

BROTHERS-IN-ARMS. BALT WARRIORS AND THEIR INTERREGIONAL CONTACTS IN THE ROMAN AND MIGRATION PERIODS (THE CASE OF THE BOGACZEWO AND SUDOVIAN CULTURES)

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This paper is the first attempt to summarize the state of research into the armament of the Bogaczewo and Sudovian cultures. Swords ended up with a higher than expected position. While shaft-hole axes and socketed axes played an important part, the military role of the so-called 'fighting knives' of the Roman period was rejected, with the exception of Dolchmesser, which were recognized as true weapons. Polearms and shields were used the most frequently. The latter, although fitting into the Central European pattern, had local traits. The bow was recognized as hunting equipment. And horses had a rather auxiliary character. Items with a Balt character that were discovered, for example, at Vimose Bog 1 and 2a and the sacrificial sites at Balsmyr, Sorte Muld, Kragehul, Skedemosse, and Uppåkra seem to prove that Balts participated in Scandinavian conflicts, which led to an exchange of ideas about such things as tactics and weapons.

Keywords: weapons, the Western Balt circle, the Roman period, the Migration period, bog sites.

Straipsnyje pirmą kartą bandoma apibendrinti Bogačevo ir Sūduvių kultūrų ginkluotės tyrimus. Nustatyta, kad kalavijai buvo svarbesni nei manyta, taip pat didelį vaidmenį turėjo pentiniai ir įmoviniai kirviai. Vadinamųjų „kovos peilių“ karinė paskirtis romėniškuoju laikotarpiu atmesta (išskyrus Dolchmesser tipo peilius, kurie pripažinti tikrais ginklais). Dažniausiai naudoti ietys ir skydai. Pastarieji, nors ir atitinka Centrinės Europos pavyzdžius, turi ir vietinių bruožų. Lankas laikytinas medžioklės įrankiu, o žirgai karyboje greičiausiai turėjo ne pagrindinį vaidmenį. Baltiškojo tipo dirbiniai, rasti, pvz., Vimose pelkėje (1 ir 2a) bei aukojimo vietose, tokiose kaip Balsmyr, Sorte Muld, Kragehul, Skedemosse ir Uppåkra, atskleidžia, kad baltai dalyvavo skandinavų kariniuose konfliktuose, ir tai leido keistis žiniomis apie karybos taktiką bei ginklus.

Reikšminiai žodžiai: ginklai, Vakarų baltų kultūrų ratas, romėniškasis laikotarpis, tautų kraustymosi laikotarpis, aukojimo pelkėse vietos.

INTRODUCTION

The armament of the Balts who lived in the territory of Poland during the protohistoric period has not been studied for years. It is possible to name only the Bogaczewo culture, the Sudovian culture, and the Elbląg group as relatively well-known cultural units, although this list is far from final. Some general state-

ments, however, can currently be made, at least in respect to the weaponry of the Bogaczewo and Sudovian cultures. This paper aims to present an up-to-date model of Balt armament based mainly but not exclusively on the studies of the present author (Nowakowski 1994a; 1995; 2007a; 2007b; 2009b; 2014; Kontny 2007a; 2007b; 2008a; 2011; 2013a; 2013b; 2015a; 2015b; 2016a; 2016b; 2017a; 2017c; forthcoming a).

POLEARMS

These were definitely the basic offensive weapon. Non-specialized types, i.e. implements that could have been used as either a spear or a javelin, as needed, probably prevailed in both cultures. The former function was likely to have been very important as shown by the large number of burials with one polearm head. This observation is especially valid for the Sudovian culture where only three burials containing more than one polearm head can be named out of 58 polearm burials¹ (5.2%) whereas in the Bogaczewo culture 43 of the 267 such burials (16.1%) have been so identified. A certain specialisation of heads with leaf-shaped blades has also been proven in the latter culture by the occurrence (although sporadic) of barbed spearheads (Nowakowski 2014), which unambiguously served as javelins². Additionally, pairs of heads that clearly differed in size were occasionally placed in a burial, which allows the assumption to be made that they belonged to a spear and a javelin. This may be the result of the chronological situation: in the Bogaczewo culture no weapon burials occur after C1b (Kontny 2008a, pp.100–101) whereas the tendency that existed in the Przeworsk culture to use specialized polearms ceased in C1b (Kontny 2008b, p.114, Diagram 34). Thus the popularity of such weapons in the Bogaczewo culture should probably be considered proof of Przeworsk influence in the Early Roman period and the early part of the Younger Roman period. Unfortunately, the predominance of cremations in the Bogaczewo culture means that no data are available for the dimensions of the wooden polearm elements. Based on the material from Sudovian inhumations, one may deduce that the long (roughly 3 m) shafts known from Scandinavia were not popular among the Balts where shafts close in length to the warrior's height predominated (Kontny 2001, p.120),

like in the Przeworsk culture (see Kontny 2008b, pp.114–117, note 44).

A surprisingly different situation can be seen in respect to the spearhead types if the Bogaczewo and Sudovian cultures are taken into consideration (Kontny 2007b). In the former, the Przeworsk influence is overwhelming. Almost all of the Roman period Przeworsk types are present in the Bogaczewo cultural material, Piotr Kaczanowski (1995) types VII, VIII, and XII being the most popular, but local types also sometimes occur (Kontny 2007b, pp.126–128, Figs. 7, 8). Other cultural elements, e.g. Scandinavian and Eastern, are barely recognizable: only some rarely noticed features like a concave upper blade, a wide conical socket, or the rather frequent use of nails to attach the socket seem to point to eastern features. Nevertheless, some forms seem to be more primitive than their models from the Przeworsk culture. It therefore seems that the overwhelming majority of the Bogaczewo specimens were produced in local workshops. It has so far been almost impossible to identify any Przeworsk imports.

The opposite situation existed in the Sudovian culture. The polearm heads as a whole cannot be fitted into Kaczanowski's scheme. There are a few, typically Przeworsk, spearheads from the earliest stage which should probably be associated with Bogaczewo influence. Nevertheless, Scandinavian influences seem to be of greater importance; the vast majority of Sudovian spearheads should be linked with examples described by Vytautas Kazakevičius (Казакявичюс 1988) (Fig. 18:4, 5). Most frequent are specimens of type IB/IB, including a variant, followed by IVA, IA, ID, and II. Scandinavian patterns are rarely spotted and proven among objects from the Sudovian and Dollkeim-Kovrovo cultures (Fig. 1).

As to decorated heads, they occur almost exclusively in the Bogaczewo culture (Fig. 2:1–5,

¹ Osowa, barrow 114, burial 2 (Jaskanis 1962, pp.274–275, tabl. VII:3–10; collection of the Podlachia Museum in Białystok, inv. no. MB/A/128, cat. 542); Szurpiły, barrow XXII (Żurowski 1961, pp.71–73, tabl. XVIII, XIX:1–22); Szwajcaria, barrow 2, burial 1 (Antoniewicz *et. al.* 1958, pp.23–31, tabl. I–IX; Jaskanis 2013, pp.76–80, tabl. CXVII–CXXV; Kontny 2013b; 2016a; collection of the State Archaeological Museum in Warsaw, inv. no. PMA/IV/4498).

² Because the presence of barbs made it impossible to use the weapon more than once, i.e. to quickly pull it out of the target (e.g. the opponent's shield or body), this kind of weapon would be a hindrance in melee combat and so should be considered a missile.

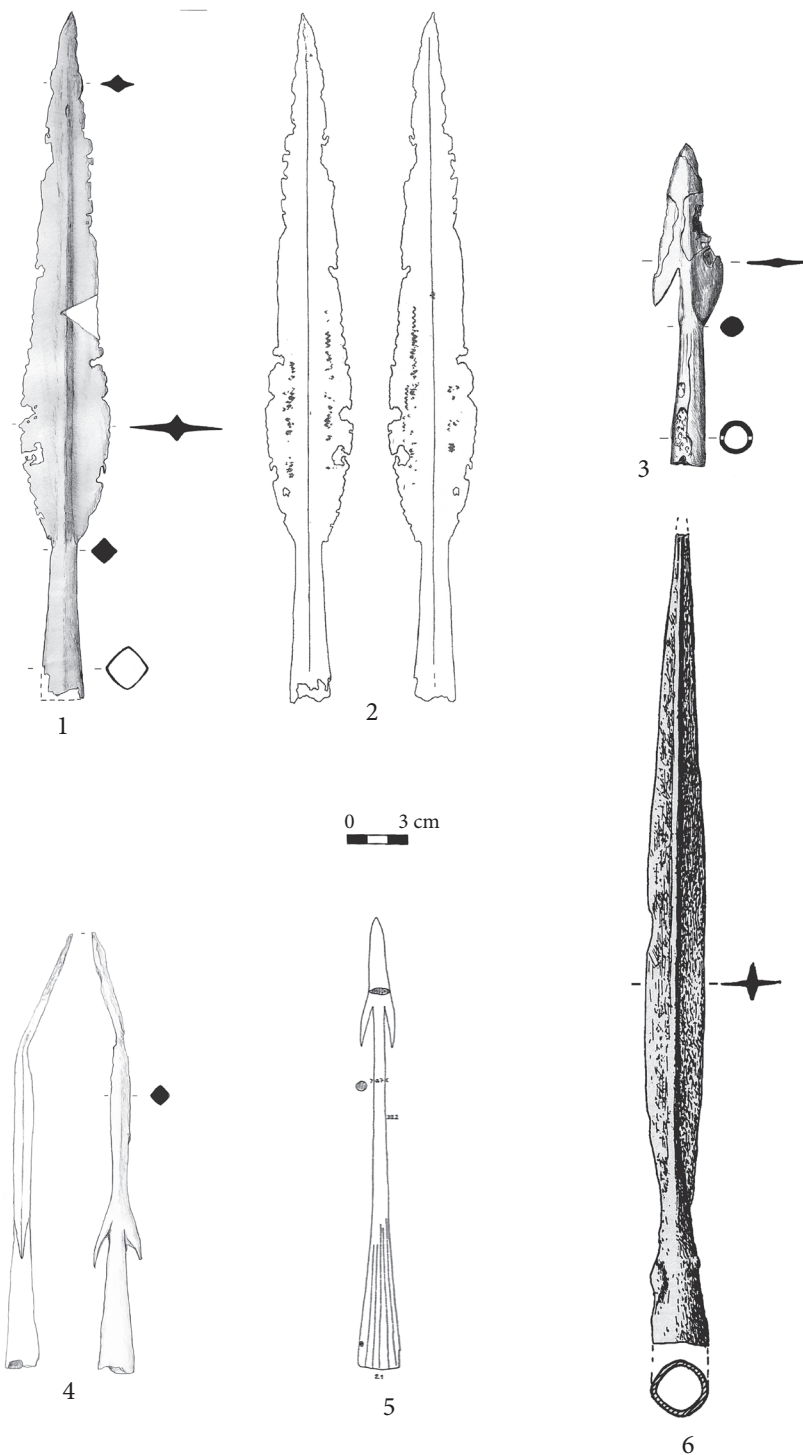


Fig. 1. Imported Scandinavian polearm heads or imitations of them from the West Balts: 1, 2 – Type Vennolum from Szwajcaria, barrow 2, burial 1; 3 – an imitation Scandinavian single-barbed, type Saeli/Ilkjær 23 (?) javelin head made from a type Kaczanowski VIII head from Netta, burial 81; 4 – the type Sättra spearhead from Pervomajskoe, burial 49; 5 – the type Skuttunge spearhead from Dubravka, burial 28; 6 – the type Mollestad head from Osowa, barrow 13. 1 – after Kontny 2007b; 2 – after Jaskanis 2013; 3 – after Kontny 2007b; 4 – drawing by B. Kontny; 5 – after Raddatz 1993; 6 – after Kontny 2007b, with further literature.

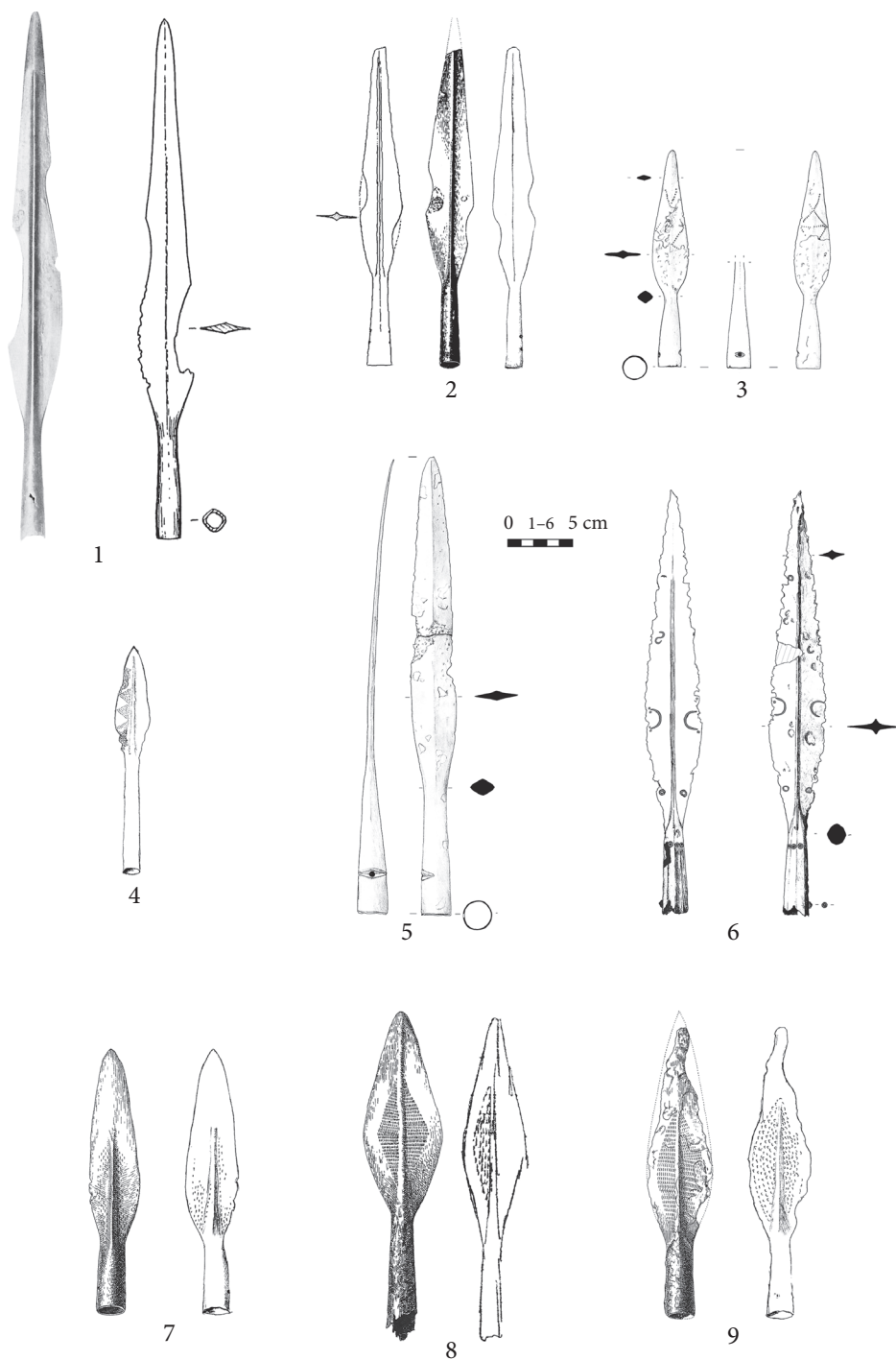


Fig. 2. Decorated and notched polearm heads from the West Balts and a parallel form: 1 – Łabapa, burial 67, the Bogaczewo culture (on the left) and Wesółki, burial 45, a Przeworsk parallel (on the right); 2 – Muntowo, burial 120, the Bogaczewo culture; 3 – Łabapa, burial 63; 4 – Stara Rudówka, burial 13, the Bogaczewo culture; 5 – Judziki, a stray find; 6 – Szwajcaria, barrow 2, burial 1, the Sudovian culture; 7 – Stara Rudówka, burial 13, the Bogaczewo culture; 8 – Marcinkowo, burial 13, the Bogaczewo culture; 9 – Tülenino, burial 154, the Dollkeim-Kovrovo culture. 1 (on the left) – after La Baume 1941b; 1 (on the right), 2–9 – after Kontny 2007b; 2017a, with further literature. 7–9 – not to scale.

7–9). The designs, which also have analogies in the Dollkeim-Kovrovo culture, include short lines (Fig. 2:7–9) punched on the blade's surface (stitch pattern) vertically or parallel to the blade's edges (Kontny 2007b, p.118, Fig. 1; 2008c, pp.147, 149, 160–162, ryc. 3:e, 5:e–g). Although these designs have been identified in different areas of Central Europe, it was the most popular in the Przeworsk culture during phase B2. Another decoration identified with the Bogaczewo culture, i.e. a negative design consisting of triangles (Fig. 2:4) or zig-zag lines (Fig. 2:3), was quite popular in the Przeworsk culture during late B2–C1a (Kontny 2007b, pp.117–118, Fig. 2; 2017a). Another decoration is an eye design formed from oblique lines placed around the rivet/nail holes on a socket (Fig. 2:5) (Kontny 2007b, pp.121–125, Fig. 4; Czarnecka, Kontny 2008). All of these motifs stem from the Przeworsk culture but were made in Balt territory by local craftsmen, as is proven by some local features. The one exception is an early head with notched edges from Łabapa burial 67 (Fig. 2:1 on the left; another notched head is indigenous – Fig. 2:2, see Kontny 2007a, pp.81–86, ryc. 4, 5, 6:a; 2007b, pp.120–121, Fig. 3:d–h); both items (Fig. 2:1, 2) date to the turn of the Early Roman period. In addition, one of the two Sudovian polearm heads, a specimen from

Szwajcaria, barrow 2, burial 1 (Fig. 2:6), which is ascribed to Kaczanowski (1995) type XV and adorned with inlaid silver designs known from Central European objects (solar and crescent motifs), was inspired by a Przeworsk design but made locally (Kontny 2007b, pp.125–126, Fig. 5; 2016a, p.256, Figs. 5:39, 6:58).

SWORDS

One of the long-lasting ideas regarding weapons was formulated by Wojciech Nowakowski (1994a) who stated that the Balts used swords only in exceptional cases. A later 'outburst' of archival data concerning the Balt lands as well as the relics that survived the Second World War (e.g. Bitner-Wróblewska 2008a)³ did not change that view significantly. (Some specimens were verified and only a single sword was added to the list.) And so he confirmed his thesis (Nowakowski 2007a), which was mainly based on archaeological evidence, i.e. the scarcity of swords, but also supplementally on information given by Tacitus in *'De origine et situ germanorum'* or *'Germania'* (written in 98 AD), which states of the *Aestii*, i.e. the Balts who

³ As to the evidence, this is connected with the reappearance of a significant part of the Prussia-Museum collection (hereinafter referred to as the Prussia-Sammlung) and archives (both written data, hereinafter the Prussia-Archiv, and photographs) now kept in the Museum of Prehistory and Early History (Ger. *Museum für Vor- und Frühgeschichte*) in Berlin as well as another part, which was unearthed at Fort Quednau near Kaliningrad and is now in the Regional Museum of History of Art (Rus. *Oblastnoj Istoriko-Chudožestvennyj Muzej; Областной историко-художественный музей*) in Kaliningrad; both discoveries occurred in the 1990s; a smaller part of the collection, which is at the Museum of Warmia and Mazury (Pol. *Muzeum Warmii i Mazur*) in Olsztyn, was known much earlier. This was supplemented by further archival data like the so-called inventory books of the Prussia-Museum (partly published: Bitner-Wróblewska 2008b; mentioned in the text as the Prussia-Museum Inventory Books) as well as the private files of archaeologists who were active in the pre-war period and strongly interested in the Balt area. In the field of weaponry, the heritage of the following archaeologists was especially useful: Martin Jahn – now in the Institute of Archaeology, University of Warsaw (Pol. *Instytut Archeologii Uniwersytetu Warszawskiego*); Herbert Jankuhn – in the State Archaeological Museum Schloss Gottorf in Schleswig (Ger. *Archäologisches Landesmuseum Schloss Gottorf in Schleswig*); partly published: Nowakowski 2013; Feliks Jakobson – in the National History Museum of Latvia in Riga (Latv. *Latvijas Nacionālais Vēstures Muzejs, Rīga*); published: Jakobson 2009; Bitner-Wróblewska *et al.* 2011; Marta Schmiedehelm – in the Archaeological Research Collection, Tallinn University (Est. *Tallinna Ülikooli Arheoloogia Teaduskogu, Arhiiv*); prepared for publication by Anna Juga-Szymańska and Paweł Szymański; Kurt Voigtmann – in the Museum of Prehistory and Early History in Berlin; Rudolf Grenz – in the State Archaeological Museum Schloß Gottorf in Schleswig; and Carl Engel – in Grenz's heritage and in Johann Gottfried Herder Institute in Marburg (Ger. *Johann Gottfried Herder-Institut in Marburg*).

had lived on the Sambian Peninsula⁴, that ‘*rarus ferri, frequens fustium usus*’; ‘*The use of an iron weapon is rare, that of clubs common.*’ [translated by J. A. Bakanauskas] (*Germania*, 45, 3; Tacitus 1990). Nowakowski’s idea was that the Balts had such a dislike for swords that they preferred the shortest possible specimens, sometimes even shortened ones, their main sword substitute being a fighting knife or dagger. However, Tacitus’ message concerning the lack of iron among the Balts may simply be a topos. Tacitus also used such clichés to describe German armaments: ‘*Ne ferrum quidem superest, sicut ex genere telorum colligitur. rari gladii aut maioribus lanceis utuntur*’; ‘*Even iron is not plentiful, as may be inferred from the nature of their weapons. Few swords and larger lances are used*’ [translated by J. A. Bakanauskas] (*Germania*, 6; Tacitus 1990). This was apparently false as swords were quite popular among the Germans (see, for example, Biborski 1978; 1994; Kontny 2001, pp.106–107, wykres 1; 2004b, pp.151–153; 2008b, p.121, Diagram 11; Biborski, Ilkjær 2006; Miks 2007) as were spears with fairly large heads (Kontny 2008b, pp.108, 110–117). The first part of the quoted passage about the *Aestii* does not seem clear: while organic bludgeons were popular in different periods, at the turn of the millennium they were probably quite rare. There are almost no data proving their existence in proto-historical *Barbaricum* aside from finds from Oberdorla in Thüringen, sites that date to La Tène and Roman periods (Behm-Blancke 2003, pp.39–40, 50, 53, 89–90, 145, 147, 149, 185–186, Taf. 24:4, 34:11, 37:10, 78:4, 100:1–6, 117:6), clubs from the Alken Enge bog site in East Jutland⁵, and finally club representa-

tions on the miniatures in Hoard 1 (Early Migration period) at Şimleu Silvaniei (Hun. *Szilágysomlyó*) in Transylvania, Romania (Gschwantler 1999, pp.67, 70, Abb. 11, 19). However, they served as hunting rather than fighting weapons and at Alken Enge, they were probably used to execute the prisoners of war (Kontny 2015a, p.279). Moreover one cannot exclude that Tacitus used slightly outdated information in describing the *Venethi* (Nowakowski 1996a, pp.190–191) and the swords of the *Gothones*, *Rugii*, and *Lemovii* (Kontny 2008d, p.184). It seems that his statement about Aestian clubs (*fustis*) should be attributed to the West Balt Barrow culture thriving on the Sambian Peninsula until the 1st century, especially since the use of wooden clubs has been proven for that culture (Kontny 2015a). In societies that lack metal (e.g. iron) and cannot be described as warrior-societies, the boundary between hunting and fighting weapons is vague if it even exists (judging from ethnographic studies). It is therefore plausible that these were multi-purpose weapons that were soon replaced by the superior polearms, shaft-hole axes, and socketed axes of the later stages of the Roman period (Kontny 2015a, pp.279–280). In conclusion, the assumption can be made that the Aestian clubs and lack of iron mentioned by Tacitus can be interpreted as common ‘knowledge’ or as evidence of the realia of the preceding chronological periods.

Nowakowski’s list, which includes swords from the Bogaczewo, Sudovian, and Dollkeim-Kovrovo cultures, should be supplemented by the recent find of a big fragment of a sword close to the Bogaczewo cemetery at Grzybowo (Ger. *Grzybowen*), Ryn Commune⁶

⁴ They are identified with the inhabitants of the Sambian Peninsula and the neighbouring lands, i.e. the Dollkeim-Kovrovo culture (Nowakowski 1994a, p.379; 2008, pp.45–47; Kolendo 2008b, p.21), which reached its zenith in the Roman period owing to natural resources, i.e. amber, which was very popular in the Roman Empire. The picture of the *Aestii* is quite precise and encompasses even some details of their language. It seems therefore that they were well known to the Romans, probably because they were at one end of the Amber Route and so were frequently in contact with Roman merchants (Kolendo 1998, p.34; 2008a, p.176; 2008b, pp.20–25).

⁵ Personal communication: Dr Mads Kähler Holst of the Moesgaard Museum, excavation coordinator at the site. See also: http://www.skanderborgmuseum.dk/Status_2012-1141.aspx (Accessed 6 May 2017).

⁶ In keeping with French tradition, the official name for a *gmina*, the smallest Polish administrative unit (note by J. A. Bakanauskas).

(see Peiser 1919a) but its provenance is doubtful⁷. There are at least several more swords, mostly from bog sites, i.e. Wólka (Ger. *Wolka-See*), Kętrzyn Commune (Kontny 2015b, pp.315, 318–319, Fig. 1, with further literature) and the sensational find from Czaszkowo, Piecki Commune (Nowakiewicz, Rzeszotarska-Nowakiewicz 2012, pp.59–61, Figs. 34–36). At least a few have been identified as Roman imports (Kontny 2017c, p.90). The most impressive elements of the Czaszkowo swords are the pure gold guard and throat mount and the amber sword bead; it is speculated that the metal elements possess Mediterranean or Pontic/Byzantine (?) parallels (Nowakiewicz, Rzeszotarska-Nowakiewicz 2012, pp.74–78, Figs. 51–53) but this has not yet been proven. It plausibly dates to the Migration period, i.e. when the Bogaczewo culture no longer existed in this area which had been occupied by members of the Olsztyn group.

The above image can be reinforced by new evidence from the archival data and published material, although this evidence consists of only small sword-related fragments that prove the use of such weapons (Kontny 2017c, Fig. 4), e.g. a possible scabbard throat mount found in Onufryjewo (Ger. *Onufrigowen*), burial 275 (Fig. 3:1, a Przeworsk culture parallel: Fig. 3:2), a C-shaped scabbard collar from Nowy Zyzdrój (Ger. *Neu-Sysdroy*), burial 148, and a baldric (Lat. *balteus*) fitting: a bronze openwork circular plate, perhaps enamelled, from Babięta (Ger. *Babienten*) I, burial 305a. A couple of 'new' finds from old sources also come from the Dollkeim-Kovrovo culture: from Âroslavskoe (Ger. *Schlakalken*), burial 16, an item published

(Jankuhn 1939, p.253, Abb. 9) as an iron fitting with traces of two rivets actually served as a grip fitting for a single-edged sword, Biborski type D (Fig. 3:3, a Balt parallel from Szurpiły: Fig. 3:4), which was characteristic for the end of the Early Roman period (see Biborski 1978, p.128; Kontny 2003a, p.69). This interpretation is supported by the fact that the burial included a scabbard (or part of one) from such a sword, as shown by the fragment of an iron C-shaped scabbard clasp. The premise that swords were used in the Dollkeim-Kovrovo culture is based on a winged chape found at Kotel'nikovo (Ger. *Warengen*), burial 4 (Fig. 3:5, Scandinavian parallel: Fig. 3:6; see: Peiser 1919b, p.322; Jankuhn's heritage; Kontny 2017c, p.94, Fig. 4:5). Single-edged swords, which evolved from dagger-knives (Ger. *Dolchmesser*), and their scabbards were later proven to date to the Late Migration period in the Elbląg group, the Olsztyn group (chapes exclusively), the Sambian-Natangian area, and Lithuania (Fig. 4; Kontny 2017c, Figs. 6–8). It is theoretically possible to identify a baldric used for a sword. One may assume the use of the sword in a burial where two buckles were found: one presumably from a waist belt and another from a baldric. The solution, however, is not as simple and universal as it was in the Przeworsk culture where big rectangular belt buckles with double tongues are found together with smaller baldric buckles (Madyda-Legutko 1990). The appearance of these big buckles in the Bogaczewo culture has been treated as evidence of Przeworsk influence (Nowakowski 1994b, p.374), the Przeworsk armament model having greatly influenced the Bogaczewo culture. It therefore seems

⁷ Although fragmentarily preserved, it looks like to be a Marcin Biborski (1978, p.60, ryc. 2:d, 3:a) type I/6 or I/5 dating to B2, a group II Roman sword (Biborski 1994, pp.94–95, Abb. 494, 495), or a Roman spatha of the Newstead type (Kaczanowski 1992) or Straubing-Nydam type, Newstead variant according to Christian Miks (2007, pp.117–119). The association with a Roman sword was supported by the remains of a punched mark on the grip's thong, although the mark's elongated form is rather untypical of Roman ones; it was probably left from an effort to control it during the manufacturing process; rectangular stamps occur on blades, especially their upper parts (Biborski 1994; Biborski, Ilkjær 2006, pp.302–303). However metallographic studies carried out by Dr Grzegorz Żabiński from Jan Długosz University in Częstochowa proved that it was made of cast iron, i.e. a technology unknown to both the Romans and Barbarians. Thus it appears it must be excluded from the collection of ancient finds (see Żabiński *et al.* 2016, note 8).

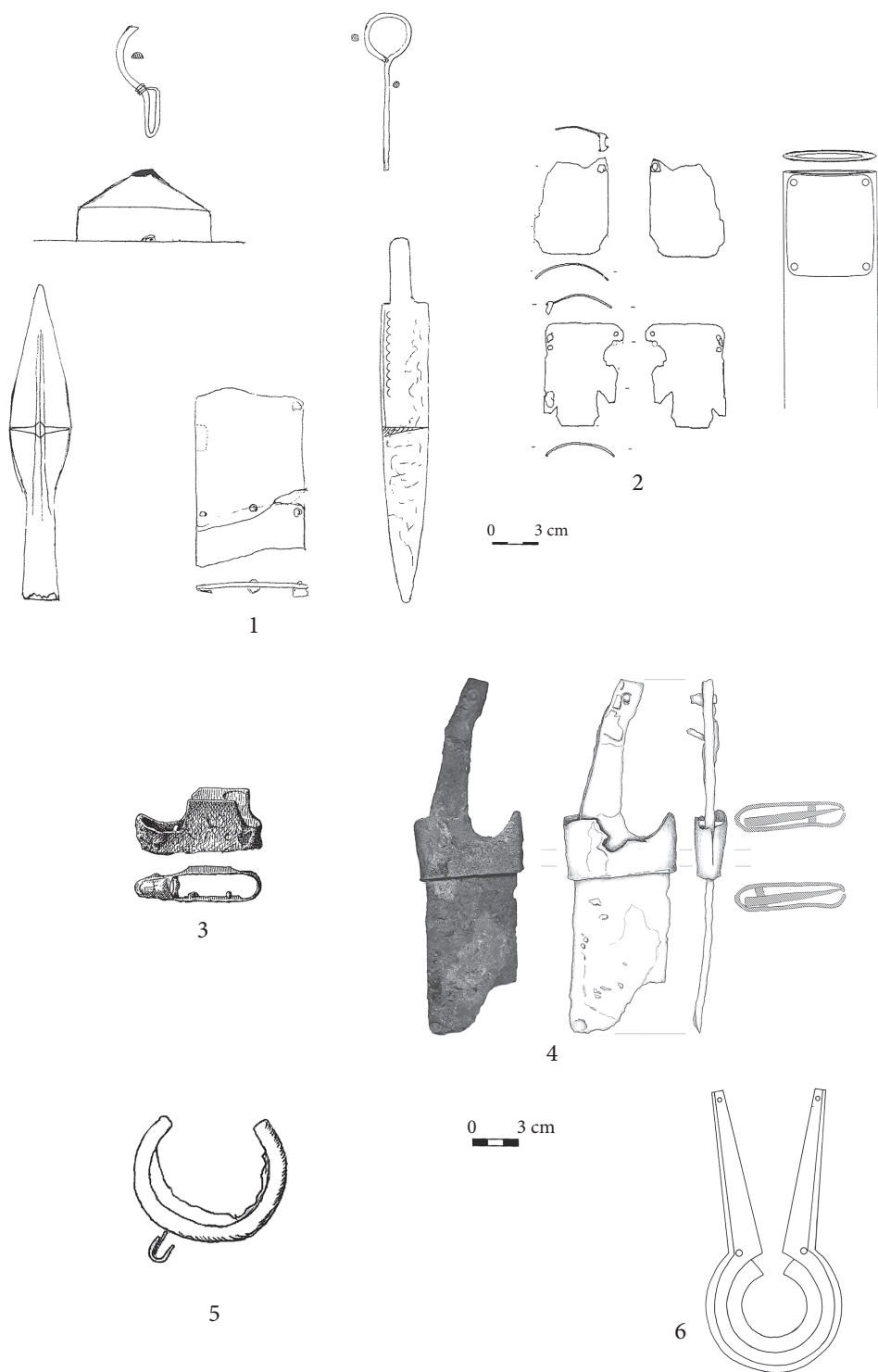


Fig. 3. West Balt sword hilt and scabbard elements and their parallels: 1 – Onufryjewe, burial 275, the Bogaczewo culture; 2 – Cetula, burial 2, a Przeworsk parallel; 3 – Āroslavskoe, burial 16, the Dollkeim-Kovrovo culture; 4 – Szurpiły, site 4, the Sudovian culture (?); 5 – Kotel'nikovo, burial 4, the Dollkeim-Kovrovo culture; 6 – Kragehul bog site. 1 – after Jankuhn's heritage (Nowakowski 2013); 2 – after Biborski 2000; 3 – after Jankuhn 1939; 4 – after Sawicka 2007; 5 – after Jankuhn's heritage; 6 – after Iversen 2010.

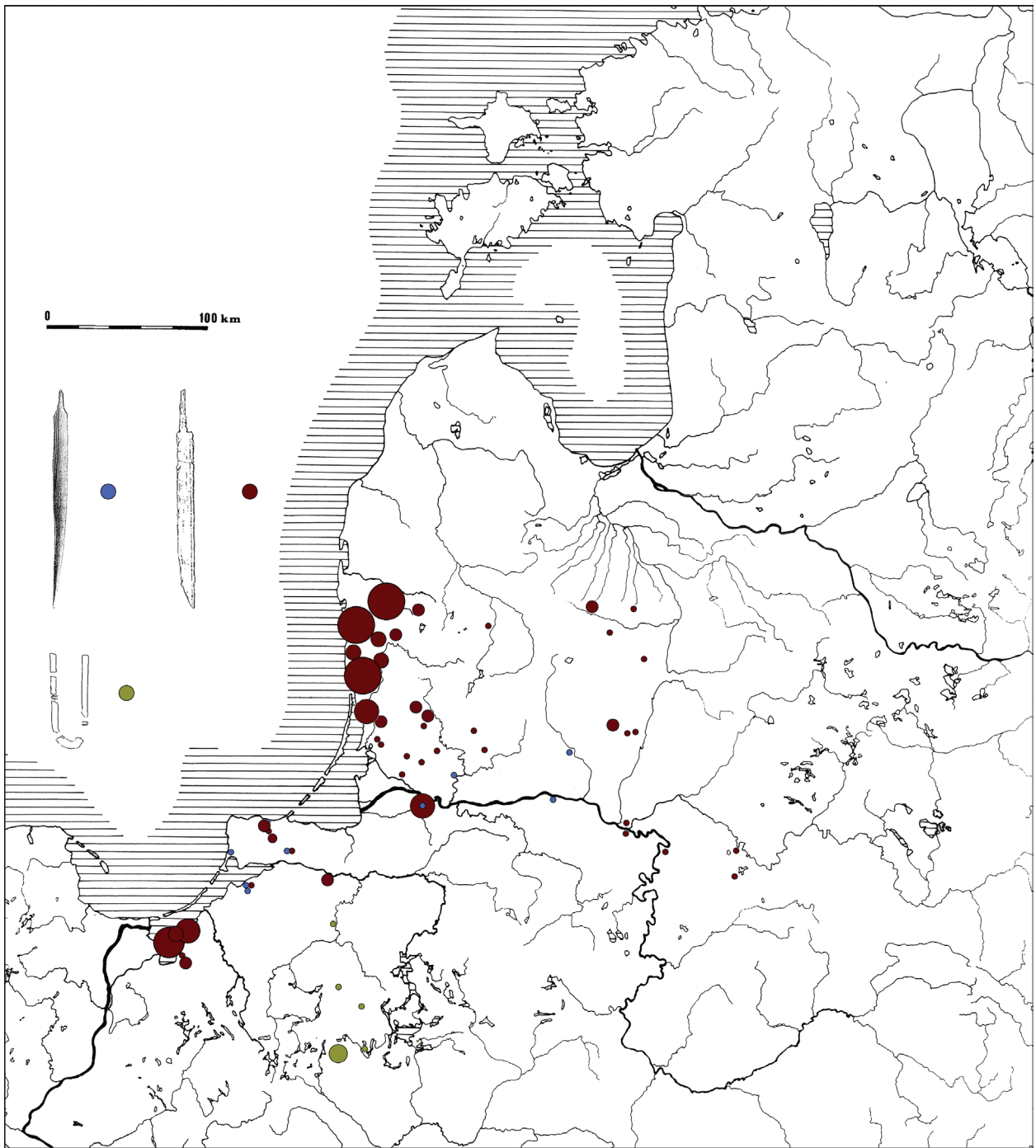


Fig. 4. Distribution of the Balt type seaxes: blue circles – early forms, red circles – developed forms, green circles – only chapes. After Казакивичюс 1988; Kontny 2013a.

sensible to apply the Przeworsk culture-oriented model here and infer that two buckles (one of them with a double tongue) in a West Balt burial indicates the presence of a sword (Kontny 2017c, pp.97–99, 106–108). In conclusion, the idea of an almost complete absence of swords among the Balts is definitely too pessimistic. The discovery of scabbards and baldric elements in burials as well as swords at bog sites instead proves that swords were treated differently than in the neighbouring Przeworsk culture and Scandinavian area where scabbards alone were quite rare among grave goods (see Kontny 2003b, p.129, wykres 4). This could be the result of swords having a greater value than in the rest of *Barbaricum* and a subsequent intention to economize.

SHAFT-HOLE AND SOCKETED AXES

Apart from doubts concerning the use of *fustes* among the Balts in the Roman period as well as their real function (Kontny 2015a, also see the remarks above), one may point out unambiguous melee weapons in the Balt cultural environment, namely shaft-hole (Kontny forthcoming a) and socketed axes (Kontny 2016b) which comprise one of the most prominent Balt weapons in the Roman period.

There were two main shaft-hole axe groups (Kontny forthcoming a): group I (Fig. 5) with an asymmetric bevelled head (subgroup 1 – specimens characterized by a strong asymmetry with distinct rear lugs as well as a head bevelled on both sides, Fig. 5:1, 2; subgroup 2 – less asymmetrical ones,

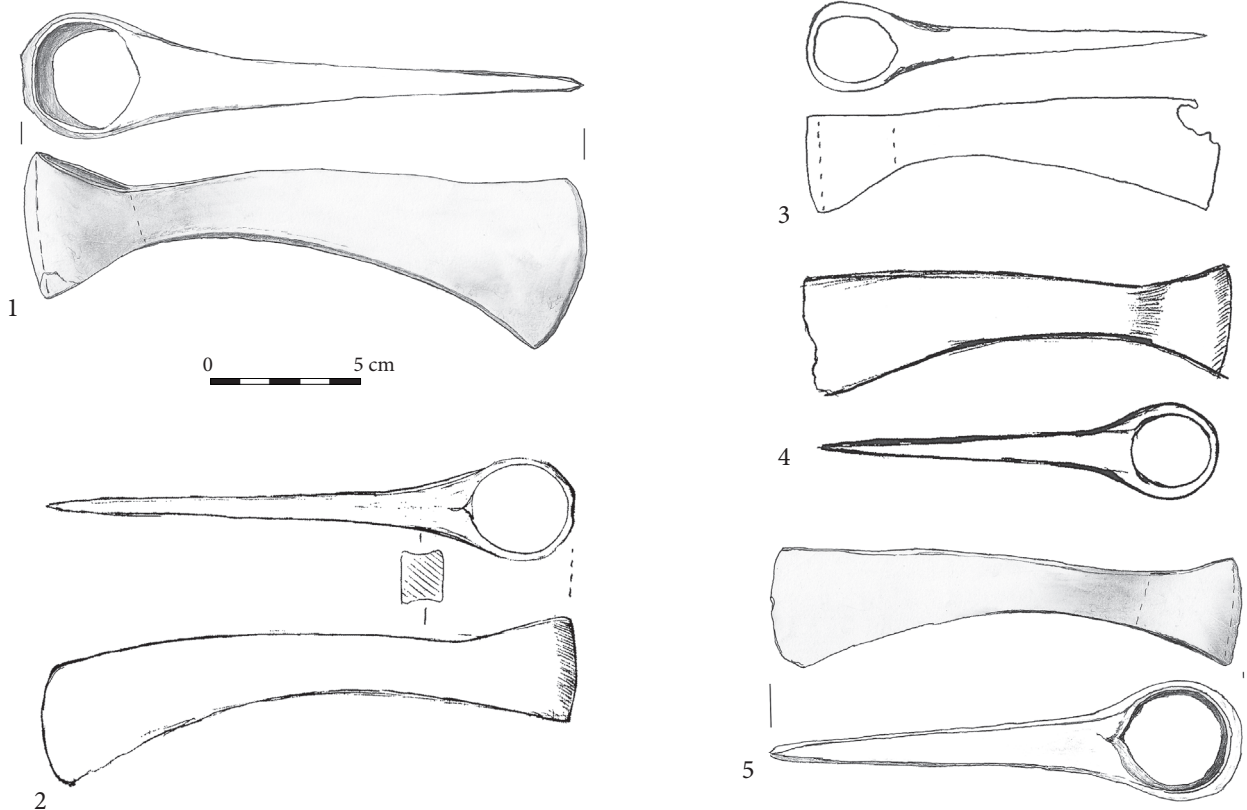


Fig. 5. Bogaczewo axes of subgroups I.1 (1, 2) and I.2 (3–5): 1 – Bartlikowo (Ger. *Bartlickshof*), burial 7; 2 – Stręgiel II, burial 150; 3 – Lisy, burial 67; 4 – Radużnoe, burial I; 5 – Sterławki Małe, burial 342. 1, 5 – drawings by B. Kontny; 2–4 – after Nowakowski 2013.

sometimes with an almost straight upper head line that drops only in the vicinity of the cutting edge, Fig. 5:3–5; subgroup 3 – waisted chunky ones) and group II (Figs. 6, 7) with an overall head symmetry, a length of 10.3–20 cm, and usually convex or slightly flattened polls (subgroup 1 – narrow ones with elongated-oval eyes hardly distinguishable from the body and wide, fan-shaped cutting edges, variety II.1.1 I – with wide bits and waisted bodies, see Fig. 6:1–4; subgroup 2 – ones with thick bodies, waisted on both sides, oval eyes, sometimes chamfered, occasionally flattened butts, and less flaring

bits than those of subgroup II.1, see Fig. 6:5–8; subgroup 3 – an intermediate form, i.e. with thick bodies and indistinct butts, see Fig. 7:6).

The chronology of group I encompasses the Early Roman period with the possible exception of subgroup I.3, for which no grounds for precise dating exist. Group I axes have been documented in the central and especially northern part of the Bogaczewo culture, but have also been proven to occur in the Dollkeim-Kovrovo culture (a stray find from Bugrovo, Zelenogradsk District (Ger. *Warglitten*, *Kreis Fischhausen*) and in Lithuania, i.e. type 5 (Malonaitis

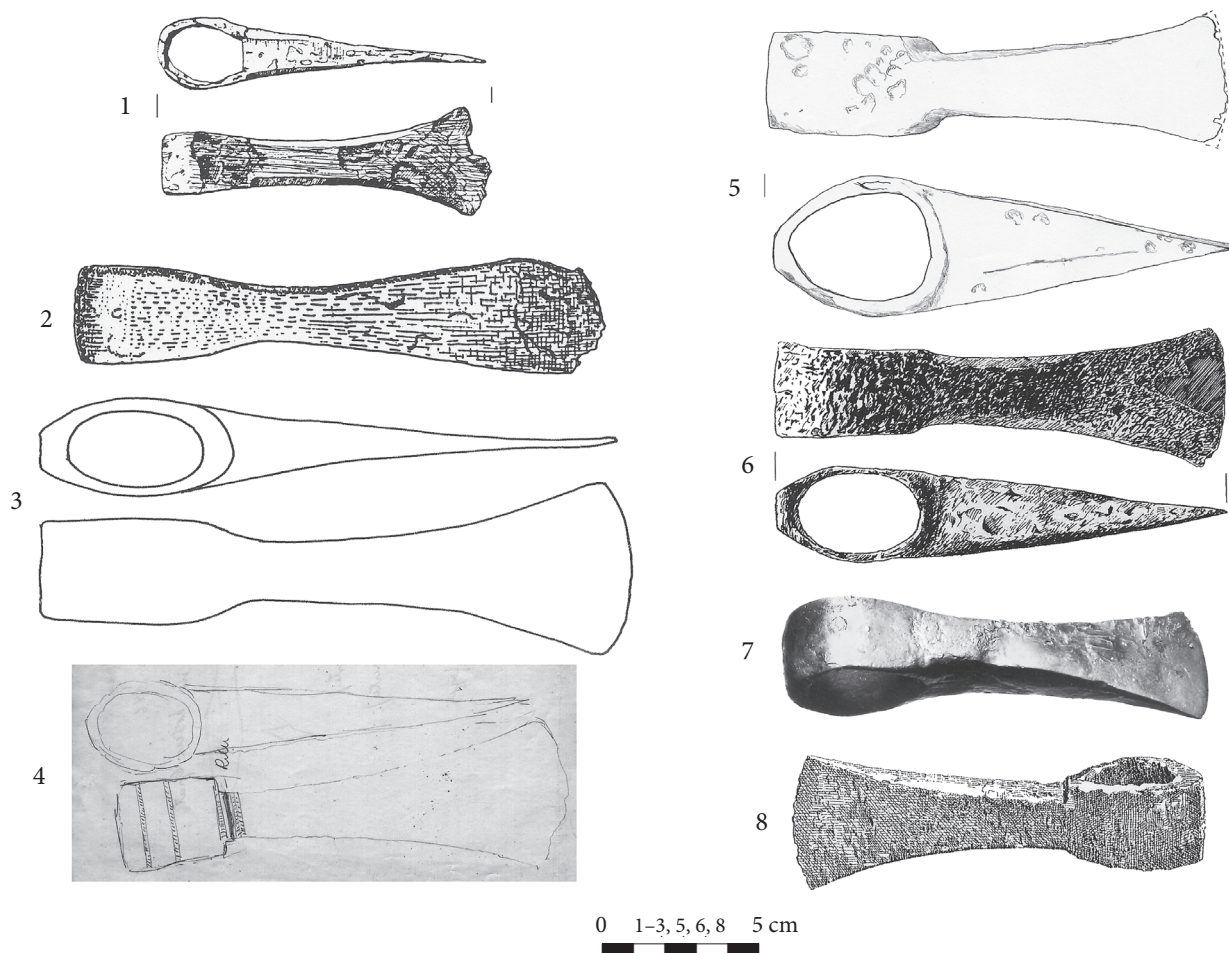


Fig. 6. Bogaczewo axes of subgroups II.1 (1–4) and II.2 (5–8): 1 – Bogaczewo-Kula; 2 – Raczki, burial 6a; 3 – Bartlikowo, burial 384; 4 – Nowy Zyzdrój, burial 186; 5 – Bargłów Dworny, a stray find; 6 – Judziki, burial 12; 7 – Koczek II, burial 121; 8 – Spychówko, a stray find (?). 1 – after Okulicz 1958; 2 – after La Baume, Gronau 1941; 3 – after Nowakowski 2013; 4 – after Schmiedehelm's heritage; 5 – drawing by B. Kontny; 6 – after Engel *et al.* 2006; 7 – after Juga *et al.* 2003; 8 – after Gaerte 1929. 4, 7 – not to scale.



Fig. 7. Sudovian (1–5) and Bogaczewo (6) group II axes: 1 – variant II.1.1 (Netta, burial 30); 2 – variant II.1.2 (Szwajcaria, barrow 26); 3 – variant II.1.3 (Szurpiły, barrow XXI, central burial); 4 – subgroup II.2 (Suwałki region, stray find); 5 – subgroup II.3 (Szwajcaria, barrow 2, burial 1); 6 – subgroup II.3 (Paprotki Kolonia, burial 67). 1, 2 – after Jaskanis 2013; 3 – after Żurowski 1961; 4, 5 – drawings by B. Kontny; 6 – photo by M. Karczewski.

2008, pp.47–52, 298), e.g. Paragaudis, Šilalė District (the Lithuanian-Latvian Barrow culture). In Lithuania they continue into the Younger Roman period. At the moment, it seems that asymmetric axes first appeared in the Bogaczewo culture, from which they spread to the north–north east, perhaps even influencing 3rd–4th century Oka-Râzan' axes.

Based on a chronological analysis of grave finds, the chronological range of the specific subgroups is as follows: subgroup II.1: B2–C2, II.2: B2–C1a, and II.3: B2/C1–C1a.

Symmetrical axes have been documented in almost the entire territory of the Bogaczewo culture

except for the northernmost area where group I axes predominated. This could indicate local weaponry differences, but this supposition should be checked in the future.

Fewer axes are known from the Sudovian culture but the state of the research is poor. Their absence in the Gołdap group should obviously be linked to the burial rites which excluded the placement of weapons in the grave. Sudovian axes are 10.5–17.5 cm long and generally have less distinct butts compared to Bogaczewo finds. They represent exclusively subgroup II (Fig. 7:1–5), including not only the typical forms: II.1, II.2 (Fig. 7:4), and II.3 (Fig. 7:5), but also

variants II.1.1 (Fig. 7:1), II.1.2, an axe with a very wide, fan-shaped cutting edge (Fig. 7:2), and II.1.3, slightly asymmetrical axes reminiscent of group I (Fig. 7:3).

The symmetrical finds from the Sudovian culture have been dated to C1–C2 and are thus close to the chronology of the Bogaczewo specimens and naturally exclude B2, which precedes the advent of the Sudovian culture. They were probably in common use in the Bogaczewo culture even during C2 but this cannot be proven as the habit of placing weapons in graves was abandoned there in C1b. Parallel axes (group II) from the Dollkeim-Kovrovo culture have sometimes been found together with dating elements that allow their chronology to be extended to C2–C3 (Kontny forthcoming a).

Haft size can be considered in determining the function of the shaft-hole axes. Based on finds from the Roman period, including those from Scandinavian sacrificial bog sites, one may imagine their length as 60–90 cm, i.e. sword length. Specifically, those with symmetrical heads have frequently been found together with other weapons, leading to the conclusion that, like socketed axes, they served as a sword substitute. This does not exclude other uses and ethnographical analogies. It is therefore possible to imagine axes as multi-purpose tools, but with a primary military use (Kontny forthcoming a).

Another group of edged weapons consisted of socketed axes (Figs. 8, 9). Very similar carpenters' tools, i.e. adzes, also existed in *Barbaricum*, as is well documented among the Balts, but they can be quite easily distinguished⁸. Socketed axes are

known among the West Balts in the Roman period, Migration period, and Early Middle Ages but their direct prototypes lie in the West Balt Barrow culture of the Early Iron Age as is shown by their substantial size and morphology, especially the socket's bulge and tapered lip. The axes from the Bogaczewo and Sudovian cultures have round cross-section sockets of varying depth that usually reach the base of the bit and generally have a wedge-shaped or flat bottom. The sockets are carefully finished, although sometimes a longitudinal seam is noticeable. No horizontal rivets or nails were used to secure any of the handles. The axes are 10–16 cm long with a socket diameter of 2.3–4.4 cm. The bit is demarcated by a waist, which is usually symmetrical. (This does not apply to the majority of the later Lithuanian finds; see Malonaitis 2008, pav. 48).

The 10–14 cm long finds from the Bogaczewo culture have sockets of varying depths that usually reach the base of the bit and have a wedge-shaped or flat bottom. The axes can be divided into three types: I – those with a massive, clearly bulging socket and a waist between the socket and the fan-shaped bit (Fig. 8:1–3); II – axes similar to group I but with an evenly tapering socket that gives them a well-distinguished waist and an hour-glass shape (Fig. 8:4–6); and III – axes with parallel or almost parallel socket walls and a gently flaring bit; both finds have an oblique socket lip, which can be considered a distinctive feature (Fig. 8:7, 8).

Based on the collected material, it can be assumed that the form of socketed axes changed little over time. They have so far been discovered in assemblages dating from B1 to B2/C1. It does not yet

⁸ The bit's transverse asymmetry, i.e. visible flattening on the outer side (a single cutting edge bevel) and its curvature allow an adze, a woodworking tool, to be distinguished from a socketed axe. A square cross-section socket also suggests an adze as it prevents the tool from revolving during work. This rotation was apparently much more likely for smaller tools that were more susceptible to tension during repeated revolving actions, which may occur when working wood, e.g. when making grooves. This is not to say that a round socket prevented a tool from being used as an adze. Adzes could also have unfinished sockets, sometimes even with an incomplete bottom: such adzes seem to have been carelessly made. The bit is quite often asymmetrical with an uneven upper part. The adzes made by the Balts were also quite small, not exceeding 10 cm in length. This likewise applies to the majority of the known Barbarian adzes from the Roman period. Longer specimens, which have symmetrical edges and sometimes round cross-section sockets, are very rare in *Barbaricum* (Kontny 2015b, pp.315–316; 2016b, pp.39, 41).

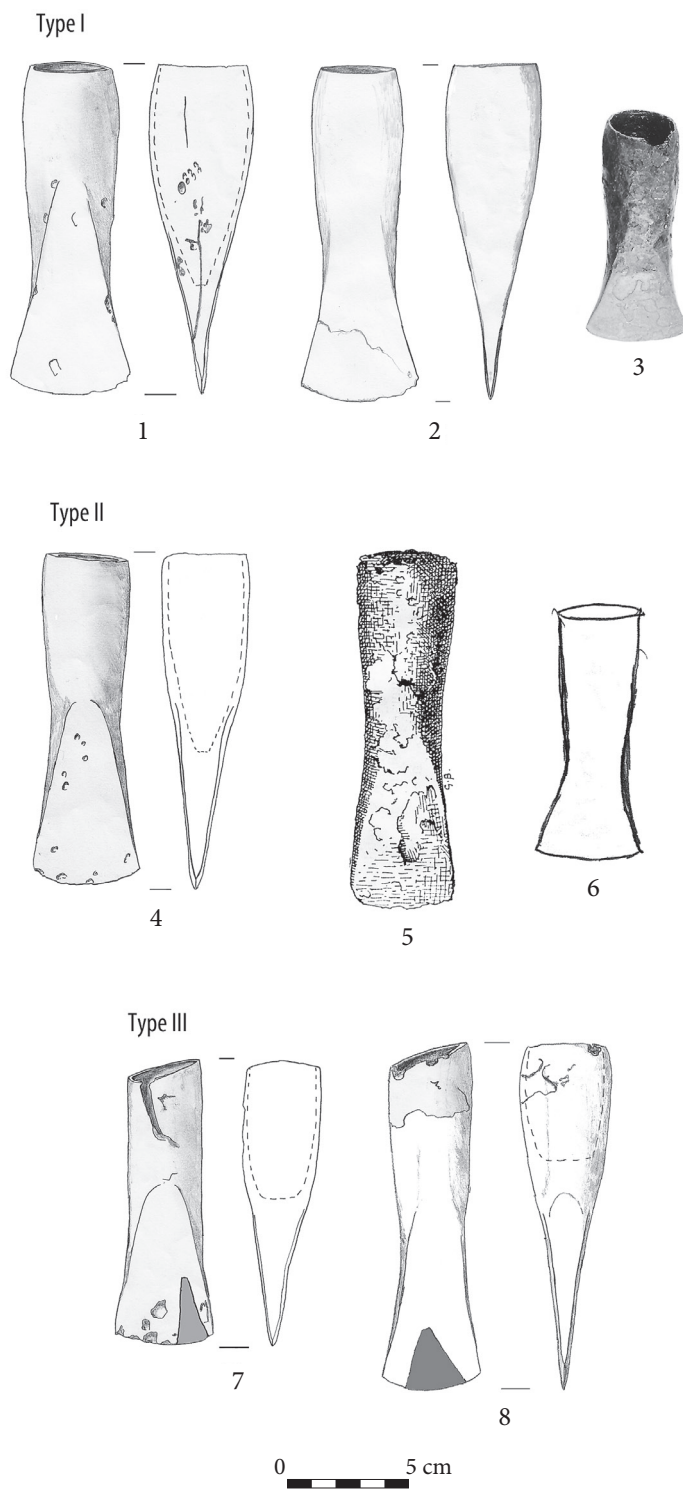


Fig. 8. Bogaczewo socketed axes: 1, 2, 4 – Judziki, stray finds; 3 – Romoty, burial 70; 5 – Radużnoe, burial VI; 6 – Kosewo I, burial 292; 7 – Bargłów Dworny, a stray find; 8 – Judziki, burial 7. 1, 2, 4, 7, 8 – drawings by B. Kontny; 3 – after Grenz's heritage; 5 – after Bezenberger 1896; 6 – after Schmiedehelm's heritage.

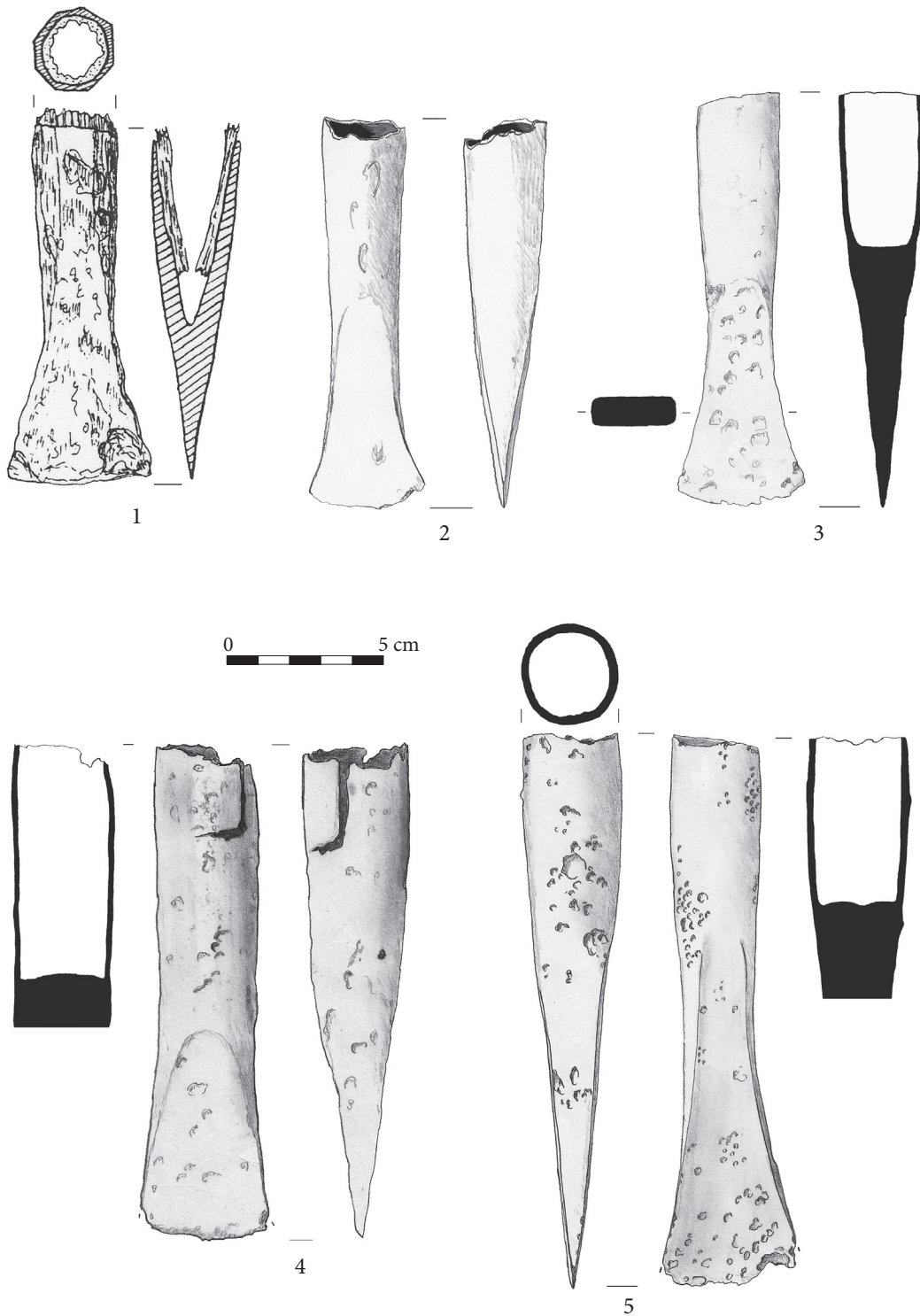


Fig. 9. Sudovian socketed axes: 1 – type II/III (Netta, burial 12); 2 – type III (Żywa Woda, barrow 7); 3 – type III (Szwajcaria, burial S.12); 4 – type III (Szwajcaria, barrow LXXII, burial 2); 5 – type Malonaitis 2 (Szwajcaria, barrow 40). 1 – after Bitner-Wróblewska 2007; 2–5 – drawings by B. Kontny.

seem feasible to narrow down the dating of the socketed axe groups, although it may be supposed that type I, the massive axes with large diameter sockets, derives directly from forms known in the West Balt Barrow culture and so should be rather early.

Compared to finds from the Bogaczewo culture, Sudovian axes have a broader spectrum of dimensions (Fig. 9): alongside smaller, 10–14 cm axes are substantially larger ones up to 17.5 cm long. Their morphology also differs. No type I axes have so far been identified in the Sudovian culture. The straighter, generally slimmer sockets may be due to chronological, rather than cultural differences, but owing to the scarcity of well-dated Bogaczewo assemblages, this remark has to remain hypothetical, a subject for future study.

Sudovian socketed axes are usually slimmer and often longer than their Bogaczewo equivalents; in addition their sockets have a smaller exterior diameter (2.3–3.6 cm compared to 3.5–4.4 cm). This may be owing to the use of a different, more secure fastening, e.g. leather straps or wooden wedges. On the other hand, it seems justified to assume that the Sudovian culture (or, starting with the Roman period, since the cultural shift overlaps the chronological shift) used hafts from another, more durable material, which allowed smaller diameter sockets. Specimens determined as type II can be linked with C1a (Osowa, barrow 8, burial 1). An intermediate II/III form (Fig. 9:1) and type III (Fig. 9:2–4) belong to a broader chronological range: from B2/C1 to C1b–C2. Meanwhile the type 2 axe (see Malonaitis 2008, pp.105–109, 303) from barrow 40 in Szwajcaria (Jaskanis 2013, p.101, tabl. CLXXXVI:2) (Fig. 9:5) should be linked with C1a (Kontny 2016b, with further literature).

Socketed axes probably played a role analogous to the shaft-hole axes: they have a similar weight (0.25–0.5 kg) and similar numbers of shaft-hole and socketed axes have been found at Bogaczewo and Sudovian cemeteries, which may indicate a similar status in the burial rites. No socketed axe has been found in the same burial as a shaft-hole axe, which

indicates that they were treated interchangeably, and this, together with similar functional features, seems to suggest that they were used for identical purposes. An artefact's function may be determined with the help of the edge's shape. A single-bevelled cutting edge (chisel-shaped) suggests that it was a tool and probably used for working wood (carpentry, boat-building, etc.). In the collection of specimens, from both the Bogaczewo and Sudovian cultures, the only single-bevel artefacts are the smallest ones; these have been determined to be adzes, which often have a quadrangular cross-section socket and usually a visibly flared bit. The majority of the specimens, however, including all the bigger ones, have a double-bevelled cutting edge.

The manner of hafting is equally important. Based on the discoveries of Pre-Roman and Roman period socketed axes with preserved handles from Danish bog sites, one may assume that the Balts' socketed axes also had both one- and two-piece knee-shaped handles. (The latter are known from Vimose: Christensen 2005, pp.62–63, Figs. 11, 12, and Hjortspring: Kaul 2003, p.155, Fig. 4:11.)

The context of the discovery of Scandinavian socketed axes may lead to some doubts as to their function (although they may have been used in battle, they were designed for camp work, grubbing, and other needs that arose during the military expeditions, including boat-building) but the situation among the West Balts is clearer. Socketed axes frequently appear in their burial assemblages, including the ones from inhumations. Their location in the grave may suggest the manner of their hafting: knee-shaped handles with an acute angle bend of about 70–80° in relation to the head's axis. The shaft-hole axes were also hafted at a similar angle, which suggests a similarity between the two axe types. The cutting edge was parallel to the body in the grave pit, which excludes the possibility of their being adzes. The axe in Marvelė burial 312, Kaunas District (Central Lithuanian group) is particularly interesting (Fig. 10:1): the blade lay beside a type Vidgiriai shoulder belt, which had been placed above the head

(Bertašius 2005, pp.79–80, Taf. CXL). A clearly visible correlation exists in the Lithuanian material between type Vidgiriai shoulder belts, fighting knives, and polearms (half of the 14 cases), but even more so for socketed axes (Prassolow 2013, p.103). Thus it appears that these belts were used to carry weapons, including socketed axes, which seems to confirm the military use of these axes.

Another important premise as to their function derives from Szwajcaria, burial S.12 in a Sudovian cemetery (Antoniewicz 1962; Jaskanis 2013, p.69, tabl. CIII, CIV). The clear spatial division of the grave goods should be noted (Fig. 10:2). The domestic tools (a spoon-bit auger and a sickle-shaped knife) were placed next to the supine skeleton's right leg, the weapons (a polearm head, a presumable arrowhead, and a socketed axe) and the tools, which were usually suspended from a warrior's belt (a knife, a bar-shaped fire steel), next to and above the shoulder. The axe's location suggests its symbolic connection with military rather than agricultural and woodworking activities.

The contexts in which socketed axes have been found among the West Balts are not uniform. Such axes have been documented almost exclusively in burials with weapons. While they are not accompanied by other woodworking tools in the Bogaczewo and Sudovian cultures, in the Dollkeim-Kovrovo culture this happens quite often which, in the tentative opinion of Klaus Raddatz (1993, pp.174–179), was explained by the exceptional role played by woodworkers, whose status was comparable to that of smiths in the Celtic and La Tène worlds; in his opinion, the Balts from Sambia, Natangia, and Nadrovia represent a specific *Holzkultur*.

While acknowledging the impossibility of conclusively establishing the purpose of socketed axes, the contexts in which they were found in Bogaczewo and Sudovian burials suggest that they did have a military designation, although, of course, they could have also been used in other ways, like shaft-hole axes (for a detailed discussion see: Kontny 2016b, pp. 47–52, 64).

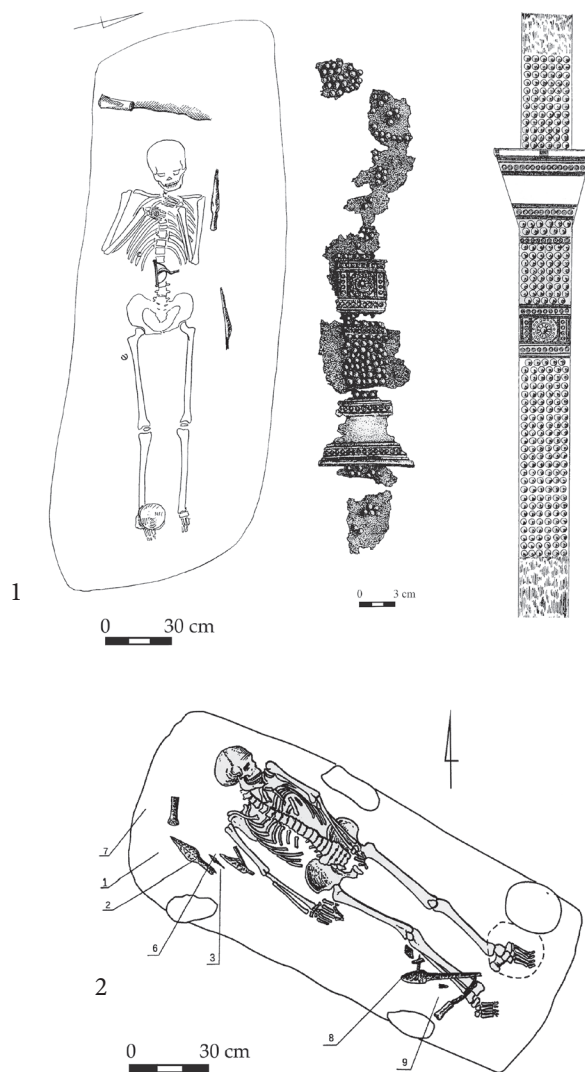


Fig. 10. Location of socketed axes in West Balt burials: 1 – Marvelė, burial 312; 2 – Szwajcaria, burial S.12. 1 – after Bertašius 2005; 2 – after Jaskanis 2013.

SHIELDS

Shield elements are mostly represented among the Balts by shield bosses while grips and other fittings are quite rare. Although they represent well-known types from Barbarian Europe, some discrepancies are noticeable in respect to chronology. Certain types remained in use far longer among the Balts than elsewhere (Kontny 2015b, pp.308–

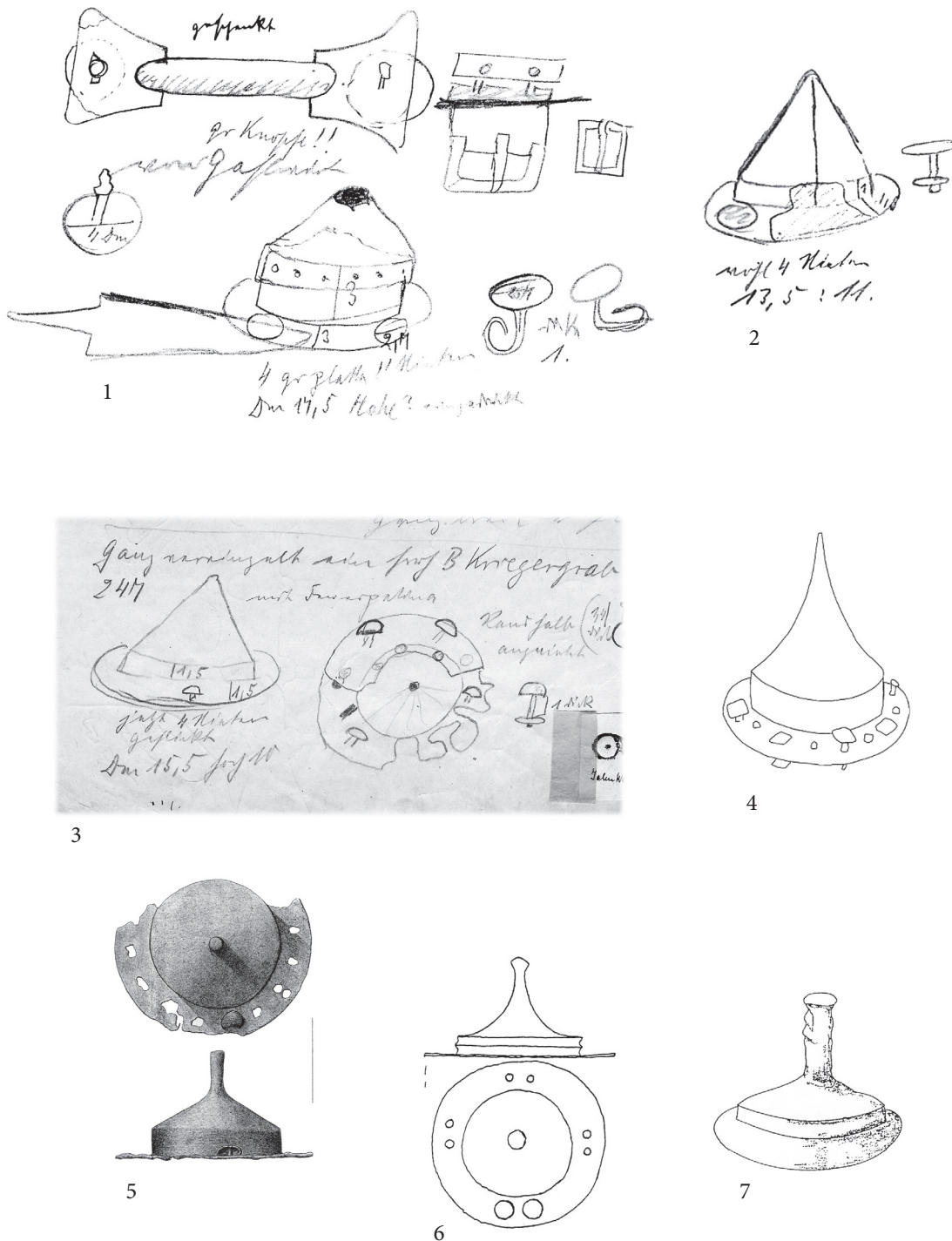


Fig. 11. Archaic Balt shield boss elements: 1, 2 – big headed nails/rivets; 3–5 – numerous rivets/nails; 6, 7 – type Jahn 4a from the Roman period. 1, 2 – Nikutowo, stray finds; 3 – Spychówko, burial 247 from E. Hollack's 1902 excavation; 4, 5 – L. J. Pisanski's collection; 6 – Kovrovo, burial 15; 7 – Āroslavskoe (Ger. *Schlakalken*), burial 14. 1 – after Jahn's heritage; 2 – after Jahn's heritage; Kontny 2007a; 3 – after Jahn's heritage; 4, 5 – after Nowakowski 1998; 6 – after Jankuhn's heritage; 7 – after Nowakowski 1996b. Not to scale.

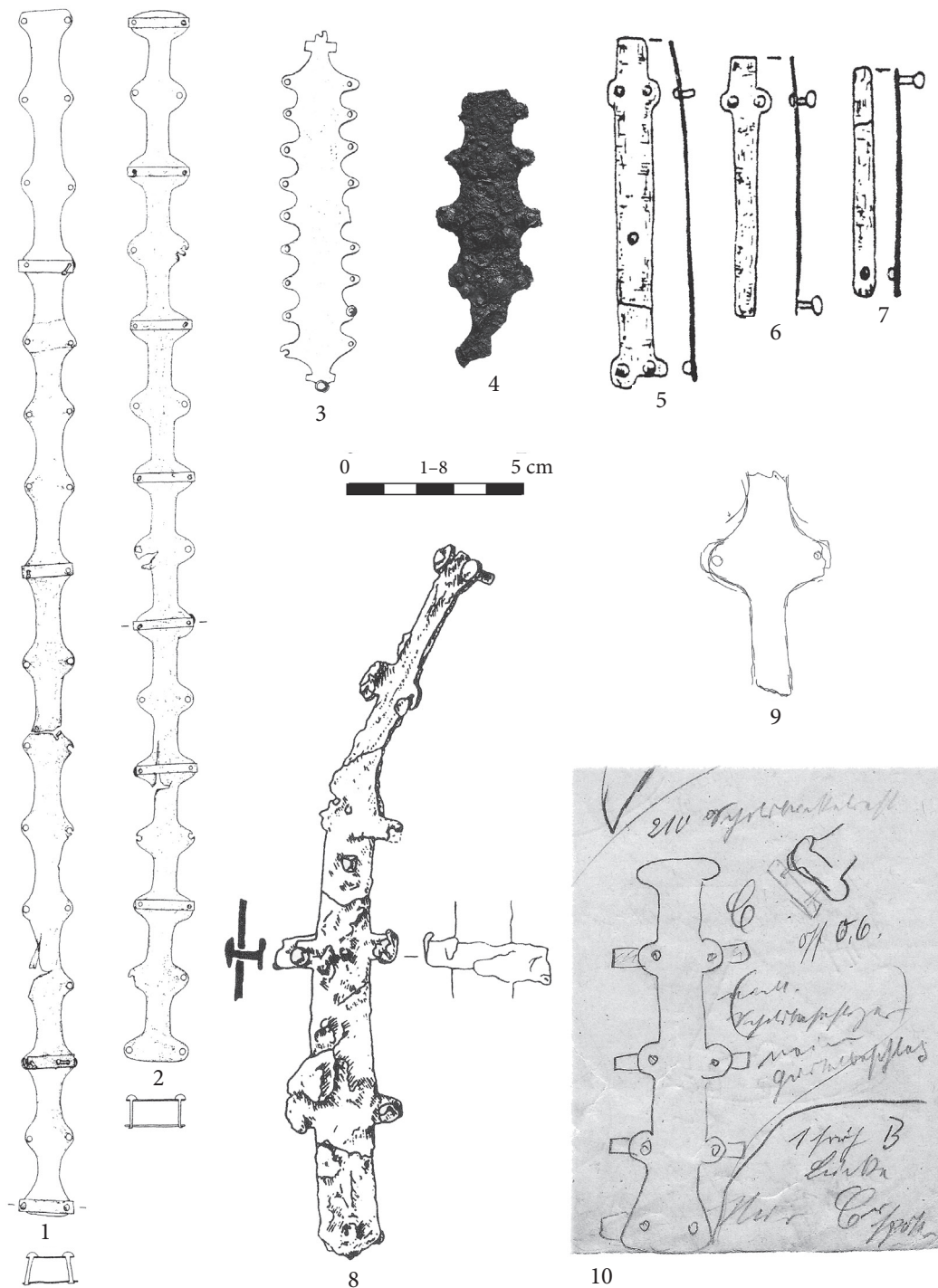


Fig. 12. Shield board fittings from Scandinavia (1-3), the Przeworsk culture (5-7), the Dollkeim-Kovrovo culture (8), and the Bogaczewo culture (4, 9, 10): 1, 2 - Nydam; 3 - Thorsberg; 4 - Gašior, burial 213; 5-7 - Kryspinów, burial 25; 8 - Kovrovo, burial 306; 9 - Nowy Zyzdrój, burial 117; 10 - Sychówko, burial 210, from E. Hollack's 1902 excavation. 1, 2 - after Bemmann, Bemmann 1998; 3 - after Raddatz 1987; 4 - after Schmiedehelm 2011; 5-7 - after Godłowski 1972; 8 - after Kulakov 2009; 9 - after Schmiedehelm's heritage; 10 - after Jahn's heritage. 9, 10 - not to scale.

313; forthcoming b). Moreover, some general patterns represent a wider spectrum of forms in this region, e.g. type 7a blunt apex bosses (Jahn 1916, pp.175–176) while others were much more popular among the Balts than elsewhere in *Barbaricum* (e.g. types with very short blunt spikes or pseudo-spikes; Kontny forthcoming b). In addition, many ‘archaic’ traits can be found, like numerous rivet-holes (Fig. 11:3–5), which are well known from the Late Pre-Roman period (Zieling 1989, p.303) and persisted among the West Balts far into the Roman period. One can likewise point out more outdated technological characteristics among the Balts, e.g. the use of large-headed rivets (Fig. 11:1, 2), which generally occurred in the Late Pre-Roman period (Adler 2002) and long nails (Jahn 1916, pp.156–158, Fig. 177) as well as finds of Late-Pre-Roman type 4a shield bosses (Jahn 1916, p.154) in an Early Roman period context in the Dollkeim-Kovrovo culture (Fig. 11:6, 7; Nowakowski 1996b, pp.49–50) and perhaps also in the Bogaczewo culture (Kontny forthcoming b). This allows one to infer that the Balts intermingled traditional aspects with modern trends in this area and were sometimes conservative in terms of the blacksmithing methods for making shield bosses.

In addition to shield grips (see Kontny 2015b, pp.313–315) and trough-shaped rim fittings (La Baume 1941a), shield board fittings, especially type D (Zieling 1989, pp.247–251), have been documented in the West Balt area (Fig. 12). These are mainly characteristic of Scandinavia (Fig. 12:1–3), being very rare outside this region (Fig. 12:5–7) with the exception of the Bogaczewo and Dollkeim-Kovrovo cultures (Fig. 12:4, 8–10; Kontny forthcoming b).

BOWS AND ARROWS

Although arrowheads are found in West Balt territory (e.g. Kazakevičius 2004), arrows probably served as a hunting weapon in the Roman period. In the Bogaczewo culture they are represented by both socketed (Fig. 13:11, 12)⁹ and tanged specimens (Fig. 13:1–10, 13)¹⁰. The former were quite typical for Central European *Barbaricum*, including the Przeworsk culture, and have been identified as a hunting weapon (Kontny 2008b, pp.127, 130, Diagrams 13, 14). Experiments conducted with replicas of the longbows from the Nydam bog site have shown that at a distance 25–30 m the arrows did not pierce the shield replicas, i.e. the arrowhead did not reach the back of the planks. The effectiveness of the leaf-shaped arrowheads depended on whether the blade was parallel to the shield’s wood fibres (more effective) or perpendicular to them (less effective) whereas that of the needle-like tanged arrowheads was uniform. Even though the latter proved to be more efficient, penetrating deeper into the planks, they still did not pierce the shield and only made effective use of a shield covered with scattered arrowheads more difficult. In addition the former were more often destroyed when striking a shield boss than the latter (Paulsen 1998, pp.423–424). The battle superiority of the latter was likewise proven by experiments involving the shooting of a dead pig: both types of arrowheads went right through an unprotected body but only the narrow nail-shaped ones were able to penetrate mail armour (Nielsen 1991). The observation has been made that wounds inflicted by leaf-shaped arrowheads are bigger and cause significantly more blood loss which facilitates

⁹ A set of four from Mojtyny (Ger. *Moythienen*), Piecki Commune, burial 85 (Hollack, Peiser 1904, p.54, Taf. IX:59.d1, 2, 4, 5), and isolated ones from Szychówko (Ger. *Klein Puppen*), Świętajno Commune, burials no. 217 from Emil Hollack’s 1902 excavation (Voigtmann’s heritage; Schmiedehelm’s heritage 7.1.203, 7.8a.114, 7.13.34, 7.13b.90, 7.22a.833; Prussia-Archiv, no. PM-A 1781.2.44.17; Prussia-Museum, inv. no. PM VII.573.13280) and no. 227 (Jahn’s heritage; Schmiedehelm’s heritage 7.13e.200; Voigtmann’s heritage; Prussia-Archiv, no. PM-A 1781.2.44; Prussia-Museum inv. no. PM VII.573.13280), a Bogaczewo-Kula (Ger. *Bogaczewen*), Giżycko Commune, stray find (Okulicz 1958, tabl. XIII:5; collection of the Museum of Warmia and Mazury in Olsztyn, inv. no. MWMO 125).

¹⁰ A set of ten from Paprotki Kolonia, Miłki Commune, burial 72 (Bitner-Wróblewska *et al.* 2001, pp.69, 72, 80, ryc. 8).

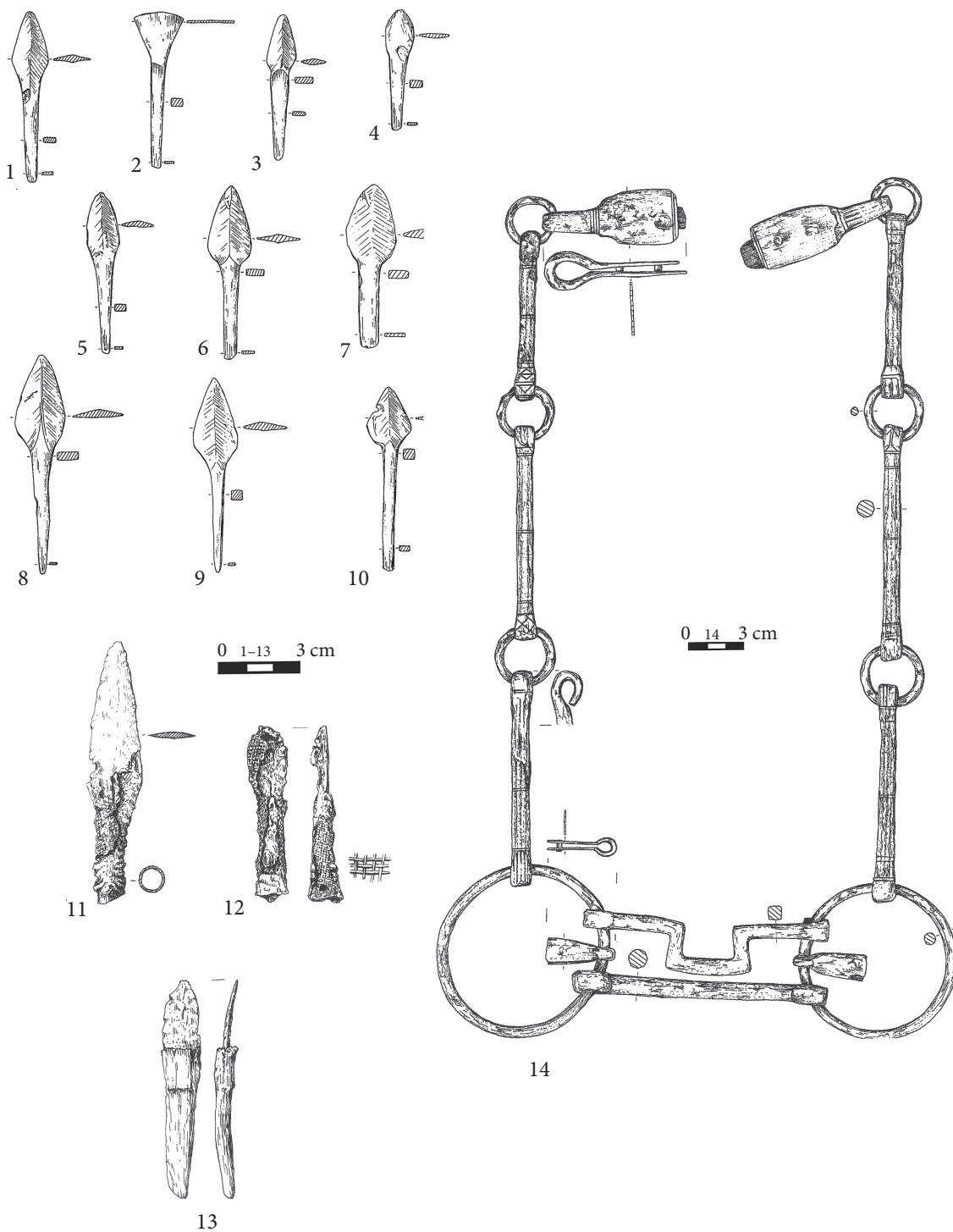


Fig. 13. A horse harness with chain reins (14) and arrowheads (1–13) from the Bogaczewo and Sudovian cultures: 1–10, 14 – Paprotki Kolonia, burial 72; 11–13 – Szwajcaria, barrow 15, burial 2. 1–10, 14 – after Bitner-Wróblewska *et al.* 2001; 11–13 – after Jaskanis 2013.

tracking. One has to agree with Xenia Pauli Jensen (2009a, p.372) that a broad, destructive cutting edge is the hunter's choice, the narrow, penetrating point the soldier's.

The tanged arrowheads from Paprotki Kolonia, burial 72 (Fig. 13:1–10) should also be assigned to hunting equipment. They include diverse sizes and shapes but the flat, wide blades are almost exclusively leaf- or fan-shaped. They seem to form a set of specialized arrows used for different hunting purposes.

Two barbed arrowheads are also known from the Bogaczewo culture: Wólka, Ruciane-Nida Commune, burial 10 (Tischler 1878, Taf. IX:31; Jahn's heritage), and Zdory (Ger. *Sdorren*), Pisz Commune, a stray find (Schmiedehelm's heritage 9.21.9; Prussia-Museum, inv. no. PM III.233.1134). These have unfortunately been documented so inadequately that it is unreasonable to discuss their possible hunting functions in any detail.

The finds from the Sudovian culture fit the above image: three leaf-shaped arrowheads: one tanged and two socketed from Sz wajcaria, Suwałki Commune, barrow 15, burial 2 (Fig. 13:11–13; Jaskanis 2013, pp.87–88, 177, Table CXLVI:2.3–5), and one socketed arrowhead from barrow XII (Jaskanis 2013, p.34, tabl. XVIII:1.1). The only possible needle-shaped tanged arrowhead, which would be useful for combat, came from burial S.12 (Fig. 10:2.3; Jaskanis 2013, p.69, tabl. CIV:2)¹¹.

The tantalizing idea that characteristically nomadic trilobate arrowheads were in use among the Balts must also be considered. This is very plausible for the Migration period when the Balts would have been likely to have obtained them from the Huns, Alans, or their Germanic allies (Bitner-Wróblewska, Kontny 2006) but the possibility of their acquisition, although on a limited scale, in the Roman period can also not be denied. This occurrence could

be suggested by the arrowhead from burial 59 at Mojtyny, a Bogaczewo culture burial ground, but the published photograph is not entirely clear (Hollack, Peiser 1904, Taf. VII:59.a). It might likewise be confirmed by another, indisputable case of an arrowhead, a stray find from the stronghold at Dybowo, Świętajno Commune (personal communication: Piotr Iwanicki from the State Archaeological Museum in Warsaw who conducted a field survey there)¹².

It is currently possible to conclude that bows did not play any significant military role among the Balts. The effective use of the longbow apparently requires the creation of separate units that are placed, for example, at the wings to support an infantry attack (Kontny 2008b, p.127). The existence of such units, which probably required a central command (in order to synchronise the archers' actions with other groups) seems possible in Scandinavia, where traces of supposedly developed military structures have been discovered in the bog site material (Pauli Jensen 2009b, pp.126–130) but this theory is much weaker in a West Balt context. The scarcity of Roman-period trilobate arrowheads also disavows the idea that nomadic-type bows, which were definitely useful in fighting, especially from horseback, were known among the West Balts on any significant scale prior to the Early Migration period. Thus the Balts probably used the longbows and leaf-shaped arrows for hunting.

FIGHTING KNIVES

The notion of a fighting knife (Ger. *Kampfmesser*) was generally used to describe items 25–40 cm in total length (Nowakowski 1994a, p.386) but the criteria of their identification has not yet been definitively determined. For example, some scholars have stated

¹¹ It could theoretically be considered a needle-shaped fire striker but a bar-shaped fire steel typical of a different sparking method (Jonakowski 1996) was found among the grave goods (Jaskanis 2013, p.69, tabl. CIV:6) which excludes that assumption.

¹² The item's blades are triangular meaning it belongs to earlier, Sarmatian-type specimens, which are also known from a Roman military context (Хазанов 1971, pp.35–40, табл. XIX–XXII; Zanier 1988).

that 20 cm long blades fit the definition and, if found in burials together with weapons and belt fittings, even smaller, 15–20 cm ones do as well. Curiously, if a knife was decorated, this reduced the definition ‘several centimetres’ (Karczewski 1999, pp.103–105, with further literature) which sounds absurd as ornamentation does not influence function. Actually, knives over 30 cm in total length (tentatively for fighting) are extremely unique¹³ and so their position is definitely exaggerated. Almost all of the knives from the Bogaczewo and Sudovian cultures should be treated as multi-purpose tools, not weapons. They might have been useful in a warrior’s daily-life (e.g. for working wood, cutting up food, etc.). Utility knives are well-known to have been carried by Scandinavian warriors in the Younger Roman period: the knives excavated in the sacrificial bog sites are occasionally almost 40 cm long, but are usually far shorter (see Ilkjær 1993a, pp.260–262; 1993b, Taf. 182–227). In the present author’s opinion, none of them can unequivocally be called fighting knives as the warriors had at their disposal a spear, a javelin, a shield, and sometimes also a sword or a bow, leaving little occasion to use a knife unless all one’s offensive weapons had been lost¹⁴. Such a last-chance, haphazard weapon cannot be treated as strictly a weapon; otherwise awls, fire strikers, and razors would have to be considered weapons.

Only so-called dagger-knives (Ger. *Dolchmesser*) may be seen as real weapons. They were typical of the Balt tribes, specifically the Dollkeim-Kovrovo culture, the West Lithuanian group, the Central Lithuanian group, and the Lower Neman group¹⁵,

and were characterized by a knife-like shape with a long, double edged point. They mainly date to the Early Migration period (see e.g. Šimėnas 1996; Prassolow 2013, pp.119, 123–124). The Late Migration period Balt seaxes developed out of them (Fig. 4; Kontny 2013a, with further literature).

WAR HORSES

The position of horses among the Balts was uniquely significant in European *Barbaricum* as shown by the Roman period horse burials known from the Bogaczewo (these have no connection with the human burials), Sudovian (Gręzak 2007; Karczewska *et al.*; Nowakowski 2009a), and Dollkeim-Kovrovo cultures (Skvortsov 2009; Zinoviev 2009) as well as in Lithuania (Bliujienė, Butkus 2007). In the Migration period, such interments were also numerous in the Olsztyn and Elbląg groups and the Sambian-Natangian area (Kontny *et al.* 2009) or Lithuania (Bliujienė, Butkus 2009; Bliujienė, Steponaitis 2009). Another important fact is the significant number of spurs in the weapon burials of the Bogaczewo and Dollkeim-Kovrovo cultures. These, however, are also documented in the Sudovian culture (Kontny, Natuniewicz-Sekuła 2009; Jaskanis 2013, pp.200–202) and, rarely, in Lithuania (Michelbertas 2000)¹⁶. Additionally, a spectacular element of horse harness, i.e. chain reins, appears among the Balts, namely in the Dollkeim-Kovrovo culture (Fig. 13:14; Wilbers-Rost 1994, pp.18–21). This suggests that horses played a

¹³ The present author knows of only two: one with a total length of 33.6 cm from site IVa, burial 61 in the Bogaczewo cemetery at Wyszembork, Mrągowo Commune (Szymański 2005, pp.67, 70–71, tabl. XXIV; Kontny 2008a, p.99, Fig. 10:a) and one with a total length of 40 cm from the central burial of barrow XXII in the Sudovian cemetery at Szurpiły, Jeleniewo Commune (Żurowski 1961, pp.71–73, tabl. XVIII, XIX:1–22).

¹⁴ Tomasz Bochnak (2003) interprets Late Pre-Roman period long knives from the Przeworsk culture in a similar way.

¹⁵ One prototype is also known from barrow III in the Sudovian cemetery at Netta, Augustów Commune (Bitner-Wróblewska 2007, pp.31–32, Plate. LVIII:2; the collection of the State Archaeological Museum in Warsaw, inv. no. PMA/IV/364).

¹⁶ See Smółka 2014. The paper focuses on the spurs of the South east Baltic region but it is very superficial in respect to the Balts, e.g. only ten of the more than 120 Bogaczewo features known to the present author are mentioned; the finds from the Sudovian culture as well as the Olsztyn and Elbląg groups are also definitely underrepresented (Smółka 2014, pp.60–61), which does not allow it to draw any significant conclusions. It must be admitted that Emilia Smółka (2014, p.47) does mention the paper’s preliminary nature.

significant role in Balt society. This paper focuses on their military and, in part, symbolic importance. Nowakowski stated that the military equipment of the Balts was typical of the infantry and also that the shape and size of the shields exclude fighting on horseback (Nowakowski 2009b, p.177). This seems too restrictive: the elongation of a shield (La Baume 1941a; see Kontny 2008d, pp.188–189) does not prevent its equestrian use as it covers a warrior's side quite efficiently and the use of a vertical shield grip allows the rider to easily control a horse with reins (Kontny, Rudnicki 2009, p.38). Considering what is known about the military techniques of the neighbouring Germans, one may suppose that mounted warriors were primarily used to harass the enemy, one of the activities of a military retinue (Kontny 2009, pp.100–101). Their use in regular combat required well-thought-out tactics, trace of which has yet to be found among the West Balts. As to the military use of horses, it seems that these animals were a means of transport to the battle and an element facilitating the pursuit of the enemy, or, in case of defeat, escape from the battlefield. The horse's combat potential might have been exploited in clashes on rare occasions but more significant use was made of it in executing short-term military objectives such as looting forays by the retinue (see Kontny 2003c). Because these expeditions were probably off-handed, it is difficult to assume that horses were used as part of tactical units. Although they helped units to move faster (better surprise value, attack effectiveness, pursuit of the defeated, escape in case of defeat or a fear of revenge, etc.), that does not mean that plundering forays were not also conducted by warriors on foot. Thus the principle aim in employing horses was to make use of their speed. It is possible that a horse served as a means of transport not only for a mounted warrior but also a colleague on foot who could have ridden together with him bareback¹⁷, especially for a short distance. This was

probably a very important fighting method for the retinue which consisted of both mounted and foot warriors. Those warriors who possessed their own horse were likely to have higher status than those without one (Kontny 2009, p.101).

Undoubtedly, the possession of a steed also emphasised its owner's status as is clearly shown by the placement of a spur(s) in a burial.

BROTHERS-IN-ARMS

The study of Scandinavian sacrificial bog sites and the weapon deposits in them comprises one of the most important fields in the archaeology of Roman and Migration period *Barbaricum*. The deposits, which are interpreted as offerings (including the spoils of war taken from attackers by local warriors) dedicated to deities, not only allow typological and chronological analyses to be conducted but also shed light on the hierarchy of the invading armies, the military tactics, and certain symbolic as well as technical aspects of the sacrifice rites (see, e.g. Ilkjær 1990; von Carnap-Bornheim, Ilkjær 1996; Kontny 2008d, pp.192–194). The results of the typo-chronological studies have also shown the homelands of the attackers (Ilkjær 1993a, pp.374–386, Abb. 152, 153, 157). Nevertheless, there are some discrepancies which have raised doubts as to the method's precision (see Rau 2010, pp.473–490, Abb. 198, 199, 202, 204; Blankenfeldt 2013, p.32, Fig. 4; Nørgård Jørgensen 2013, Figs. 122, 125, 130). The supposed homelands of the invaders frequently encompass vast areas, as demonstrated by, among other things, the diverse origin of specific types of equipment. Some of the mixed material, e.g. from the C1b deposit in Thorsberg moor, Schleswig-Flensburg District, has been explained, at least partially, by alliances between military units of different origins as well as possibly by general cultural similarities

¹⁷ The earliest saddles known from Central and North European *Barbaricum* date to the Younger Roman period (Kontny 2013b, p.138).

(Blankenfeldt 2013, p.32). In certain instances, the East Baltic region has been considered an invasion route, especially in the Younger and Late Roman period or Early Migration period, for peoples from North Sweden and Norway (Ilkjær 1993a, p.385, Abb. 157). So far Ruth Blankenfeldt (2013, p.32, Fig. 4) has examined the South and South east Baltic origin of the attackers, linking them with earlier deposits (phases B2b–C1a) in Thorsberg, but only for the ‘East Germans,’ not the West Balts. Pauli Jensen (2009c, p.59, Figs. 2, 7) also took the same position in respect to Vimose 1, Odense Municipality on Funen (early B2, i.e. late 1st century) and Vimose 2a (late B2, i.e. early 2nd century) but proposed very wide limits for the potential invaders’ core-area, while emphasising the definitely Polish artefacts (Fig. 14) such as the single-edged swords from Vimose 1 and type 3c shield grips (Ilkjær 1990, Abb. 23) from Vimose 2a (Fig. 14:1–3, 12). The connections with the South Baltic region may also be proven by, among other things, the so-called ‘Polish’ fire steels from the Illerup bog site, Skanderborg Municipality, which are unique in Scandinavia (Fig. 14:6; see Ilkjær 1993a, pp.246–248, 250, 251). Nevertheless, Balt elements have been disregarded in the search for the invaders’ origins but in the opinion of the present author, this is not justified owing to items typical of the West Balts having been among the gear in the bog deposits.

One should mention the finds from the Vimose bog site where an atypically large number of tools were found (Engelhardt 1869, pp.26–28, 31, 32, pl. 18; Christensen 2005), i.e. blacksmith’s (hammers, anvils, pliers), carpenter’s (adzes, planes, chisels, augers), multi-purpose/weapons, i.e. axes, and agricultural tools (‘half-scythes’); these last

may have had a military connection, e.g. collecting horse fodder. Aside from the blacksmith’s tools, all of them are very characteristic of the Balt cultures (see Nowakowski 1995, pp.36–38; Malonaitis 2008; Kontny 2013c, pp.199, 201, 207, Fig. 3; 2015b, pp.315–316; forthcoming a; forthcoming b), although the Balts must have also had blacksmiths. Axes and other tools, except for knives, are generally rare in Scandinavian bog sites (except at Vimose and, in the smaller numbers, at Illerup and Nydam, Sønderborg Municipality) as well as in the settlements and amongst the grave goods (Christensen 2005, p.59). The large number of axes and adzes at Vimose is thought-provoking, the more so in that aside from those types unknown among the West Balts but well documented in Scandinavia, i.e. those with long, massive polls, some of the axes from Vimose were very similar to Balt types. The one labelled with inv. no. 15682 (Fig. 15:3; see Christensen 2005, Fig. 4, top) can be assigned to subgroup II.2 (Kontny forthcoming a), the one with inv. no. 17094 (Engelhardt 1869, pl. 18:18; Christensen 2005, Fig. 2, top), to subgroup II.3 (Fig. 15:1), and the one with inv. no. 21628 (Fig. 15:5; see Engelhardt 1869, pl. 18:20; Christensen 2005, Fig. 1) should be roughly associated with type 10 Lithuanian battle axes (Malonaitis 2008, pp.59–61, 300)¹⁸. To this can be added the socketed axes (Christensen 2005, pp.72–75, Figs. 11–15), a weapon typical of the Balts and very rare in Scandinavia (Fig. 14:11) as well as the ‘Polish’ types C and D (Biborski 1978, pp. 124–128) single-edged swords (Fig. 14:1–3; see Engelhardt 1869, pl. 7:23–28) and the Ilkjær type 3 shield grips (nine with distinct rivet plates, including a rectangular one, Fig. 14:12; see Jahn 1916, pp.192–193) that date to B2b (group 4, Godłowski 1994, Abb. 1), were

¹⁸ Bearded axes with rear lugs and ridges at the lower part of the eye (Malonaitis 2008, p.300, pav. 14); aside from three Lithuanian specimens with no archaeological context (and so no grounds for dating, but linked by Arvydas Malonaitis to the Early Middle Ages), it is possible to mention a find from Sapotskin (Pol. *Sopoćkinie*), Grodno District in Belarus (Fig. 15:6; Nowakowski 2007b, p.20, Abb. 1:a), which has been ascribed to the group of asymmetrical, narrow axes with a downward-curving neck (Nowakowski 2007b, pp.21–23), i.e. Kontny type I. This attribution, however, is false as the upper part of the neck is straight and the poll has rear lugs which is not typical of type I but can be associated with Malonaitis types 3a and 6, which date from the 4th century to the Middle Ages (Malonaitis 2008, pp.297–298, pav. 13, 14) even though this dating is not based on reliable premises (see Kontny forthcoming a).

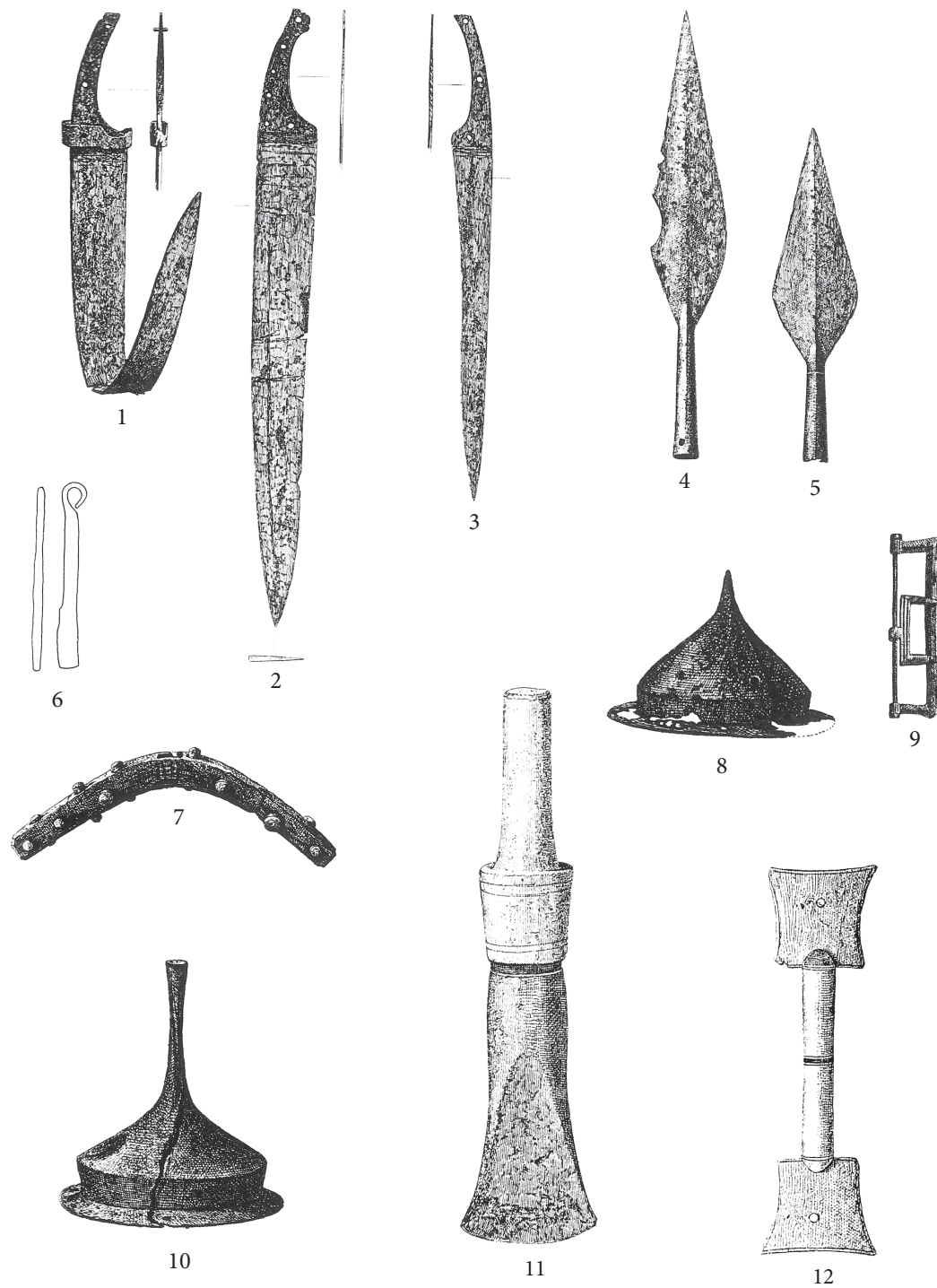


Fig. 14. Examples of the Przeworsk and West Balt elements from the Vimose bog site (1–6, 8–12) and a possible saddle pommel (7). 1–5, 7–12 – after Engelhardt 1869; 6 – after Christensen 2005. Not to scale.



Fig. 15. Axes from Vimose and their possible parallels: 1 – Vimose, inv. no. 17094; 2 – Paprotki Kolonia, burial 67; 3 – Vimose, inv. no. 15682; 4 – Judziki, burial 12a; 5 – Vimose, inv. no. 21628; 6 – Sapotskin, a stray find. 1 – after Engelhardt 1869; 2 – after Karczewski 1999; 3 – photo by B. Kontny; 4 – after Engel *et al.* 2006; 5 – after Engelhardt 1869; 6 – drawing by B. Kontny.

documented in early Vimose deposits (Engelhardt 1869, p.13, Fig. 13; Pauli Jensen 2009c, Fig. 7), and are known in both the Przeworsk and the Bogaczewo cultures (see Kontny forthcoming b). Many of the Vimose spearheads also do not fit the Scandinavian

typology (Ilkjær 1990). Alongside the Scandinavian forms, a significant number of them represent forms popular in Central European *Barbaricum* rather than Scandinavia (Both the Przeworsk and the Bogaczewo cultures have similar models. See

Kontny 2007b, pp.126–128) which proves the existence of a southern connection¹⁹. They include two Kaczanowski type VI spearheads (Fig. 14:4, 5) (Engelhardt 1869, pl. 14:7, 10) that are typical of B2b in the Przeworsk culture (Kaczanowski 1995, pp.17–18, tabl. VII)²⁰ but appear in the Elbe region as type Lh1 (Adler 1993, p.97, Abb. 24) as well as in the Bogaczewo (Kontny forthcoming b, note 7) and Sudovian cultures (Kontny forthcoming b, note 8). Furthermore deposits at Vimose 1 and 2 contained Kaczanowski types VIII (two items, collection of the National Museum in Copenhagen, inv. no. 1439; Pauli Jensen 2003, Fig. 3: second row, on the left) and XII (Pauli Jensen 2003, Fig. 3: bottom in the middle, third row, on the right), both very popular in both the Przeworsk and the Bogaczewo cultures (Kontny 2007a, ryc. 8). In addition, one spearhead from burial 63 at Łabapa, Węgorzewo Commune, is close to Kaczanowski type VIII but with a design of dots and zig-zag lines, a ‘negative’ design variant, incised along the midrib (Fig. 2:3) (Kaczanowski, Zaborowski 1988, p.235, Abb. 9; Kontny 2017a). The image sometimes seems to depict two serpents flanking the midrib (with the serpents’ heads appearing to be slightly marked). Such heads are mostly known from the Przeworsk culture and only in exceptional instances, from Scandinavia (Öland and Gotland). However, local Balt variants of this type are known from the Bogaczewo culture (Kontny 2007a, p.118, ryc. 2; 2017a).

The Vimose shield bosses include numerous forms from *Barbaricum* (Engelhardt 1869, pl. 5:1–12): with a blunt apex, Jahn type 7a (Fig. 14:10), and with a sharp apex, Jahn type 7b (Fig. 14:8), from the Early Roman period and hemispherical bosses,

Jahn type 8, and similar ones with a knob on the cone, Ilkjær type 5c/Zieling S2–3 (see Zieling 1989, pp.147–149; Ilkjær 2001, pp.294–299), from the Younger Roman period. Specifically Scandinavian forms were also found at the site but all of the above variants were characteristic of vast parts of Barbarian Europe, including the Przeworsk culture, North east *Barbaricum*, and the West Balts (Zieling 1989, pp.147–149; Godłowski 1994, Abb. 1:42; Schultze 1994, Abb. 3; Радюш, Скворцов 2008, p.125; Kontny 2015b, pp.310–313).

Aside from these, the archaeological material contained two unique shield bosses, both wooden, one with a domed cone and a very short, blunt apex (Fig. 16:1; see Engelhardt 1869, pl. 5:9) and one representing Ilkjær type 3e or Jahn type 7a with a so called pseudo-spike (Fig. 16:8; see Engelhardt 1869, pl. 5:4). These forms have almost never been documented anywhere else in the Scandinavian region and the slightly different forms of Ilkjær type 3 are also rather unique (see Ilkjær 2001, p.284, Abb. 279:ZNU, AAAF as well as EQL and MMK). Their rarity has prevented the establishment of their chronology in the Scandinavian region (see Ilkjær 1990, Tab. 192, Abb. 186; 2001, p.284). Moreover, they were also infrequent in the Przeworsk culture where hemispherical bosses prevailed during this chronological phase (C1b) (Godłowski 1992, p.82; 1994, Abb. 1:40, 41). Among the West Balts, however, they were very popular, as shown by the domed bosses which have been found in the Bogaczewo (Fig. 16:2, 3, 7; Kontny forthcoming b, note 11), Sudovian (Fig. 16:6; Kontny forthcoming b, note 12), and Dollkeim-Kovrovo cultures (Fig. 16:4, 5; Kontny forthcoming b, note 13), and date to

¹⁹ Personal communication: Xenia Pauli Jensen, who defended a dissertation on the topic of the Vimose deposits. The author would like to thank Xenia Pauli Jensen for her help and for allowing him to handle some of the polearm heads, shield bosses, and melee weapons from Vimose.

²⁰ The former has an outcurved blade which is almost undocumented for the Roman period; one of the very rare parallels comes from burial 302b in the Bogaczewo cemetery at Onufryjewe (Ger. *Onufrygowen*), Ruciane-Nida Commune and dates to the Younger Roman period (Kontny 2007a, pp.85–86, ryc. 6:a, tab. 1). The latter has proportions slightly in excess of the type’s limits but such wide forms are known from *Barbaricum*, e.g. spearheads A1 and A4 from the princely burial at Mušov (Droberjar, Peška 2002, pp.103, 106, Abb. 1).

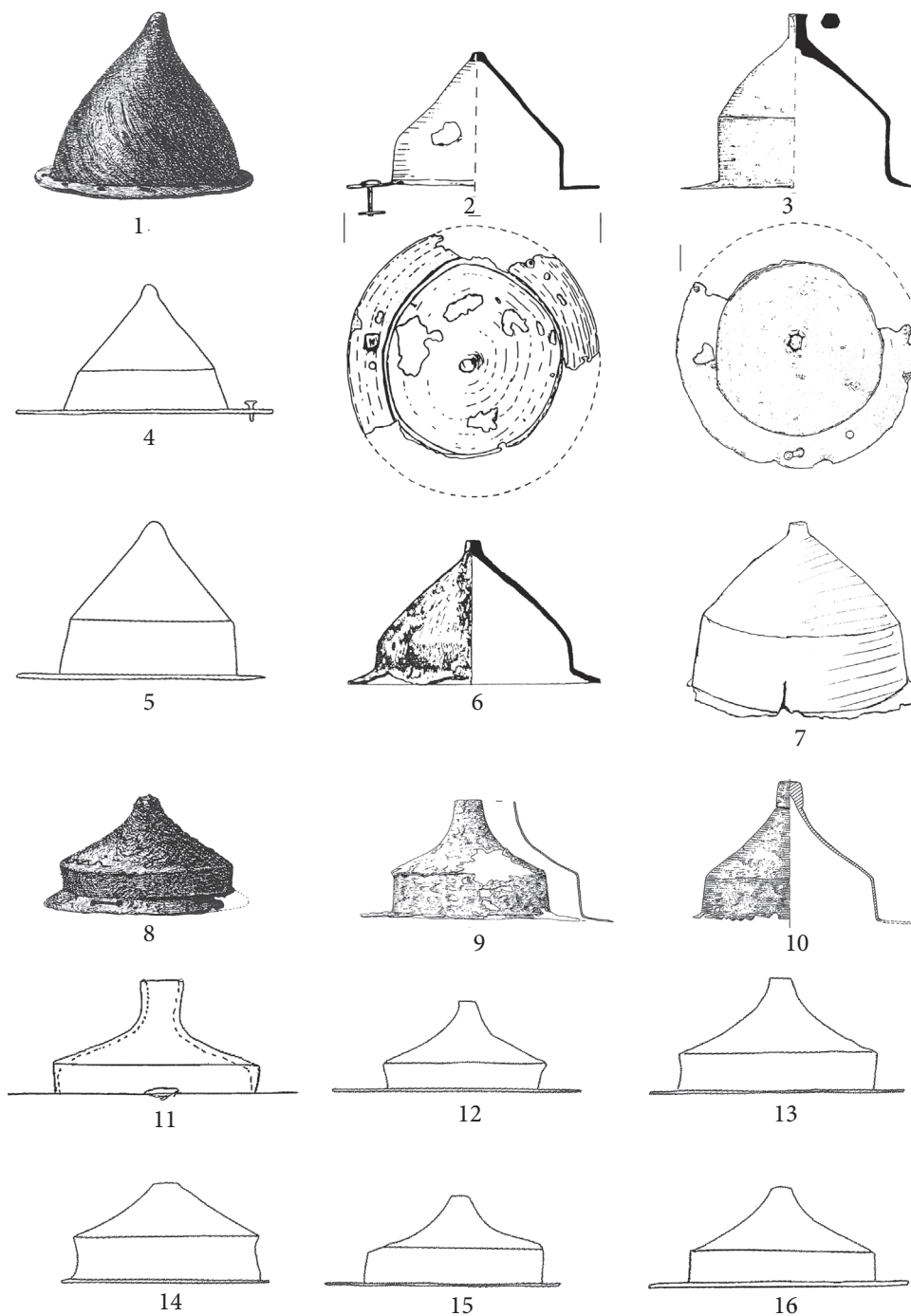


Fig. 16. The wooden shield bosses from Vimose (1, 8) and their Balt parallels made of iron (2–7, 9–16): 1 – Vimose; 2 – Sterławki Małe, burial 341; 3 – Paprotki Kolonia, burial 44; 4 – Ozerovo; 5 – Logvino, a stray find; 6 – Osowa, barrow 71, burial 1; 7 – Miętkie; 8 – Vimose; 9 – Szwajcaria, burial S.25; 10 – Szwajcaria, barrow LXVIII, burial 2; 11 – Onufryjewo 370b; 12 – Elanovka, burial 38; 13 – Gračevka, burial 62; 14 – Prudy, a stray find; 15 – Medvedevka, a stray find; 16 – Kotel'nikovo, burial 4. 1 – after Engelhardt 1869; 2 – after Karczewska 1999; 3 – after Karczewski 1999; 4, 5 – after Радюш, Скворцов 2008; 6 – after Jaskanis 1961; 7 – after Jahn's heritage; 8 – after Engelhardt 1869; 9, 10 – after Jaskanis 2013; 11 – after Kontny 2008a; 12 – after Радюш, Скворцов 2008; 13 – after Raddatz 1993; 14–16 – after Радюш, Скворцов 2008. Not to scale.

B2b–C1 (in the Sudovian and Bogaczewo cultures, only C1). The same popularity can be asserted for the shield bosses, which have a pseudo-apex and are known from the Bogaczewo (Fig. 16:11; Kontny forthcoming b, note 14), the Sudovian (Fig. 16:9, 10; Kontny forthcoming b, note 15), and especially the Dollkeim-Kovrovo cultures (Fig. 16:12–16; Kontny forthcoming b, note 16); a single stray find is also known from Lithuania (Šarkai, Šilalė District; see Kiulkys 2010, p.52, pav. 12). The Balt finds date to C1, those from the Dollkeim-Kovrovo culture from B2/C1–C1a to C3–D²¹. They should probably be considered a result of migrations from the north.

Two boss types considered here are very typical of the Balts, which could mean that the two Vimose specimens are of Balt origin, which is further supported by the domed one originally having twelve rivet holes. As has been explained, ‘archaic’ traits like numerous rivet-holes, which trait is well-known from the Late Pre-Roman period, remained in use among the West Balts in the Roman period (Fig. 11:3–5; Kontny forthcoming b, note 17) together with other outdated technological characteristics. The possible Balt origin of these wooden shield bosses from Vimose can be checked by future dendrological studies.

Pauli Jensen (2011, p.47, Figs. 6, 7) also connected the rectangular belt buckles, which have a forked tongue and were found at Vimose (Fig. 14:9), and the type E2 spurs (Ginalski 1991, pp.61–62), both extremely rare in Scandinavia, with Przeworsk influences. However, these artefacts were also quite popular among the Balts, especially in the Bogaczewo

culture (see Godłowski 1994, Abb. 2:5; Nowakowski 1996b, Taf. 48:8; Michelbertas 2000, p.288, Abb. 1; Andrzejowski, Madyda-Legutko 2013, pp.18–20, Fig. 1). The same can also be said about the bar-shaped ‘Polish’ fire striker (Fig. 14:6) from Vimose (Christensen 2005, p.77, Fig. 45).

One may assume that both Przeworsk and Bogaczewo cultural elements are present at Vimose. Nevertheless some traits are characteristic of only the Balts, such as for the axes (extremely rare traits in the Przeworsk culture. See Kontny 2008b, p.130, Fig. 15), certain shield boss types, and certain tools. They confirm that Balts participated in attacks probably directed at an area close to Vimose.

Vimose is not the only bog site with Balt weapons²². Five of the eleven spearheads in the bog deposit at Balsmyr on Bornholm were of Balt origin: two Kazakevičius type IB/IB (inv. nos. 2587, 1 and 2588,1) and three type IG/II (inv. no. 2588, 2, 3, 6). They come from a deposit dated to the turn of the Early Germanic Period, i.e. circa 400, while the other spearheads are attributed to an earlier, C1b/C2 deposit (Nørgård Jørgensen 2008, p.110, Fig. 67).

Among the Balt elements in the Scandinavian bog offerings, one may also mention Kragehul, Assens Municipality on Funen and its finds of sword-shaped spearheads (Engelhardt 1867, pl. II:5, 6; Iversen 2010, p.225, Taf. 18:22545, 22546). They were identified as type Dresden-Dobritz/Gübs (Iversen 2010, pp.48–51) with unique parallels in Scandinavian bog sites. Besides the artefacts from Kragehul (Fig. 17:1–3), the following should also be mentioned: Nydam inv. no. x15088 (Fig. 17:4;

²¹ Additionally, exceptional finds of pseudo-apex bosses have occurred further south: two stray finds from Horní Dunajovice, Znojmo District in the Czech Republic (Droberjar, Peška 1994, p.299, Abb. 4:4, 5) and a specimen from cellar Z in the ancient Bosphoran city of Tanais (Kazanski 1994, pp.438, 479, Fig. 2:5; Bezuglov 2003, p.91, Abb. 2:3).

²² The present author is aware that bog sites with weapons and tools have also been documented in the territory of Lithuania and Latvia, e.g. Kokmuiža I and II in Vitiņi Parish, and that they are treated as war-booty offerings (see Bliujienė 2010, pp.149–150, 159, Figs. 7–9, with further literature). However, they include an enormous quantity of finds and require detailed studies to determine their origin. In general, it seems that they consist of items made by the Balts, especially the clothing elements and ornaments and so it is plausible that these deposits are the result of local conflicts. Only the boat-shaped fire-stones (Bliujienė 2010, Fig. 8:4, 10) may look like specifically Scandinavian ones, e.g. type 5 (Ilkjær 1993a, Abb. 89, 92), but it is premature to establish their origin based exclusively on their shape, as their absence in the burials may be the result of the funeral rites. (Research into the raw material should be conducted.) It is hoped that the present paper will inspire scholars to do such work.

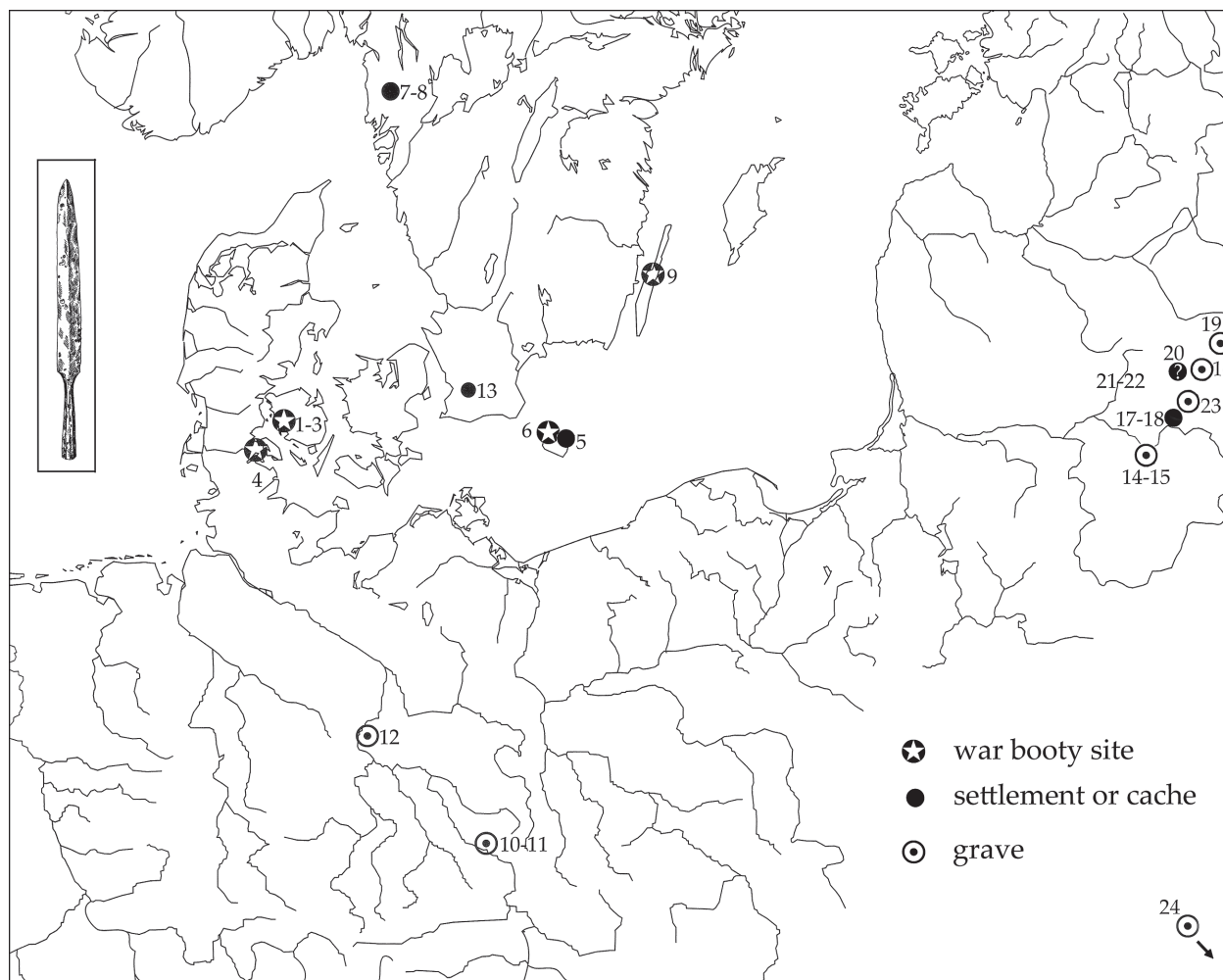


Fig. 17. Distribution of the Kazakevičius type III spearheads: 1–3 – Kragehul, 4 – Nydam, 5 – Sorte Muld, 6 – Balsmyr, 7, 8 – Nedergården, 9 – Skedemosse, 10, 11 – Dresden-Dobritz, burial 1, 12 – Gübs, 13 – Uppåkra, 14, 15 – Neravai-Grigiškės, barrow 20, burial 2 and barrow 22, burial 4, 16 – Taurapolis, barrow 5, 17, 18 – Vilnius, 19 – Lapušiskė, barrow 9, 20 – Kivyliai, a stray find, 21, 22 – an unknown site in Lithuania, 23 – Santaka, barrow 4, burial 2, 24 – Chatyr-Dag, burial 2. After Kazakevičius 1988; Iversen 2010, supplemented by the author.

Iversen 2010, p.188), from Skedemosse, Borgholm Municipality on Öland (Fig. 17:9; Hagberg 1967, Fig. 66:664), items in the deposit at Nedergården in Bohuslän, Sweden (Fig. 17:7, 8; two specimens in the collection of the Historical Museum in Stockholm, inv. no. SHM 14869; Iversen 2010, p.188, Fig. 25), a dry land offering from the sacrificial site at Uppåkra, Staffanstorp Municipality, Scania, inv. no. x6227

(Fig. 17:13; Iversen 2010, p.188, Abb 25), and another from the one at Sorte Muld, Bornholm Municipality (Fig. 17:5; Bornholm Museum, inv. no. 1191 x 244Rb; Iversen 2010, p.188, Abb. 25)²³. One may also add an artefact from the bog site at Balsmyr on Bornholm, inv. no. 2589, 1 (Fig. 17:6; Klindt-Jensen 1957, af. 64:8; Nørgård Jørgensen 2008, p.110, af. 67:8, which was identified as Kazakevičius type V), three

²³ The author would like to thank Dr Finn Ole Nielsen from the Bornholm Museum in Rønne for letting him work with the spearheads from Sorte Muld.

sepulchral finds from Dresden-Dobritz, Dresden District (Ger. *Stadtkreis*): burial 1 (two items) in a Luboszyce cemetery (Fig. 17:10–11; Meyer 1971, p.50, Abb. 24:7, 8)²⁴ and one from Gübs, Jerichower Land District in Saxony-Anhalt (Fig. 7:12; Schmidt 1976, Taf. 3:2c). Although the type in question (including those specimens found in Scandinavia, see Iversen 2010, p.49) has been treated as stemming from North east Germany, the artefacts probably have different origins. Such spearheads have been discovered in considerable numbers in West Balt territory (Fig. 17:14–23). They should be attributed to Kazakevičius type III, which is characteristic of East Lithuania (also found in Latvia) and date to the late 5th–7th centuries (Казакявичюс 1988, pp.41–42, рис. 15, карта VII)²⁵. More such items are known from that territory, many from a sepulchral context; thus they were used by the Balts. The majority of the Scandinavian finds, however, are known from sacrificial deposits, both water and dry land, but none from burials. The finds from Scandinavian deposits seem to prove their foreign origin, i.e. that they were probably arms taken from warriors from the Balt lands. It seems that the Scandinavian finds should be compared with the Balt finds rather than with those from Saxony or Saxony-Anhalt, as the former are much more frequent and so cannot be treated as rare imports.

The chronology proposed for this type is based on weak grounds (Kurila 2007, p.299; Iversen 2010, p.51); thus in the present author's opinion, they might have appeared earlier, even in the Late Roman period. This seems probable if one takes into consideration the very similar forms, i.e. Dresden-Dobritz, burial 1 from the Early Migration period, which are typical of the last stage of the Luboszyce culture. An even earlier chronology has been set for the spearhead found far to the south east in burial 2 in the Crimean cemetery at Chatyr-Dag, Balaklava

District (Ukr. *Raion*) (Вознесенская, Левада 1999, рис. 5:1; Kontny 2013c, Fig. 2:1). It was dated to the second half of the 3rd–first half of the 4th century, although even wider limits are possible (Мыц *et al.* 2006, pp.147–151; Kontny 2013c, pp.196–201). Its sword-like shape may be an imitation of spearheads made from broken sword blades (see Czarnecka 2010; Kontny 2013c, pp.197, 199, Fig. 2).

So-called 'spear-butts' are unknown from Roman-period Scandinavia with the exception of two finds from Illerup and two from Kragehul bog sites (Iversen 2010, p.64). The former should be treated not as spear-butts but as a specific spearhead type, i.e. type 99 (Ilkjær 1990, p.167) whereas the latter (Iversen 2010, pp.222, 241, Taf. 32:22525, C3146) may be true spear-butts. They can also be found in the Balsmyr bog site, inv. nos 2588:11, 12 (Klindt Jensen 1957, af. 64:5–7; Nørgård Jørgensen 2008, pp.150, 223, 226, 227, pl. 67:5–7). Such elements, which are well documented for the Late Pre-Roman period, remained almost unknown not only in Scandinavia but also in Central European *Barbaricum* (Kontny 1999; 2013c, pp.206–207). Nevertheless, they have been proven to have existed in the Bogaczewo, Dollkeim-Kovrovo, and Sudovian cultures; some of them may have been identified as conical spearheads (Kontny 2013c, pp.206–207, Fig. 5). It seems reasonable to link the 'spear-butts' from Kragehul and Balsmyr with the Balts, all the more so since other Balt elements were recorded there.

Apart from the Balt weapons in Scandinavian bog offerings (Vimose, Kragehul, Balsmyr, Nydam, Skedemosse, Nedergården) and dry land sacrificial sites (Uppåkra, Sorte Muld), the participation of Balt warriors in Scandinavian battles may be proven by the gear from barrow 2, burial 1 in the Sudovian cemetery at Sz wajcaria. The grave goods included a decorated spearhead of the Scandinavian

²⁴ The reconstruction of one of them does not seem entirely reliable but they resemble the sword-like spearheads quite closely.

²⁵ To the list of Lithuanian finds presented by Kazakevičius, one may add another from Barrow 4, burial 2 at Santaka, Vilnius District (Vaitkevičius 2007, pav. 55:1).

type Vennolum (Fig. 1:1), horse headgear with local Balt and imported Scandinavian fittings (including scavenger bird and human head motives), possibly also Scandinavian headgear buckets as well as some Przeworsk inspirations and eclectic solutions. It seems that the person buried in Szwajcaria, Barrow 2 was involved in international enterprises during C1b. It is tantalizing to link this with the Scandinavian conflicts documented by the bog deposits from that time. One could imagine a Sudovian warrior participating in those military events as a member of a retinue, presumably of a multi-ethnic character, and the successful enterprise being the key to his elevation in his homeland (Kontny 2013b).

There is also the Balt spearhead, which should be ascribed to Kazakevičius type II (Nørgård Jørgensen 2008, pp.91–92, af. 56), from burial 3 in the cemetery at Lovön, Ekerö Municipality (Arwidsson 1962, p.115, tav. 4:a). It may be considered evidence of an exchange of ideas (i.e. on weapon forms) among the members of ethnically mixed military units.

Such military inspirations, which may account for similar phenomena, can be spotted more frequently among the Balts. In addition to the imported Scandinavian spearheads (Fig. 1) known from Sudovian (Kontny 2007b, p.128, Fig. 9) and Dollkeim-Kovrovo cemeteries (Юрахов 2007; Kontny forthcoming b, note 28), the imported type Ilkjær 8c shield boss from Babięta, burial 323 (Bogaczewo culture) (Peiser 1916, pp.14–17, 20, Abb. 66; Kontny 2008a, p.96, Fig. 9:a, Table 1, with further sources), and probably the type Ejsbøl-Sarry, subtype 3 Roman sword (Biborski, Ilkjær 2006, pp.263–267), which probably came from Scandinavia and was found in Szwajcaria, barrow 25 (Kontny 2017c, pp.101–102), clearly visible Scandinavian influences can be seen in the Balt weaponry forms (Fig. 18). For example, the typi-

cal Balt spearheads, Kazakevičius types IB/IB and II (Казакявичюс 1988, pp.24–27, 36–41, рис. 7, 13, карта II, IV), which are characterized by concave upper blade edges (Fig. 18:4, 5), seem to have been influenced by Scandinavian models (Fig. 18:1–3) of types Vennolum, Skiaker, and Svennum (Ilkjær 1990, pp. 11, 95–96, 112, 133, Abb. 79, 82, 101). Another type of Balt weapon with Scandinavian inspiration is shield bosses with pearl-like decorations (Fig. 18:6–8). The design first appeared in Scandinavia in C1b (the one in a burial at Hjartbro, Haderslev Municipality, Fig. 18:6, as well as bog finds from Ejsbøl and Thorsberg) but the decoration soon became typical of the East Lithuanian Barrow culture and appeared on various shield bosses (Fig. 18:7, 8) until at least the Early Migration period (Kontny 2004a, pp.250–255, ryc. 3, 4; 2006, pp.162–167, ryc. 1, 2; Demidziuk, Kontny 2009, pp.164–166, 168, Figs. 1, 6, with further literature; Kiulkys 2010, pav. 4, 19, 23, 27, 28, 30, 31)²⁶.

Further Scandinavian influence can be seen in the shapes of the shield board fittings, especially the Zielsing type D ones, which are the most characteristic of the Scandinavian area (Fig. 12:1–3). Their appearance among the Balts points to cultural influence.

Military contacts with Scandinavia seem to explain the appearance of the scabbard chape from Kotel'nikovo, burial 4 (Peiser 1919b, p.322; Jankuhn's heritage). Its appearance is close to that of the Scandinavian winged chapes (see Bemann, Hahne 1994, p.402) from the second half of the 3rd century or first half of the 4th century (Biborski, Ilkjær 2006, Abb. 16) but a detailed analysis has drawn the conclusion that it was probably a local imitation (Kontny 2017c, p.104, Fig. 4:5).

Other phenomena which may be explained by Balt-Scandinavian military contacts include horse harnesses with chain reins, which were very popular in Scandinavia (see Ørsnes 1993;

²⁶ A similar shield boss from a destroyed grave was also found at the Przeworsk cemetery at Mokra, Miedźno Commune (Biborski 2010, p.146, ryc. 7:2). It should be connected with the cemetery's final stage, i.e. the advent of the Migration period. It seems to show far-reaching military contacts in this turbulent epoch.

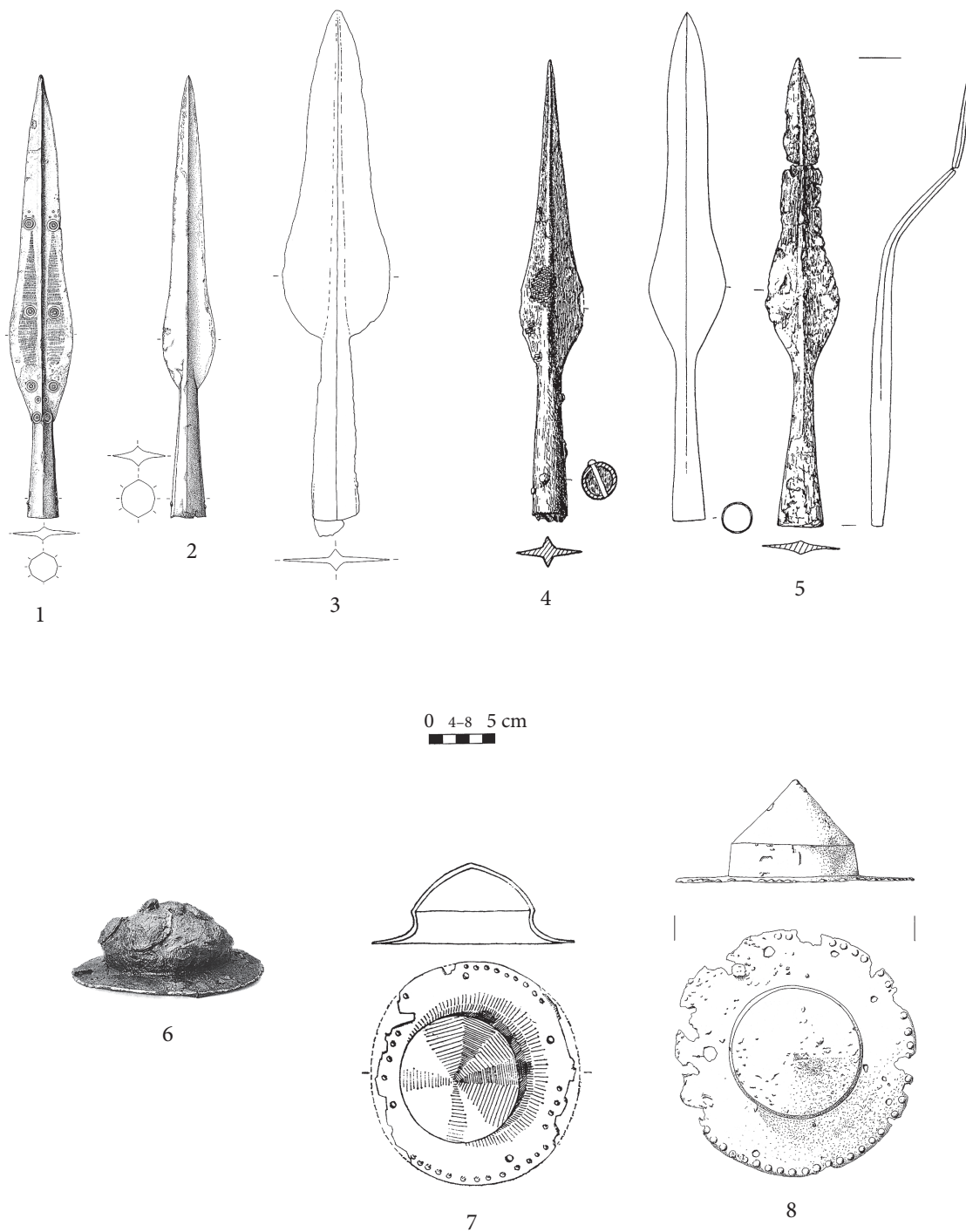


Fig. 18. Scandinavian patterns (1–3, 6) and their Balt derivations (4, 5, 7, 8): 1 – a type Vennolum spearhead (Illerup, inv. no. MTL); 2 – a type Skiaker spearhead (Illerup, inv. no. FIV); 3 – a type Svennum spearhead (Svennum); 4 – a type Kazakevičius IB/IB spearhead (Osowa, barrow 41); 5 – a type Kazakevičius II spearhead (Netta, burial 55); 6 – a shield boss with a bronze pearl-like decoration on the rim from Hjartbro, burial A19/20; 7 – a shield boss with pearl-like decorations from Neravai-Grigiškės, barrow 13, burial 2; 8 – a shield boss with pearl-like decorations from former Slobotka, a stray find. 1–3 after Ilkjær 1990; 4 – after Jaskanis 1961; 5 – after Kontny 2007b, with further literature; 6–8 – after Kontny 2004a, with further literature. 1–3 – not to scale.

Wilbers-Rost 1994), certain finds from the sacrificial bog site at Czaszkowo, Piecki Commune (Nowakiewicz, Rzeszotarska-Nowakiewicz 2012), and Late Migration period seaxes, which, by the time of their introduction in Scandinavia, were already well-known among the Balts (Kontny 2013a). Obviously these problems demand further studies. One may also ponder the Roman shield bosses found in West Balt territory²⁷. It seems less likely that Balts acquired their hemispherical shield bosses with flat flanges from service in the Roman auxiliary forces (which used them, see Bishop, Coulston 2006, p.92) or from victories over Romans on the battlefield than from contacts in Scandinavia where Roman military equipment is well documented, including bronze shield bosses, e.g. at Thorsberg bog (Engelhardt 1863, pl. 8:11, 12; Raddatz 1987, p.43, Taf. 23:1–4, 24:1, 4, Abb. 16:2). Although they have also been recorded on rare occasions in other parts of Barbarian Europe, i.e. the Marcomannic-Quadic or Elbian circle (Kaczanowski 1992, pp.62–63), there is one more premise: that the decoration of the Roman bronze umbo with zig-zag rim edges from Thorsberg (Raddatz 1987, pl. 27:3) was probably copied on iron artefacts known from the Balts, i.e. the Dollkeim-Kovrovo type K1 shield boss (Zieling 1989, pp.121–122) from Gora Velikanov, burial 31k (Кулаков 2014, p.219, рис. 95:3) and the type H2 (Zieling 1989, pp.102–104) from Gerojskoe-5 (Ger. *Eisliethen*), burial 130 (Jentsch 1896, p.121, Taf. III:31).

The above observations could well be illustrated by the retinue (Lat. *comitatus*, Ger. *Gefolgschaft*) described by Tacitus, especially the information about young warriors taking part in military raids organized by foreign military leaders (*Germania*, 14, 2;

Tacitus 1990; Kristensen 1983, pp.31–32). During the second stage of the three-stage development of the *comitatus*, multi-ethnic retinues evolved from local ones with fixed payment being introduced later (Hess 1977; Steuer 1982, pp.52–54; cf., for example, Tymowski 1985, pp.233–234; Kontny 2003c, with further literature). One may reasonably infer that big retinues/quasi-armies appeared in the case of supra-regional conflicts such as the Marcomannic Wars (166/167–180), the Scandinavian conflicts documented by the sacrificial bog sites (namely late 2nd–3rd centuries), the deposition of Vannius, King of the Quadi in 50 (*Annales*, XII, 29–30; Tacitus 1971), etc. In certain situations, the invaders could have embraced the exclusive use of foreign mercenaries to prevent their personal political interest in the affairs, e.g. Catualda, the Marcomannic noble who deposed King Maroboduus using Gothian forces in 19 (*Annales*, II, 62; Tacitus 1971); see also the Iazyges supporting Vannius (*Annales*, XII, 29; Tacitus 1971).

The big retinues probably consisted of several nuclei, i.e. local retinues (Wenskus 1961, p.349), which were also possibly of a multi-ethnic character. As to their size and complexity, they probably existed in times of war rather than peace (Wenskus 1961, p.348) as it is easiest to feed and maintain so many warriors during war. Under suitable conditions and during long-term conflicts, they could evolve into royal guards and participate in the machinery of the state (Wenskus 1961, pp.366–369).

This is a good fit for the archaeological observations. The items of Balt character seem to prove that Balts took part in Scandinavian conflicts, the best example being the Vimose 1 and 2a bog sites where the weapons of defeated Bogaczewo culture

²⁷ The Bogaczewo culture: Babięta I, burial 309, described in the publication as Macharren II (now Machary) (La Baume 1941, p.10, Abb. 6; Kaczanowski 1992, pp.63, 96, ryc. 16:1; Nowakowski 1995, p.66, tabl. XX:2; 2001, p.72, Taf. V:3; Bitner-Wróblewska 2008b, pl. XCIX–CI; Kontny 2008a, p.96, Table 1; Prussia-Museum Inventory Books, 7.068, 069; PM-A 096/1.244; Schmiedehelm's heritage, 7.13.18, 7.13.19, 7.13e.89, 7.13e.147, 7.13e.180; Grenz's heritage; Engel's heritage; Åberg's heritage). The Dollkeim-Kovrovo culture: Kulikovo (Ger. *Elchdorf*), Zelenogradsk District, stray find (La Baume 1941, p.9; Nowakowski 1996b, pp.71–72, Taf. 102:1; Радюш, Скворцов 2008, p.133, рис. 4:18), Schakumehlen, a former village in Bagrationovsk District (Raddatz 1993, Fig. 8; Радюш, Скворцов 2008, p.137, рис. 4:19; Jankuhn's heritage; Jahn's heritage).

warriors, who were perhaps allied with the retinue's Przeworsk members, were deposited in the Early Roman period. This was not a unique phenomenon. The gear in Szwajcaria, barrow 2, burial 1 (phase C1b) seems to prove that the interred Balt served as a warrior under Scandinavian and Przeworsk military leaders. The Balt militaria that date from the turn of the Roman period and from the Migration period and were excavated at Balsmyr and Sorte Muld on Bornholm, Kragehul on Funen, Skedemosse on Oland, and Uppåkra in Scania, come from smaller deposits rather than mass ones and so do not allow the contribution of the Balts to the invaders to be assessed, but it was significant at the least. This does not mean that the Balts occupied high positions among the invaders. They appear instead to have been cannon fodder but the conflict was also a stepping stone that allowed them to advance in the hierarchy, as shown by the aforementioned Szwajcaria burial. Moreover, their participation in military matters led to an exchange of ideas about tactics, weapons, and perhaps also certain rituals. This accounts for the adoption of the numerous Balt weaponry solutions that were inspired by the Scandinavians and Scandinavian imports. The opposite flow of ideas is less frequent (e.g. the spearhead from Lovön, burial 3), which indicates that the centre was in the north.

The Balts probably also participated in military raids at other targets. Balt weapons and other male cultural traits together with Przeworsk, Chernyakhov, Crimean, Sarmatian/Pontic, and perhaps also Scandinavian features have been recorded at the Crimean cemetery at Chatyr-Dag. The image of a cultural cocktail, reminiscent of J.R.R. Tolkien's fellowship of the ring, strongly suggests the existence of multi-ethnic military units in South east Europe that contained, *inter alia*, Balts (Kontny 2013c). Another example of Balt military activity is the gradual 'Baltisation' of the post-Wielbark culture areas in the Early Migration period (Kontny 2017b). The incidence of Balt cultural elements from this period, *inter alia* brooches and weapons, may be explained by the movement of groups searching for new con-

tacts with the people remaining in the area (e.g. of Pruszcz Gdański). The settlement clusters with good prospects for becoming trade centres such as natural harbours (e.g. the shores of Puck Bay and the Janów Pomorski region) were especially promising locations. In the case of Janów Pomorski, this strategy succeeded as was later proven by Truso (see Kontny, Szymański 2015, pp.340–341). The tentative military character of the exploration in half abandoned territories by Balt scouts can be deduced from the warlike activity of the Balts at the turn of the Early Migration period, which has been described in this paper. It seems that their possible participation in distant raids was even accomplished with the use of boats (as some Balt elements came from the Baltic Sea islands). This seems reasonable as trade (at least sea trade) and war parties were strictly connected (Kontny 2012, pp.69–71) since both needed a well-trained crew of oarsmen. The supposition that warriors formed the vital core of the migrants seems to also be suggested by the weapon burials from the earliest stage of the Balt migration along the shores of Vistula Bay, i.e. Horizon 0 of the Elbląg group (Kontny 2017b) and fits well with the idea of Stefan Burmeister (2000, p.544) who tried to describe the theoretical grounds for ancient migrations, i.e. that warriors or traders formed the first migrant wave.

In conclusion, the Balts were probably not the leaders of interregional war parties but some of them reached the position of reputable brothers-in-arms in the Roman and Early Migration periods. Their involvement in military raids led to an exchange of weaponry ideas. This mechanism, which has been alleged to have occurred in the Germanic societies, has definitely been neglected so far. It is hoped that the present paper will change this underestimation.

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ABBREVIATIONS

- AA – Acta Archaeologica
- AB – Archaeologia Baltica
- AL – Archaeologia Lituana
- APA – Acta Praehistorica et Archaeologica
- JASP – Jutland Archaeological Society Publications
- JRMES – Journal of Roman Military Equipment Studies
- MA – Materiały Archeologiczne
- RB – Rocznik Białostocki
- SA – Silesia Antiqua
- SAP – Sitzungsberichte der Altertumsgesellschaft Prussia
- SPÖG – Schriften der Physikalisch-Ökonomischen Gesellschaft zu Königsberg i. Pr.
- ŚNS – Światowit nowa seria
- WA – Wiadomości Archeologiczne

GINKLO BROLIAI. BALTŲ KARIAI IR JŲ TARPREGIONINIAI KONTAKTAI ROMĖNIŠKŪJU IR TAUTŲ KRAUSTYMOŠI LAIKOTARPIAIS (BOGAČEVO IR SŪDUVIŲ KULTŪRŲ ATVEJIS)

Bartosz Kontny

Santrauka

Straipsnyje pristatoma Vakarų baltų kultūrų rato, ypač Bogačevo ir Sūduvių kultūrų, ginkluotės tyrimų būklė. Tai pirmasis bandymas apibendrinti šiuos duomenis, daugiausia remiantis straipsnio autoriaus tyrimų rezultatais.

Ietys neabejotinai buvo pagrindiniai puolamieji ginklai. Greičiausiai abiejuose kultūrose vyravo ne-

specializuotos jų formos, t.y. dauguma iečių galėjo būti naudojamos, priklausomai nuo poreikio, kaip duriamosios ir svaidomosios. Didelis kapų, kuriuose rastas tik vienas ietigalis, skaičius rodo, kad pirmoji funkcija greičiausiai buvo labai svarbi. Tai ypač pasakytina apie Sūduvių kultūrą, kur žinomi tik trys (5,2%) atvejai, kai viename kape aptikta daugiau

nei vienas antgalis, o Bogačevo kultūroje – 16,1%. Pastarajai kultūrai būdingą tam tikrą antgalių lapo formos plunksna specializaciją patvirtina epizodiškai kartu aptinkami ietigaliai su užbarzda, viena-reikšmiškai naudoti svaidomosioms ietims. Kartais į kapus dėtos poros aiškiai dydžiu besiskiriančių antgalių leidžia daryti prielaidą, kad jie priklausė duriamosioms ir svaidomosioms ietims. Remiantis Sūduvių kultūros griautinių kapų duomenimis galima teigti, kad Skandinavijoje paplitusios ilgos, apie 3 m, ietys tarp baltų nebuvo populiarios, jie dažniausiai naudojo beveik kario ūgio ietis.

Kalbant apie duriamųjų iečių antgalių tipus, Bogačevo ir Sūduvių kultūrose pastebima labai skirtinga situacija. Pirmuoju atveju – didžiulė Pševorsko kultūros įtaka, o Sūduvių kultūroje rasta tik keletas Pševorsko kultūrai būdingų antgalių, kurie atitinka ankstyviausią kultūros fazę ir greičiausiai yra susiję su Bogačevo kultūros įtaka Sūduvių kultūros formavimosi procesui. Didesnė yra Skandinavijos įtaka, o dauguma Sūduvių kultūros ietigalių sietini su V. Kazakevičiaus aprašytais pavyzdžiais (18:4, 5 pav.). Ornamentuoti ietigaliai beveik išimtinai aptinkami tik Bogačevo kultūroje (2:1–5, 7–9 pav.).

Viena iš ilgai egzistuojančių baltų ginkluotės idėjų, kurios autorius yra W. Nowakowski, kad baltai kalavijus naudojo tik išskirtiniais atvejais. Jis rėmėsi archeologine medžiaga (kalavijų aptinkama retai), dar pasitelkdamas Tacito „Germanijoje“ pateikiamą informaciją (45, 3), kad *Aestii*, t.y. Sembos pusiasalyje gyvenę baltai „[...] kardus vartoja retai, dažniau vėzdus“¹. W. Nowakowski teigia, kad baltai kalavijus naudojo retai, pirmenybę teikė trumpesniems, kartais sutrumpintiems, dažniausiai kalavijus pakeisdavo kovos peiliais ar durklais. Remdamasis archeologine medžiaga šio straipsnio autorius daro prielaidą, kad Tacito minimi aisčių vėzdai bei geležies trūkumas gali būti traktuojama kaip bendrinė frazė arba kad tai atspindi ankstesnio chronologinio etapo – Vakarų baltų pilkapių kultūros – situaciją.

Bogačevo, Sūduvių ir Dollkeim-Kovrovo kultūrų kalavijų sąrašą papildė keletas gerai išlikusių kalavijų ir mažų fragmentų, kurie ne visada yra kalavijų dalys, bet liudija jų naudojimą (pvz., makštų ar kalavijo diržo detalės) (3 pav.). Galima manyti, kad kalavijo naudojimą rodo ir tame pačiame palaidojime aptiktos dvi diržo sagtys: viena stačiakampė dvigubu liežuvėliu priklauso juosmens diržui, kita, mažesnė – *balteus*. Iš esmės atrodo, kad kalavijai buvo naudojami kitaip nei kaimyninėje Pševorsko kultūroje ir Skandinavijoje, kur tuščios makštys yra gana reta įkapė. Visgi teiginys, kad baltų kraštuose labai trūksta kalavijų, yra pernelyg pesimistinis, juo labiau kad tautų kraustymosi laikotarpiu baltiškieji vienašmeniai kalavijai tapo labai populiarūs (4 pav.).

Svarbią vietą užėmė smogiamieji ginklai. Be neabejotinai naudotų vėzdų (*fustis*), galima išskirti pentinius ir įmovinius kirvius. Pagrindinės pentinių kirvių grupės yra: grupė I (5 pav.) – kirviai asimetriiniu lenktu liemeniu ir grupė II (6, 7 pav.) – beveik simetriniu liemeniu. Grupės I chronologija apima ankstyvąją romėniškąjį laikotarpį, gal tik išskyrus pogrupį 3, kuriam tiksliai datuoti nepakanka duomenų. Grupės I kirvių aptikta centrinėje ir daugiausia šiaurinėje Bogačevo kultūros dalyse, nors jų esama ir Dollkeim-Kovrovo kultūroje (atsitiktinis radinys Bugrovo) bei Lietuvoje – tipas 5 pagal A. Malonaitį, pvz., Paragaudis (Šiaurės Lietuvos pilkapių kultūra). Įkapių chronologinės analizės duomenimis, galima nustatyti tokią grupės II chronologinę seką: pogrupis II.1 – B2–C2 fazės, II.2 – B2–C1a, II.3 – B2/C1–C1a. Simetriniai kirviai paplitę beveik visoje Bogačevo kultūros teritorijoje, išskyrus šiaurinę jos dalį, kur vyrauja grupės I radiniai. Tai gali reikšti lokalius ginkluotės skirtumus, tačiau šią prielaidą dar reikėtų patikslinti ateityje.

Sūduvių kultūroje žinoma mažiau kirvių, bet ši situacija susiklostė dėl mažos tyrimų apimties. Kirvių nebuvimas Gołdap grupėje akivaizdžiai susijęs su papročiu jų nedėti į kapus. Sūduvių kultūros kir-

¹ Cituojama pagal lietuvišką vertimą (Tacitas 1972, p.30).

viai yra mažiau išreikšta pentimi, palyginti su Bogačevo kultūros dirbiniais.

Simetriniai Sūduvių kultūros kirviai datuojami C1–C2 fazėmis, taigi yra artimi Bogačevo kultūros dirbinių chronologijai, žinoma, neįtraukiant B2 fazės, ankstesnės nei Sūduvių kultūra. Tikėtina, kad šiuos kirvius Bogačevo kultūros žmonės naudojo ir C2 laikotarpiu, bet sunku tai pagrįsti, kadangi Bogačevo kultūroje paprotys dėti ginklus į kapus išnyko C1b subfazėje. Analogijos (grupės II) iš Dollkeim-Kovrovo kultūros, kartais aptinkamos su gerai datuojamais radiniais, leidžia pratęsti jų chronologiją iki C2–C3 fazės.

Kitą ašmenis turinčių ginklų grupę sudaro įmoviniai kirviai (8, 9 pav.). Beje, *Barbaricum* būta labai panašių dailidžių naudotų įrankių, kurie gerai žinomi baltų kraštuose, tokių kaip vedegos, nors juos galima lengvai atskirti pagal skersinę krašto asimetriją, išgautą centrinę darbinio paviršiaus dalį, dažniausiai kvadratinę ir mažesnio skerspjūvio įmovą. Bogačevo kultūros dirbiniai pasižymi įvairaus gylio įmova, kuri dažniausiai siekia pleišto formos arba plokščius ašmenis. Galima išskirti tris kirvių tipus: I – masyvia, vidurinėje dalyje žymiai storesnė įmova, su įlenkimais tarp įmovo ir vėduoklės formos ašmenų (8:1–3 pav.); II – panašūs į grupės I dirbinius, bet tolygiai siaurėjančia mova, tai kirviams suteikia smėlio laikrodžio formą (8:4–6 pav.); III – lygiagrečiomis arba beveik lygiagrečiomis įmovo sienelėmis, nežymiai išsiskiriančiais ašmenimis; šių dirbinių išskirtinis bruožas yra nuožulnus įmovo kraštas (8:7, 8 pav.).

Remiantis surinkta medžiaga galima teigti, kad įmovinių kirvių formos laikui bėgant mažai keitėsi. Iki šiol jų aptikta B1–B2/C1 periodais datuojamuose kompleksuose. Palyginti su Bogačevo kultūros radiniais, Sūduvių kultūros kirvių matmenys yra įvairūs (9 pav.). Taip pat įvairuoja kirvių morfologija. Kol kas tipo I dirbinių Sūduvių kultūroje nerasta. Nepastorinta įmova ir lieknesnė forma greičiausiai yra susiję su chronologiniais, ne tik kultūriniais skirtumais, nors dėl mažo gerai datuotų Bogačevo kultūros objektų skaičiaus šis pastebėjimas lieka hi-

potetinis ir turėtų būti patikrintas ateities tyrimais. Sūduvių kultūros įmoviniai kirviai dažniausiai yra lieknesni ir dažnai ilgesni nei Bogačevo kultūros analogai, taip pat įmovo yra mažesnio skersmens. Tai gali būti susiję su kitokiu, saugesniu tvirtinimo būdu, pvz., odinių dirželių, medinių pleiščių ar kitų patvaresnių medžiagų naudojimu. Įmoviniai kirviai greičiausiai turėjo panašų vaidmenį kaip ir pentiniai: jie buvo panašaus svorio (0,25–0,5 kg), panašus abiejų rūšių kirvių, aptiktų Bogačevo ir Sūduvių kultūrose, skaičius. Tai rodo, kad laidojimo ritualuose jie turėjo panašią reikšmę. Nė vienu atveju įmoviniai kirviai nebuvo rasti tame pačiame kape kartu su pentiniais, tai leidžia daryti prielaidą, kad jie buvo naudojami identiškiems tikslams. Žinoma, kad neįmanoma atkurti tikrojo įmovinių kirvių naudojimo tikslo, galima manyti, kad, bent Bogačevo ir Sūduvių kultūrų atveju, kirvių radimo kontekstas byloja apie karinę jų paskirtį, tačiau, žinoma, jie, kaip ir pentiniai kirviai, galėjo būti naudojami ir kitoms reikmėms.

Autorius atmeta vadinamųjų „kovos peilių“ karinę paskirtį romėniškuoju laikotarpiu. Jo nuomone, nė vienas šių dirbinių negali būti vienareikšmiškai priskiriamas kovos peiliams dėl to, kad kariai naudojami duriamąja ietimi ir skydu, kartais kalaviju, pentiniu ar įmoviniu kirviu arba svaidomąja ietimi, tad peilio naudoti nebereikėjo, nebent visų kitų puolamųjų ginklų praradimo atveju. Toks „paskutinės galimybės“ atsitiktinis panaudojimas neleidžia laikyti įrankio ginklu. Tai netaikytina smailiesiems kovos peiliams – durklams (*Dolchmessern*), kurie yra pripažįstami tikrais ginklais.

Gynybiniais ginklams priskiriami skydai, kurie turi vietinių bruožų (pvz., „archajinių“ elementų, tokių kaip didelis kniedžių skaičius (11:3–5 pav.), gerai žinomas iš vėlyvojo ikiromėniškojo laikotarpio, kniedžių stambiomis galvutėmis (11:1, 2 pav.) arba ilgų vinių naudojimas, vėlyvojo ikiromėniškojo laikotarpio tipo 4a pagal M. Jahn antskydžių radiniai ankstyvojo romėniškojo laikotarpio kompleksuose), tačiau kartu jie atitinka ir bendrąją Centrinės Europos kontekstą. Esama tam tikrų neatitikimų

kai kurių tipų apkalų chronologijoje. Kai kurie tipai buvo naudojami daug ilgesnį laikotarpį nei nebaltiškose teritorijose. Tikėtina, kad šioje srityje baltų kultūrose tradicija susipynė su tuometėmis moderniomis kryptimis, ir kalvystėje antskydžių gamybos praktika išliko konservatyvi. Be to, Vakarų baltų kultūrų rate aptinkama skydo rankenų ir skydo krašto bei korpuso apkalų (12 pav.).

Lankas ir strėlės laikomi medžioklės įrankiais (13 pav.). Žirgai karo antpuolių ir žygių metu atliko labiau pagalbinę funkciją, t.y. kavalerija galėjo būti apskritai nenaudojama. Žirgas neabejotinai pabrėžė savo jo savininko statusą: raitelio svarbą atskleidžia į kapus dedami pentiniai.

Baltiškieji daiktai atskleidžia baltų dalyvavimą skandinavų karuose. Tai rodo ankstyvojo romėniškojo laikotarpio Vimose 1 ir 2a auokojimo pelkėse vietų radiniai: antskydžiai, pentiniai ir įmoviniai kirviai, kiti įrankiai (14–16 pav.), taip pat tautų kraustymosi laikotarpio auokojimo pelkėse (Balsmyr, Kragehul, Skedemosse) ir kitos vietos (Sorte Muld, Uppåkra), kuriose rasta tipo III pagal V. Kazakevičių ietigalių (17 pav.). Šis dalyvavimas leido keistis žiniomis apie karybos taktiką ir ginkluotę. Tai parodo ietigalių ir antskydžių formos (18 pav.), skydų apkalai (12 pav.), importiniai ginklai (2 pav.), Szwajcaria pilk. 2 kabo įkapės.

ILIUSTRACIJŲ SĄRAŠAS

1 pav. Importiniai skandinaviški ietigaliai ir jų imitacijos Vakarų baltų kultūrų rate: 1, 2 – Vennum tipas, Szwajcaria, pilk. 2, k. 1, 3 – skandinaviško Saeli/Ilkjær 23 (?) tipo ietigalio su užbarzda imitacija, pagaminta iš Kaczanowski VIII tipo ietigalio, Netta, k. 81, 4 – Sättra tipo ietigalis, Pervomaiskoje, k. 49, 5 – Skuttunge tipo ietigalis, Dubravka, k. 28, 6 – Mollestad tipo ietigalis, Osowa, pilk. 13. 1 – pagal Kontny 2007b, 2 – pagal Jaskanis 2013, 3 – pagal Kontny 2007b, 4 – *B. Kontny pieš.*, 5 – pagal Raddatz 1993, 6 – pagal Kontny 2007b ir kt. literatūra.

2 pav. Dekoruoti ir rantyti ietigaliai (Vakarų bal-

tų formos ir jų analogijos): 1 – Łabapa, k. 67, Bogačevo kultūra (kairėje) ir Wesólki, k. 45, Pševorsko kultūros analogija (dešinėje), 2 – Muntowo, k. 120, Bogačevo kultūra, 3 – Łabapa, k. 63, 4 – Stara Rudówka, k. 13, Bogačevo kultūra, 5 – Judziki, atsitiktinis radinys, 6 – Szwajcaria, pilk. 2, k. 1, Sūduvių kultūra, 7 – Stara Rudówka, k. 13, Bogačevo kultūra, 8 – Marcinkowo, k. 13, Bogačevo kultūra, 9 – Tiulenino, k. 154, Dollkeim-Kovrovo kultūra. 1 (kairėje) – pagal La Baume 1941b, 1 (dešinėje), 2–9 – pagal Kontny 2007b; 2017a ir kt. literatūra. 7–9 – nemasteliniai.

3 pav. Vakarų baltų kalavijo rankenos ir makštų dalys ir jų analogijos: 1 – Onufryjewo, k. 275, Bogačevo kultūra, 2 – Cetula, k. 2, Pševorsko kultūros analogija, 3 – Jaroslavskoje, k. 16, Dollkeim-Kovrovo kultūra, 4 – Szurpiły, radimvietė 4, Sūduvių kultūra (?), 5 – Kotelnikovo, k. 4, Dollkeim-Kovrovo kultūra, 6 – Kragehul pelkė. 1 – pagal H. Jankuhn archyvą (Nowakowski 2013), 2 – pagal Biborski 2000, 3 – pagal Jankuhn 1939, 4 – pagal Sawicka 2007, 5 – pagal H. Jankuhn archyvą, 6 – pagal Iversen 2010.

4 pav. Baltiškojo tipo kovos peilių paplitimas: mėlyni apskritimai – ankstyvosios formos, raudoni apskritimai – išstobulintos formos, žali apskritimai – tik makštų apkalai. Pagal Казакевичюс 1988; Kontny 2013a.

5 pav. Bogačevo kultūros grupės I, pogrupių I.1 (1, 2) ir I.2 (3–5) kirviai: 1 – Bartlikowo (vok. *Bartlickshof*), k. 7, 2 – Stręgiel II, k. 150, 3 – Lisy, k. 67, 4 – Radużnoe, k. I, 5 – Sterławki Małe, k. 342. 1, 5 – *B. Kontny pieš.*, 2–4 – pagal Nowakowski 2013.

6 pav. Bogačevo kultūros grupės II pogrupio II.1 (1–4) ir II.2 (5–8) kirviai: 1 – Bogaczewo-Kula, 2 – Raczki, k. 6a, 3 – Bartlikowo, k. 384, 4 – Nowy Zyzdrój, k. 186, 5 – Bargłów Dworny, atsitiktinis radinys, 6 – Judziki, k. 12, 7 – Koczek II, k. 121, 8 – Spsychówko, atsitiktinis radinys (?). 1 – pagal Okulicz 1958, 2 – pagal La Baume, Gronau 1941, 3 – pagal Nowakowski 2013, 4 – pagal M. Schmiedehelm archyvą, 5 – *B. Kontny pieš.*, 6 – pagal Engel ir kt. 2006, 7 – pagal Juga ir kt. 2003, 8 – pagal Gaerte 1929. 4, 7 – nemasteliniai.

7 pav. Sūduvių (1–5) ir Bogačevo (6) grupės II kirviai: 1 – variantas II.1.1 (Netta, k. 30), 2 – variantas II.1.2 (Szwajcaria, pilk. 26), 3 – variantas II.1.3 (Szurpiły, pilk. XXI, centrinis k.), 4 – pogrupis II.2 (Suvalkų regionas, atsitiktinis radinys), 5 – pogrupis II.3 (Szwajcaria, pilk. 2, k. 1), 6 – pogrupis II.3 (Paprotki Kolonia, k. 67). 1, 2 – pagal Jaskanis 2013, 3 – pagal Żurowski 1961, 4, 5 – B. *Kontny pieś.*, 6 – M. *Karczewski nuotr.*

8 pav. Bogačevo kultūros įmoviniai kirviai: 1, 2, 4 – Judziki, atsitiktiniai radiniai, 3 – Romoty, k. 70, 5 – Radużnoe, k. VI, 6 – Kosewo I, k. 292, 7 – Bargłów Dworny, atsitiktinis radinys, 8 – Judziki, k. 7. 1, 2, 4, 7, 8 – B. *Kontny pieś.*, 3 – pagal R. Grenz archyvą, 5 – pagal Bezzenberger 1896, 6 – pagal M. Schmiedehelm archyvą.

9 pav. Sūduvių kultūros įmoviniai kirviai: 1 – tipas II/III (Netta, k. 12), 2 – tipas III (Żywa Woda, pilk. 7), 3 – tipas III (Szwajcaria, k. S.12), 4 – tipas III (Szwajcaria, pilk. LXXII, k. 2), 5 – tipas Malonaits 2 (Szwajcaria, pilk. 40). 1 – pagal Bitner-Wróblewska 2007, 2–5 – B. *Kontny pieś.*

10 pav. Įmovinių kirvių radimo vietos Vakarų baltų kapuose: 1 – Marvelė, k. 312, 2 – Szwajcaria, k. S.12. 1 – pagal Bertašius 2005, 2 – pagal Jaskanis 2013.

11 pav. Baltų archajinių antskydžių dalys: 1, 2 – viny/kniedės stambiomis galvutėmis, 3–5 – viny/kniedės, 6, 7 – tipas Jahn 4a, romėniškasis laikotarpis. 1, 2 – Nikutowo, atsitiktiniai radiniai, 3 – Spsychówko, k. 247, iš E. Hollacko 1902 m. kasinėjimų, 4, 5 – L. J. Pisanskio kolekcija, 6 – Kovrovo, k. 15, 7 – Jaroslavskoe (vok. *Schlakalken*), k. 14. 1 – pagal M. Jahn archyvą, 2 – pagal M. Jahn archyvą; Kontny 2007a, 3 – pagal M. Jahn archyvą, 4, 5 – pagal Nowakowski 1998, 6 – pagal H. Jankuhn archyvą, 7 – pagal Nowakowski 1996b. Nemasteliniai.

12 pav. Skydų apkalai iš Skandinavijos (1–3), Pševorsko kultūros (5–7), Dollkeim-Kovrovo kultūros (8) ir Bogačevo kultūros (4, 9, 10): 1, 2 – Nydam, 3 – Thorsberg, 4 – Gąsior, k. 213, 5–7 – Kryspinów, k. 25, 8 – Kovrovo, k. 306, 9 – Nowy Zyzdrój, k. 117, 10 – Spsychówko, k. 210, iš E. Hollacko 1902 m. ka-

sinėjimų. 1, 2 – pagal Bemmann, Bemmann 1998, 3 – pagal Raddatz 1987, 4 – pagal Schmiedehelm 2011, 5–7 – pagal Godłowski 1972, 8 – pagal Kulakov 2009, 9 – pagal M. Schmiedehelm archyvą, 10 – pagal M. Jahn archyvą. 9, 10 – nemasteliniai.

13 pav. Kamanos su vadžiomis (14) ir strėlių antgaliai (1–13) iš Bogačevo ir Sūduvių kultūrų: 1–10, 14 – Paprotki Kolonia, k. 72, 11–13 – Szwajcaria, pilk. 15, k. 2. 1–10, 14 – pagal Bitner-Wróblewska *ir kt.* 2001, 11–13 – pagal Jaskanis 2013.

14 pav. Pševorsko ir Vakarų baltų kultūrų elementų pavyzdžiai iš Vimose pelkės (1–6, 8–12) ir galimai balno guga (7). 1–5, 7–12 – pagal Engelhardt 1869, 6 – pagal Christensen 2005. Nemasteliniai.

15 pav. Vimose kirviai ir galimos analogijos: 1 – Vimose, inv. Nr. 17094, 2 – Paprotki Kolonia, k. 67, 3 – Vimose, inv. Nr. 15682, 4 – Judziki, k. 12a, 5 – Vimose, inv. Nr. 21628, 6 – Sapotskin, atsitiktinis radinys. 1 – pagal Engelhardt 1869, 2 – pagal Karczewski 1999, 3 – B. *Kontny nuotr.*, 4 – pagal Engel *ir kt.* 2006, 5 – pagal Engelhardt 1869, 6 – B. *Kontny pieś.*

16 pav. Mediniai antskydžiai iš Vimose (1, 8) ir baltiškiosios geležinės analogijos (2–7, 9–16): 1 – Vimose, 2 – Sterławki Małe, k. 341, 3 – Paprotki Kolonia, k. 44, 4 – Ozerovo, 5 – Logvino, atsitiktinis radinys, 6 – Osowa, pilk. 71, k. 1, 7 – Miętkie, 8 – Vimose, 9 – Szwajcaria, k. S.25, 10 – Szwajcaria, pilk. LXVIII, k. 2, 11 – Onufryjowo, k. 370b, 12 – Elanovka, k. 38, 13 – Gračevka, k. 62, 14 – Prudy, atsitiktinis radinys, 15 – Medvedevka, atsitiktinis radinys, 16 – Kotelnikovo, k. 4. 1 – pagal Engelhardt 1869, 2 – pagal Karczewska 1999, 3 – pagal Karczewski 1999, 4, 5 – pagal Радюш, Скворцов 2008, 6 – pagal Jaskanis 1961, 7 – pagal M. Jahn archyvą, 8 – pagal Engelhardt 1869, 9, 10 – pagal Jaskanis 2013, 11 – pagal Kontny 2008a, 12 – pagal Радюш, Скворцов 2008, 13 – pagal Raddatz 1993, 14–16 – pagal Радюш, Скворцов 2008. Nemasteliniai.

17 pav. Kazakevičius III tipo ietigalių paplitimas: 1–3 – Kragehul, 4 – Nydam, 5 – Sorte Muld, 6 – Balsmyr, 7–8 – Nedergården, 9 – Skedemosse, 10, 11 – Dresden-Dobritz, k. 1, 12 – Gübs, 13 – Uppåkra, 14, 15 – Neravai-Grigiškės, pilk. 20, k. 2 ir pilk. 22, k. 4,

16 – Taurapolis, pilk. 5, 17, 18 – Vilnius, 19 – Lapušišškė, pilk. 9, 20 – Kivyčiai, atsitiktinis radinys, 21, 22 – nežinoma radimvietė Lietuvoje, 23 – Santaka, pilk. 4, k. 2, 24 – Čatyr-Dag, k. 2. Pagal Kazakevičius 1988; Iversen 2010, papildyta autoriaus.

18 pav. Skandinavieški pavyzdžiai (1–3, 6) ir baltiškiosios išvestinės formos (4, 5, 7, 8): 1 – Vennolum tipo ietigalis (Illerup, inv. Nr. MTL), 2 – Skiaker tipo ietigalis (Illerup, inv. Nr. FIV), 3 – Svennum tipo ietigalis (Svennum), 4 – Kaza-

kevičius IB/IB tipo ietigalis (Osowa, pilk. 41), 5 – Kazakevičius II tipo ietigalis (Netta, k. 55), 6 – antskydis su žalvarinių gūbrelių pakraščių puošyba (Hjartbro, k. A19/20), 7 – antskydis su gūbrelių pakraščių puošyba (Neravai-Grigiškės, pilk. 13, k. 2), 8 – antskydis su gūbrelių pakraščių puošyba (buv. Slobotka, atsitiktinis radinys). 1–3 pagal Ilkjær 1990, 4 – pagal Jaskanis 1961, 5 – pagal Kontny 2007b ir kt. literatūra, 6–8 – pagal Kontny 2004a ir kt. literatūra. 1–3 – nemasteliniai.

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