

## Star decoration on Late Bronze Age helmets, cups and decorated discs in central and south-eastern Europe

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### Izvleček

Dokumentiranje in analiziranje bronastodobnih kovov orožja, odkritih na območju srednje in jugovzhodne Evrope, je pokazalo, da precejšnje število tistih poprej opredeljenih kot deli čelad dejansko pripada okrašenim diskom s primerljivim okrasom. Okras na teh predmetih je narejen z iztolčenimi buncicami, ki tvorijo eno ali več linij dotikajočih se lokov, povezanih v krog oziroma zvezdasti motiv. Pod loki so včasih dodatne iztolčene buncice, obdane z enim ali več krogi, t. i. puncirani krožci, celoten motiv pa je lahko obdan z enim ali več iztolčenimi krogi. Tak okras najdemo na različnih vrstah predmetov, razen na okrašenih diskih in čeladah tudi na bronastih in keramičnih posodah. Prispevek predstavlja te predmete ali samo njihove odlomke in prinaša razpravo o njihovem izvoru, razprostranjenosti in tipologiji.

**Ključne besede:** srednja in jugovzhodna Evropa, zvezdasti okras, čelade, okrašeni diski, skodelice, pozna bronasta doba

Documentation work for a project on the manufacture and use of the Bronze Age armour from eastern and central Europe (see Acknowledgements) brought about a list of fragments thought to have belonged to bronze helmets. An analysis revealed that the majority of the alleged helmet fragments actually belonged to decorated discs of sheet bronze. Most were published without a photograph and their drawings were of poor quality without a scale, making it impossible to exactly reconstruct their shape and size. The erroneous interpretation is thus not surprising. Apart from helmets (most recently Karavanić 2009, 116–118; Gleirscher 2007, 48–50; Schauer 1982, 339; id. 2003, 193, 201; Škoberne 2001, 11–35;

### Abstract

Analyses and documentation of Bronze Age armour pieces from eastern and central Europe revealed that a considerable number of fragments previously attributed to helmets were in fact parts of discs with comparable decoration. The latter consists of single or multiple embossed lines shaped into conjoining arcs arranged in a circle and forming a star. The arcs are sometimes filled with small embossed pellets surrounded by a single or multiple rings, termed ring-and-dot decoration. The whole might be surrounded by either a single or multiple embossed rings. The article presents all the bronze cups, helmets and discs, including fragments, as well as ceramic vessels that are decorated with this star motif; it also discusses and defines their origin, distribution and typology.

**Keywords:** central and south-eastern Europe, star decoration, helmets, decorated discs, cups, Late Bronze Age

Kemenczei 1979, 81 f) some were also interpreted as fragments of sheet bronze to be attached to a wooden container, possibly a cist (Clausing 1996; id. 2001, 210). The alternative interpretation of decorated discs is substantiated by the loop on the reverse of some of the large fragments that matches the correctly identified discs with similar decoration, such as those from Nadap and Nova Bingula (Hansen 1994, 258–260; Popović 1975, 38; Müller-Karpe 1959). Apart from their identification, the manufacturing technique and usage of the decorated discs has also been discussed recently (Mödlinger, Piccardo 2012). Milan Salaš (2002, 269) identified such decorated discs when discussing the fragments from northern Croatia,

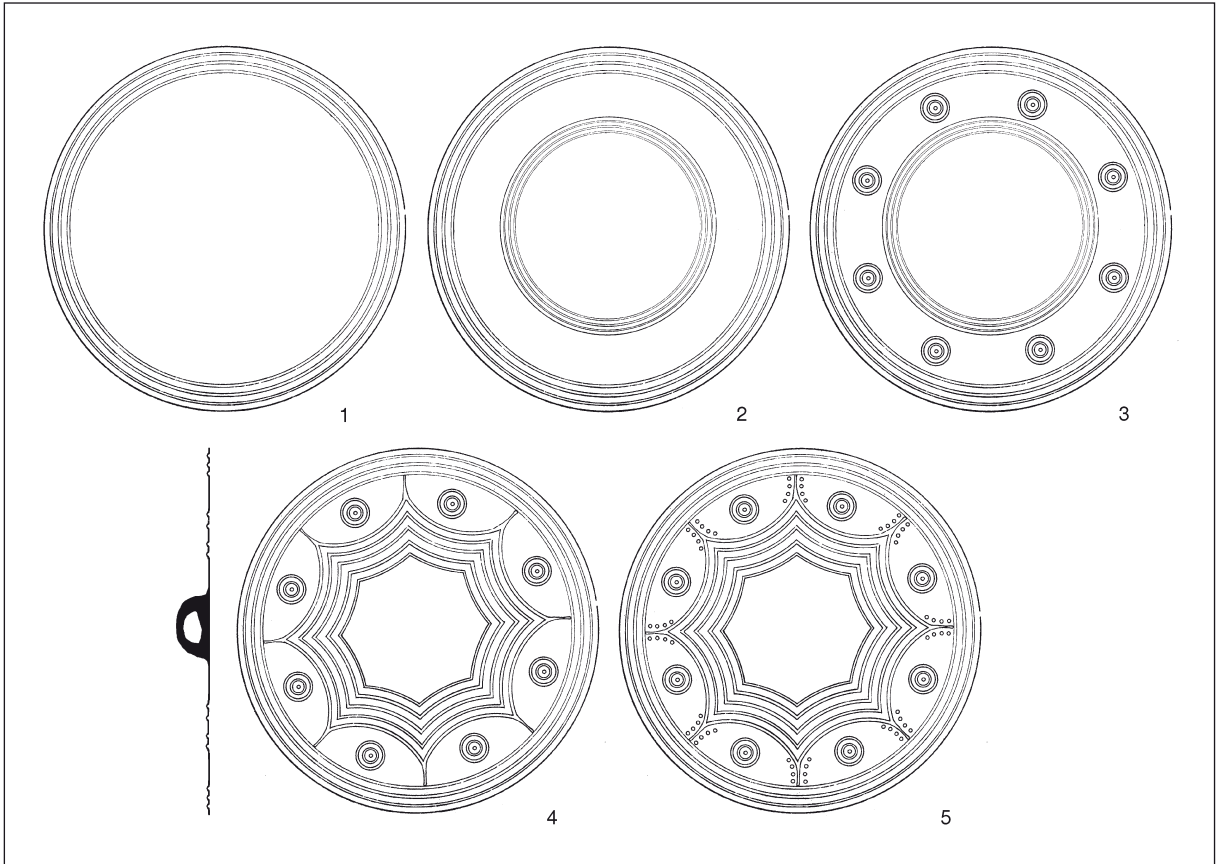


Fig. 1: Schematically drawn development of the star decoration. 1 – Discs with outer ribs only; 2 – discs with ribs; 3 – discs with ribs and ring-and-dots; 4 – discs with ribs, ring-and-dots and the star motif; 5 – discs with ribs, ring-and-dots, the star motif and small bosses (probably later variant).

Sl. 1: Shematični prikaz razvoja zvezdastega okrasa. 1 – Diski z robnimi rebri; 2 – diski z rebri; 3 – diski z rebri in punciranimi krožci; 4 – diski z rebri, punciranimi krožci in zvezdastim motivom; 5 – diski z rebri, punciranimi krožci, zvezdastim motivom in iztolčenimi bunčicami (verjetno kasnejša različica).

Augsdorf in Austria and Jurka vas in Slovenia. Also, Tobias Mörtz interpreted such fragments as parts of decorated discs (2011b, 95) rather than as fragments of bronze cap helmets found between Lake Balaton and the Sava river (cf. Clausing 2001, 210; Karavanić 2009, 116 f), noting that the few complete helmets that survive lack the ring-and-dot decoration. Whether interpreted as helmets or discs, all authors generally agree on their dating to BA D–Ha A1, and bronze cups with the same type of decoration to Ha A2–B1 (see Catalogue). All the fragments of cap helmets and discs with some form of star decoration have been found in hoards. The majority of the discs were incomplete with only a few, such as those from Privina Glava, Nadap, Poljanci I and Zalaszentmihály-Pötréte, almost complete (Cat. Nos. 11, 14, 7, 26).

In attempting to reliably differentiate between helmet fragments and discs, it is of crucial im-

portance that the objects be studied first hand, because published drawings alone rarely suffice. There are a number of decorative and structural features that can be used to differentiate between the two. Firstly, the ring-and-dot decoration under the conjoining arcs of the star motif (Fig. 1: 4,5) is found on a number of discs, but not on helmets. Secondly, the outer ring of ribs that surround the star motif always runs very close to the edge of the disc that is smooth (Pls. 1–3), whereas the rim of a cap helmet is perforated (Pls. 4–5). Thirdly, discs are completely flat and not hammered into a convex or bowl shape typical of helmets. Fourthly, fragments of discs often have a central loop on the reverse (Pls. 1–3), which would be quite unusual if positioned at the centre of the underside of a helmet. Finally, the decoration on discs is far more delicate than on helmets, with the embossed ribs being much thinner.

The decorated discs and other sheet-bronze objects decorated with the star motif show a great variety in form and differences in distribution. The text below addresses the origin of this decoration in eastern and central Europe, focussing mainly on its development and chronology during the Late Bronze Age. It also briefly discusses the northern European finds of bronze cups and south-eastern European finds of helmets, discs and ceramic cups, which are closely related to these decorated discs and have their origin in the preceding Middle Bronze Age.

## DECORATION

The star motif consists of individual arcs arranged in a ring, with the ends of the arcs facing outwards (Fig. 1: 4,5). As the decorative motif develops, the ends of individual arcs become joined. In addition, some discs have ring-and-dots positioned centrally under each arc. The disc from Brandgraben (Cat. No. 2), on the other hand, has large round bosses (Pl. 1: 2) instead of the ring-and-dots. The star motif is usually encircled by ribs, which can be found on both helmets and discs. On discs, however, the ribs are positioned very close to the smooth edge without visible traces of breakage (Pls. 1–3), which justifies their interpretation as not being broken off from a large object such as a helmet. The outer rings of ribs usually consists of three; exceptions are the disc fragments from Augsdorf (Cat. No. 1), Brodski Varoš (Cat. Nos. 3–4), Pamuk (Cat. No. 13) and Poljanci II (Cat. No. 8) with four ribs and the fragment from Nadap (Cat. No. 14) with five (Tab. 1). On bronze cups, the outer ribs are substituted with two or more lines of decorative bosses (Pl. 5), which first appear in Ha A1. This suggests a later date for the bronze cups than for the cap helmets and decorated discs, which is consistent with the relative dating of the bronze cup hoards (Dresden-Dobritz, Osternienburg, Viernheim; Cat. Nos. 68–70) to Ha A2–B1 (Martin 2009, 16). However, a small number of (possibly earlier) star-decorated discs also bears decorative bosses (Pl. 1: 4,6,8,10); namely the fragments from Nagyvejke (Cat. No. 15), Brodski Varoš (Cat. Nos. 3–4), Gornji Slatinik (Cat. No. 6), Poljanci II (Cat. No. 8) and Veliko Nabrđe (Cat. No. 10); the last two with small embossed pellets only. The disc from Brandgraben (Cat. No. 2) might also fall into this group (Pl. 1). Ceramic cups (Tab. 3) show no further decoration apart from several ribs running either parallel or perpendicular to

Tab. 1: Overview of decorative characteristics on cap helmets and discs decorated with ribs and the star motif. Tab. 1: Preglednica okrasnih značilnosti na kapastih čeladah in diskih, okrašenih z rebri in zvezdastim motivom.

Cat. No.	Disc Plošča	Outer ribs Rona rebra	Ribs star Zvezdasta rebra	Inner ribs Notranja rebra
1	Augsdorf	4	4	
2	Brandgraben	3	3	
3	Brodski Varoš	4	3	
4	Brodski Varoš	3	≥ 3	
5	Budinščina	?	≥ 4	4
6	Gornji Slatinik	≥ 2	5	
7	Poljanci I	3	3	
8	Poljanci II	4	6	≥ 3
9	Slavonski Brod	3	?	?
10	Veliko Nabrđe	3	4	
11	Privina Glava	3	5	
12	Přestavlky	?	≥ 3	
13	Pamuk	4	≥ 3	
14	Nadap	5	12	4
15	Nagyvejke	≥ 3	≥ 3	
16	Nova Bingula	3	5	
17	Čermožiše	?	≥ 5	

Cat. No.	Helmet Čelada	Lower ribs Spodnja rebra	Middle ribs Sredinska rebra	Inner ribs Notranja rebra	Ribs star Zvezdasta rebra
50	Hungary (?)	3	-	6	5
51	Northern Hungary (?)	3	-	7	4
52	Paks	3	-	5	3
53	Žiar nad Hronom	3	-	7	3
54	Unknown; Auction Cahn I	6	6	5	
55	Markovac-Grunjac, Serbia	≥ 4	-	-	-
56	Veliko Nabrđe	4	?	?	?
57	Poljanci I	3	?	?	?
58	Elsterwerda	≥ 3	?	?	?
59	Guttman AG 246	4	6	9	-
60	Guttman AG 1126	3	-	3	-

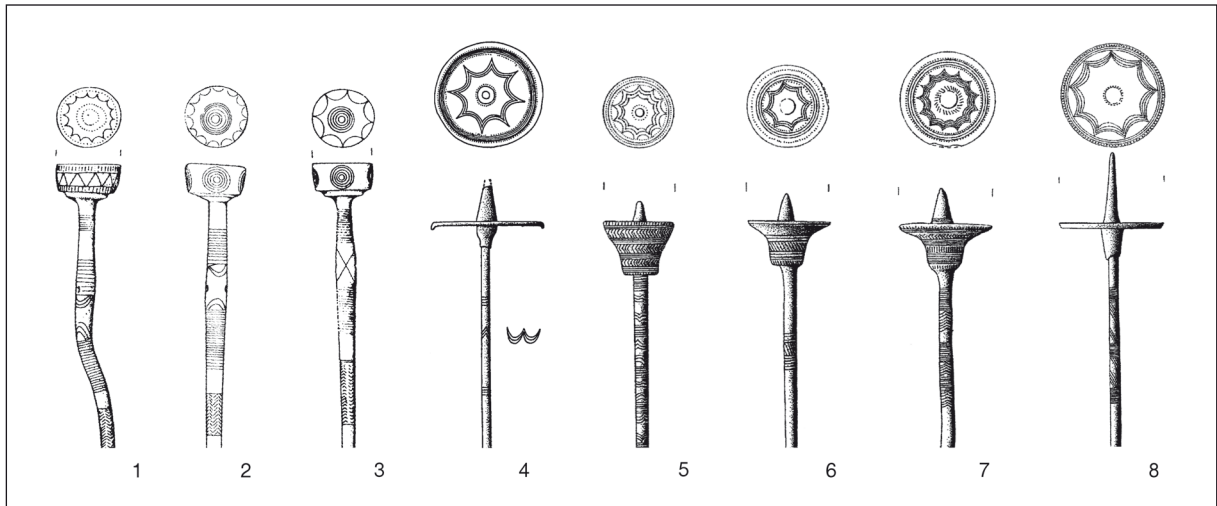


Fig. 2: Dress pins with the star decoration. All bronze; not to scale.

Sl. 2: Igle z zvezdastim okrasom. Vse bron; ni v merilu.

1–3 – Olmo di Nogara (I) (Cupitó 2006, Figs. 5, 6); 4 – Přerov-Předmostí (Cz) (Salaš 2005, Pl. 33: A3); 5 – Jordanów Śląski (Pl) (Gedl 1983, No. 143); 6,7 – Kietrz (Pl) (Gedl 1983, Nos. 145, 146); 8 – Wrocław-Księżę Wielkie (Pl) (Gedl 1983, No. 226).

the rim (Fig. 4), with the exception of the cup from Zlaté Moravce-Kňazice (Cat. No. 93) with chevrons placed between the parallel lines (Mörtz 2011b, Fig. 3: B). The star motif (as on Fig. 1: 4) has also been found on the interior of a number of ceramic cups, as well as on their exterior. The ceramic cups from Augustin-Tipia Ormenișului (Cat. No. 73) and Alba Iulia Monolit, Romania (Cat. No. 72), appear to be closely related to the star-decorated discs, as they similarly have the star motif surrounded by an outer ring of ribs running parallel to the rim or the base. Other types of sheet-bronze objects with the star motif are rare and, so far, there is only the sheet-bronze fragment from Sacoti, Romania (Rusu 1990, Pl. III: 3; the fragment is flat and not bent, as suggested by the sketch by Rusu), that could represent a fragment of a belt plate.

## ORIGIN

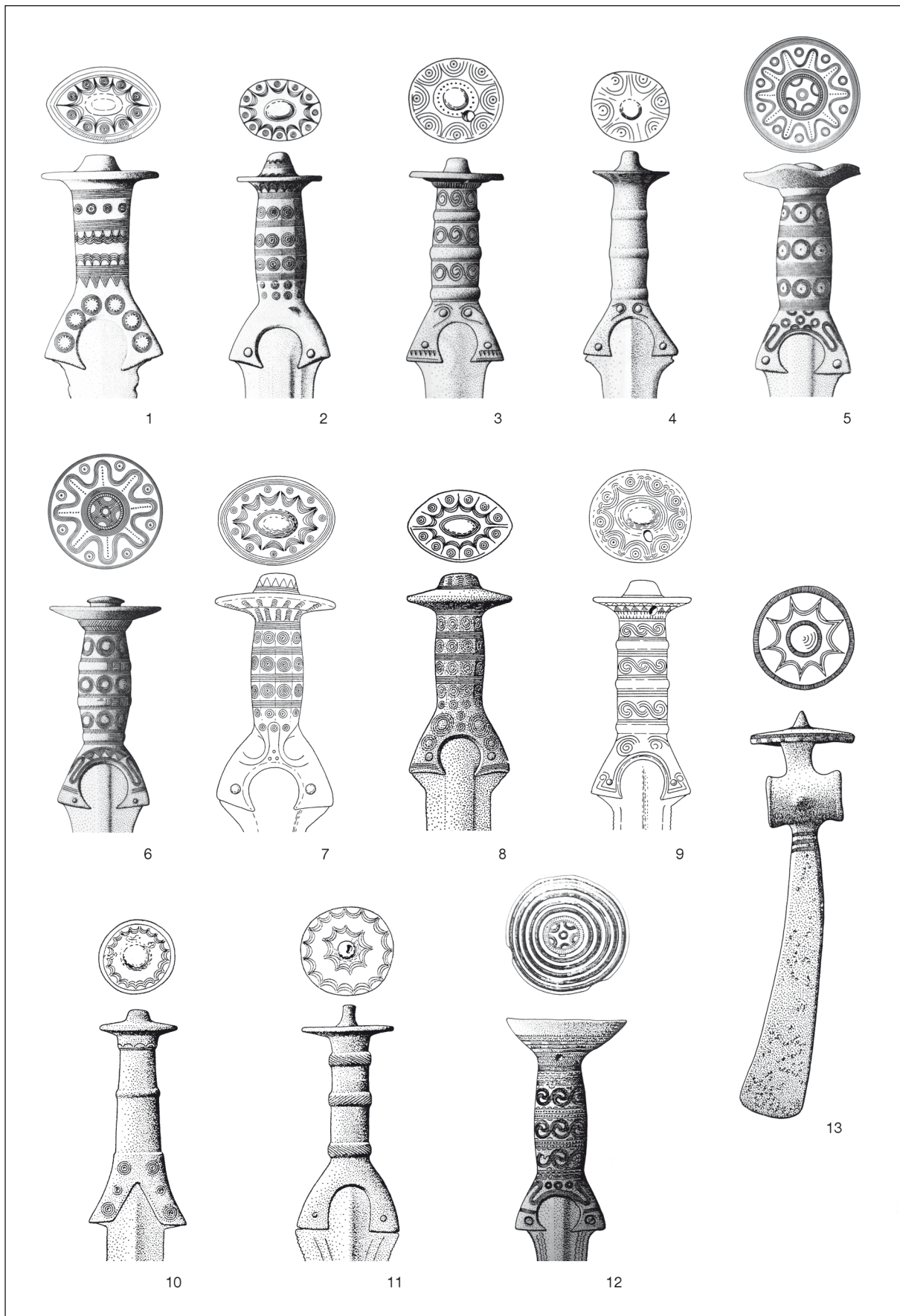
The star motif first appears on cast bronze objects from the Middle Bronze Age in south-eastern and central Europe, including dress pins of the pre-Lusatian culture (Fig. 2). Similar decoration occurs on the pommel discs of solid-hilted swords or *Vollgriffschwerter* from BA B–Ha B1 (Fig. 3: 1–12), as well as on disc-headed axes (Fig. 3: 13) from central and southern Europe (Martin 2009, 49, note 89; Coblenz 1951, 156, note 69). The star

motif is combined with ring-and-dots already on the pommel discs of the early solid-hilted swords (Fig. 3: 1,2,7,8), but also on later swords (Fig. 3: 3,4,9). It is important to note that the star motif on cast bronze objects consists of a circular arrangement of separate arcs, the ends of which are not conjoined, the only exception with conjoined arcs being the swords from Bingula-Divoš and Krasznokvajda (Fig. 3: 10,11). Mörtz (2011b) suggested another possible origin of the star motif, namely the group of fluted (*kanneliert*) ceramic cups with garland decoration. However, the origin in the cast bronze objects seems more likely, because there

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Fig. 3: Swords of different types from BA B2–Ha B1 (1–12) and a butt-headed axe from Winklarn (13), all with the star decoration. All bronze; not to scale [scale 11 = 1:3].  
Sl. 3: Meči različnih tipov iz časa Bd B2–Ha B1 (1–12) in kolutasta sekira iz Winklarna (13), vse z zvezdastim okrasom. Vse bron; ni v merilu [M. 11 = 1:3].

1 – Absam/Hall (A) (Krämer 1985, Pl. 1: 4); 2 – Breitenbach (A) (Krämer 1985, Pl. 3: 13); 3 – Kirchberg am Wagram (A) (Krämer 1985, Pl. 11: 62); 4 – Greiner Strudel (A) (Krämer 1985, Pl. 11: 63); 5 – Wörschach (A) (Krämer 1985, Pl. 16: 96); 6 – Hinterriß (A) (Krämer 1985, Pl. 16: 97); 7 – Kfforró (H) (Kemenczei 1991, Pl. 11: 56); 8 – Stechow(D) (Wüstemann 2004, Pl. 58: 419); 9 – Tamási (H) (Kemenczei 1991, Pl. 19: 85); 10 – Bingula-Divoš (Srb) (Harding 1995, Pl. 30: 237); 11 – Krasznokvajda (H) (Kemenczei 1991, Pl. 40: 178,179); 12 – Strachotice (Cz) (Říhový 2000, 160, Pl. 9: 15); 13 – Winklarn (A) (Mayer 1977, Pl. 7: 79).





is an overlap in both the distribution area and chronological horizon, which is not the case with the fluted (*kanneliert*) pottery. Moreover, the star motif on cast objects is not the main decorative element, but merely one in a wide repertoire of decoration including wave and spiral decoration (Mozsolics 1967, 33–49; Hänsel 1968, 61–65; David 2002, 92–158; Sicherl 2004, 86–97).

The star motif on Austrian swords lasts until those of Type Erlach, dated to Ha A1; on later swords, such as Type Wörschach, the arcs develop into a continuous waveband (Fig. 3: 5,6). In Moravia, the star motif can be found on solid-hilted swords from Ha B with bowl-shaped pommels, such as that from Strachotice (Fig. 3: 12). Two swords of Type R, Variant I, from Krasznokvajda, Hungary, even show a double ring of star decoration on the pommel disc (Fig. 3: 11). In the Balkans, swords with star decoration belong to Type Dreiwulst and date to Ha A1, such as that from the Budinščina hoard (Harding 1995, Pl. 29: 234), which also contains a number of discs (Cat. Nos. 5 and 28), and from the hoard of Bingula-Divoš (Fig. 3: 10) (Harding 1995, Pl. 30: 237), which includes two discs (Cat. Nos. 23, 27). We cannot, therefore, assume that the star decoration is transmitted from older bronze cast to later sheet-bronze objects, as suggested by Mörtz (2011b, 98). Alternatively, we can suggest that the development of the star motif on cast objects, such as swords, underwent a separate development, with an early adoption and later modification of such decoration on sheet-bronze objects such as discs, helmets and cups (Fig. 1), therein representing different developmental trajectories. The star motif in general appears to have gone out of fashion on sheet-bronze objects such as helmets by Ha A2 and on bronze cups by Ha B1.

The ceramic vessels decorated with the star motif most likely have their predecessors in the ceramic cups with garland decoration (Fig. 4). The garland decoration consists of individual arcs arranged horizontally, with the ends of the arcs conjoined and usually facing upwards. Such cups were found at Tiszafüred and Tiszapalkonya, Hungary, both sites connected with the Füzesabony culture (Hansen 1994, 260; Mörtz 2011b, 101). They are also known from the Žuto Brdo-Ghîrla Mare culture, which is contemporary with the first appearance of similarly decorated, but cast bronze objects, such as pins and sword hilts (Mörtz 2011b, 101; Hänsel 1968, 133–142; Şandor, Chicideanu 2003, 91–97). The star motif on ceramic objects first appears on fluted-neck pottery of the Lusatian

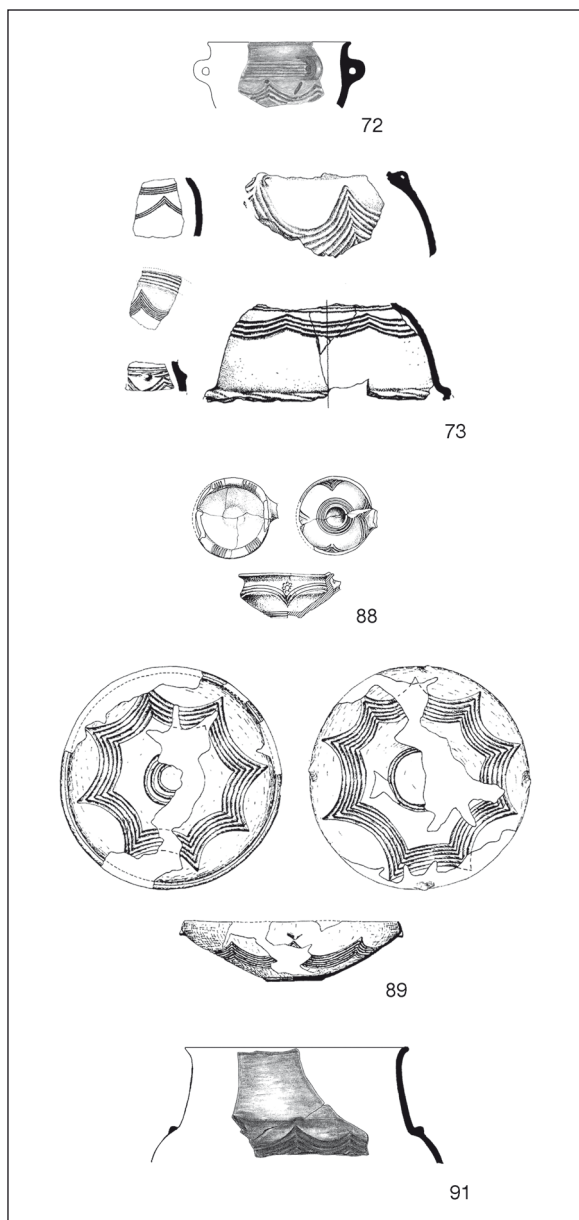


Fig. 4: Pottery with the star or garland decoration (72, 73, 88, 89, 91). The numbers refer to those in the Catalogue, Tab. 3. Ceramic; different scales (c. 1:8).

Sl. 4: Lončenina z zvezdastim ali girlandnim okrasom (72, 73, 88, 89, 91). Številke se nanašajo na številke v Katalogu, tab. 3. Vse keramika; različna merila (pribl. 1:8).

72 – Alba-Iulia-Monolit (Ro) (after Ciugudean 2010 Pl. XII: 4); 73 – Augustin-Tipia Ormenişului (Ro) (after / po Ciugudean 2010 Pl. XVI: 5,6,12,14); 88 – Simeria (Ro) (after / po Ciugudean 2010 Pl. XI: 1,4); 89 – Susani (Ro) (after / po Mörtz 2011b, Fig. 1.A); 91 – Teleac (Ro) (after / po Ciugudean 2010 Pl. XIII: 2).

culture and spreads eastwards to the Kyjatice und Gáva cultures (Kemenczei 1979, 84), reaching as far as Babadag, Romania (Cat. No. 74). The motif appears to survive until as late as the Mezöcsát

group and the Late Hallstatt period (Pankau 2004, 72–73). Apart from the garland-decorated pottery, the star motif on cups was most likely also influenced by cap helmets decorated with the star motif. The close connection in decoration between the ceramic and the metal cups is no coincidence, because most ceramic vessels are graphite-coated, polished and bearing lugs, thus imitating the luster and shine of bronze vessels and cups decorated with the more typical Late Urnfield motif of pellets and bosses (Mörtz 2011b, 98–100). The later ceramic cups with engraved star decoration from Moravia, Silesia and the western Carpathians (*Fig. 4*) might also have imitated the older fluted-neck ceramic from the Carpathian Basin (Mörtz 2011b, 101).

Elsewhere in Europe, similar bronze vessels decorated with the star motif are known from Denmark and northern Germany. The fragment of a cup from Gyldensgård, Denmark, shows a star-like motif on the base with bosses in the arcs (Sprockhoff 1930, 49 f; Thrane 1962, 112–116). More similar are the decorated fragments from Kivik, Sweden (Randsborg 1993, 55 f). Further cast bronze cups with similar, but incised decoration were found in Löptin (Mörtz 2011b, 96; Jacob 1995, 11 f; Hundt 1958) and Seddin, both Germany (Mörtz 2011b, 96; Martin 2009, 19 f, Pl. 1: 1; Kersten 1958, 19, no. 117). Further parallels for the decorated cups of Variant Osternienburg-Dresden, are known from Østermarie, where a cast bronze cup was found (Thrane 1962, 116 f, *Fig. 6: 7a*). However, the bronze cups from Kivik and Gyldensgård as well as the later one from Löptin are clearly of local manufacture, inspired by and imitating the wooden bowls decorated with bronze and tin (Randsborg 2011, 188), which was already suggested for the cup from Seddin (Martin 2009, 20; Thrane 1962, 132–141; Hundt 1958, 34–40; Sprockhoff 1930, 49 f). These cups, however, are not connected to the ones from central or eastern Europe.

### DEPOSITION

There appears to be an exclusive deposition practice for each type of object with star-decoration: helmets, discs, cups and pottery. All decorated discs were found in hoards, which typically include tools, weapons or armour and ornaments, providing little clue as to the social or practical function of the discs. The only exception is the hoard from Zalaszentmihály-Pötréte (Cat. No. 26), which consists of ornaments only (Müller 1972). The presented

disc from this hoard is almost complete and does not appear to have been intentionally broken or damaged. Cap helmets with star decoration, on the other hand, were deposited in hoards only as single fragments of either a cap or a knob. The few complete finds of helmets appear all to be stray finds, as suggested by the helmet from Paks (Cat. No. 52), the only complete helmet with a certain find context. Attention must also be drawn to the helmet from the former Guttmann collection (Cat. No. 60), which was reportedly found together with two disc pendants, two bracelets and an arrow head (Born, Hansen 2001, 64, *Fig. 58*). Bronze cups are usually found in graves; only the cups from Dresden-Dobritz (Cat. No. 68) have been found as part of a hoard. Ceramic cups with the star motif, on the other hand, are known from both settlements and graves.

### DISTRIBUTION

The star decoration on central European Late Bronze Age sheet-metal objects and pottery is much more widely distributed (*Fig. 5*) than suggested by Mörtz (2011b, 103). A list of star-decorated discs (*Pl. 1*) was first published by Peter König (2004, 181, List 15; Pl. 91). It comprised the finds from Augsdorf, Brodski Varoš, Budinščina, Gornji Slatinik, Nova Bingula, Pamuk, Poljanci II, Privina Glava and Veliko Nabrdje. He distinguished between fragments with concentric circles and fragments with ring-and-dot decoration (*Pl. 2* and *3*), such as those from Bingula-Divoš, Boljanić, Gornji Slatinik, Kličevac-Pomrlovo and Zalaszentmihály-Pötréte. He (2004, 76) also suggested that the discs with the star motif were mainly distributed in Sylvania and Slavonia.

The concentration of star-decorated discs indicates that their place of origin should be sought in the area of Slavonski Brod, in the Posavina region. The motif spreads to the northwest, where the number of decorative elements increases. The simplest form of the decorated discs, with circular ribs only (*Pl. 3*), shows a concentration around Slavonski Brod, reaching as far west as Budinščina (following the Drava valley upstream), to Majdan in the east and Esztergom in the north; the latter disc is most likely an item of trade up the Danube. The distribution area of these discs, excluding the outlying finds from Majdan and Esztergom (45, 46), corresponds roughly with the distribution core of the discs with ribs and ring-and-dot decoration; reaching in the



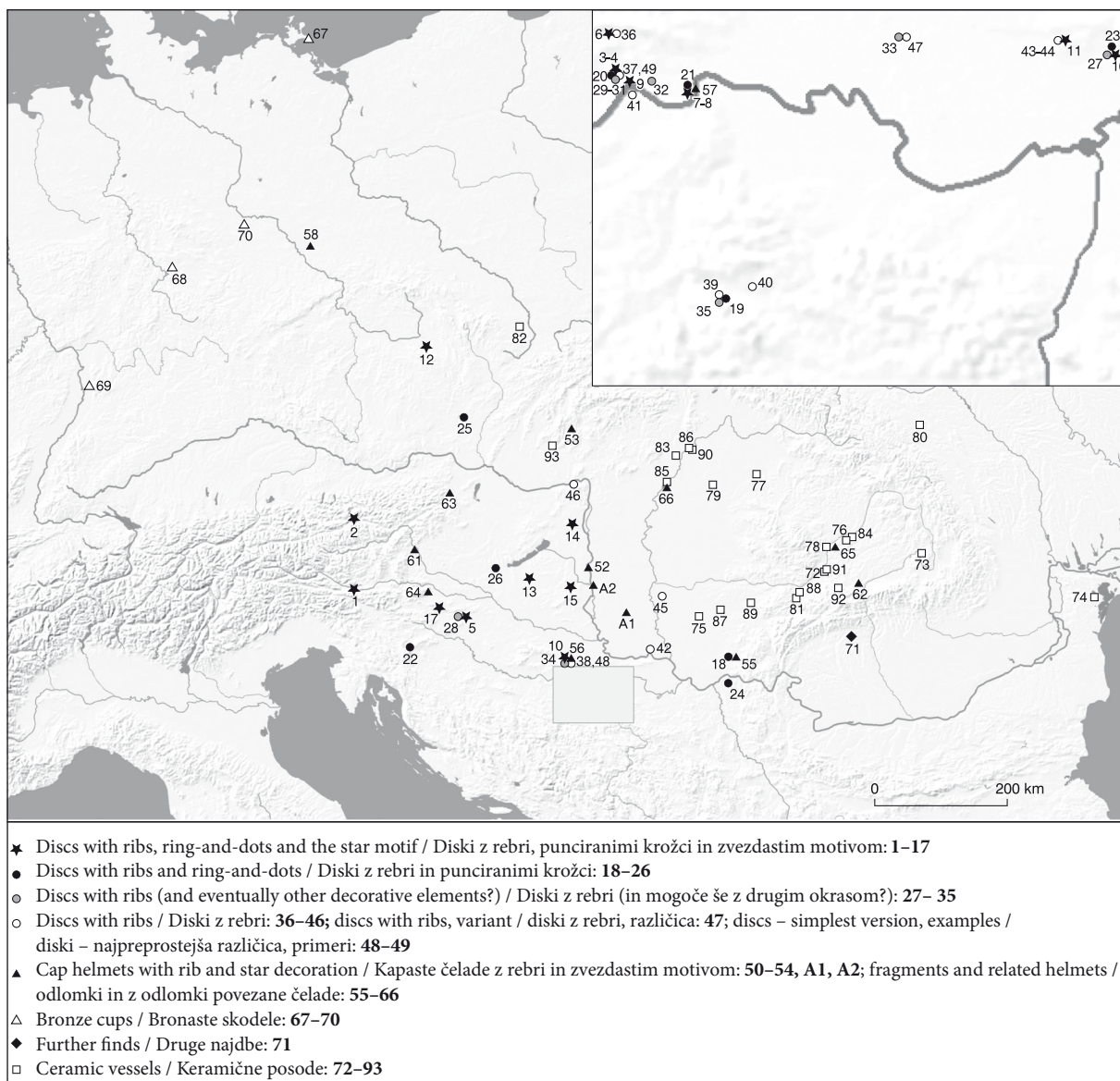


Fig. 5: The distribution map of the star decoration. The numbers refer to those in the Catalogue (1-71), Table 2 (72-93), and in Addendum (A1, A2). Unlocated sites (Hungary?): 50, 51, 54, 59, 60.

Sl. 5: Karta razprostranjenosti zvezdastega motiva. Številke se nanašajo na številke v Katalogu (1-71), na tabeli 2 (72-93) in v Dodatku (A1, A2). Nelocirana najdišča (Madžarska?): 50, 51, 54, 59, 60.

1 Augsdorf/Velden (A)	17 Čermožiše (Slo)	34 Veliko Nabrđe (Hr)	49 Brodski Varoš (Hr)
2 Brandgraben (A)	18 Markovac-Grunjac (Srb)	35 Boljanić (BiH)	52 Paks (H)
3-4 Brodski Varoš (Hr)	19 Boljanić (BiH)	36 Gornji Slatinik (Hr)	53 Žiar nad Hronom (Sk)
5 Budinščina (Hr)	20 Brodski Varoš (Hr)	37 Brodski Varoš (Hr)	55 Markovac-Grunjac (Srb)
6 Gornji Slatinik (Hr)	21 Poljanci IV (Hr)	38 Veliko Nabrđe (Hr)	56 Veliko Nabrđe (Hr)
7 Poljanci I (Hr)	22 Jurka vas ((Slo)	39 Boljanić (BiH)	57 Poljanci I (Hr)
8 Poljanci II (Hr)	23 Bingula-Divoš (Srb)	40 Jadrina (BiH)	58 Elsterwerda (D)
9 Slavonski Brod (Hr)	24 Kličevac-Pomrlovo (Srb)	41 Kućišta (BiH)	61 Strassengel (A)
10 Veliko Nabrđe (Hr)	25 Mušov II (Cz)	42 Jarak I (Srb)	62 Gușterița (Ro)
11 Privina Glava (Srb)	26 Zalaszentmihály-Pötréte (H)	43, 44 Privina Glava (Srb)	63 Wöllersdorf (A)
12 Přestavky (Cz)	27 Bingula-Divoš (Srb)	45 Majdan (Srb)	64 Hočko Pohorje ((Slo)
13 Pamuk (H)	28 Budinščina (Hr)	46 Esztergom-Szentgyörgyemző (H)	65 Uioara de Sus (Ro)
14 Nadap (H)	29-31 Brodski Varoš (Hr)	47 Otok-Privlaka (Hr)	66 Mezónýarád (H)
15 Nagyvejke (H)	32 Gornja Vrba (Hr)	48 Veliko Nabrđe (Hr)	67 Seddin (D)
16 Nova Bingula (Srb)	33 Otok-Privlaka (Hr)		68 Dresden-Dobritz (D)



69 Osternienburg (D)	77 Căuaş-Sighetiu (Ro)	86 Prügy (H)
70 Viernheim (D)	78 Cicău (Ro)	87 Remetea Mare-Gomila lui Pituţ (Ro)
71 Milostea-Sacoţi (Ro)	79 Debrecen-Nyulas (H)	88 Simeria (Ro)
72 Alba-Iulia-Monolit (Ro)	80 Grăniceşti (Ro)	89 Susani (Ro)
73 Augustin-Tipia Ormenişului (Ro)	81 Hunedoara (Ro)	90 Taktabáj (H)
74 Babadag I (Ro)	82 Kietrz (Pl)	91 Teleac (Ro)
75 Bobda II (Ro)	83 Köröm (H)	92 Tilişca (Ro)
76 Bogata (Ro)	84 Lechinţa de Mureş (Ro)	93 Zlaté Moravce-Kňažice (Sk)
	85 Poroszló-Aponhát (H)	A1 Bajmok (Srb)
		A2 Dusnok (H)

east and down the Danube to Kličevac-Pomrlovo (24) and in the west up the Sava and the Krka to Jurka vas (22), while in the north they spread more widely following the Danube, March and Dyje rivers as far as Mušov (25). The most richly decorated discs, those with ribs, ring-and-dot decoration and the star motif also have the widest distribution area, with its main concentration in east Croatia, Bosnia-Herzegovina and Serbia. They spread even further to the north, to Přestavlky (12) located between the Eger and Elbe valleys, most likely following the March river. In the west, their distribution area reaches as far as Augsdorf (1) (following the Drava valley) and Kainischtal (following the Mur and Liesing valleys). Several such discs are also known from western Hungary, more precisely from Nadap, Pamuk and Nagyvejke (13–15), following the Danube, and are probably connected with the distribution of the star-decorated cap helmets in this region. The distribution of these discs testifies to an increasing contact with the north and west following the main rivers (with the exception of the find from Přestavlky, all discs have been found close to such rivers). It also reveals an increasing number of decorative elements. The example from Velem/St. Vid, Hungary, which is usually discussed in relation to decorated discs (Müller-Karpe 1959, 112; Gleirscher 2007, 48), show none of the decorative characteristics discussed above and has therefore not been included in this study.

Although poorly provenanced, the complete decorated cap helmets (*Pls.* 4–5) show a concentration in Hungary (Cat. Nos. 50–54, 59–60). The fragments of (star?) decorated cap helmets are all part of large Late Bronze Age hoards of mixed contents and a much wider distribution than the complete helmets. Helmets and their fragments with the star motif are known from Elsterwerda (58), Germany, in the north, to Guşteriţa (62), Romania, in the east, and from Strassengel (61), Austria, in the west, to Poljanici (57), Croatia, in the south. Two fragments from the Nadap hoard, Hungary (Makkay 2006, Pl. 5: 10,11) might also belong to

decorated cap helmets, which would mean that the cap helmets were deposited together with an older, conical helmet (Mödlinger 2013). The first known complete helmet with rib decoration (Cat. No. 50) was mistakenly published as a bowl by József Hampel (1887, Pl. 66: 5). Gero von Merhart (1941, 4 f) classified it as a part of his group of decorated cap helmets despite all other helmets of this group being without a knob. Hugh Hencken (1971, 146 f) provided an alternative corpus of cap helmets with star decoration and added further, presumably related, fragments. Two more complete cap helmets, supposedly found in Hungary, with cast knobs and decoration related to that on the star-decorated cap helmets are known from the former Guttmann collection; as a consequence of a private sale, their present location is unknown. Christof Clausing (2001, 212, Fig. 9: 2) mentioned another complete cap helmet related to this group; it was sold at an auction in Basel, but no details on its present location are known. The most recent finds of decorated cap helmets are from Žiar nad Hronom (Bartík 2009) and Paks (Gaál 2001) (Cat. Nos. 53, 52). The latter represents the only known complete helmet with a reliable provenance and more detailed find circumstances.

Apart from the above, a number of fragments from various contexts were also considered part of this cap helmet group, but had to be excluded from this study for several reasons. Hencken's group of cap helmets with star decoration (1971, 146 f) includes fragments from Uioara de Sus and Palotaboszók (Boszók), assuming them to be the precursors of the later cap helmets with cast knobs. However, the sheet-bronze fragments from Uioara de Sus (Petrescu-Dîmboviţa 1978, 133, no. 184, Pl. 198: 1026–1027) appear to be decorated with incised rather than embossed ribs. Furthermore, a comparison with other helmets showed the rivet holes to be too small for bronze rivets, though it is possible that they were used for attaching further bronze plates to it. They also do not show the row of possible rivet holes parallel to the rim or the ribs.

The fragment from the Palotabozsók hoard, on the other hand, more likely formed part of a decorated cist than a helmet (Clausing 1996, 419, Fig. 5: 38). Tibor Kemenczei (1979, 80–82) added to Hencken's group the helmet fragments from Poljanci I and Veliko Nabrđe, but also fragments of undetermined objects from Bizovac, Bonyhád and Nagyvejke. Clausing (2001, 208) excluded the fragment from Bizovac without further explanation, possibly based on the observation of Amália Mozsolics (1985, 26) that it was more likely a fragment of a cuirass because of the rim with a parallel row of holes spaced ca 1cm apart and the fragmentary decoration and two ribs with cord-like impressions parallel to the rim not known from other helmets. One of the fragments from Bonyhád shows parallel ribs, but no rim or (rivet) holes parallel to it (Mozsolics 1985, Pl. 40: 13), though at least four of the fragments already published by Mozsolics show both. One of these also shows a particular corrosion in the area of the rivet holes, which reaches from the rim to above the holes and is most likely a residue of an organic lining (Mozsolics 1985, Pl. 40: 14). However, the fragment does not show ribs parallel to the edge and could therefore not have been part of a decorated cap helmet. The fragments from Nagyvejke appear to be parts of a disc (Cat. No. 15). The fragment from Keszőhidegkut, Hungary (see e.g. Schauer 2003, Fig. 3: 3), is not considered in this study because the ribs are comparatively too thin and too widely spaced to suggest a helmet. Another fragment, from Suseni (Rusu 1990, 70, Pl. 1: 1), does not show rivet holes at all and is excluded from the discussion because the cap helmets with rib and star decoration tend to have numerous closely spaced rivet holes. For the sheet-bronze fragment (62) from the Gușterița hoard, Clausing (2001, 214) already assumed that it was not part of a helmet. The knob from the same hoard, on the other hand, very probably did form part of a (star-) decorated cap helmet, since it is very similar to the knobs from Paks, Žiar nad Hronom (52, 53), the two helmets from the former Guttmann collection (59, 60) and the helmet sold at an auction in Basel. Also, the knob from Strassengel (61) is cast on the sheet-bronze cap of the helmet. The base of the knob is slightly stepped (*getreppt*), as we know it from the above-mentioned helmets. Two further knobs from possible cap helmets are known from Špálnaca and Techirghiol, Romania (Petrescu-Dîmbovița 1978, Pl. 115: 277; 157: 614). The knob from Špálnaca has a smooth shank and lacks ribbing. Both knobs are highly fragmented and miss lower and upper ends, making their

proper identification problematic; they are thus not included in the discussion.

Only two cap helmets have been found together with cheek plates, namely the helmet from Žiar nad Hronom and the unprovenanced helmet from the former Guttmann collection (Cat. Nos. 53, 60). For that reason, cheek plates can be associated with the broader group of cap helmets only to a certain point (*Pls.* 4–5). The cheek plates from Wöllersdorf, Uioara de Sus, Mezónyárád and Hočko Pohorje (Cat. Nos. 63–66) are typologically close to those from Žiar nad Hronom and the former Guttmann collection, which are kidney-shaped and have an embossed middle section with rivet holes lining the edge. The fragments from Uioara de Sus and Hočko Pohorje additionally show rivet holes running across the embossed section, suggesting an organic lining. One of the fragments from Uioara de Sus, however, has no rivet holes in the parts preserved. Further single cheek plates are known, such as the flat plates from Weissig and Schmiedehausen, as well as the flat decorated example from Podcrkavlje-Slavonski Brod; they are not considered in this study because they differ too much from the cheek plates from Žiar and Hronom and the former Guttmann collection.

The bronze cups with star decoration (*Pl.* 5: 67–70) show a linear distribution from Viernheim, Hessen, in the south-west, to Seddin, Brandenburg, in the north-east, that does not overlap with the distribution area of ceramic or other contemporary sheet-bronze objects with star decoration. Nevertheless, it is considered as part of the wide range of transcontinental forms, because bronze cups, such as those of Type Friedrichsruhe, are similarly widespread – from Jütland in the north to Transylvania in the south-east (Martin 2009, 36–52). In terms of depositional circumstances, the cups from Osternienburg and Viernheim (Cat. Nos. 69, 70) being found in urn graves is not surprising, as this follows the local burial rite.

I should also mention the sheet-bronze fragment from the Milostea-Sacoți hoard, Romania (Cat. No. 71), because it marks the south-eastern border of the star-like decoration on sheet-bronze objects. The fragment was most likely part of a belt, as suggested by both parallel ends rolled around a bronze wire. The decoration consists of two groups of three ribs parallel to the rolled ends, while above these two arcs consisting of three parallel lines with conjoined ends can be seen (Rusu 1990, Pl. 3: 3). Though not arranged in a circular or star-like pattern, the formal similarity is clear.

The decorated ceramic cups (*Fig. 4*) are distributed from Silesia, southern Poland, Moravia, the western Carpathians to the Romanian Coast and were known in the Lusatian (Furmánek, Veličák, Vladár 1999, Fig. 36: 21; 37: 10), Wysocko (Sulimirski 1931, Pl. XII: 7), Kyjatice, Gáva and Babadag I cultures, respectively (Pankau 2004, 72–73). Generally, these finds rarely appear in the Urnfield cultures (Kemenczei 1979, 84). The star decoration appears first on the fluted pottery of the Lusatian culture at the end of the Late Bronze Age and spreads eastwards over eastern Hungary to the Kyjatice (Chidioşan, Emődi 1982, 77) and Gáva cultures to Transylvania (Rusu 1963, 187, note 30). The motif can be found on ceramic vessels until the Late Hallstatt period (Studeniková 1986, Pl. 2: 8; Stegmann-Rajtár 1992, Fig. 23: 15). The latest finds so far seem to be from Kietrz, Poland, dated to Ha B2/3 or Period V of the Nordic Bronze Age (Grave 215; Mörtz 2011b, 99, Fig. 3: A; Gedl 2000, 92; Gedl 1979, 46).

### DATING

In some cases, all the different types of discs were found together, in a single hoard (e.g. Brodski Varoš or Veliko Nabrđe), which could lead to an assumption of the discs appearing within a very limited chronological horizon of BA D–Ha A1 (i.e. Vinski-Gasparini's Periods I/II – see *Tab. 2*) and being largely contemporary, possibly suggesting a rapid adoption of known decorative elements, such as the ring-and-dot and circular arrangement of

arcs. These individual motifs eventually join and form the star motif for the first time. However, the distribution of the different types of discs do not allow for such an assumption of contemporaneity. The distribution of the star-decorated discs – the latest type, perhaps only those with bosses – overlaps with the distribution of the helmets. This suggests that it was the discs that influenced the development of the star-decorated cap helmets. It seems unlikely that the decoration of helmets derives from the contemporary star-decorated pottery, because the latter has been dated to the central European Late Bronze Age, i.e. roughly to Ha B2/3 (Pankau 2004, 70–74).

With the exception of the find from Paks, the find circumstances of the helmets are unknown. The same goes for the two closely related helmets with rib decoration only (Cat. Nos. 59 and 60). Also, the helmets are dated on the basis of the fragments in the Veliko Nabrđe, Poljanci I, Brodski Varoš and Elsterwerda hoards (Cat. Nos. 56–58), whereby the Croatian hoards all date to Period II (Vinski-Gasparini 1973) or Phase II (Vasić 1994, 13). The hoard from Elsterwerda is also dated to the Early Urnfield period (Ha A1) (Martin 2009, 120). This dating accords with the earlier dating of cap helmets with rib decoration (Borchhardt 1972, 120–122) and the dating of those with star decoration to Ha A1 according to Mozsolics. However, one problem remains – fragments of these helmets cannot be positively assigned to either the star-decorated cap helmets or the simple rib-decorated cap helmets. At present, we can only integrate these helmet fragments into the broader group of

*Tab. 2:* Parallelisation of the European Bronze Age chronology – select areas (after Stockhammer 2004, sl. 1: 3).

*Tab. 2:* Kronološka tabela bronaste dobe v Evropi – izbrana območja (po Stockhammer 2004, Fig. 1: 3).

Müller-Karpe 1959	Říhovský 1979	Říhovský 1979	Novotná 2001	Vinski-Gasparini 1973	Mozsolics 1985	Petrescu-Dîmbovița 1978	Montelius 1900
Bz C2			Ožďany	I	Forró		II
Bz D	Hulín	Blučina Drslavice	Malá Vieska Buzica	I/II	Ópályi Aranyos	Uriu-Domanești	III
Ha A1	Přestavlky	Draßburg	Ducové-Martinček-Bodrog	II	Kurd	Cincu-Suseni	
Ha A2	Lešany	Železné	Trenčianske Bohuslavice	III	Gyermely	Turia-Jupalnic	IV
Ha B1	Křenůvky	Kleedorf	Somotor-Lúčky	IV	Hajdúböszörmény	Moigrad-Tăuteu	
Ha B2/3	Boskovice Černotín	Herrnbaumarten Großweikersdorf	Liptovský-Mikulaš	V	Románd	Fizeşu Gherlii-Sîngeorgiu de Pădure	V

decorated cap helmets, rather than assigning them to any of the specific typological and chronological groups outlined above. Having said that, the rapid development of decoration on discs, beginning with the simple star motif, suggests that the earliest helmets with similar star decoration must very likely have appeared at the end of Period II, in Ha A1, adopting the star motif from the discs. The transmission of the star motif from the decorated central and eastern European Middle Bronze Age cast bronze objects to sheet-metal objects such as discs, helmets and cups leaves the question of why the ring-and-dot decoration was not adopted on helmets and cups. Helmets are the most likely medium by which the star motif was transmitted from the south-eastern BA D–Ha A1 discs to the north-western Ha A2–B1 decorated bronze cups. This is further suggested by the adoption of the star- and rib-decoration only. However, the rib decoration was transformed into a row of bosses on the bronze cups, representing a more contemporary version of the simpler, older rib decoration. The star motif on pottery appears first on the fluted pottery of the Lusatian culture at the end of the Late Bronze Age and spreads eastwards to the Kyjatice und Gáva cultures, reaching as far as Babadag, Romania. The motif is found amongst the Mezöcsát group up until the Late Hallstatt period (Pankau 2004, 72–73; Stegmann-Rajtár 1992, Fig. 23: 15). The star decoration on ceramic cups was most likely influenced by the appearance of the star-decorated cap helmets, as discussed above.

### CONCLUSION

The date and distribution of the star-decorated helmets, discs, as well as bronze and ceramic cups suggests that the star motif most likely first appeared on discs in the area of Slavonski Brod, Croatia. The origins of the star motif can be traced back to central European Middle Bronze Age cast objects such as dress pins, axes and swords, some of which continue to show this type of decoration until Ha B. The decorated discs, however, show a process of development in their decorative complexity, the richest variant – discs with ribs, ring-and-dot and star decoration – being transmitted almost completely to cap helmets. These helmets can so far only be dated on the basis of their fragments being found in the hoards from Period II after Vinski-Gasparini. The distribution of both the helmets and the richly decorated discs leads to a reasonable assumption

of the helmets dating to Ha A1, spreading rapidly over Hungary and up to Elsterwerda in the north and Guşteriţa in the south-east. The Elsterwerda find also connects the helmets with the decorated bronze cups, which show the adoption of the star decoration sometime in Ha A2/B1. The distribution of the star decorated helmets and the later ceramic cups overlaps, whereby the latter appear to imitate the bronze objects, which would suggest that the star decoration was transmitted to the ceramic cups from the helmets, using the older garland decoration as basis.

### Addendum

Recently, Gábor V. Szabó (2013) discussed stolen and illegally excavated Bronze Age metal finds from Hungary, including two decorated cap helmets, a fragment of a helmet and a cheek plate and another potential cheek plate. The latter, a 25cm long sheet-bronze fragment resembling a cheek plate in shape, is more likely a metal fitting on an organic object rather than a cheek plate, mainly due to its length. It formed part of a hoard from Tolcsva-Várhegy (?), Hungary, which also contained four spiral armlets, two cauldrons, three cups and a torque. The current location of this Ha B1 hoard is unknown, though it was most likely sold to the United States (Szabó 2013, 798–803).

One of the helmets with rib and star decoration (four ribs arranged into a star on the top, six ribs in the middle and three ribs at the rim) of possible origin from Bajmok, Serbia, was presented to the Municipal Museum of Subotica, Serbia, in February 2011 (*Fig. 6: A1*). Another similar (or the same?) helmet was already presented to the museum 25 years ago (Szabó 2013, 805). The current location of the helmet(s) is unknown.

The second helmet noted by Szabó was attempted to be sold by a person working in Dusnok, Hungary, on a dredge-boat at the end of the 1990s; Szabó noted that the helmet might later have been sold in Germany, because the person was fearful of selling the helmet to the Hungarian National Museum officially (2013, 806). Only a poor-quality sketch of the helmet remains (*Fig. 6: A2*). It was suggested that this is the same helmet as the one from a private collection in Nordrhein-Westfalen, Germany, which was sold at the Jean-David Cahn AG in 2002 (Cat. No 54; *Pl. 4*). However, the sketch from the Dusnok helmet shows five ribs in the centre, while the auctioned helmet shows six.



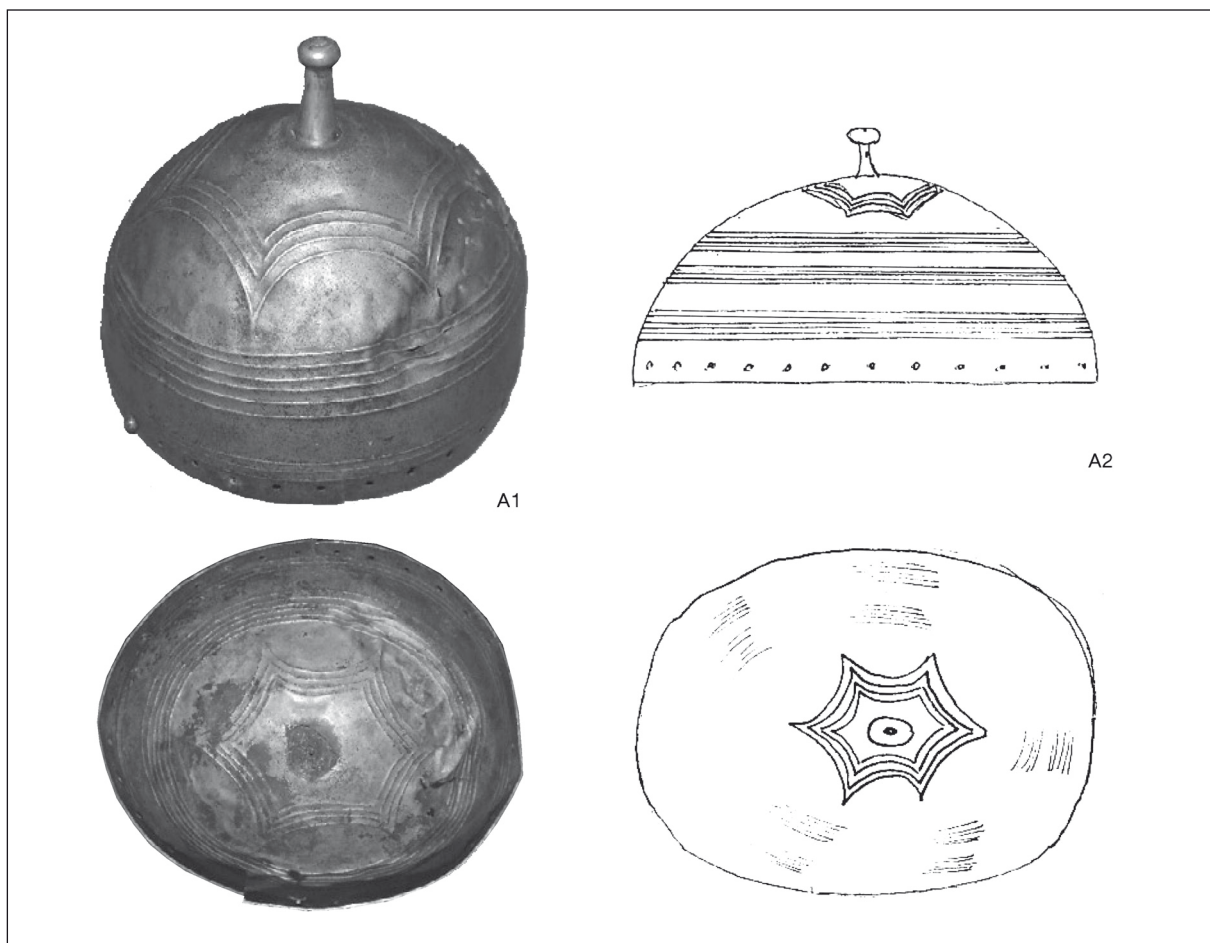


Fig. 6: Recently published helmets from Bajmok, Serbia (A1), and Dusnok, Hungary (A2). All bronze; not to scale  
 Sl. 6: Nedavno objavljeni čeladi iz Bajmoka v Srbiji (A1) in Dusnoka na Madžarskem (A2). Vse bron; ni v merilu.  
 (After / po Szabó 2013.)

Also, the knob of the latter is straighter and not bent as on the sketch of the Dusnok helmet. It is therefore more reasonable to assume the presence of two different helmets.

The discovery of a Ha A1 bronze hoard in Pázmándfalu, Hungary, was reported in December 2011 and its contents rescued by archaeologists (Szabó 2013, 811). The hoard consists of hundreds of melted, broken fragments, but also of undamaged bronze objects including two rim fragments of a cap helmet, two rib-and-star decorated fragments of a decorated cap helmet, a cheek plate of the same type of helmet with lines of embossed dots along the rim and fragments that highly likely belong to a cuirass. Another hoard was found just 3 m away from the first one, possibly containing remains of a conical helmet (or a vessel) (see Szabó 2013, Fig. 17). Further excavations in the area are

planned for the summer of 2013, with the aim of clarifying the context of the hoards.

In view of the above, the total number of complete decorated cap helmets should be corrected to at least ten and the total number of fragments of further helmets to seven. With the new find of a cheek plate from Pázmándfalu, possibly belonging to the helmet from the same hoard, we know of at least 22 decorated cap helmets in total.

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## CATALOGUE

The running numbers in the catalogue refer to the Cat. Nos. in the text, on the *plates* and the distribution map (Fig. 5). The publications printed in **bold type** represent the source from which the illustrations of objects presented on the plates were taken.

Tekoče številke v Katalogu ustrezajo kataložkim št. v besedilu, na *tablah* in na karti razprostranjenosti (sl. 5). Med objavami so **krepko** zapisani citati za slike na tablah.

### Discs with ribs, ring-and-dot decoration and star decoration

(Pl. / t. 1: 1–18)

#### 1. *Augsdorf/Velden*, Carinthia, Austria

Hoard; fragment; length: 6.2 cm; breadth: 6.3 mm; thickness: 0.5 mm; weight: 18 g – Landesmuseum Kärnten, Inv. no. 6383 g, f.

*Date:* Ha A1 (Müller-Karpe 1959, 22, 112, 129) or Ha A2 (v. Brunn 1968, 64, 302).

*Bibliography:* Gleirscher 2007, 48–53, Fig. 1: 1; Vinski-Gasparini 1973, 86; v. Brunn 1968, 64, 302; Müller-Karpe 1959, 22, 112, 129, 278 [with literature before 1900], Pl. 129: 22.

#### 2. *Brandgraben*, Styria, Austria

Hoard; fragment; length: 4.6 cm; breadth: 4.65 cm; thickness: 0.5 mm; weight: 5.7 g – Kammerhofmuseum Bad Aussee, Cat. no. 124/Find no. 141.

*Date:* according to the miniature-cuirass from the same deposit roughly BA D/Ha A to Ha B1 (Windholz-Konrad 2008, 50).

*Bibliography:* Windholz-Konrad 2008, 48–57, 137, Fig. 2: 3.47.

#### 3. *Brodski Varoš*, Brodsko-posavska županija, Croatia

Hoard; fragment; measurements: 5 × 5.5 cm; thickness: 0.8 cm; weight: 12 g – Arheološki muzej u Zagrebu, no Inv. no.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 212).

*Bibliography:* Karavanić 2009, 116–118; Clausing 2003, 132; Fig. 47: 68; Schauer 2003; Clausing 2001, 216, Fig. 8: 6; Vinski-Gasparini 1973, 178; 212, Pl. 57: 5.

4. *Brodski Varoš*, Brodsko-posavska županija, Croatia  
Hoard; fragment; measurements: 2.9 × 2.9 cm; thickness: 0.3 cm; weight: 2 g – Arheološki muzej u Zagrebu, no Inv. no.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 212).

*Bibliography:* Karavanić 2009, 116–118; Schauer 2003; Vinski-Gasparini 1973, 178, 212. (4 is not part of the disc 3).

5. *Budinščina*, Krapinsko-zagorska županija, Croatia  
Hoard; fragment; 6.2 × 5.7 cm; thickness: 0.5 mm; weight: 20 g – Arheološki muzej u Zagrebu, Inv. no. 10.699.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 212).

*Bibliography:* Vinski-Gasparini 1973, 212, Pl. 79: 4.

6. *Gornji Slatinik*, Brodsko-posavska županija, Croatia  
Hoard; three fragments (*a–c*); measurements and weight see below – Brodsko Posavlje Muzej Slavonski Brod, Inv. no. A-280.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 214).

*Bibliography:* **Clausing 2003, 132, Fig. 61: A 25–27;** Vinski-Gasparini 1973, 214, Pl. 69: 13–15.

Fragment *a* (Vinski-Gasparini 1973, Pl. 69: 13): 6.2 cm × 5 cm; thickness 0.5–1.0 mm; weight: 13 g. – Fragments *b* and *c* (Vinski-Gasparini 1973, Pl. 69: 14,15; fitting together): 11.2 cm × 3.9 cm; thickness 0.6 mm; weight: 13.6 g.

#### 7. *Poljanci I*, Brodsko-posavska županija, Croatia

Hoard; fragment; dm: ca. 11 cm; thickness: 0.1 mm; weight: 26 g – Brodsko Posavlje Muzej Slavonski Brod, Inv. no. 1807.

*Date:* BA D–Ha A1 (Miklik-Lozuk 2009, 46; Vinski-Gasparini 1973, 218).

*Bibliography:* Miklik-Lozuk 2009, 46; Clausing 2003, Fig. 65, 47; Vinski-Gasparini 1973, Pl. 48: 29.

#### 8. *Poljanci II*, Brodsko-posavska županija, Croatia

Hoard; fragment; dm: approx. 21.5 cm; weight: 22.7 g – Muzej Slavonije Osijek, Inv. no. 7827.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 218), resp. Ha A (Bulat 1973–1975, 37).

*Bibliography:* Karavanić 2009, 117; Kudelić 2007, 11; **Clausing 2003, 132, Fig. 67: 27**; Clausing 2001, 216, Fig. 8: 10; Hansen 1994, 570, no. 224, Pl. 34: 2; Vinski-Gasparini 1973, 218; Bulat 1973–1975, 28, Pl. XV: 10.

**9. Slavonski Brod**, Brodsko-posavska županija, Croatia  
Hoard; fragments; measurements: 3.3 × 1.9 cm; weight: 3.8 g – Römisch-Germanisches Zentralmuseum Mainz, Inv. no. O.40515/127.

*Date:* BA D–Ha A1 (Clausing 2003, 200).

*Bibliography:* **Clausing 2003, 131, Fig. 40: 130**; Schauer 1986, 900–904.

**10. Veliko Nabrđe**, Osječko-baranjska županija, Croatia  
Hoard; fragments; length: 6 cm/3.5; breadth: 4 cm/3.3 cm; weight: 6 g/2 g; – Arheološki muzej u Zagrebu, Inv. no. 10.240.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 218).

*Bibliography:* Karavanić 2009, 116–118; Škoberne 2001, 21; Clausing 2001, 216, Fig. 8: 5; Vinski-Gasparini 1983, 654–660, Pl. XCIII: 15; Vinski-Gasparini 1973, 186, Pl. 44: 5.

**11. Privina Glava**, Sremski okrug, Serbia

Hoard; fragment; height: 4.5 cm; width: 5.9 cm – Narodni muzej Beograd, Inv. no. 2128.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 84).

*Bibliography:* Clausing 2001, 216, Fig. 8: 4; Popović 1975, 71, Pl. LXV: 7; Vinski-Gasparini 1973, 84, 105, 107; Garašanin 1954, 25–27, Pl. 14: 4.

**12. Přestavlky**, Okres Plzeň-jih, Czech Republic

Hoard; fragment; length: 2.8 cm; breadth: 2.4 cm; weight: 2 g – Moravské zemské muzeum Brno, Inv. no. 57.067.

*Date:* Ha A1, resp. depot horizon Přestavlky (Salaš 2002, 269 f).

*Bibliography:* Mačala 1985, 170, Pl. XI: 10, XV: 7; v. Brunn 1968, 302; Müller-Karpe 1959, 112; Rzehak 1907, 95 f, Pl. 3: 21.

**13. Pamuk**, kom. Somogy, Hungary

Hoard; fragment; length: 5.4 cm; breadth: 3.5 cm; thickness: 1 mm; weight: unknown – Somogy Megyei Múzeumok Igazgatósága, Kaposvár, Inv. no. 66.191.25.

*Date:* horizon Kurd (Kemenczei 1988, 23; Mozsolics 1985, 169).

*Bibliography:* Clausing 2001, 216, Fig. 8: 7; Kemenczei 1988, 23, 31, 54, Pl. 68: 15; Mozsolics 1985, 168 f, 344, Pl. 106: 22.

**14. Nadap**, kom. Fejér, Hungary

Hoard; almost complete; dm: ca. 23.5 cm; weight: unknown – Szent István Király Múzeum, Székesfehérvár, no Inv. no.

*Date:* BA D–Ha A1 (most recently Uckelmann 2008, 18 f with further literature).

*Bibliography:* Uckelmann 2008, 18 f; Makkay 2006, 7, Pl. I; Clausing 2001, 218; Jankovits 1999–2000, Fig. 1: 2; Jankovits 1998–1999, Fig. 1: 2; Hansen 1994, 546, H 451; Calzecchi-Onesti 1987–1988, 77 no. 12; Schauer 1988, 184, Fig. 4; Petres 1982, 57 f, Fig. 1: a,b.

**15. Nagyvejke**, Hungary

Hoard; three fragments; 3.0 × 2.5 cm; 3.4 × 3.2 cm; 3.3 × 2.5 cm; thickness: 0.1 cm; weight: unknown – Adám Béri Balogh Museum Szekszárd, Inv. no. 69.220.89; 69.220.63.

*Date:* BA D–Ha A1 (Mészáros 1971–1972, 47).

*Bibliography:* Clausing 2001, 208, 216, Fig. 8: 1–3; Kemenczei 1979, 80 f, note 6; Mészáros 1971–1972, 32 f, nos. 125, 129; 63, Pl. 13: 3–5,9.

Another fragment with ribs only might possibly belong to the same disc.

**16. Nova Bingula**, Sremski okrug, Serbia

Hoard; fragments of two (?) discs; dm: approx. 13 cm; weight: 63 g – Muzej Sremska Mitrovice, Inv. no. unknown.

*Date:* BA D–Ha A1 (König 2004, 70; Vasić 1982, 268).

*Bibliography:* Popović 1975, 38, no. 77, 1–5, Pl. XXXVI: 1–5.

**17. Čermožiše** (Ptuj), Slovenia

Hoard; fragment; length: 4.1 cm; breadth: 3 cm; thickness: 0.7 mm; weight: 6.7 g – Universalmuseum Joanneum Graz, no Inv. no.

*Date:* Ha A (Catalogue 2011, 42).

*Bibliography:* Catalogue 2011, 42–43, Cat. no. 13; Karl, Modl, Porod 2009, 46–60; Čerče, Šinkovec 1995, 138 [no. 5], 146–148; Smodič 1955. All publications before 2011 discuss the hoard in general, but do not mention the fragment concerned.

**18. Markovac-Grunjac**, Banat, Serbia

Hoard; four fragments (*a–d*); diameter reconstructed: 10 cm; measurements biggest fragment: 6.4 × 4.2 cm; weight: 5.6 g – Gradski muzej Vršac, Inv. nos. 10.750, 10.753.

*Date:* HaA1 (Jovanović 2010, 81).

*Bibliography:* Jovanović 2010, 98, Pl. 57: 479,482.

#### Discs with ribs and ring-and-dot decoration

(Pl. / t. 2: 19–26)

**19. Boljanić**, Gračanica, Tuzla canton, Bosnia and Herzegovina

Hoard; fragment; length: 4.6 cm; thickness: 1 mm; weight: 4.9 g – Muzej istočne Bosne, Tuzla, Inv. no. 3420.

*Date:* BA D–Ha A1 (König 2004, 191–194).

*Bibliography:* Karavanić 2009, 116–118; König 2004, 191–194, Pl. 19: 74; Jovanović 1958, no. 25.

**20. Brodski Varoš**, Brodsko-posavska županija, Croatia

Hoard; fragment; measurements and weight unknown – Arheološki muzej u Zagrebu, Inv. no. unknown.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 212).

*Bibliography:* Karavanić 2009, 116–118; Clausing 2003, 132, Fig. 55: 412; Schauer 2003; Clausing 2001, 216; Vinski-Gasparini 1973, 178, 212, Pl. 55: 22.

**21. Poljanci IV**, Brodsko-posavska županija, Croatia

Hoard; fragment; measurements: 6.6 × 3.3–3.5 cm; thickness: 0.4–0.7 mm; weight: 6.9 g – Brodsko Posavljie Muzej Slavonski Brod, Inv. no. A-4026.

*Date:* BA D–Ha A1 (Miklik-Lozok 2009, 47).

*Bibliography:* Miklik-Lozuc 2009, 108, no. 257; Miklik-Lozuc 2004, 32, Pl. IX: 2.

**22. Jurka vas** (Novo mesto), Slovenia

Hoard; fragment; length: 3.7/5.2 cm; breadth: 3.3/3.4 cm; weight: 1.6/2.7 g – Narodni muzej Slovenije, Inv. no. P 10819/2; P 10818/12.

*Date:* horizon II = Ha A (Turk 1996, 110 f, 121 f).

*Bibliography:* Gleirscher 2007, 48–53, Fig. 1: 3,4; Čerče, Šinkovec 1995, 197–204 [no. 15], Pl. 91: 51,52; Trampuž-Orel 1996, 225; Turk 1996, 110 f, 121 f; Gabrovec 1983, 72, 75–78, Pl. VI; Knez 1975, 214; Müller-Karpe 1959, 278 [with earlier literature before 1931], Pl. 130.

**23. Bingula-Divoš**, Sremski okrug, Serbia

Hoard; fragments; dm: ca. 15 cm; thickness: 0.5–0.9 mm; weight: 24 g – Arheološki muzej u Zagrebu, Inv. no. 4046.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 211).

*Bibliography:* Vinski-Gasparini 1973, 211, Pl. 86: 1; Müller-Karpe 1959, 112; Peroni 1956, 76, 89; Holste 1951, 7 f, Pl. 12: 19.

**24. Kličevac-Pomrlovo**, Braničevski okrug, Serbia

Hoard; fragment; dm: 12.5 cm; weight: 10 g – Narodni muzej Beograd (?), Inv. no. unknown.

*Date:* Ha A1 (Jacanović, Radojčić 2001, 89).

*Bibliography:* Jacanović, Radojčić 2001, 74, no. 119, Pl. 11: 4.

**25. Mušov II**, Okr. Břeclav, Czech Republic

Hoard; fragment; measurements: 3.8 × 3.7 cm; weight: 2 g – Muzeum Moravský Krumlov, Inv. no. 212.

*Date:* Kurd horizon = Ha A1 (Salaš 2002, 261).

*Bibliography:* Salaš 2005, 357–371, 507, Pl. 218: 261; Salaš 2002, 269, Fig. 5: 14.

**26. Zalaszentmihály-Pötréte**, kom. Zala, Hungary

Hoard (?); fragment; dm: 11.7–11.8 cm; thickness: 0.2–0.5 mm – Göcseji Múzeum, Zalaegerszeg, Inv. no. 69.11.9.

*Date:* BA D–Ha A1 (Müller 1972, 72) or horizon Gyermely = Ha A2 (Mozsolics 1985, 71, 216).

*Bibliography:* Mozsolics 1985, 71, 216; Müller 1972, 60, 64 f, Fig. 6: 1, 7: 1.

**Discs with ribs (and eventually more?)**

(Pl. / t. 2: 27–35)

**27. Bingula-Divoš**, Sremski okrug, Serbia

Hoard; fragment; measurements and weight unknown – Arheološki muzej u Zagrebu, Inv. no. unknown.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 211).

*Bibliography:* Vinski Gasparini 1973, 108, Pl. 86: 20; Müller-Karpe 1959, 112; Peroni 1956, 76, 89; Holste 1951, 7 f.

**28. Budinščina**, Krapinsko-zagorska županija, Croatia

Hoard; fragment; 4.8 × 5.2 cm; thickness: 0.2 mm; weight: 10 g – Arheološki muzej u Zagrebu, Inv. no. 10.698.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 212).

*Bibliography:* Vinski-Gasparini 1973, 105, Pl. 79: 8.

**29. Brodski Varoš**, Brodsko-posavska županija, Croatia  
Hoard; fragment; measurements and weight unknown – Arheološki muzej u Zagrebu, Inv. no. unknown.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 212).

*Bibliography:* Karavanić 2009, 116–118; Clausing 2003, 132; Clausing 2001, 216; Vinski-Gasparini 1973, 178, 212, Pl. 53: 25.

**30. Brodski Varoš**, Brodsko-posavska županija, Croatia  
Hoard; fragment; measurements: 5.6 × 6.2 cm; thickness: 1 mm; weight: 16 g – Arheološki muzej u Zagrebu, Inv. no. 21.182.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 212).

*Bibliography:* Karavanić 2009, 116–118; Clausing 2003, 132; Clausing 2001, 216; Vinski-Gasparini 1973, 178; 212.

**31. Brodski Varoš**, Brodsko-posavska županija, Croatia  
Hoard; seven fragments (a–g) from different discs, max. six; measurements and weight see below – Arheološki muzej u Zagrebu, no Inv. no.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 212).

*Bibliography:* Karavanić 2009, 116–118; Clausing 2003, 132; Clausing 2001, 216; Vinski-Gasparini 1973, 178, 212, Pl. 58: 2.

– Fragment *a*: dm: 6.7 cm; thickness: 0.5 mm; weight: 12 g.  
– Fragment *b*: 2.8 × 3.7 cm; thickness: 0.2 mm; weight: 2 g.  
– Fragment *c*: 5.3 × 2.3 cm; thickness: 0.15 mm; weight: 2g.  
– Fragment *d*: 2.3 × 1.2 cm; thickness: 0.2 mm; weight: < 1 g.  
– Fragment *e*: 5.5 × 2.3 cm; thickness: 0.2 mm; weight: 2 g.  
– Fragment *f*: 3.8 × 3.8 cm; thickness: 0.2 mm; weight: 4 g.  
– Fragment *g*: 3.7 × 2.4 cm; thickness: 0.2 mm; weight: 4 g. Fragments *f* and *g* belong to the same disc.

**32. Gornja Vrba**, Brodsko-posavska županija, Croatia  
Hoard; fragment; measurements: 3.6 × 4.4 cm; thickness: 0.5 mm; weight: 10 g – Arheološki muzej u Zagrebu, Inv. no. 3442.

*Date:* BA D–Ha A1, mainly Ha A (König 2004, 49; Vinski Gasparini 1973, 89).

*Bibliography:* König 2004, 49; Vinski Gasparini 1973, 180, 214, Pl. 51: 25.

**33. Otok-Privlaka**, Vukovarsko-srijemska županija, Croatia  
Hoard; fragment; measurements: 4.3 × 4.7 cm; thickness: 0.5 mm; weight: 10 g – Arheološki muzej u Zagrebu, Inv. no. 23/8.

*Date:* Ha A1.

*Bibliography:* Hansen 1994, 569; Müller-Karpe 1980, 804; Vinski-Gasparini 1973, 217, Pl. 28: 14; Holste 1951, 5 f.

**34. Veliko Nabrđe**, Osječko-baranjska županija, Croatia  
Hoard; fragments; length: 6 cm/3.5 cm; breadth: 4 cm/3.3 cm; weight: 6 g/2 g; – Arheološki muzej u Zagrebu, Inv. no. 10.220.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 218).

*Bibliography:* Karavanić 2009, 116–118; Škoberne 2001, 21; Clausing 2001, 216; Vinski-Gasparini 1973, 186, Pl. 44: 6,8.



**35. Boljanić**, Tuzla canton, Bosnia and Herzegovina  
Hoard; two fragments (*a*, *b*); measurements and weight see below – Muzej istočne Bosne posjeduje Tuzla, Inv. no. unknown.

*Date*: BA D–Ha A1 (König 2004, 191–194).

*Bibliography*: König 2004, 191–194, Pl. 19: 72,73; Jovanović 1958.

Measurements and weight after P. König (2004, 193): No. 72 (= *a*): dm: 5 cm; loop height: 1.3 cm; weight 11 g – No. 73 (= *b*): dm: 6.2 cm; loop height: 1.3 cm; weight: 11.9 g.

#### Discs with ribs

(Pl. / t. 3: 36–46)

**36. Gornji Slatinik**, Brodsko-posavska županija, Croatia  
Hoard; fragment; measurements and weight unknown – Brodsko Posavlje Muzej Slavonski Brod, Inv. no. A-279.

*Date*: BA D–Ha A1 (Vinski-Gasparini 1973, 214).

*Bibliography*: Clausing 2003, 132, Fig. 61: A 25; Vinski-Gasparini 1973, 214, Pl. 69: 12.

**37. Brodski Varoš**, Brodsko-posavska županija, Croatia  
Hoard; fragment; measurements: 3.1 × 7.0 cm; 5.0 × 3.5 cm; thickness: 1.0–0.5 mm; weight: 6 g + 6 g – Arheološki muzej u Zagrebu, no Inv. no.

*Date*: BA D–Ha A1 (Vinski-Gasparini 1973, 212).

*Bibliography*: Karavanić 2009, 116–118; Clausing 2003, 132; Clausing 2001, 216; Vinski-Gasparini 1973, 178, 212, Pl. 58: 10,11.

**38. Veliko Nabrđe**, Osječko-baranjska županija, Croatia  
Hoard; three fragments; dm: 11.2 cm; thickness: 0.5 mm; weight: 2 g + 6 g + 8 g; – Arheološki muzej u Zagrebu, Inv. no. 10.242.

*Date*: BA D–Ha A1 (Vinski-Gasparini 1973, 218).

*Bibliography*: Karavanić 2009, 116–118; Clausing 2001, 216; Vinski-Gasparini 1973, 186, Pl. 44: 6.

**39. Boljanić**, Tuzla canton, Bosnia and Herzegovina  
Hoard; fragment; dm: 6.6 cm; loop height: 0.9 cm; weight: 8.1 g; 3.9 g side fragment – Muzej istočne Bosne, Tuzla.

*Date*: BA D–Ha A1 (König 2004, 191–194).

*Bibliography*: König 2004, 191–194, Pl. 19: 71; Jovanović 1958.

**40. Jadrina**, Gračanica, Tuzla canton, Bosnia and Herzegovina

Hoard; fragment; dm: approx 9 cm; loop: 1 cm height; thickness of the metal sheet: 0.5–1.0 mm (in the centre); weight: 24.6 g (all three fragments together) – Zemaljski Muzej Bosne i Hercegovine, Sarajevo, Inv. no. 25870–25876, 25878–25882.

*Date*: BA D–Ha A1 (König 2004).

*Bibliography*: König 2004, Cat. no. 11, Pl. 20: B9.

**41. Kučišta**, Brod (Bosanski Brod), Republika Srpska, Bosnia and Herzegovina

Hoard; fragment; dm: 17.2 cm; thickness: 0.3–0.4 mm; weight of the fragments: 7.7 g; 5 g; 4 g, 3.8 g; 2.7 g; 2.6 g;

1.7 g; 1.3 g; 1 g (total: 29.8 g) – Zavičajni Muzej Doboj, Inv. no. 1792–1887 (whole hoard).

*Date*: BA D–Ha A1 (König 2004).

*Bibliography*: König 2004, Cat. no. 15, Pl. 4: 58.

**42. Jarak I**, Sremski okrug, Serbia  
Hoard; fragmented disc; dm: 12.8 cm; weight: unknown – Arheološki muzej u Zagrebu, Inv. no. 2470.

*Date*: BA D–Ha A1 (Vinski-Gasparini 1973, 214).

*Bibliography*: Vasić 1999, 13; Vinski-Gasparini 1973, 180, 214.

**43. Privina Glava**, Sremski okrug, Serbia  
Hoard; fragment; dm: 10.8–11.0 cm, weight unknown – Narodni muzej Beograd, Inv. no. 2090.

*Date*: BA D–Ha A1.

*Bibliography*: Popović 1975, 71, Pl. LXVI: 3; Garašanin 1954, 25–27, Pl. 14: 1.

**44. Privina Glava**, Sremski okrug, Serbia  
Hoard; fragment; dm: 13.6 cm; weight unknown – Narodni muzej Beograd, Inv. no. 2089 a–d.

*Date*: BA D–Ha A1.

*Bibliography*: Popović 1975, 71, Pl. LXVI: 2; Garašanin 1954, 25–27, Pl. 14: 2.

**45. Majdan**, Severnobański okrug, Serbia  
Hoard; fragment; dm: 15.1 cm; thickness loop and plate together: 11 mm; weight: 78.9 g – Gradski Muzej Vršac, Inv. no. 1228.

*Date*: Ha A (Rašajski 1988) resp. date: BA D–Ha A1 (Vinski Gasparini 1973; Vasić 2003, 91).

*Bibliography*: Vasić 2003, 90; Rašajski 1988, 19, 23, Fig. 31.

**46. Esztergom-Szentgyörgymező**, Kom. Komáron, Hungary  
Hoard I; two fragments; measurements and weight unknown – Balassa Bálint Múzeum Esztergom, Inv. no. 69.1.284; 289.

*Date*: Kurd horizon, B Vb = Ha A1 (Mozsolics 1985, 118).

*Bibliography*: Mozsolics 1985, 116 f, Pl. 138: 14,16.

#### Discs with ribs: variant

(Pl. / t. 3: 47)

**47. Otok-Privlaka**, Vinkovci, Croatia  
Hoard; fragment; measurements: 6.0 × 4.8 cm; thickness: 0.7 mm; weight: 14 g – Arheološki muzej u Zagrebu, Inv. no. 23/7.

*Date*: Ha A1.

*Bibliography*: Hansen 1994, 569; Müller-Karpe 1980, 804; Vinski-Gasparini 1973, 217, Pl. 28: 13; Holste 1951, 5 f.

#### Discs – simplest version, examples

(Pl. / t. 3: 48–49)

**48. Veliko Nabrđe**, Osječko-baranjska županija, Croatia  
Hoard; fragment; dm: 16.4 cm; thickness: 0.5 mm; weight: 22 g – Arheološki muzej u Zagrebu, Inv. no. 10.218.

*Date*: BA D–Ha A1 (Vinski-Gasparini 1973, 218).

*Bibliography:* Karavanić 2009, 116–118; Clausing 2001, 216; Vinski-Gasparini 1973, 186, 218.

**49. Brodski Varoš**, Brodsko-posavska županija, Croatia  
Hoard; fragment; measurements and weight unknown – Arheološki muzej u Zagrebu, Inv. no. unknown (fixed in show case).

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 212).

*Bibliography:* Karavanić 2009, 116–118; Clausing 2003, 132; Clausing 2001, 216; Vinski-Gasparini 1973, 178; 212, Pl. 58: 3.

### Cap helmets with rib and star decoration

(Pl. / t. 4: 50–54)

#### 50. Hungary (?)

Single find; find circumstances unknown; almost complete; height: 13.5 cm; dm: 13.0 × 20.8 cm; weight: not possible to measure, since fixed with modern bronze sheet – Magyar Nemzeti Múzeum, Inv. no. 62.1.213.

*Date:* Ha A (Mozsolics 1955; Kemenczei 1979, 80).

*Bibliography:* Schauer 2003, 196, Fig. 3: 1; Clausing 2001, 215; Born, Hansen 2001, 63, Fig. 56; Gaál 2001, 49; Kemenczei 1979, 79 f, Fig. 4,5; Müller-Karpe 1959, 113; Mozsolics 1955, 37, Fig. 3; Hampel 1887, Pl. 66: 5a,b; Hampel 1886, Pl. LXVI: 5a,b.

#### 51. Northern Hungary (?)

Find circumstances unknown; almost complete; height: 13.1 cm; dm: 17.2 × 20.9 cm; weight: 292 g – Magyar Nemzeti Múzeum, Inv. no. 77.4.1.

*Date:* Ha A.

*Bibliography:* Clausing 2001, 215, Fig. 7, 1; Gaál 2001, 49; Born, Hansen 2001, 62, Fig. 55; Gaál 2001, 46 f; Mozsolics 1985, 25, 208, Pl. 136: 2; Kemenczei 1979, 79–89, Figs. 1–3.

#### 52. Paks, kom. Tolna, Hungary

Single find (Danube); complete; height: 11.5 cm (cap), 3.5 cm (socket); dm: 17.0 × 20.5 cm; weight: 340 g – Városliget Múzeum Paks, Inv. no. 2002.11.

*Date:* Ha A.

*Bibliography:* Gaál 2001, 46 f, Figs. 4,5; Clausing 2001, 215, Fig. 9: 1.

#### 53. Žiar nad Hronom, okr. Žiar nad Hronom, Slovakia

Find circumstances unknown; complete; height: 12.1 cm (socket: 5.5 cm); dm: 20.8 × 18.2 cm (socket: 12.5 × 36.0 mm); cheek plates: 11.0 × 8.4 cm; thickness: edge: 0.8 mm; weight: 385 g (cheek plates: 33.3 g and 39 g); cheek plates: approx. 0.5 mm – Archeologické múzeum SNM, Inv. no. AP 75.990.

*Date:* Ha A.

*Bibliography:* Bartík 2009, 37–48, Fig. 1,2,3–6.

#### 54. Unknown (Hungary?)

Find circumstances unknown; complete; height: 19.5 cm; max. dm: 22.5 cm; weight: unknown – present repository unknown; sold at the auction Cahn in Basel, 19. 10. 2002; former in private hands in Nordrhein-Westfalen, Germany.

*Date:* Ha A.

*Bibliography:* Clausing 2001, 212, 214 f, Fig. 9: 2; Auktionskatalog Jean-David Cahn AG, Auktion 4, 19. 10. 2002 (Leipzig 2002), 64, no. 315, Pl. 57: 315.

### Fragments and related helmets

(Pls. / t. 4: 55–59; 5: 60–66)

#### 55. Markovac-Grunjac, Serbia

Hoard; fragment; 6 × 4.1 cm; weight: 10.1 g – Gradski muzej Vršac, Inv. no. 10.755.

*Date:* HaA1 (Jovanović 2010, 81).

*Bibliography:* Jovanović 2010, 70, 98, Pl. 59: 497.

Potentially another fragment from the hoard is also part of a helmet (Jovanović 2010, Pl. 59: 481).

#### 56. Veliko Nabrđe, Osječko-baranjska županija, Croatia

Hoard; fragment; length: 11.5 cm; breadth: 5.8 cm; weight: 28 g – Arheološki muzej u Zagrebu, Inv. no. 10.237.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 218) resp. Ha A1.

*Bibliography:* Karavanić 2009, 116–118; Schauer 2003, Fig. 3: 6; Clausing 2001, 216, Fig. 8: 5,11; Hansen 1994, 574, JU 315; Vinski-Gasparini 1973, 186; Pl. 44: 2.

#### 57. Poljanci I, Brodsko-posavska županija, Croatia

Hoard I; fragment; length 10.5 cm; width 7.1 cm; thickness: 0.04–0.08 cm; weight 23.5 g – Brodsko Posavljie Muzej Slavonski Brod, Inv. no. A 1805.

*Date:* BA D–Ha A1 (Vinski-Gasparini 1973, 218) resp. Ha A1.

*Bibliography:* Karavanić 2009, 101, no. 39; 116–118; Miklik-Lozuc 2009, 69, Cat. no. 88; Clausing 2003, Fig. 65: 50; Schauer 2003, Fig. 3: 8; Clausing 2001, 210, 216, Fig. 8: 9; Vinski-Gasparini 1973, 87, 183, 218, Pl. 48: 31.

#### 58. Elsterwerda, Lkr. Elbe-Elster, Brandenburg, Germany

Hoard; fragment; measurements: 5.9 × 3.75 cm; thickness: 0.25–0.3 mm; weight: unknown – Landesmuseum Sachsen-Anhalt, Halle, Inv. no. 10.727.

*Date:* Ha A1 (Martin 2009, 120).

*Bibliography:* Mörtz 2011b, 102; Mörtz 2011a; Martin 2009, 99, no. 133d; Clausing 2001, 208–216; Hansen 1995; v. Brunn 1968, 143, 156, 317, no. 57; Grünberg 1943, 78, 91; Agde 1939, 170, Fig. 4; Sprockhoff 1937, 8, Fig. 3; Bornschein, Gandert 1929, 145 f.

#### 59. Hungary (?)

Find circumstances unknown; complete; height: 18.5 cm; dm: 20.8 × 18.0 cm; thickness: 0.5–0.8 mm; socket: height: 5 cm; hole in the socket: 3.2 cm deep; socket dm: 1.6 × 1.5 cm; base dm: 3.6 × 3.0 cm; helmet weight: 345 g – present repository unknown; former Guttman-collection, Inv. no. AG 246.

*Date:* 13<sup>th</sup>/12<sup>th</sup> cent. BC (Born, Hansen 1991, 235).

*Bibliography:* Schauer 2003, Fig. 2; *The Art of Warfare. The Axel Guttman Collection*, Part 1. Auction catalogue Christie's, 6. 11. 2002 (London 2002), 14, no. 10, sale 9482; Clausing 2001, 215, Fig. 7: 2; Born, Hansen 2001, 61–65, 175, 270, 231–235, Pl. IX–X; 323; 235, Fig. 178–182.

**60. Hungary (?)**

Find circumstances unknown; soil context (?); complete; height: 16.5 cm; dm: 21 × 16.0 cm; thickness: 1.0–1.5 mm, on the edge 2 mm; left cheekplate: 11.2 × 7.4 cm; right cheek plate: 11.4 × 7.8 cm; socket: height: 5 cm; rectangular opening: 0.9 × 1.0 cm, deepness 5 cm; thickness socket: on top 1.8 cm, in the middle 1.5 cm and on the base 2.7 cm; helmet weight: without cheekplates 407 g; left cheek plate: 36 g; right cheek plate: 40 g; total weight: 483 g – present repository unknown; former Guttman-collection, Inv. no. AG 1126.

*Date:* 13<sup>th</sup>/12<sup>th</sup> cent. BC (Born, Hansen 1991, 241).

*Bibliography:* Clausing 2001, 215, Fig. 7: 3; **Born, Hansen 2001**, 62–66, 68, 74, 175, 235 f, 270, Pl. XI–XII, 237 f, 242, **Figs. 183–191**, 270.

**61. Strassengel, Styria, Austria**

Hoard; fragment of a socket; height: 4.4 cm; dm: 1.4 cm (socket), 2.8 cm (base); weight: 63.2 g – Universalmuseum Joanneum Graz, Inv. no. 7219.

*Date:* Ha B (Pittioni 1954, 517) or BA D–Ha A (Müller-Karpe 1959, 113) resp. Ha A.

*Bibliography:* Gleirscher 2007, 48–53, Fig. 4: 4; Clausing 2001, 214 f; Hansen 1994, 526, A 498; Primas 1986, 91 f, no. 527; **Hencken 1971**, 155, **Fig. 122**; Müller-Karpe 1959, 113, note 5, 277, Pl. 126: A1; Pittioni 1954, 517.

**62. Gușterița (Szentersébet/Hammersdorf), Romania**

Hoard II; fragment of a socket; height: 4.1 cm; dm knob: 1.96 cm; shaft length: 2.81 cm; dm hole in knob: 8 mm; dm base: 2.0 × 1.8 cm; dm hole on the base: 4.5 mm; weight: unknown – Muzeul National Brukenthal, archaeological collection, Inv. no. 546 (old and new).

*Date:* see below.

*Bibliography:* Sorocanu 2008, 85, no. 33–34; Gleirscher 2007, 48–53, Fig. 4: 2; Clausing 2001, 215, Fig. 10; Bader 1991, 92, no. 190; Rusu 1990, 70 f, Pl. V: 5; Schauer 1988, 184; Bader 1983, 38, no. 22; **Petrescu-Dîmbovița 1978**, 120 f, no. 141, **Pl. 115: 277**; Holste 1962, Pl. 8; Petrescu, Dîmbovița 1960, 148; Petrescu-Dîmbovița 1978, 120–122 [with earlier literature about the hoard in general], Pl. 115: 277. Mozsolics 1955, 39; Holste 1951, 24–27; v. Merhart 1941, 12, note 15, no. 10; Hampel 1892, 143–155, Pl. XV: 5; Hampel 1986, 56; Goos 1876, 226; Reissenberger 1872.

G. v. Merhart dated the hoard according to the earlier Hungarian hoards to BA D–Ha A (1941, 13). G. Kossack placed the hoard in Ha A1 (1954, 17) and A. Mozsolics, due to the later finds at the Magyar Nemzeti Múzeum, to the transition horizon Ha A/B (1955, 46). M. Petrescu-Dîmbovița notes some older BA D objects as well and places the hoard in Ha A (1960, 148), as does H. Müller-Karpe (1962, 271). M. Rusu places the hoard in Ha A1 (1963, 184), as well as P. Schauer (1988, 184). M. Gimbutas dated it in BA D (1965, 328). It is quiet clear, that the hoard can be dated accurate only if all pieces in all different museums were studied systematically.

**63. Wöllersdorf, Lower Austria, Austria**

Hoard; fragment; measurements: 8.5 × 5.2 cm; thickness: 0.7–0.8 mm; weight: 28 g – Naturhistorisches Museum Wien, Inv. no. 37.404.

*Date:* Ha A (Pittioni 1954, 534).

*Bibliography:* Bartík 2009, 44; Borchardt 1972, 44, Fig. 6: A3; Hencken 1971, 179, Fig. 146; Müller-Karpe 1962, 272; Müller-Karpe 1959, 108–110, 113 f, 226, Pl. 135B; 136; Pittioni 1954, 411–414, Figs. 287, 417, 814, note 686 [with earlier citations].

**64. Hočko Pohorje (Maribor), Slovenia**

Hoard; fragment; measurements: 3.9 × 3 cm; weight: 3.5 g – Pokrajinski muzej Maribor, Inv. no. 2146.

*Date:* Ha A.

*Bibliography:* Mörtz 2011a, 371; **Čerče, Šinkovec 1995**, 177–179 [no. 13], **Pl. 83: 168**, 156: 5; Hansen 1994, 564, JU 96; Müller-Karpe 1959, 279.

**65. Uioara de Sus (Felsőmarosújvár), jud. Alba, Romania**

Hoard; fragments of two cheek plates; measurements: ca. 3.3 × 3.6 cm and 6.0 × 4.2 cm – Muzeul de istorie Cluj, Inv. no. III 6005 and III 5319.

*Date:* Ha A1 (Rusu 1963, 184 f).

*Bibliography:* Rusu 1990, 76; Mozsolics 1985, 25; Hencken 1971, 180, Fig. 148: a,b; Petrescu-Dîmbovița 1960, Petrescu-Dîmbovița 1978, 132–135, Pl. 198: 1025,1030; Rusu 1963, 184–187; **Schauer 2003**, 197, **Fig. 3: 5,6**.

**66. Mezőnyárad, kom. Borsod-Abaúj-Zemplén, Hungary**

Hoard; one almost complete cheekplate; max. width: 7.9 cm; length: 10.5 cm; weight unknown – Herman Ottó Múzeum Miskolc, Inv. no. 74.38.1.

*Date:* Ha A1 (Kemenczei 1979, 83; Hellebrandt 1999–2000, 207; Born, Hansen 2001, 64).

*Bibliography:* Born, Hansen 2001, 64, Fig. 57; Hellebrandt 1999–2000; Vachta 2008, 123, list V.1.5, no. 9; Hansen 1994, 545, H 426; Patay 1990, 19, no. 4; Mozsolics 1985, 149 f; Kemenczei 1984, 149, no. 20; Kemenczei 1979, 83, note 14; Hellebrandt 1973, 16.

**Bronze Cups**

(Pl. / t. 5: 67–70)

**67. Seddin, Mecklenburg-Vorpommern, Germany**

Grave; complete cast bronze cup; max. dm: 12.8 cm; dm base: 4.8 cm; height: 11 cm; thickness: 1.0–2.5 mm; weight: 704 g – Museum Stralsund, no Inv. no.

*Date:* BA C/D–Ha A2 (Martin 2009, 16).

*Bibliography:* **Martin 2009**, 19–20, **Pl. 1: 1**; Schauer 1985, 176 f; Müller-Karpe 1980, 330; Sprockhoff 1933, 19, no. 117, Pl. 11.

**68. Dresden-Dobritz, Saxony, Germany**

Hoard; complete cups type Friedrichsruhe, variant Osternienburg-Dresden, group Dresden-Dobritz and group Osternienburg (Inv. no. 2317/52); measurements and Inv. no. see below – Museum Dresden.

*Date:* Ha A2–B1 (Martin 2009, 16).

*Bibliography:* Mörtz 2011b, 95; **Martin 2009**, 40, no. 28, Pl. 7: 33, **9: 39–41** [one of the seven complete cups from Dresden-Dobritz], 10: 42–44; Kaiser 2007, 102, no. 70;

Coblenz 1992; Stratan, Vulpe 1977; v. Brunn 1968, 316 f, no. 53; Coblenz 1951, 137 f, Fig. 4.

Measures:

Inv. no. 2317/52: height: 7 cm; dm: 18.0–18.5 cm; thickness: 0.3 mm; weight: 183.3 g.

Inv. no. 2318/52: height: 5.6 cm; dm: 14.3–15.5 cm; thickness: 0.3 mm; weight: 96.6 g.

Inv. no. 2319/52: height: 5.7 cm; max. dm: 14.5 cm; thickness: 0.3 mm; weight: 105.2 g.

Inv. no. 2320/52: height: 4.9 cm; max. dm: 12.5 cm; thickness: 0.3 mm; weight: 77.5 g.

Inv. no. 2321/52: height: 4.25 cm; dm: 12.8 cm; thickness: 0.3 mm; weight: 77.3 g.

Inv. no. 153/17/1: height: 4.5 cm; dm: 12.5–13.0 cm; thickness: 0.3–0.5 mm; weight: 80 g.

Inv. no. 175: height: 4.5 cm; dm: 13.3 cm; thickness: 0.3 mm; weight: 78.4 g.

#### 69. Osternienburg, Saxony-Anhalt, Germany

Grave 29, hill 2; almost complete cup, base is missing; type Friedrichsruhe, variant Osternienburg-Dresden, group Osternienburg; height (actual): 4.6 cm; max. dm: 13.6 cm; weight: unknown – Museum Köthen, Inv. no. EK: 25/21a–g, no. B 358.

Date: Ha A2–B1 (Martin 2009, 16).

Bibliography: Mörtz 2011b, 95; Martin 2009, 42, no. 36, Pl. 8: 36; v. Brunn 1968, 291; v. Merhart 1941, 36; Sprockhoff 1930, 90.

#### 70. Viernheim, Hessen, Germany

Urn grave; complete cup type Friedrichsruhe, variant Osternienburg-Dresden, group Dresden-Dobritz; height: 6.1 cm; max. dm: 14.6 cm; dm: of the base: 4 cm – Hessisches Landesmuseum Darmstadt, Inv. no. A 1957: 8.

Date: late Urnfield period.

Bibliography: Mörtz 2011b, 95; Jacob 1995, 18 f, no. 5, Pl. 2: 5; Hansen 1994, 477, D 1096; Kubach 1977, 461; Herrmann 1966, 153, no. 535; Jorns 1960.

#### Further finds

#### 71. Milostea-Sacoți, jud. Vâlcea, Romania

Hoard; fragments; measurements: approx. 11.3 × 11.4 cm – Muzeul de Istorie a Judetului Vâlcea, Inv. no. 1299, 1323.

Date: BA D–Ha A (Nania, Holtei 181).

Bibliography: Rusu 1990, 77, Pl. III: 3; Petrescu-Dîmbovița 1977, 120; Nania, Holtei 1972, 173.

#### Ceramic cups

(Tab. 3; Fig. / sl. 4: 72,73,88,89,91)

72–93. For reasons of clarity and readability, the ceramic cups with star decoration are listed in Tab. 3 with the literature concerned.

Tab. 3: Ceramic cups with the star decoration (quoted from Pankau 2004, 72–73, with comments). References to the figures in this article are placed in [brackets] after the findspot.

Tab. 3: Keramične posode z zvezdastim okrasom (povzeto po Pankau 2004, 72–73, s komentarji). Sklici na slike v članku so podani v [oklepajih] za navedbo najdišča.

Cat. No. / Kat. št. [Fig. / Sl. 5]	Site / Najdišče	Reference / Objava
72	Alba-Iulia-Monolit, Romania [Fig. 4: 72]	Gáva I pottery: Ciugudean 2010, Pl. XII: 4; Ciugudean 2009, 69 f, Pls. II: 5, IX: 5.
73	Augustin-Tipia Ormenișului, Romania [Fig. 4: 73]	Gáva I pottery in settlement: Ciugudean 2010, Pl. XVI: 5–6, 12–14.
74	Babadag I, Romania	Pankau 2004, 72–73; Jugănaru 1997, Figs. 2: 3, 3: 9.
75	Bobda II, Romania	Horedt 1967a, 18.
76	Bogata, Romania	Inv. No. 211–9 and 215, Muzeul Unirii Alba Iulia.
77	Căuaș-Sighetiu, Romania	Németi 1981–1982, Pl. XV: 1.
78	Cicău, Romania	Winkler, Takács 1980, Figs. 6: 7, 9; 24: 2.
79	Debrecen-Nyulas, Hungary	Kemenczei 1984, Pl. 125: 9–10, 14.
80	Grănicești, Romania	László 1994, Fig. 30B: 1–5.
81	Hunedoara, Romania	Ciugudean 2010, Pl. XI: 1.
82	Kietrz, Poland	Mörtz 2011b, 99, Fig. 3: A; Gedl 2000, 92; Gedl 1979, 46 (HaB2/3 respectively Period V).
83	Köröm, Hungary	Kemenczei 1984, Pl. 136: 11.
84	Lechința de Mureș, Romania	Horedt 1963, Fig. 3.
85	Poroszló-Aponhát, Hungary	Patay 1976, 199.
86	Prügy, Hungary	Kemenczei 1984, Pl. 148: 17.
87	Remetea Mare-Gomila lui Pituț, Romania	Gumă 1993, Pl. 36: 3, 5.
88	Simeria, Romania [Fig. 4: 88]	Ciugudean 2010, Pl. XI: 4.



Cat. No. / Kat. št. [Fig. / Sl. 5]	Site / Najdišče	Reference / Objava
89	Susani, Romania [Fig. 4: 89]	Mörtz 2011; Stratan, Vulpe 1977, 39–46, Pls. 5–26.
90	Taktabáj, Hungary	Kemenczei 1984, Pl. 161: 2.
91	Teleac, Romania [Fig. 4: 91]	Gáva II pottery; Ciugudean 2010, Pl. XIII: 2; Vasilev, Aldea, Ciugudean 1991, Fig. 45.
92	Tilișca, Romania	Lupu 1989, Pl. 5: 2.
93	Zlaté Moravce-Kňažice, Slovakia	Mörtz 2011, 99, Fig. 3: B; Kujovský 1994.
–	Igrița group	Mörtz 2011, Fig. 4; Andrițoiu 1982–1983, Pl. 5: 6.12; Chidioșan, Emódi 1982, Fig. 5: 1–3; Emódi 1980, Figs. 6: 24, 19: 159, 22: 183, 23: 198.
–	Lusatian culture	Furmánek, Veliačik, Vladár 1999, Fig. 36: 21, 37: 10.
–	Mezőcsát group	Kemenczei 1989, Fig. 8: 2; Metzner-Nebelsick 2000, Fig. 10.
–	Piliny culture	Chidioșan, Emódi 1982, 77.
–	Silesia	Gollob 1960, Pls. 9:5; 23: 13; 25: 15; 33: 11.
–	Urnfield culture	Stegmann-Rajtár 1994, Fig. 1: A8.
–	Wysocko culture	Sulimirski 1931, Pl. XII: 7.

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## Zvezdasti okras na poznobronastodobnih čeladah, posodah in okrašenih diskih na območju srednje in jugovzhodne Evrope

### Prevod

Delo na projektu o proizvodnji in uporabi defenzivnega orožja v bronasti dobi na območju srednje in vzhodne Evrope (glej zahvale) je vključevalo izdelavo seznama predmetov in fragmentov, ki naj bi pripadali bronastim čeladah. Podrobna analiza pa je pokazala, da velika večina domnevnih odlomkov čelad dejansko pripada okrašenim diskom iz bronaste pločevine. Napačna interpretacija niti ni presenetljiva ob upoštevanju dejstva, da je bila večina kosov objavljena brez fotografij, samo z risbami, ki so bile velikokrat slabe in brez merila, kar je onemogočilo pravilno rekonstrukcijo njihove prvotne oblike in velikosti. Poleg opredelitve kot čelade (najnovejše pri Karavanić 2009, 116–118; Gleirscher 2007, 48–50; Schauer 1982, 339; id. 2003, 193, 201; Škoberne 2001, 11–35; Kemenczei 1979, 81 s) so bili nekateri kosi razloženi tudi kot kosi

pločevine, pritrjeni na leseno posodo, na primer cisto (Clausing 1996; id. 2001, 210). Na opredelitev, da so to okrašeni diski, bi v prvi vrsti nakazovala zanka na spodnji strani nekaterih teh kosov, ki je enaka kot zanke na zanesljivo opredeljnih okrašenih diskih, na primer onih iz Nadapa in Nove Bingle (Hansen 1994, 258–260; Popović 1975, 38; Müller-Karpe 1959), ter še druge značilnosti, našete spodaj. Poleg njihove opredelitve je bil pred kratkim objavljen tudi način proizvodnje in uporabe (Mödlinger, Piccardo 2012). M. Salaš (2002, 269) je prepoznal take okrašene diske v odlomkih, najdenih na severnem Hrvaškem, v avstrijskem Augsburgu in slovenski Jurki vasi. Tudi T. Mörtz (2011b, 95) je kot take, in ne kot dele kapastih čelad, opredelil odlomke, najdene med Blatnim jezerom in reko Savo (prim. Clausing 2001, 210; Karavanić 2009, 116 s), pri tem

pa opozoril na dejstvo, da dosedaj znani v celoti ohranjeni primerki kapastih čelad niso okrašeni s punciranimi krožci. Ne glede na opredelitev so si avtorji enotni v dataciji, namreč Bd D–Ha A1, medtem ko bronaste posode z zvezdastim okrasom datirajo v Ha A2–B1 (glej Katalog). Vsi odlomki kapastih čelad in okrašenih diskov so depojske najdbe. Okrašeni diski so v veliki večini ohranjeni kot odlomki, le nekaj je skoraj popolno ohranjenih primerkov z najdišč, kot so Privina Glava, Nadap, Poljanci I in Zalaszentmihály-Pötréte (kat. št. 11, 14, 7, 26).

Pomembno je, da je vsak poskus natančne opredelitve predmeta kot čelade ali okrašenega diska opravljen ob neposrednem opazovanju predmeta samega, saj objavljene risbe le redko zadostujejo. Pri ločevanju so nam v pomoč naslednje okrasne in strukturne značilnosti:

- puncirani krožci pod povezanimi loki zvezdastega motiva (*sl. 1: 4,5*), ki jih je moč najti na številnih okrašenih diskih, ne pa tudi na čeladah;

- rob, ki je pri okrašenih diskih vedno cel in tesno ob njem tečejo zunanji iztolčeni krogi zvezdastega motiva (*t. 1–3*), medtem ko je na čeladah preluknjan (*t. 4–5*);

- diski so popolnoma ravni in ne izbočeni v kapasto obliko čelade;

- sredinske zanke na večini diskov (*t. 1–3*), ki bi bile nenavadne oziroma nerodne na notranji strani čelade;

- sam okras, ki je na diskih izveden veliko bolj natančno, z mnogo manjšimi bunčicami.

V nadaljevanju so predstavljeni predmeti z zvezdastim okrasom, narejeni iz bronaste pločevine ter raznolikih oblik in razprostranjenosti; predstavljeni so diski, pa tudi čelade in keramične posode jugovzhodne Evrope, ki so s prvimi v sorodu in jim je izvor iskati v srednji bronasti dobi. Predstavljen je izvor zvezdastega okrasa v srednji in vzhodni Evropi ter njegov razvoj in kronologija, predvsem tista v pozni bronasti dobi. Primerjalno so v razpravo pritegnjene tudi najdbe bronastih posod iz severne Evrope.

## OKRAS

Zvezdasti motiv je sestavljen iz posameznih lokov, razporejenih v krog, pri čemer so njihovi kraki obrnjeni navzven (*sl. 1: 4,5*). Z razvojem se kraki povežejo, na nekaterih diskih pa se v sredini pod loki pojavijo puncirani krožci. Namesto slednjih ima disk iz Brandgrabna (kat. št. 2; *t. 1*)

samo iztolčene bunčice. Zvezdasti motiv ponavadi obdajajo krožna rebra, tako na diskih kot čeladah. Ta rebra na diskih potekajo čisto blizu roba, ki je gladek in ne kaže prelomov (*t. 1–3*), kar bi sicer nakazovalo, da so bili kosi odlomljeni od kakšnega večjega predmeta, na primer čelade. Zunanja rebra se običajno pojavljajo v skupini treh. Izjemoma se pojavijo v skupini štirih (na odlomkih diskov iz Augsdorfa [kat. št. 1], Brodskega Varoša [kat. št. 3–4], Pamuka [kat. št. 13] in Poljancev II [kat. št. 8]), na odlomku iz Nadapa celo v skupini petih (kat. št. 14; *tab. 1; t. 1*). Na bronastih posodah je rob namesto z zunanjimi rebri okrašen z eno ali dvema vrstama iztolčenih bunčic (*t. 5*), kar se prvič pojavi v Ha A1. To kaže na kasnejšo datacijo bronastih posod v primerjavi s kapastimi čeladami in okrašenimi diski, kar se ujema z relativno datacijo depojev z bronastimi posodami (Dresden-Dobritz, Osternienburg, Viernheim; kat. št. 68–70; *t. 5*) v Ha A2–B1 (Martin 2009, 16). Pomenljivo pa tudi nekaj diskov z zvezdastim okrasom, mogoče zgodnjih, kaže zunanje kroge iz iztolčenih bunčic (*t. 1: 4,6,8,10*), to so odlomki iz Nagyvejkeja (kat. št. 15), Brodskega Varoša (kat. št. 3–4), Gornjega Slatinika (kat. št. 6), Poljancev II (kat. št. 8) in Velikega Nabrda (kat. št. 10). Slednja dva imata posod le iztolčene bunčice. Tudi disk iz Brandgrabna (kat. št. 2) bi lahko spadal v to skupino (*t. 1*).

Keramične posode (*t. 3*) imajo ob ustju le nekaj reber, vodoravnih ali horizontalnih (*sl. 4*), izjema je posoda z najdišča Zlaté Moravce-Kňazice (kat. št. 93) z odprtimi trikotniki med vzporednimi rebri (Mörtz 2011b, *sl. 3: B*). Zvezdasti motiv (npr. na *sl. 1: 4*) je na keramičnih posodah lahko izveden na zunanji, pa tudi na notrani površini. Keramični posodi z romunskih najdišč Augustin-Tipia Ormenișului (kat. št. 73; *sl. 4*) in Alba Iulia Monolit (kat. št. 72; *sl. 4*) bi lahko bili v tesnem sorodstvu z zvezdasto okrašenimi diski, saj oboji kažejo motiv, obkrožen z rebri, ki potekajo ob ustju ali bazi posode. Razen diskov, čelad in posod so drugi predmeti iz bronaste pločevine z zvezdastim okrasom redki, zaenkrat poznamo le odlomek z najdišča Sacoti v Romuniji (Rusu 1990, t. III: 3; odlomek je raven in ne ukrivljen, kot kaže Rusujeva skica), ki bi lahko bil del plošče pasne spona.

## IZVOR

Zvezdasti motiv se na območju srednje in jugovzhodne Evrope prvič pojavi na ulitih predmetih iz srednje bronaste dobe, ki vključujejo

igle predlužiške kulture (*sl. 2*). Podoben okras je najti tudi na gumbastih zaključkih polnoročajnih mečev iz Bd B–Ha B1 (*sl. 3: 1–12*) ter na kolutastih sekirah (*sl. 3: 13*) iz srednje in južne Evrope (Martin 2009, 49, op. 89; Coblenz 1951, 156, op. 69). Motiv je kombiniran s punciranimi krožci že na gumbastih zaključkih zgodnjih polnoročajnih mečev (*sl. 3: 1,2,7,8*), pa tudi na kasnejših mečih (*sl. 3: 3,4,9*). Pri ulitih predmetih je potrebno poudariti, da tam loki zvezdastega motiva niso povezani, temveč ločeni, z edinima izjemama na mečih iz depoja Bingula-Divoš in Krasznokvajde (*sl. 3: 10,11*). V nasprotju s tem je Mörtz (2011b) iskal izvor zvezdastega motiva v skupini žlebljenih keramičnih posod z okrasom girland. Vendar pa se prvi omenjeni izvor zdi bolj verjeten, saj se delno prekriva tako v razprostranjenosti kot kronološko, česar za žlebljeno keramiko ni mogoče trditi. Poleg tega zvezdasti okras na ulitih predmetih ni glavni okras, temveč le eden v dekorativnem repertoarju, ki vključuje tudi razne valovnice in spirale (Mozsolics 1967, 33–49; Hänsel 1968, 61–65; David 2002, 92–158; Sicherl 2004, 86–97).

Zvezdasti motiv na mečih iz Avstrije se ohranja do tistih tipa Erlach, datiranih v Ha A1, medtem ko se loki na kasnejših mečih, na primer tipa Wörschach, razvijejo v valovnico (*sl. 3: 5,6*). Na Moravskem je zvezdasti motiv najti na polnoročajnih mečih s čašastimi zaključki iz časa Ha B, kot je na primer meč iz Strachotic (*sl. 3: 12*). Dva meča tipa R, variante I, iz Krasznokvajde na Madžarskem sta celo okrašena z dvema krogoma lokov na gumbastem zaključku (*sl. 3: 11*). Na Balkanu pripadajo meči z zvezdastim okrasom tipu Dreiwulst in datirajo v Ha A1. Eden takih je bil najden v depoju iz Budinščine (Harding 1995, t. 29: 234), ki je poleg meča vseboval tudi številne okrašene diske (kat. št. 5 in 28; t. 1 in 2), ter v depoju Bingula-Divoš (*sl. 3: 10*) (Harding 1995, t. 30: 237), ki je prav tako vseboval dva diska (kat. št. 23 in 27; t. 2). Zato ne morem pritruditi domnevi Mörtza (2011b, 98), da se je zvezdasti motiv preprosto prenesel iz zgodnejših ulitih predmetov, kot so meči, na kasnejše predmete iz bronaste pločevine, kot so okrašeni diski, čelade in posode. Slika je bolj zapletena; ugotovim lahko, da ima zvezdasti okras skupno osnovo, ki se je na ulitih predmetih kasneje po svoje razvijala, medtem ko se je okras na predmetih iz bronaste pločevine, povzet od ulitih predmetov, razvijal ločeno (*sl. 1*). To pa pomeni različne razvojne poti zvezdastega okrasa. Nasplošno je šel zvezdasti motiv na predmetih iz bronaste pločevine, kot so npr. čelade, iz mode do Ha A2 in na bronastih posodah do Ha B1.

Na drugi strani pa predhodnike keramičnih posod z zvezdastim okrasom verjetno lahko iščemo v keramičnih posodah z okrasom girland (*sl. 4*). Slednji je sestavljen iz horizontalno povezanih lokov, katerih kraki ponavadi gledajo navzgor. Take posode so znane z najdišč Tiszafüred in Tiszapalkonya na Madžarskem, obe povezani s kulturo Füzesabony (Hansen 1994, 260; Mörtz 2011b, 101). Prav tako so znane z območja kulture Žuto Brdo-Ghirla Mare, ki je sočasna prvemu pojavu podobno okrašenih predmetov, ulitih iz bron, kot so igle in ročaji mečev (Mörtz 2011b, 101; Hänsel 1968, 133–142; Şandor, Chicideanu 2003, 91–97). Zvezdasti motiv se na keramičnih predmetih prvič pojavi na lončenini z nažlebljenim vratom lužiške kulture, od koder se razširi proti vzhodu na območje kultur Kyjatice in Gáva (Kemenczei 1979, 84), pa vse do Babadaga v Romuniji (kat. št. 74; *tab. 3*). Zdi se, da se motiv obdrži do skupine Mezöcsát in poznega halštatskega obdobja (Pankau 2004, 72–73). Poleg lončenine z okrasom girland je na zvezdasti okras na posodah verjetno vplival tudi zvezdasti okras na kapastih čeladah. Povezanost med okrasom na keramičnih in kovinskih posodah ni naključje, saj je večina keramičnih posod premazana z grafitom, zglajena in okrašena z držaji ter kot taka posnema sijaj bronastih posod, okrašenih s tipičnim poznožarnogrobiščnim motivom pik in bunčic (Mörtz 2011b, 98–100). Kasnejše keramične posode z vrezanim zvezdastim motivom iz Moravske, Šlezije in zahodnih Karpatov (*sl. 4*) mogoče prav tako posnemajo starejšo lončenino z nažlebljenim vratom iz Karpatske kotline (Mörtz 2011b, 101).

Drugod po Evropi so podobne bronaste posode z zvezdastim motivom znane iz Danske in severne Nemčije. Odlomek posode iz Gyldensgård na Danskem ima zvezdasti motiv izveden na dnu, z bunčicami v lokih (Sprockhoff 1930, 49 s; Thrane 1962, 112–116). Še bolj podobni so okrašeni odlomki iz Kivika na Švedskem (Randsborg 1993, 55 s). Ulite bronaste posode s podobnim, a vrezanim motivom so bile najdene na nemških najdiščih Löptin (Mörtz 2011b, 96; Jacob 1995, 11 s; Hundt 1958) in Seddin (Mörtz 2011b, 96; Martin 2009, 19 s, t. 1: 1; Kersten 1958, 19, št. 117). Paralele okrašenim posodam različice Osternienburg-Dresden so znane z najdišča Østermarie, kjer je bila najdena tudi ulita bronasta posoda (Thrane 1962, 116 s; *sl. 6: 7a*). Bronaste posode iz Kivika in Gyldensgård, tudi kasnejša iz Löptina, so lokalni produkti, ki posnemajo lesene sklede z bronastimi in kositrnimi okraski (Randsborg 2011, 188); taka domneva je že bila izražena za posodo iz Seddina

(Martin 2009, 20; Thrane 1962, 132–141; Hundt 1958, 34–40; Sprockhoff 1930, 49 s). Obravnavane posode torej niso povezane z onimi iz srednje in vzhodne Evrope.

### NAJDIŠČNI KONTEKST

Zdi se, da ima vsak tip predmetov z zvezdastim okrasom, tako čelade in okrašeni diski kot bronaste in keramične posode, specifičen najdiščni kontekst. Vsi okrašeni diski, na primer, so depojske najdbe in so bili ponavadi najdeni skupaj z orodjem, napadalnim in obrambnim orožjem ter raznimi okrasnimi predmeti. Tak kontekst pove zelo malo o družbeni vlogi in uporabi teh predmetov. Izjema je depo z najdišča Zalaszentmihály-Pötréte (kat. št. 26; *t.* 2), ki je vseboval izključno okrašene diske (Müller 1972); predstavljeni disk s tega najdišča je skoraj v celoti ohranjen in ne kaže sledi namernih poškodb. Kapaste čelade z zvezdastim motivom so bile najdene v depojih le kot odlomki, v celoti ohranjene čelade pa so bile verjetno vse posamične najdbe, kot je to dokazano za čelado iz Paksa (kat. št. 52; *t.* 4), edino v celoti ohranjeno čelado z znanimi najdiščnimi podatki. Opozoriti velja tudi na čelado iz bivše Guttmannove zbirke (kat. št. 60; *t.* 5), ki naj bi bila najdena skupaj z dvema diskastima obeskom, dvema zapestnicama in pušično ostjo (Born, Hansen 2001, 64, sl. 58). Bronaste posode so bile običajno najdene v grobovih, le posode z najdišča Dresden-Dobritz (kat. št. 68; *t.* 5) so zakladne najdbe. Keramične posode z zvezdastim motivom pa so znane tako iz naselbinskih kot grobiščnih kontekstov.

### RAZPROSTRANJENOST

Zvezdasti motiv na poznobronastodobnih predmetih iz bronaste pločevine in keramike iz srednje Evrope je znan na mnogo širšem območju (*sl.* 5), kot domneva Mörtz (2011b, 103). Prvi seznam diskov, okrašenih z zvezdastim motivom (prim. *t.* 1), je objavil P. König (2004, 181, seznam 15; *t.* 91) in je vključeval najdbe iz Augsdorfa, Brodskega Varoša, Budinščine, Gornjega Slatinika, Nove Bingule, Pamuka, Poljancev II, Privine Glave in Velikega Nabrđa. König je oddelil odlomke s koncentričnimi krogi in punciranimi krožci (*t.* 2 in 3), najdene na najdiščih Bingula-Divoš, Boljanić, Gornji Slatinik, Kličevac-Pomrlovo in Zalaszentmihály-Pötréte. Prav tako je domneval (2004, 76), da se diski

z zvezdastim motivom v glavnem pojavljajo na območju Srema in Slavonije.

Koncentracija diskov z zvezdastim motivom kaže, da je njihov izvor iskati na območju Slavonskega Broda v Posavini. Od tam se motiv razširi proti severozahodu, pri čemer se pomnoži tudi število okrasnih elementov. Najpreprostejša oblika okrašenih diskov, samo s krožnimi rebri (*t.* 3), kaže koncentracijo na območju Slavonskega Broda, ki na zahodu sega vse do Budinščine (gorvodno po dolini Drave), na vzhodu do Majdana in na severu do Esztergoma. Disk s slednjega najdišča je zelo verjetno predmet trgovine po Donavi navzgor. Razprostranjenost diskov, če odmislimo skrajno ležeče najdbe iz Majdana in Esztergoma (kat. št. 45, 46), se približno sklada s središčem razprostranjenosti diskov z rebri in punciranimi krožci, ki sega na vzhodu in navzdol po Donavi do najdišča Kličevac-Pomrlovo (24), na zahodu in navzgor po Savi in Krki do Jurke vasi (22), na severu pa gorvodno po rekah Donava, Morava in Dyje/Thaya do Mušova (25). Najbogateje okrašeni diski, z rebri, punciranimi krožci in zvezdastim motivom, so tudi najbolj razširjeni, najpogosteje pa se pojavljajo na vzhodnem Hrvaškem, v Bosni in Hercegovini ter v Srbiji. Najsevernejši primerki segajo vse do najdišča Přestavky (12), med dolinama Egra in Labe, kamor so najverjetneje prišli ob Moravi. Na zahodu njihova razprostranjenost sega do Augsdorfa (1) (po dolini Drave) in Kainischtala (po dolini Mure in Liesinga). Nekaj takih diskov je znanih tudi z zahodne Madžarske, z najdišč Nadap, Pamuk in Nagyvejke (13–15), kamor so prišli ob Donavi. Ti predmeti so verjetno povezani z razprostranjenostjo kapastih čelad z zvezdastim motivom na tem območju. Njihova razprostranjenost pa kaže tudi na vedno močnejše povezave z območji severno in zahodno (z izjemo najdbe z najdišča Přestavky so bili vsi taki predmeti najdeni blizu večjih rek). Kaže se vse večje število okrasnih elementov. Omenim naj še madžarski primerek iz Velema/St. Vida, ki je vključen v številne diskusije o okrašenih diskih (Müller-Karpe 1959, 112; Gleirscher 2007, 48), a nima nobene od zgoraj naštetih značilnosti in zato ni vključen v to študijo.

O izvoru v celoti ohranjenih kapastih čelad (*t.* 4–5) nimamo povsem natančnih podatkov, vendar pa se kaže koncentracija na Madžarskem (kat. št. 50–54, 59–60). Odlomki (zvezdasto?) okrašenih kapastih čelad so bili vsi najdeni kot del velikih poznobronastodobnih depojev z mešanim gradivom, ki kažejo širšo razprostranjenost kot v celoti ohranjene kapaste čelade. Odlomki čelad z zvezdastim motivom



so znani od nemške Elsterwerde (58) na severu, romunske Gușterițe (62) na vzhodu, avstrijskega Strassengela (61) na zahodu do hrvaških Poljancev (57) na jugu. Poleg teh bi lahko bila del okrašenih kapastih čelad tudi dva odlomka iz depoja iz Nadapa na Madžarskem (Makkay 2006, t. 5: 10,11), odložena skupaj s starejšo stožčasto čelado (Mödlinger 2013). Prvo znano v celoti ohranjeno čelado z okrasom reber (kat. št. 50) je J. Hampel (1887, t. 66: 5) napačno objavil kot skledo. G. von Merhart (1941, 4 s) jo je uvrstil v svojo skupino okrašenih kapastih čelad navkljub dejstvu, da nobena druga čelada v tej skupini ni imela gumba oziroma nastavka. H. Hencken (1971, 146 s) je objavil svoj korpus kapastih čelad z zvezdastim okrasom in vanj pritegnil dodatne, domnevno sorodne odlomke. Še dve v celoti ohranjeni čeladi sta bili znani, bojda najdeni na Madžarskem, z ulitim nastavkom in okrasom, podobnim onemu na kapastih čeladah, ki sta bili del Guttmannove zbirke; po zasebni prodaji je njuna trenutna lokacija neznana. Ch. Clausing (2001, 212, sl. 9: 2) omenja še eno v celoti ohranjeno čelado, povezano s to skupino; prodana je bila na dražbi v Baslu in natančni podatki o njeni trenutni lokaciji niso znani. Najnovejši najdbi okrašenih kapastih čelad prihajata iz Žiarja nad Hronom (kat. št. 53) (Bartík 2009) in Paksa (kat. št. 52) (Gaál 2001). Slednja je tudi edina v celoti ohranjena čelada z znano provenienco in podrobnejšim najdiščnim kontekstom.

Poleg naštetih so v sezname vključeni še drugi odlomki iz različnih kontekstov, a v tej študiji iz več razlogov niso bili upoštevani. Hencken je, na primer, v svojo skupino čelad z zvezdastim motivom (1971, 146 s) vključil odlomke z najdišč Uioara de Sus in Palotaboszók (Boszók), v katerih je videl predhodnike kasnejših kapastih čelad z ulitimi nastavki. Vendar pa so odlomki iz bronaste pločevine z najdišča Uioara de Sus (Petrescu-Dîmbovița 1978, 133, št. 184; t. 198: 1026–1027) videti okrašeni z vrezanimi in ne iztolčenimi rebri. Poleg tega je primerjava z drugimi čeladami pokazala, da so luknjice premajhne za bronaste zakovice, čeprav je mogoče, da so se uporabljale za pritrditev dodatnih bronastih ploščic. Prav tako luknjice na teh odlomkih ne potekajo vzporedno z robom oziroma z rebri. Bolj verjetno kot del čelade je bil odlomek iz depoja iz Palotaboszóka del okrašene ciste (Clausing 1996, 419, sl. 5: 38). T. Kemenzei (1979, 80–82) je k Hencknovi skupini čelad pritegnil odlomke iz Poljancev I (57) in Velikega Nabrđa (56) ter odlomke nedoločenih predmetov iz Bizovaca, Bonyháda in Nagyvejka. Clausing (2001,

208) je odlomek iz Bizovaca izključil brez pojasnila, mogoče na podlagi opredelitve A. Mozsolics (1985, 26). Ona je v odlomku videla del oklepa – na podlagi vrste z robom vzporednih luknjic z enocentimetrskim razmakom ter fragmentarnega okrasa in dveh reber, prav tako vzporednih z robom, z vrvičastimi odtisi, kar ni znano z drugih čelad. Eden izmed odlomkov iz Bonyháda ima vzporedna rebra, a je brez vzporednih robnih luknjic za zakovice (Mozsolics 1985, sl. 40: 13), čeprav vsaj štirje odlomki, ki jih je poprej objavila A. Mozsolics, kažejo oboje. Eden izmed slednjih ima nekoliko drugačno korozijo na delu okoli luknjic za zakovice, ki sega od roba do dela nad luknjico in je verjetno ostanek organske podloge (Mozsolics 1985, pl. 40: 14). Ta odlomek nima robu vzporednih reber in tako ne bi mogel biti del okrašene kapaste čelade. Odlomek iz Nagyvejka je videti kot del okrašene diska (kat. št. 15; t. 1). Odlomek iz Keszöhidegkuta na Madžarskem (glej npr. Schauer 2003, sl. 3: 3) ni vključen v to študijo, ker ima preozka rebra in je med njimi preveč razmaka za rebra na čeladi. Odlomek iz Susenija (Rusu 1990, 70, t. 1: 1) nima luknjic za zakovice in zato ni obravnavan, saj imajo kapaste čelade z rebri in zvezdastim motivom povečini številne in gosto razporejene luknjice za zakovice. Za odlomek iz bronaste pločevine, najden v depoju iz Gușterițe (62), je že Clausing (2001, 214) domneval, da ni del čelade. Je pa nastavek iz istega depoja zelo verjetno pripadal čeladi z (zvezdastim) okrasom, saj je zelo podoben nastavkom z najdišč Paks in Žiar nad Hronom (52, 53), nastavkoma na dveh čeladah iz nekdanje Guttmannove zbirke (59, 60) ter na čeladi, prodani na dražbi v Baslu. Prav tako je nastavek iz Strassengla (61) ulit in pritrjen na kaloto čelade, njegov spodnji del pa rahlo stopničast, kakršnega poznamo na zgoraj omenjenih čeladah. Naslednja dva nastavka, ki bi lahko bila del kapaste čelade, sta znana iz romunskih najdišč Șpălnaca in Techirghiol (Petrescu-Dîmbovița 1978, t. 115: 277; 157: 614). Prvi omenjeni ima gladek srednji del in ni narebren. Oba sta slabo ohranjena, brez spodnjih in zgornjih koncev, kar ne omogoča zanesljive opredelitve; iz tega razloga sta tudi izključena iz te obravnave.

Le dve kapasti čeladi sta bili najdeni z naličnicami, to sta primerek iz Žiarja nad Hronom (kat. št. 53; t. 4) in čelada neznane provenience iz nekdanje Guttmannove zbirke (kat. št. 60; t. 5). Iz tega razloga lahko naličnice le deloma povezujemo s širšo skupino kapastih čelad. Opazimo lahko, da so naličnice iz Wöllersdorfa, Uioare de Sus,

Mezőnyárada in Hočkega Pohorja (kat. št. 63–65) tipološko blizu onima iz Žiarja nad Hronom in nekdanje Guttmannove zbirke, torej ledvičaste oblike, z iztolčenim osrednjim delom in luknjicami za zakovice ob robu. Odlomki z najdišč Uioara de Sus in Hočko Pohorje imajo luknjice za zakovice tudi po osrednjem, iztolčenem delu, verjetno za pritrditev organske podloge. Po drugi strani pa eden izmed odlomkov iz Uioare de Sus na ohranjenem delu nima nobenih luknjic. Posamične naličnice so znane tudi z drugih najdišč, na primer ploske naličnice iz Weissiga in Schmiedehausna, pa tudi ploska okrašena naličnica z najdišča Podcrkavlje-Slavonski Brod; te se preveč razlikujejo od naličnic iz Žiarja nad Hronom in nekdanje Guttmannove zbirke in zato niso vključene v obravnavo.

Bronaste posode z zvezdastim okrasom (kat. št. 67–70; *tab. 3; t. 5*) kažejo linearno razprostranjenost, ki sega od Viernheima (Hessen) na jugozahodu do Seddina (Brandenburg) na severovzhodu, kar se ne prekriva z razprostranjenostjo keramičnih posod oziroma drugih predmetov iz bronaste pločevine z zvezdastim okrasom. Kljub temu pa veljajo za eno izmed široko razprostranjenih oblik, saj bronaste posode, na primer tipa Friedrichsruhe, kažejo podobno razprostranjenost – od Jütlanda na severu do Transilvanije na jugovzhodu (Martin 2009, 36–52). Od vseh posod sta nekoliko posebni oni iz Osternienburga in Viernheima (kat. št. 69, 70; *t. 5*), najdeni v žarnih grobovih, kar pa ob upoštevanju tamkajšnje grobne prakse ni presenetljivo.

Omenim naj še odlomek iz depoja z romunskega najdišča Milostea-Sacoți (kat. št. 71), saj označuje jugovzhodno mejo zvezdastega okrasa na predmetih iz bronaste pločevine. Odlomek je verjetno del pasu, kar nakazujeta paralelna robova, navita okoli bronaste žice. Okras je sestavljen iz dveh skupin treh reber, ki potekajo vzporedno z ovitima koncema, nad katerimi sta dva trojna loka z dotikajočimi se konci (Rusu 1990, t. 3: 3). Čeprav motiv ni krožen oziroma zvezdast, je oblikovna podobnost jasna.

Keramične posode z zvezdastim motivom (*sl. 4*) so razširjene od Šlezije, preko južne Poljske, Moravske, zahodnih Karpatov vse do romunske obale in spadajo v lužiško kulturo (Furmánek, Veličič, Vladár 1999, sl. 36: 21; 37: 10) ter kulture Wysocko (Sulimirski 1931, t. XII: 7), Kyjatice, Gáva in Babadag I (Pankau 2004, 72–73). Na splošno se te najdbe redko pojavijo v žarnogrobiščnih kulturah (Kemenczei 1979, 84). Najprej se zvezdasti motiv pojavi na žlebljeni lončenini lužiške kulture ob koncu pozne bronaste dobe, nato pa se razširi

proti vzhodu preko vzhodne Madžarske do kultur Kyjatice (Chidioșan, Emödi 1982, 77) in Gáva in naprej do Transilvanije (Rusu 1963, 187, op. 30). Motiv se pojavlja na keramičnih posodah vse do poznolštatskega obdobja (Studeniková 1986, t. 2: 8; Stegmann-Rajtár 1992, sl. 23: 15). Najmlajše najdbe so zaenkrat znane iz Kietrza na Poljskem in datirane v Ha B2/3 ali peto stopnjo (V) nordijske bronaste dobe (Grave 215; Mörtz 2011b, 99, sl. 3: A; Gedl 2000, 92; Gedl 1979, 46).

## DATIRANJE

Znanih je nekaj primerov depojev, ki so vsebovali več različnih tipov okrašenih diskov (na primer Brodski Varoš in Veliko Nabrđe). Iz tega bi sicer lahko sklepali na kratek časovni razpon teh diskov, med Bd D in Ha A1 (stopnji I/II po Vinski-Gasparini – glej *tab. 2*), pa tudi na skoraj sočasen obstoj različnih tipov. To bi mogoče kazalo na hitro usvojitev tedaj znanih okrasnih elementov, kot so puncirani krožci in krožna razporeditev lokov, ki se potem združijo v zvezdasti motiv. Vendar pa se domneva o hkratnosti različnih tipov podre ob pogledu na karte razprostranjenosti. Razprostranjenost najmlajšega tipa okrašenih diskov, z zvezdastim motivom, mogoče celo samo tistih z iztolčenimi bunčicami, se prekriva z razprostranjenostjo čelad. To pa navaja na misel, da so prav ti diski vplivali na razvoj kapastih čelad z zvezdastim ornamentom. Ne zdi se verjetno, da bi se okras slednjih razvil iz sočasne okrašene lončenine, saj je ta – z zvezdastim motivom – datirana v pozno bronasto dobo po srednjeevropski kronologiji, to je približno v Ha B2/3 (Pankau 2004, 70–74).

Najdiščni podatki za v celoti ohranjene čelade so neznani z izjemo one iz Paksa (kat. št. 52), prav tako so neznani za sorodni čeladi, ki sta okrašeni le z rebri (kat. št. 59 in 60). Čelade so tako datirane na podlagi odlomkov iz depojev iz Velikega Nabrđa, Poljancev I, Brodskega Varoša in Elsterwerde (kat. št. 56–58). Hrvaški depoji so datirani v stopnjo II po Vinski-Gasparini (1973) oz. fazo II po Vasiću (1994, 13), depo iz Elsterwerde pa je prav tako datiran v zgodnje obdobje kulture žarnih grobišč, to je Ha A1 (Martin 2009, 120). Datacija se sklada z zgodnjo datacijo kapastih čelad z rebri (Borchhardt 1972, 120–122) in datacijo onih z zvezdastim motivom v Ha A1 po A. Mozsolics. Pri tem je pomembno poudariti, da odlomke kapastih čelad ne moremo z gotovostjo prisoditi čeladam z zvezdastim motivom ali čeladam z rebri in jim

tako določiti tudi kronološki okvir. Lahko jih prisodimo le širši skupini okrašenih kapastih čelad. Po drugi strani pa hiter razvoj okrasa na diskih, začeni s preprostim zvezdastim motivom, nakazuje pojav najzgodnejših čelad s podobnim zvezdastim okrasom najverjetneje proti koncu stopnje II, to je v Ha A1, ko je bil zvezdasti motiv prevzet od diskov. Pri prenosu zvezdastega motiva z okrašenih predmetov iz ulitega bronu v času srednje bronaste dobe v srednji in vzhodni Evropi na predmete iz bronaste pločevine, kot so diski, čelade in posode, ostaja odprto vprašanje punciranih krožcev, ki se na čeladah in posodah ne pojavljajo. Čelade so bile verjetno medij, preko katerega se je zvezdasti motiv prenesel z jugovzhodnih diskov, datiranih v Bd D–Ha A1, na severozahodne okrašene bronaste posode, datirane v Ha A2–B1. To bi nakazovalo tudi dejstvo, da je novo osvojeni okras omejen na zvezdasti motiv in rebra. Na bronastih posodah pa se namesto reber pojavijo linije iztolčenih bunčic, kar predstavlja kasnejšo verzijo reber, ki so bila prej preprosteje izvedena. Zvezdasti motiv se na lončenini prvič pojavi na žlebljeni lončenini lužiške kulture ob koncu pozne bronaste dobe, od koder se razširi proti vzhodu do kultur Kyjatice in Gáva, pa vse do Babadaga v Romuniji. V skupini Mezöcsát je motiv v rabi vse do poznega halštatskega obdobja (Pankau 2004, 72–73; Stegmann-Rajtár 1992, sl. 23: 15). Kot je bilo napisano zgoraj, je vpliv za zvezdasti okras na lončenini najverjetneje prišel s takim motivom s čelad.

## ZAKLJUČEK

Datacija in razprostranjenost čelad, diskov ter bronastih in keramičnih posod z zvezdastim motivom kaže, da se je motiv verjetno prvič pojavil na okrašenih diskih na območju Slavonskega Broda. Izvor motiva pa je iskati na srednjebronastodobnih ulitih predmetih na območju srednje Evrope, bolj natančno na iglah, sekirah in mečih, pri čemer nekateri od teh ohranijo zvezdasti okras vse do Ha B. Diski kažejo razvoj k vedno kompleksnejšemu okrasu, pri čemer se najbolj bogat okras – z rebri, punciranimi krožci in zvezdastim motivom – v skoraj polni obliki prenese na kapaste čelade. Te čelade so zaenkrat datirane le na podlagi odlomkov iz depojev stopnje II po Vinski-Gasparini. Razprostranjenost čelad in bogato okrašenih diskov kaže, da bi čelade lahko utemeljeno datirali v Ha A1, pri čemer so se hitro razširile preko Madžarske proti severu do Elsterwerde in na jugovzhodu do

Gušterița. Najdba iz Elsterwerde povezuje čelade z okrašenimi bronastimi posodami, ki so zvezdasti okras prevzele nekako v času Ha A2/B1. Razprostranjenost čelad in kasnejših keramičnih posod z zvezdastim okrasom (ki dozdevno posnemajo bronaste posode) se prekriva, kar nakazuje, da je zvezdasti okras prešel na posode od čelad, osnova pa je bil zgodnejši girlandni okras.

## Dodatek

Pred kratkim je G. V. Szabó (2013) obravnaval ukradene in nelegalno izkopane bronastodobne kovinske najdbe na Madžarskem, med katerimi so tudi dve okrašeni čeladi, odlomek čelade in naličnice ter še en morebitni odlomek naličnice. Slednji je 25 cm dolg kos bronaste pločevine, ki pa zaradi dolžine bolj verjetno predstavlja kovinski okov na nekem predmetu iz organskega materiala. Najden je bil kot del depoja iz Tolcsva-Várhegyja (?), ki je vseboval še štiri spiralne narokvice, dve vedri/kotla, tri posode in ovratnico. Trenutna lokacija depojskih najdb ni znana, verjetno pa so bile prodane v ZDA (Szabó 2013, 798–803).

O čeladi z rebri in zvezdastim motivom (štiri rebra, ki tvorijo zvezdasti motiv na vrhu, šest reber v sredini in tri rebra ob robu), domnevno najdeni v Bajmoku, Srbija, je bil februarja 2011 obveščen Gradski muzej Subotica, Srbija (sl. 6: A1). O podobni (isti?) čeladi je bil omenjeni muzej obveščen tudi pred 25 leti (Szabó 2013, 805). Trenutna lokacija čelad(e) ni znana.

Drugo okrašeno čelado, ki jo navaja Szabó, je našel ob koncu devetdesetih delavec na stroju za čiščenje rečnega dna v Dusnoku na Madžarskem in jo hotel prodati. Zanj Szabó domneva, da je bila kasneje prodana v Nemčijo, saj naj bi se najditelj ustrašil uradne prodaje Madžarskemu narodnemu muzeju (2013, 806). O njej je znana le skica slabe kvalitete (sl. 6: A2), domnevno pa je to identična čelada kot tista iz zasebne zbirke iz nemške zvezne dežele Nordrhein-Westfalen (kat. št. 54; t. 4), ki je bila prodana na dražbi Jean-David Cahn AG leta 2002. Vendar pa je potrebno opozoriti, da skica čelade iz Dusnoka kaže pet reber v sredini, na čeladi, prodani na dražbi, pa jih je šest. Poleg tega je nastavek na slednji bolj raven in ne ukrivljen, kot je to videti na skici čelade iz Dusnoka. To pa kaže, da gre bolj verjetno za dve različni čeladi.

V decembru leta 2011 je bil slučajno odkrit bronast depo v kraju Pázmándfalu na Madžarskem, datiran v Ha A1, katerega vsebino so arheologi uspeli rešiti

(Szabó 2013, 811). Depo sestavlja stotine staljenih odlomkov, pa tudi nepoškodovanih bronastih predmetov, med slednjimi tudi dva odlomka roba okrašene kapaste čelade, dva odlomka kapaste čelade z rebri in zvezdastim motivom, naličnica kapaste čelade z linijami iztolčenih bunčic ob robu ter odlomki, ki najverjetneje pripadajo oklepu. Še en depo je bil najden le tri metre stran in je domnevno vseboval tudi ostanke stožčaste čelade (ali posode) (glej Szabó 2013, sl. 17). Poleti 2013 so na tem mestu načrtovana arheološka izkopavanja, ki bi razjasnila najdiščni kontekst.

Upoštevajoč zgornje primerke, naraste skupno število v celoti ohranjenih okrašenih kapastih čelad na vsaj deset, odlomki pa kažejo na obstoj dodatnih sedmih čelad. Z novo najdbo naličnice iz Pázmándfaluja, ki verjetno pripada čeladi iz istega depoja, danes poznamo vsaj 22 okrašenih kapastih čelad.

#### Zahvale

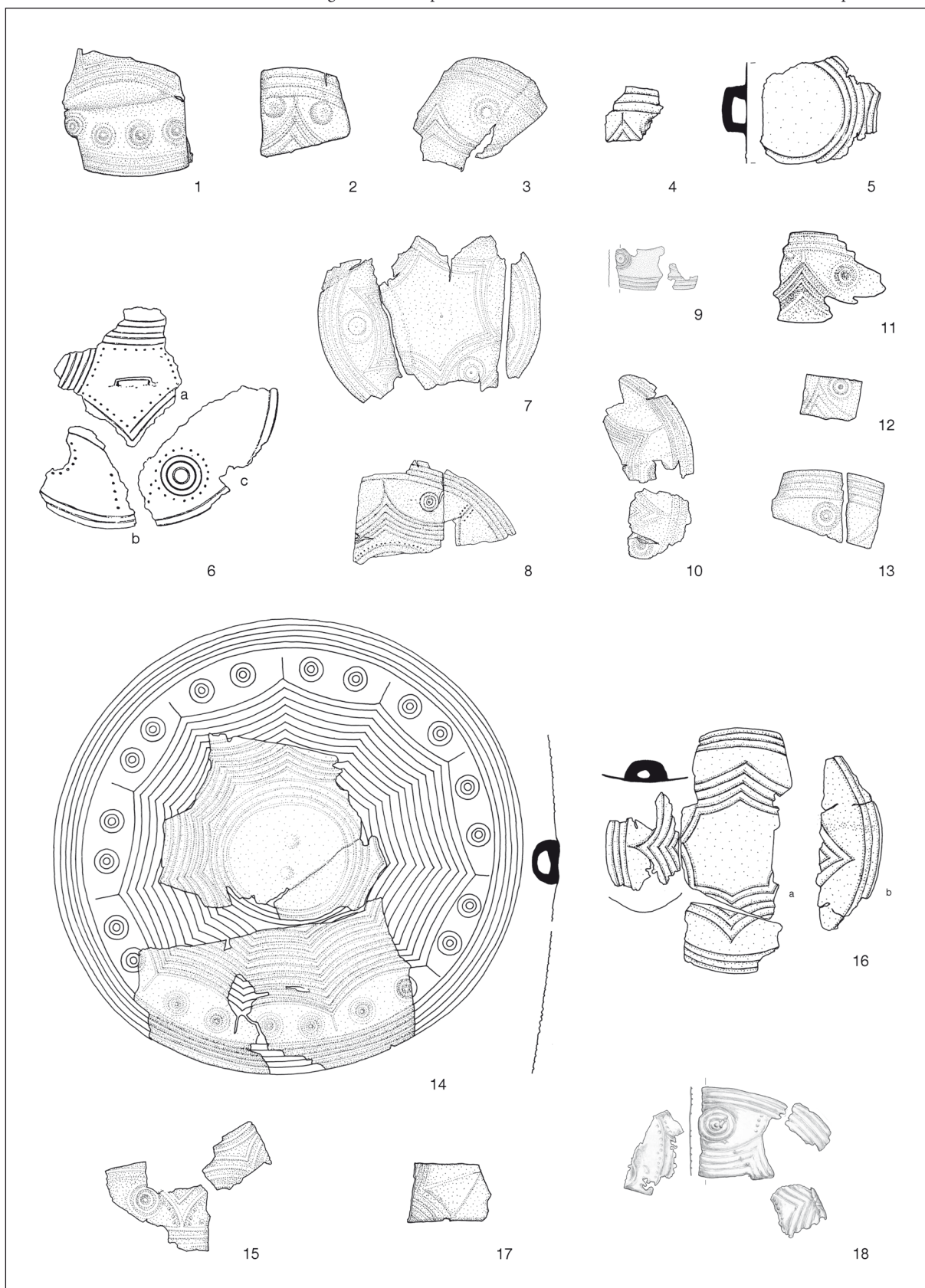
Najprej bi se zahvalila Fonds zur Förderung der wissenschaftlichen Forschung in FP7/Marie Curie Actions, ki so podpirali raziskavo preko Schrödingerjeve štipendije št. J 3109-G21. Zahvaljujem se tudi Paolu Piccardu z Dipartimento di Chimica e Chimica Industriale (DCCI), Università di Genova, v okviru katerega je projekt potekal. Posebna zahvala gre vsem, ki so me podpirali in mi pomagali pri pregledovanju muzejske dokumentacije, to so Jacqueline Balen, Ivan Drnić in Sanjin Mihelić (Arheološki muzej u Zagrebu), Juraj Bartík (Archeologické múzeum SNM, Bratislava), Katalin Biró, Ildikó Szathmári in Ádám Szabó (Magyar Nemzeti Múzeum, Budimpešta), Oliver Dietrich

(Institut für Prähistorische Archäologie, Berlin), Paul Gleirscher (Landesmuseum Kärnten, Celovec), Michael Hemm (Montanmuseum Altböckstein), Szilvia Honti (Somogy Megyei Múzeumok Igazgatósága), Peter König (Heidelberg), Marko Mele (Universalmuseum Joanneum, Gradec), Lidija Miklik-Lozuc (Muzej Brodskog Posavlja, Slavonski Brod), Gabriella Nadorfi (Szent István Király Múzeum, Székesfehérvár), Dragoş Măndescu (Muzeul Judeţean Argeş), Mónika Merczi (Balassa Bálint Múzeum, Esztergom), Claudia Pankau (Johann Wolfgang Goethe-Universität, Frankfurt), Nataša Perić in Vesna Isabegović (Muzej istočne Bosne, Tuzla), Váradyné Péterfi (Városi Múzeum), Dragana Rajković (Muzej Slavonije, Osijek), Milan Salaš (Moravské zemské múzeum, Brno), Márta Vizi (Wosinsky Mór Megyei Múzeum, Szekszárd), Ivan Vranić (Arheološki Institut, Beograd). Zahvaljujem se tudi Marcellu Nagy (Vas Megyei Múzeumok Igazgatósága, Szombathely), ki mi je omogočila ogled diska iz Velema, Stevnu Matthews, vsem recenzentom za koristne komentarje ter lektorici za jezikovne popravke.

*Prevod: Andreja Maver*

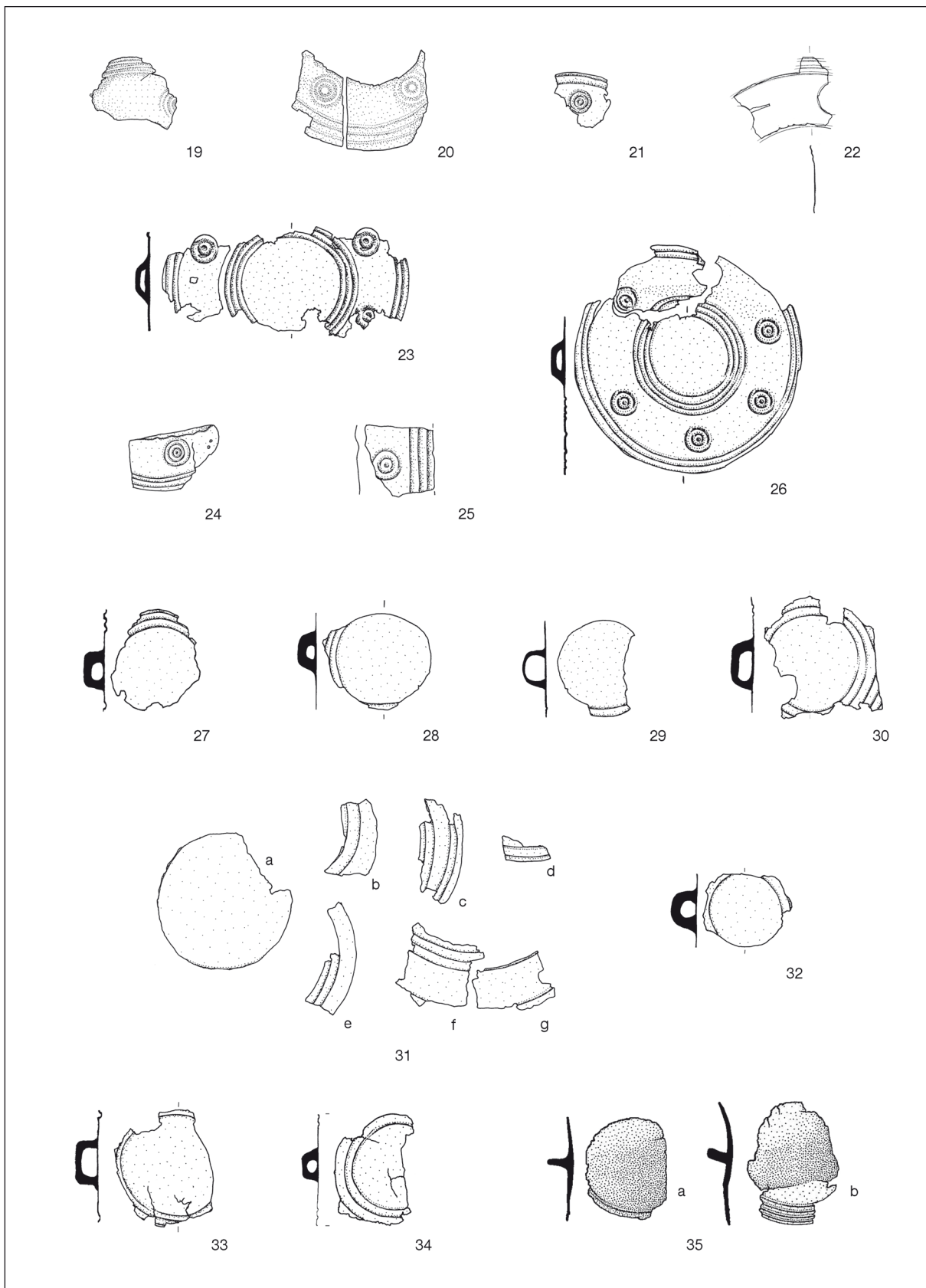
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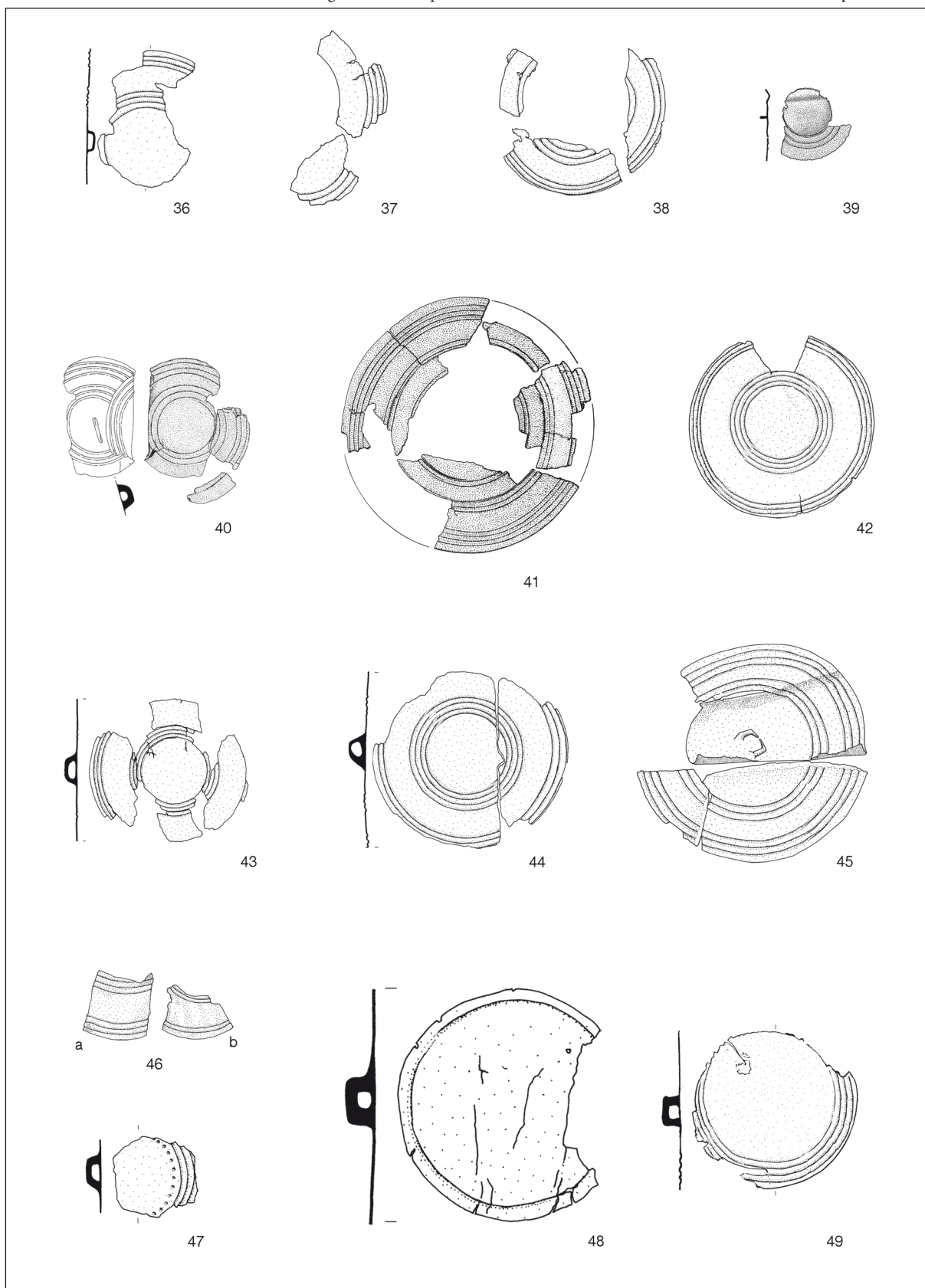
Pl. 1: Discs with ribs, ring-and-dots and the star motif (Cat. Nos. 1-18). All bronze; scale 1:3 [6 not to scale].

T. 1: Diski z rebri, punciranimi krožci in zvezdastim motivom (kat. št. 1-18). Vse bron; M. = 1:3 [6 ni v merilu].



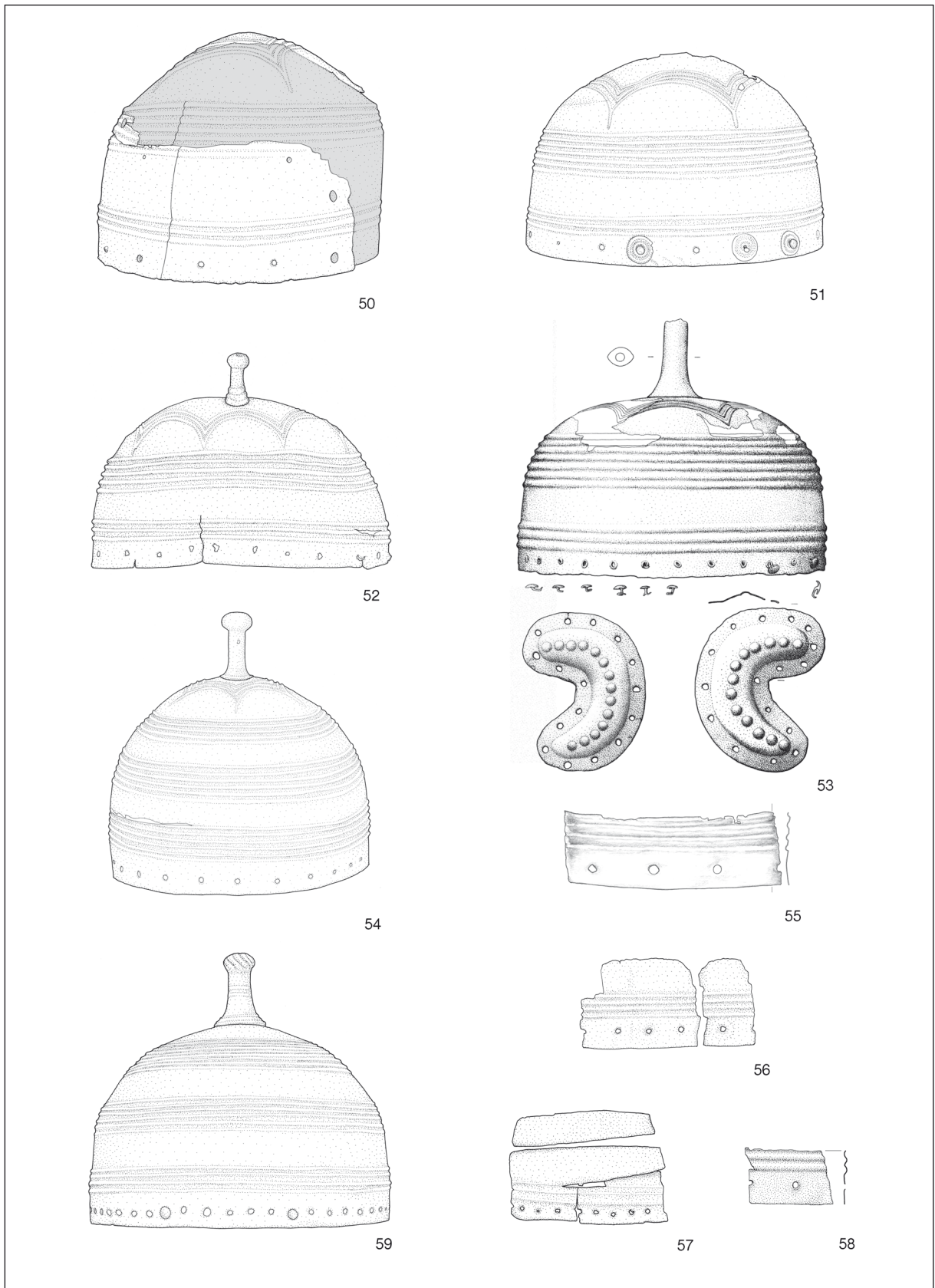
Pl. 2: Discs with ribs and ring-and-dots (Cat. Nos. 19–26). Discs with ribs (and possibly other?) decoration (27–35). All bronze; scale 1:3 [20,27,29 not to scale].

T. 2: Diski z rebri in punciranimi krožci (kat. št. 19–26). Diski z rebri (in mogoče še drugim okrasom?) (kat. št. 27–35). Vse bron; M. = 1:3 [20,27,29 niso v merilu].



Pl. 3: Discs with ribs (Cat. Nos. 36–47). Discs – simplest version, examples (48, 49). All bronze; scale 1:4 [36,46,49 not to scale].

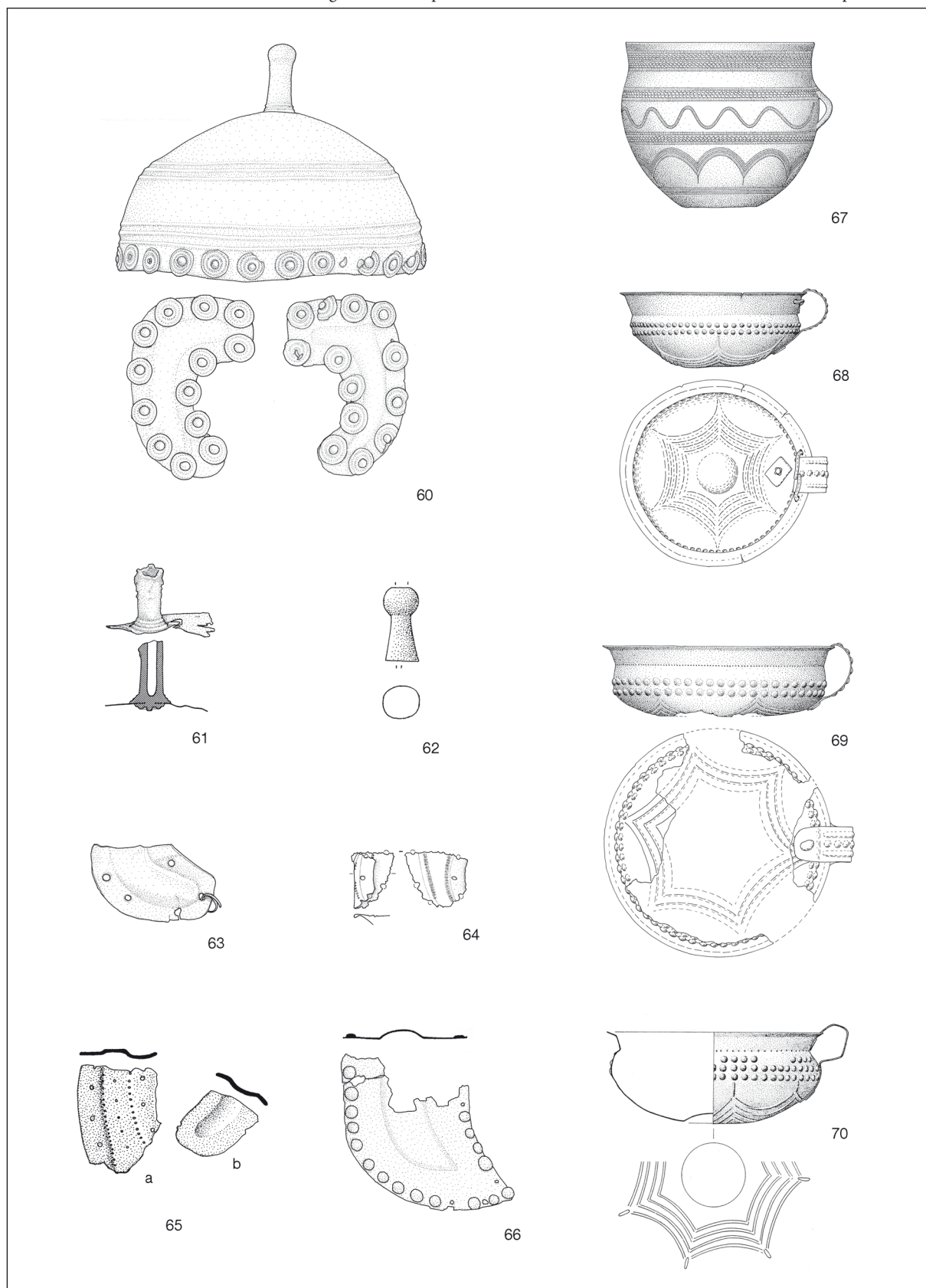
T. 3: Diski z rebri (kat. št. 36–47). Diski – najpreprostejša različica, primeri (kat. št. 48, 49). Vse bron; M. = 1:4 [36,46,49 niso v merilu].



Pl. 4: Cap helmets with ribs and the star motif, their fragments and cheek plates (Cat. Nos. 50–58) [50: grey part added during restoration]. All bronze; 50–54 scale c. 1:4; 55–58 scale 1:4.

T. 4: Kapaste in zvončaste čelade z rebri in zvezdastim motivom, njihovi odlomki in naličnice (kat. št. 50–58) [50: sivo dodano ob restavriranju]. Vse bron; 50–54 M. = pribl. 1:4; 55–58 M. = 1:4.





Pl. 5: Cap helmets with ribs and the star motif and their fragments (Cat. Nos. 60–66). Bronze cups with star decoration (67–70). All bronze; scale c. 1:4.

T. 5: Kapaste čelade z rebri in zvezdastim motivom ter njihovi odlomki in naličnice (kat. št. 60–66). Bronaste posode z zvezdastim okrasom (67–70). Vse bron; M. = pribl. 1:4.

