnico obravnavane skupine, objava, ki jo navaja Czarnecka (2002, 98, št. 19), pa nam ni bila dosegljiva.
Prav tako v skupino nismo vključili primerka iz Stare Zagore (Werner 1977, 392–394, sl. 19), ki po motivih in kompoziciji okrasa ne ustreza obravnavani skupini.

kvaliteta okrasa okova pa se ne razlikujejo od tistih iz bakrove zlitine. Primerek smo kljub razliki v materialu vključili v *seznam,* pri siceršnji obravnavi in na *sliki 13* pa ga nismo upoštevali.

Slovaška

17a. Zemplín, grob 77; dva odlomka okova s predrtim okrasom.

Budinský-Krička, Lamiová-Schmiedlová 1990, 253, 255, t. 11: 10,11.

17b. Zemplín, grob 78; meč z ostanki nožnice.

Budinský-Krička, Lamiová-Schmiedlová 1990, 255, sl. 20a, t. 11: 20; Lamiová 1993, 25, 27, sl. 18, 19, 25; Pleiner 1993, 97.

Uvrstitev med nožnice iz bakrove zlitine s predrtim okrasom je verjetna glede na omembo predrtega okrasa poznolatenskega noriškega stila (Pleiner 1993, 97).

17c. Zemplín, grob 108; dva odlomka nožnice: odlomek zgornjega dela s predrtim okrasom in odlomek spodnjega zaključka.

Cosack 1977; Budinský-Krička, Lamiová-Schmiedlová 1990, 260–261, t. 15: 30–31; Böhme-Schönberger 1998, 227, 233, 234, 237, sl. 3.

Zdi se, da je bila cela nožnica iz bakrove zlitine (Cosack 1977). Od drugih nožnic s predrtim okrasom se izrazito razlikuje po zaključku (je daljši in ožji ter ima na sprednji strani podkvasto odebelitev in štiri zakovice, na hrbtni strani pa paličasto ojačitev) in okrasnem okovu, ki je morda nedokončan (prim. Böhme-Schönberger 1998, 227, 237, sl. 3).

17d. Zemplín, grob 128; odlomek zgornjega zaključka predrtega okova in odlomek spodnjega zaključka nožnice.

Budinský-Krička, Lamiová-Schmiedlova 1990, 265, t. 18: 11,13.

17e. Zemplín, grob 136; majhen odlomek okova s predrtim okrasom.

Budinský-Krička, Lamiová-Schmiedlova 1990, 267, t. 18: 27.

Avstrija

18a–c. Štalenska gora / Magdalensberg, Lugbichl (območje nekropole) ; odlomki treh okovov s predrtim okrasom.

Deimel 1987, 263–264, t. 69: 6–8.

Slovenija (*sl. 1*)

19. Ljubljanica pri Bevkah; rečna najdba; nožnica z mečem (*sl. 2–3; pril. 1*).

20. Strmec nad Belo Cerkvijo, grob 1 na parceli Košak B; nožnica z mečem (*sl. 4–7; pril. 2*).

21a. Verdun, grob 37; nožnica z mečem (*sl. 8–9; pril. 3*).

21b. Verdun, grob 131; nožnica z mečem (*sl. 10–11; pril. 4*).

22. Mihovo, grob 1657/8; nožnica z mečem (*sl. 12*).

Madžarska

23. Donava, pri kraju Pomáz oz. Szentendre; nožnica z mečem.

Hunyady 1942–1944, 115–116, t. 44: 5,5a,b (najboljša fotografija); Bóna 1963, 253, t. 38: 4 (najdišče); Hellebrandt 1999, 35–36, t. 4: 4 (slaba risba; najdišče).

24. Nagytétény, grob; nožnica z mečem.

Ustna informacija András Márton; del predmetov iz istega groba je objavljen v Zsidi 2009, 111, št. 294–296.

Bolgarija

25. Belozem, grobna gomila; nožnica z mečem.

Werner 1977, 372, sl. 3: 1, 378, 379, sl. 8.

26. Neznano najdišče, morda v Bolgariji (Böhme-Schönberger 1998, 230, op. 42); nožnica z mečem.

http://www.christies.com/LotFinder/lot_details.aspx?pos=8&intObjectID=4265305&sid [zadnji dostop 11. 10. 2010].

DODATEK

Tik pred oddajo zadnjih korekur nas je K. Czarnecka opozorila na članka Dąbrowski K. in J. Kolendo 1967, Z badań nad mieczami rzymskimi w Europie środkowej i północnej (odkrycie miecza z odciskiem stempla w Wesółkach, pow. Kalisz), *Archeologia Polski* 12, 383–426 in Dąbrowski, K. in J. Kolendo 1972, Les épées romaines découvertes en Europe centrale et septentrionale, *Archaeologia Polona* 13, 59–109. Vsebujeta pomembne podatke o grobu 20 z grobišča Wesołki: analiza osteoloških ostankov je pokazala na 30–45 letnega moškega; gumb na zaključku trna meča je bil analiziran (medenina z 10 % cinka); na rezilu meča so ostanki medenine (ostanki sprednje strani nožnice); spodnji del okova z zanko za obešanje je iz železa. Po podrobni analizi imenskega pečata avtorja sklepata, da je bil izdelovalec meča iz Italije.

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