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Bronze Age Belt-Bowls in Poland and Latvia

Misy do pasa z epoki brązu w Polsce i na Łotwie

Abstract: The article focuses on bronze Bronze Age belt-bowls (or hanging vessels) from Poland and Latvia. It examines their role, provenance, production, and especially form and decoration as keys to understand their cultural interactions and tradition.

Keywords: Bronze Age, Poland, Latvia, belt-bowl, casting, engraving, cultural interaction

Abstrakt: Przedmiotem artykułu są misy do zawieszania przy pasie (lub tzw. wiszące misy) z epoki brązu znane z terenu Polski i Łotwy. Omówiono ich funkcję, pochodzenie, produkcję oraz formy i ornamentykę jako elementy kluczowe w studiach nad tradycją i interakcjami kulturowymi.

Słowa kluczowe: epoka brązu, Polska, Łotwa, misy do zawieszania przy pasie, odlewanie, rytowanie, interakcje kulturowe

In memoriam Elfriede Stegkämper

Introduction

Belt-bowls are masterpieces of Nordic and related bronze-working. Nowhere else in Europe have bronze workers of Antiquity managed to cast such vessel-like objects with sides sometimes no more than 1 mm thick that were decorated with intricate engraved or plastic patterns presenting a multitude of details and data that sometimes invite to trace the provenience and the relatives of an individual belt-bowl. The author's interest focuses on belt-bowls found in regions that do not form part of the Nordic Bronze Age (cf. Höckmann 2012 for Northwest Germany), and the ways non-Nordic societies responded to the competition by their Nordic neighbours.

The exact place of production can in principle be pinpointed by archaeometric evaluation of remains of the clay core moulds that have not been removed after the cast, as the research project on ancient Greek tripods has shown (Kiderlen *et al.* 2016). In the case of Nordic belt-bowls, however, results can only be expected when a vast data-bank of the mineralogical fingerprints of clay all over the Nordic area has been formed. The project would exceed the author's life-expectance and calls for younger scholars.

The production of such a prestige object that resembled a vessel but served as a belt ornament of a woman could take weeks and include several steps, starting with obtaining necessary amount of bronze and finding clay suitable for building a perfectly circular clay mould (on a kind of slow-turning wheel?), through casting, beating off the outer mould and the difficult process of removing the core, to design and engrave the decoration, and working bronze with bronze tools. Only a limited number of specialists with a couple of assistants/apprentices could master the process. They seemed to have been in contact beyond considerable distances, eventually by being itinerant or having been so in their younger years. Eventually, some foundries have been placed in the neighbourhood of each other (Fig. 1:1–3), especially in fortified settlements (Höckmann 2005; Heske 2012a; Heske 2012b).

The engraver seems to not have been identical with the founder. For example, the belt-bowl from Schwennenz (Fig. 12) in its founder's component presents similarities with the Cieszyce one (Fig. 2), which, however, are not seen in the engraved decoration, and the ones from Dzwonowo (Fig. 3) and Górzyce A (Fig. 4) come closer to Nordic belt-bowls in their founder's component than in their engraved decoration.

Only tribal elite families could afford such shiny ornaments, making them status symbols of high-ranking women, equivalent to the swords of their husbands¹. There are indications of far-flung contacts within this class that would have augmented contact among belt-bowl artisans who lived by working for the elites (Kristiansen 1998, 161 f., 170, 178, 184; Höckmann 2012, 47, n. 109). Calling them 'court artists', however, would be absurdly anachronistic.

In this article, the term belt-box is applied to objects from Per. III–IV with a bottom either flat or pointed, and without a separate shoulder (German: *Gürteldosen*, Danish: *bæltedåser*), while later ones (German: *Gegossene Bronzebecken* or *Hängebecken*, Danish: *hængekar*) from Per. IV–VI with bottoms conical, bulbous or in the latest stage S-profiled, and a tripartite body are termed belt-bowls. This paper deals with the latter group.

No belt-bowl has been scientifically excavated *in situ* on a skeleton. This type of burial was no longer practised in the later Nordic Bronze Age when these elements of female costume came into fashion². The female connotation

¹ The deposition in stone cists with or without human remains (GBb. no. 43 [Hov/Sweden], 159 [Hvedshøj/Zealand], 325 [Düssin/Mecklenburg], 345 [Lübbersdorf/Mecklenburg]) gives an idea of the esteem they enjoyed. The absence of belt-bowls in the rich Per. IV female barrow burials of Banie (e.g. Bukowski 1998, 198–199, Fig. 80:A–D) and Skronie (Bukowski 1998, 162, Fig. 62) finds its explanation in the dating of all Pomeranian belt-bowl finds in Per. V–VI.

² Three 19th-century reports mention human bones found with belt-bowls (GBb. no. 43, pl. 27 [Hov/Sweden], no. 159, pl. 197:1 [Hvedshøj/Zealand], no. 337 [Katerbow/Mecklen-

results from numerous associations with women's ornaments suggesting that belt-bowls were such ornaments as well. Swords or spearheads were mainly found with them in a fragmentary state as scrap metal in collective finds that formed the raw metal stock of founders who may have been identical with metal traders. In this paper, such finds are called FMT finds³.

A bog find at Smistrup on the Danish island of Zealand (GBb. no. 249, pl. 211) combined one of the finest belt-bowls (destroyed in the conflagration of Frederiksborg Castle in 1859) with a matching belt-buckle and a lure. Henrik Thrane interprets the find as the dedication of a priestess (it is not known if that was a rank separate from that of 'First Lady' in a chiefdom). That would be a belt-bowl's top career⁴. There is, however, a chance that the bog depositions are not dedications to a superior being but potlatch-like expropriations for gaining social prestige (Höckmann 2012, 46; Blajer 2013, 188), or that both ideas were performed side by side.

As to the way how a belt-bowl was worn by women of rank (Sprockhoff, Höckmann 1979, 2–5), namely in front of their bodies eventually with a corresponding belt-buckle in their lower backs. Hints can be gleaned from the conservation of the lugs and from details of their shape. The bows of the lugs are often rubbed thin unless whetted away by rubbing on rough cloth as would result when the belt-bowl was worn vertically before the body on top of the clothing (GBb. no. 29, 43, 75, 98, 103, 108, 118, 131, 166, 190, 194, 219, 226, 237, 253, 271, 387 and 409). The same is implied by wear on only one end of the lug's slit where the weight of the big bronze object rested on the leather belt when it was worn this way (Hahne, Gummel 1925, 7 f., 37; GBb. no. 10).

burg]). A bog find from Kettinge in southern Denmark (GBb. no. 177 and 178, pl. 157–158) of two belt-bowls together with human bones and casting waste is intriguing. No details are, however, known.

³ Alternative interpretations (Blajer 2011, 298) are religious reasons (Hansen 1992; Soroceanu 1995; Rezi 2011; Heske 2012a) as it is hard to reconcile with the presence of scrap and founder's gear, commercial (Bukowski 1998, 316), or premonetary (discussed by Rezi 2011, 305–307, including postulation of standard units of weight). Potlatch practices (see below) do not explain hoards of scrap that cannot be reassembled into more or less complete objects. Any quest for one general standard interpretation of all hoards will not match reality.

⁴ Thrane 2008, 15. The Pomeranian find of Cieszyce fits that interpretation as well but for swampy soil instead of the peat bog. Heske (2009) connects the Staldzene find with a group of seven Nordic priestesses who came to Latvia across the sea in one event, and jointly dedicated their uniform sets of bronze ornaments and the damaged belt-bowl to a superior being. The generally accepted assumption that hoards are made up of several combined sets of women's ornaments goes back to W.A. von Brunn (1980). As opposed to this, Vasks, Vijups (2004, 30) interpret the find including many broken bronzes as a founder's stock of metal. In the author's view, their interpretation avoids some uncertainties of the other one (as to Bronze Age navigation, see [e.g.] Capelle 1986, Fig. 5 – Bronze Age ship settings in Gotland and Latvia attest contacts between both areas).

On some belt-bowls, the central portion of the lugs' bases is c. 2 mm deeper than the sides e.g. Glerup (GBb. no. 142, pl. 92–93), Thisted (GBb. no. 257, pl. 125), Neubrandenburg IV (GBb. no. 356, pl. 254–255), Wegeleben (GBb. no. 375, pl. 283). The shape likely goes back to early belt-boxes with bronze or wooden lids. One from Sæsing in Jutland (GBb. no. 239, pl. 122:2) and a Per. III belt-bowl from Neu Grebs in Mecklenburg (Just 1968; GBb. no. 20) also have flat wooden bars that held the bronze lid in place by being pushed through the lugs of the belt-bowl in addition to the leather belt that seems to have been wider than the wooden bar⁵. The piece apparently fixed the lid on the belt-bowl that seems to have served as a container for some matter that should not fall out⁶.

A number of belt-bowls, mostly in eastern Scandinavia, display in their mouths flat collars c. 10–12 mm wide with an unknown function (Fig. 2). Modelling them in wax while the mould was prepared was demanding. In some cases, the artisan did not manage to completely remove the wax from triangular fields between the lattice bars before the outer mould was applied so that they now have a thin bottom sheet of bronze that demonstrates the superb mastery of belt-bowl founders in composing the alloy, even more than some belt-bowls' walls being no thicker than c. 1 mm (Fig. 11)⁷.

It seems that the delicate collars were meant for being seen. In a variant, they are formed by rows of round holes with raised rims as complicated to shape as the lattice type. A late find from Winzlar in northwestern Germany is unique as it has blue glass inlays between the holes' rims⁸, and on some belt-bowls from Sweden, Zealand and Mecklenburg, the inner rim of the lattice collar has a delicate profile⁹ that even may present oblique engraved lines alluding to

⁵ GBb. no. 239, pl. 122 (Sæsing), no. 100, pl. 135 (Billesløj), no. 363, pl. 256–257 (Rechlin), no. 377, pl. 264 (Weisdin II), no. 386, pl. 290 (Bargfeld), Neu Grebs (Just 1968; GBb. 20). Beyond Sæsing and Neu Grebs, no traces of extra features on the lids were preserved.

⁶ In a Per. III belt-box from Oppesundby in Denmark (GBb. no. 220, pl. 207) animal bones and snake's vertebrae were found which were likely used for magical rites (GBb., p. 8). The contemporary belt-box from Neu Grebs (Just 1968; GBb., p.20) held a paste that whatever its meaning was could not be kept in a container worn vertically. Some Per. V ones, on their bottoms preserve in the oxide prints of a textile lining which might have protected small objects carried there.

⁷ GBb. no. 64, pl. 66–67 (Östra Nöbbelöv), no. 126, pl. 143 (Femø), no. 261, pl. 178 (Tybrind Hovedgård II), no. 364, pl. 258–259 (Fig. 11) (Roga), no. 358, pl. 281 (Neulingen B).

⁸ GBb. no. 429, pl. 320–321 (Winzlar). Similar but without glass inlay: GBb. no. 151, pl. 190 (Højelt), no. 254, pl. 174 (Stevneskov), no. 195, pl. 204 (Magleby Nørrekær), no. 353, pl. 251 (Neubrandenburg I), no. 356, pl. 253 (Neubrandenburg IV). Among lattice collars comparable finesse is even rarer (no. 8–9, pl. 9 [Vansjø], no. 77, pl. 40 [Slättäng], no. 96, pl. 183 [Åsebakke], no. 261, pl. 179 [Tybrind Hovedgård]).

⁹ GBb. no. 10, pl. 10 (Äleklinta), no. 64, pl. 67 (Östra Nöbbelöv), no. 76, pl. 70 (Simris B), no. 88, pl. 74 (Ullstorp), no. 89, pl. 48–49 (Vegestorp), no. 96 (Åsebakke, n. 8), no. 145,

a string tightening the mouth of a textile bag¹⁰. The profile would not have been visible when the belt-bowl was worn in front of the stomach with its opening toward its owner's body. Were these objects not worn at all any more but had become prestige objects in their own right?

Another argument for belt-bowls having been worn vertically is the fact that the slit lugs of belt-bowls like the Cieszyce one are arranged in the side of the neck below the collar, where a lid could not be handled. But the bases of the lugs' slits of the Cieszyce belt-bowl and some other ones are nevertheless deepened in their central parts as it was described above. These belt-bowls could not serve as containers covered by lids as earlier ones¹¹. The shape of their lug-slits cannot have been functional any more but seems to go back to an artisans' tradition that at some point became irrational.

A minority of belt-bowls have their necks decorated. When they were worn as thought their owners could see them but no one else. The shoulders could not be seen even by the wearers and so it is reasonable that extremely few Nordic belt-bowls bear any ornament on their shoulders¹². Such decoration on the Polish belt-bowl from Dzwonowo makes us think that it was used in a different way from the Nordic one.

Ornamental patterns

Individual patterns as well as their combinations and even directions of their application follow regional predilections that can help to eventually identify belt-bowls found in certain regions as 'imports' from somewhere else.

In Per. V, two basic species of panel decoration existed side by side that can be classified as rotary or static. The former group comprises wave patterns (Fig. 13:1) that can be modified by animal' heads' protomes (Fig. 13:2), and hooked-S patterns (Fig. 13:3).

pl. 189 (Havnsø), no. 188, pl. 201 (Lille Fuglede), no. 353, pl. 251 (Neubrandenburg I), no. 364, pl. 258–259:1 (Roga A), and no. 358, pl. 283:1 (Neulingen A). The only straighter is no. 261, pl. 179 (Tybrind Hovedgård) from Funen.

¹⁰ GBb. no. 195, pl. 204 (Magleby Nørrekær), no. 354, pl. 281 (Neubrandenburg II), no. 358, pl. 283:1 (Neulingen A). The belt-bowl from Cieszyce presents this feature.

¹¹ Per. IV: GBb. no. 213, pl. 110 (Nymølle/Jutland). Per. V: GBb. no. 142, pl. 93 (Glerup/Jutland), no. 161, pl. 98 (Hylidal), no. 257, pl. 125 (Thisted), no. 174, pl. 154 (Kertinge I/Funen), no. 186, pl. 200 (Lammefjord/Zealand), no. 188, pl. 201 (Lille Fuglede), no. 307–308, pl. 230 (Fig. 6, Witkowo), no. 356, pl. 290 (Neubrandenburg IV/Mecklenburg), no. 375, pl. 293 (Wegeleben/Central Germany).

¹² In early Per. IV, there were three such experiments (GBb. no. 30, pl. 19 [Gotland], no. 103, pl. 136 [Bogense/Funen], no. 421, pl. 316 [Wacken/north Germany]) but in Per. V only one belt-bowl from Årby in Zealand (GBb. no. 94, pl. 181) follows the tradition of the early Gotland one, links missing. Another find from Rheda (GBb. no. 414, pl. 311) is not Nordic but was produced in the Ems culture of Westphalia and eastern Netherlands, under conditions comparable to those that inspired the production of the Dzwonowo belt-bowl by a non-Nordic bronze worker.

Hooked-S patterns are indigenous and characteristically Nordic¹³. The earliest testimony is an early Per. IV belt-bowl from Funen (GBb. no. 199, pl. 163 [Mariendal]) where small concentric circles are embedded in a system of curved lines forming the earliest known hooked-S panel that is substituted to the zonal arrangement of concentric circles. The following steps in the emergence of the pattern are not yet known by finds. When it turns up again nothing reminds of its initial connection with concentric circles. In Per. V, a parallelism of a perfect design is seen in which all parts of the S are equally wide, in the eastern province of the Nordic Bronze Age and less balanced varieties in the west. In Per. VI, an eastern belt-bowl style intrudes northwest Germany (GBb. no. 429, pl. 320–321 [Winzlar]).

In Per. V, there is a bias in the composition of panel decoration. Panels of wave (Fig. 13:1,2) or hooked-S patterns (Fig. 13:3) have a sense of direction, rotating round the belt-bowls. That sense of motion was unknown prior to Per. V but then it outnumbers static patterns. When there are two panels, identical directions dominate in Sweden and to a lesser degree in Mecklenburg and central Germany. In these regions, belt-bowls of multiple finds show the same direction of rotation while in Norway (GBb. no. 8, pl. 9 [Vansjø]), Jutland (no. 160, pl. 97 [Hyldal]), and northern Germany (no. 404–406, pl. 303–305 [Kronshagen]) few belt-bowls display opposing ones. Both German examples being in the Kronshagen find make it apparent that the directions were meaningful. Opposing directions generally prevail in Zealand and northwest Germany.

The sense of rotation is diagnostic for belt-bowl decoration in Per. V when it ruled in all regions of the Nordic Bronze Age. In its spreading, itinerant artisans would have played a role.

Just as innovative are protomes in the shape of waterfowls' heads (Fig. 13:11B) that can be traced back to the Urnfield culture and Late Bronze Age prototypes from Hungary and Romania. Taking into consideration their popularity in the north, the southern influence would have been massive (Hundt 1978, 140–159,

¹³ Mycenaean potters occasionally painted hooked-S panels on vases (Mountjoy 1986, 27, Fig. 24:2–4, 34, Fig. 34:4 [LH II A], 107, Fig. 129:6 [LH III B1]; Furumark 1992, pl. 88, 158:1 [LH II], pl. 112, 194:18 [LH III C1a]). Artisans forming panels of curvilinear geometric patterns (e.g. 'hooked-C' ones: Mountjoy 1986, 92, Fig. 112:2) are bound to arrive at similar solutions by coincidence. In Mycenaean Greece, the hooked-S pattern had degenerated (Mountjoy 1986, 98, Fig. 116:8 [LH III B1]) centuries earlier than its emergence in Northern Europe, and after a long hiatus only sporadically turned up again locally on the Aegean Islands (Coldstream 1968, pl. 37:d; 41:f). In Western Hallstatt context, rotating patterns are absent, and in the East, they are extremely rare (Brosseder 2004, 86, Fig. 52:IV, 26.35; 116, Fig. 79:9, 121, Fig. 83, B 6; 291, Fig. 187:1032–11) and differ from Nordic ones, going back to mere coincidence. The same is seen by Sprockhoff's 'star pattern' of Per. IV belt-bowls that recurs in East Hallstatt pottery decoration (Brosseder 2004, 228, Fig. 151, 795–1) where it is justly interpreted as pendent garlands.

Figs 13 and 15–20). It cannot, however, be appraised how much of the original religious meaning of the foreign signs survived in the north.

Another pictorial element is formed by S-animals (Fig. 13:8) that differ from the reclining-S pattern (Fig. 13:7) by one end being altered into a loop-shaped head with a dot eye. As opposed to the simple S, it gives the sign a direction that submits it to the rotation principle.

Static patterns dominated Per. IV. In Per. V, they include raised concentric circles (cf. Dzwonowo, Fig. 3), and engraved barge (Fig. 13:4)¹⁴, pretzel (Fig. 13:5)¹⁵, mushroom (Fig. 13:6)¹⁶, and some rare pictorial designs.

Pictorial patterns¹⁷

The decoration of some belt-bowls in Scania, Sweden and Pomerania, with a Swedish belt-bowl in northern Germany (Maasbüll, GBb. no. 408, pl. 307), is not organised in endless panels but rarely forms a complex field pattern (e.g. GBb. no. 317, pl. 147 [Gedesby]) or consists of unconnected elements that can be pictorial. Two out of eight belt-bowls or fragments from Poland (Górzyce B, Fig. 5:1; Witkowo A, Fig. 6:1) are decorated in this way as seems to be a high percentage.

The style derives from southeastern Europe and is mostly distributed in the eastern province of the Nordic domain. Pomerania's early find Witkowo A could in theory form a stepping-stone in its way north, but this belt-bowl came to Pomerania from Sweden or Scania.

The earliest pictorial subject in Per. IV is bird on a belt-bowl from Ejlby (GBb. no. 116, pl. 139:1) and a belt-buckle from Fiskbæk (GBb. no. 128, pl. 90:1). In Per. V, birds are shown on the belt-bowl from Maasbüll in northern Germany (GBb. no. 408, pl. 307). These images are free of any influence by the stylised southeastern European or urnfield waterfowl elements, as it seems to have been a local idea that did not start a tradition. It may, however, have augmented the popularity of waterfowl-head protomes (Fig. 13:11A–C).

In Per. V, a motif distributed mainly in Sweden is a reclining S that does not express a rotary motion (Fig. 13:7)¹⁸. When a Scandinavian elk's (Fig. 13:11F)

¹⁴ E.g. GBb. no. 8, pl. 12 (Bokenäs; outermost panel).

¹⁵ E.g. GBb. no. 2, pl. 3 (Kamfjord/Norway).

¹⁶ E.g. GBb. no. 10, pl. 10 (Äleklinta/Sweden, innermost panel).

¹⁷ Sprockhoff 1961, 767; 1964, 173; GBb. no. 19.

¹⁸ GBb. no. 4, pl. 5–6 (Kråkvik/Norway), no. 13, pl. 53 (Billeberga II/Sweden), no. 36, pl. 22 (Hallarum II A), no. 77, pl. 40 (Slättäng), no. 83, pl. 43–44 (Stenbro II/Gotland), no. 126, pl. 143:1 (Femø/Funen), no. 138, pl. 148 (Gedesby B), no. 290, pl. 223 ('Denmark'), no. 319, pl. 237 (Broock A/Mecklenburg), no. 360, pl. 250–251 (Neubrandenburg I) were found in the eastern province of belt-bowls' production as opposed to no more than two in the west (GBb. no. 245, pl. 123) from Sjørup in Jutland which include eastern influence

or a southeastern waterfowl head is added to one end they become rotary S-animals (Fig. 13:8)¹⁹. Then the other end is often split into two diverging volutes, eventually suggesting a meaning of the sign as a dragon-like mythological creature.

The subject of ships as a 'male' topic is noteworthy on women's ornaments. Images on belt-bowls from Stora Dalby in Sweden (GBb. no. 84, pl. 45) and Billeberga in Scania (GBb. no. 14, pl. 54) contain elements that might allude to the prows of ships while a tiny drawing on a lug of the Jutish belt-bowl Nedergård B (GBb. no. 205, pl. 106) leaves no doubt that a Nordic ship is shown. In Poland, ships are first seen on the belt-plate from Radolinek imported from south-eastern Europe (Szafranski 1955, pl. XIX:230; Bukowski 1998, 342, Fig. 170).

Pictorial ('female') belt-bowls and ('male') razors, bronze headbands and lures form prime pictorial sources for the Nordic Bronze Age mythology. In his attempts at interpreting them, Sprockhoff exploited parallels as remote as Indian Rigveda Sprockhoff 1955, 90 f.²⁰ This may seem far-fetched, but there can be hardly any doubts that belt-bowl decoration is connected with mythical or religious ideas.

Catalogue of Pomeranian finds

1. Cieszyce, Brojce commune, Gryfice district, Poland (German: *Karolinenhof near Broitz, Kr. Greifenberg*) (Fig. 2).

Museum, until 1945: Szczecin, Landesmuseum (now the National Museum in Szczecin), d. sygn. 4937 (war loss).

The belt-bowl was found intact. It combined a high slightly conical neck with a rather wide ascending straight shoulder that sharply met a bulbous bottom with a central raised plaque. Within the rim there was a horizontal 'collar' formed by a lattice of narrow oblique lathes

as is seen by placing the lugs on short allusions to an [eastern] 'collar', and no. 401, pl. 302 [Höckmann 2012, 19, Fig. 7] from Hemmelsdorf in northern Germany) is embedded in a network of long-range connections.

¹⁹ GBb. no. 4, pl. 4–5 (Kråkvik/Norway), no. 9, pl. 9:2 (Vansjø B), no. 12, pl. 52 and no. 14, pl. 54 (Billeberga A, Sweden), no. 18, pl. 12 (Bokenäs), no. 23, pl. 13 (Eskelhem), no. 25, pl. 16 (Fransborg B), no. 43, pl. 27 (Hov), no. 45, pl. 28–29 (Ingelstorp), no. 68, pl. 38 (Rud), no. 75, pl. 69 (Simris A), no. 84, pl. 45 (Stora Dalby), no. 88, pl. 74–75 (Ullstorp), no. 156, pl. 204 (Magleby Nørrekær/Zealand), no. 251, pl. 212 (Søborg), no. 302, pl. 227 [Fig. 5:1] (Górzyce B), no. 307 [Fig. 6:1] (Witkowo A, n. 11), no. 345, pl. 242–243:2 (Lübbersdorf/Mecklenburg) (Fig. 10), GBb. no. 364, pl. 258–259:1 [Fig. 11] (Roga B), no. 317, pl. 268 [Fig. 8] (Biesenbrow). The motif is strictly confined to the eastern province of Nordic belt-bowl production.

²⁰ He interprets most belt-bowl ornaments as stylised solar barges inspired by bird-headed solar barges in the Bronze Age of southeastern Europe (Sprockhoff 1955, 10, 36–39, 64, 74, 92, 102–106).

that left open triangular fields. The rim, two ribs at equal distances round the neck, and a third one round where the neck and the shoulder meet were raised. The lugs were formed by wide but low openings in the sides of the neck. Their base lines were interrupted by their central portions being deeper. The collar was not interrupted or modified above the lugs.

The engraved decoration on the plaque and in four panels comprised an everse (turned outward) wave pattern in the innermost panel (A), a procession of single inverse S-animals (B), a hooked-S panel (C) and an inverse wave pattern with protomes that are distinguished from those in panel B by dots below the beak.

Circumstances of find: a peat bog near the River Mołstowa, close to urn burials.

Associated objects: one single neck-ring from a necklace set, two Nierenring bracelets, five phaleras, one fibula.

Date of deposition: Per. VI a²¹.

Selected literature: Kunkel 1928, Taf. 38:15, 47:1; Sprockhoff 1956 vol. 1, 34, vol. 2, map 53, no. 126; GBb. 92 no. 304, pl. 228; von Brunn 1980, 142, no. 99 (Karolinenhof); Höckmann 1981 (erroneously 'Braunschweig': Höckmann 2012, 11, note 6); Tyniec 1987, 63, no. 14; Bukowski 1998, 304, no. 1, 306, Fig. 148; Blajer 2001, 342, no. 28; Gedl 2001, 52, no. 80, pl. 36:80; Gedl 2004, 56, no. 144; Höckmann 2012, 11, note 6.

2. **Dzwonowo, Marianowo commune, Stargard district, Poland (German: *Schönebeck, Kr. Saatzig*) (Fig. 3).**

Museum: Szczecin, the National Museum in Szczecin, MNS/A/22100 (d. sygn. 567).

The belt-bowl is intact. It features a low convex bottom, a lightly rounded inflection, a pronouncedly wide shoulder and a narrow vertical neck. In the bottom's centre is a prominent plaque formed by three concentric ridges round a raised central dot. Medium-wide vertical lugs are arranged above the rim. Next to them is bronze that in the cast intruded into the seam between the core and the outer mould that has not been cleaned away after the cast.

The bottom is encircled by three string-patterned ribs. It is separated into two zones by an engraved narrow string-patterned ribbon with dot fringes. The inner one is decorated by V- or U-shaped signs opened toward the outside drawn as single lines of dots. The outer panel

²¹ Höckmann 2012, 125 (Karolinenhof): Abschn. 20 (Per. VI); 102, Fig. 24.

features a wreath of eight raised circles of two concentric ridges round the raised central dot. An uneven garland of pendent big arches drawn by single engraved lines accompanied by dot fringes borders the outer panel. The shoulder is decorated by an uneven zigzag of dots.

Circumstances of find: near a big stone.

Associated objects: three fibulae; one bronze collar; one Nierenring bracelet; two pendent spirals; two sets of pendent wire rings; one spearhead; five socketed axes; two socketed chisels; three interconnected rings; two flat wide rings of two fingers' width; fragments of necklaces, bronze wire etc. According to composition and site the find is an FMT one.

Date of deposition: Per. VI²².

Selected literature: Kunkel 1928, pl. 50:2; Sprockhoff 1956, vol. 1, 58, vol. 2, 53, no. 112; GBB. 93, no. 306, pl. 229; von Brunn 1980, 145, no. 205 (Schönebeck); Tyniec 1987, 70, no. 19; Bukowski 1998, 305, no. 2, 307, Fig. 149; Kuśnierz 1998, 66, no. 542, 68, no. 563, 80, no. 647, 82, no. 664–665; Blajer 2001, 344, no. 46; Gedl 2001, 52, no. 81, pl. 37:81; Gedl 2004, 44, 47, 53, 56, no. 98, 126, 145 Kozłowska-Skoczka 2012, 146.

3–4. Górzyce A and B, Silnowo commune, Szczecinek district, Poland (German: *Friedrichsberg near Bärwalde, Kr. Neustettin*) (Figs 4 and 5:1).

Museum, before 1945: Gdańsk, Provinzialmuseum, V.S. 9221 (war loss).

3. Górzyce A (Fig. 4)

The belt-bowl is intact. It features a low lightly bulbous bottom, a lightly sharp inflection, a wide shoulder and a cylindrical neck. High narrow lugs are arranged above the rim. The bottom's centre is occupied by a wide plaque of a rounded profile. String-patterned ribs emphasise the rim and the shoulder/neck transition. The bottom has no ribs.

The plaque is decorated by an eight-spoked wheel of dots. Two engraved lines with dot fringes encircle the plaque, and an eight-rayed star separates the bottom in two fields. In the inner one, two dotted lines connect the circle round the plaque with the star. From its apexes emanate engraved S-shaped protomes with dot fringes the 'beaks' and 'backs' of which are connected with the inflection by lines of dots.

²² Höckmann 2012 (Schönebeck), 119, Spalte (column) 20, 122, Spalte 49, 123, Spalte 62/A. 20, 102, Fig. 24.

4. Górzyce B (Fig. 5:1)

Only the conical or lightly bulbous bottom of the belt-bowl that is broken in three pieces and not complete is known. Its centre seems to be flattened, what would be unique. It is empty but surrounded by a circle of dots. In the field round the centre, five linear engravings with dot fringes remotely alluding to S-animals (?) are arranged.

Circumstances of find: Found when ploughing a ‘little hill’ (tumulus?).

Associated objects: one fragmented spiral-plate fibula; two fragmented Lusatian culture fibulae; two bracelets with groups of cross ridges (‘*Steggruppenringe*’); one Nierenring bracelet; one arm spiral of profiled section; two arm spirals made of a double wire; one cuff and one plain neck-ring; one bracelet and fragments of others.

Date of deposition: transition Per. V b/VI a²³.

Selected literature: Amtlicher Bericht Danzig 1903, 23; Sprockhoff 1956, vol. 1, 21, vol. 2, map 53, no. 69; GBb. 92, no. 301–302, pl. 226–227; von Brunn 1980, 140, no. 51 (Friedrichsberg); Tyniec 1987, 79, no. 30; Bukowski 1998, 302, no. 3, 308, Fig. 150; Blajer 2001, 344, no. 58; Gedl 2001, 53, no. 82–83, pl. 38:82–83; Gedl 2004, 16, no. 16–17, 32, no. 60.

5. Krzywin, Widuchowa commune, Gryfino district, Poland (German: *Kehrberg, Kr. Greifenhagen*) (Fig. 5:3).

Museum (until 1945): Szczecin, Landesmuseum (now the National Museum in Szczecin), d. sygn. 4442 (war loss).

Two deformed fragments of the bulbous bottom of a belt-bowl. – The engraved decoration shows three frieze ornaments once arranged horizontally: below, an animal-head protome topping a wave pattern, in the middle a wave pattern without protomes, and above, massed lines that seem to be the base of another wave panel. The panels are not separated by raised ribs or engraved lines.

There seems to be drawn a core support, leaving open if it was the only one or if there were more, the arrangement pattern being unknown. Such patterns can help to identify the provenance of a belt-bowl in a certain region of the Nordic Bronze Age.

Circumstances of find: while digging trenches in the forest, a spade-blade’s length deep, without any pottery or stone structures.

Associated objects: one socketed axe; one knobbed sickle; four fragments of fibula bows; three fragments of fibula plates; central fragment of a Nierenring bracelet; five fragments of cast bronze sheet some of which melted together; six fragments of plain bracelets; six fragments

²³ Höckmann 2012 (Friedrichsberg), 119, Spalte 24, 121, Spalte 17, 123, Spalte 52, 124, Spalte 75/A. 17, 102, Fig. 24: Abschn. 17.

of twisted bracelets; six fragments of plain wire rings; ten fragments of sheet-metal rings, some with incised decoration. Scrap fragments melted together ensure the FMT character of the find.

Date of deposition: Per. VI a²⁴.

Selected literature: Sprockhoff 1956 vol. 1, 35, vol. 2, map 53, no. 130; GBb. 92, no. 305, pl. 227; von Brunn 1980, 142, no. 101 (Kehrberg); Bukowski 1998, 302, no. 4; Blajer 2001, 371, no. 11; Gedl 2001, 53, no. 84, pl. 38,84; Gedl 2004, 25, 55, 57, 59 f., no. 38, 137, 138, 156–159.

6. **Staldzene, district of Ventspils, Latvia (Fig. 7).**

Ventspils Museum, VVM 28325.

Fragments of a belt-bowl with a low cylindrical neck, a flat shoulder and a sharp inflection, and a medium-high convex bottom (centre has not been preserved). The rim seems not to be profiled. Lug slots are placed below the rim.

The engraved decoration is arranged in two panels plus a centre field (or three panels?): two panels of wave pattern turned outward drawn by three lines with dot fringes that are preserved better than the lines.

Associated objects: many fragments of thin bronze wire; 34 intact open-ended plain bracelets; three disc-headed pins with bent shaft, decorated by incised concentric lines on the disc (one of them repaired by over-casting a rupture); two intact and two fragmented spiral-headed pins; one pin topped by a ram's head; one spectacle-fibula; several intact or fragmented horse-trappings, including two fragments of hollow rings and a set of three ringlets held together by a fourth; one small socketed chisel or scraper. The tool and the composition of the find suggest its FMT character.

Date: transition Per. V/VI or Per. VI a.

Literature: Vasks/Vijups 2004, 28 ff.; Fig. XX, photograph 13; Heske 2009, 175.

7. **Szczecin-Kleşkowo, Poland (German: Hökendorf near Altdamm, Kr. Greifenhagen) (Fig. 5:2).**

Museum, until 1945: Szczecin, Landesmuseum (now the National Museum in Szczecin), d. sygn. 133 (war loss).

Fragment of a belt-bowl with hooked-S decoration, including a round inflection. It is separated from the hooked-S panel by a narrow-engraved string-patterned ribbon that in the drawing seems not to be raised and has no dot fringe.

²⁴ Höckmann 2012 (Kehrberg), 122, Spalte 49–51, 124, Spalte 75 / Abschn. 18, 102, Fig. 24.

Circumstances of find: in an ‘urn’ beside a big stone, inside or near an urnfield. *Associated objects:* one fragmented antennae sword; four spearheads; one plain pincer; one double button; one phalera; one arm spiral; one fragmented bracelet round in section, with three pairs of rings hooked into it; two Eiding bracelets; one fragmented bow bracelet; one fibula; 12 sickles; two intact and three fragmented socketed axes; one bronze tube with closed ends; four rings; one intact and one broken scrapers; one casting waste; one clay vessel (not delivered to the museum). The composition of the find and the site suggest its FMT character. *Date of deposition:* Per. VI a²⁵.

Selected literature: Kunkel 1928, pl. 35:9; Sprockhoff 1956, vol. 1, 31, vol. 2, map 53, no. 112; GBb. 92, no. 303, pl. 227; von Brunn 1980, 142, no. 87; Tyniec 1987, 88 f., no. 43; Gedl 1988, 20, no. 27, pl. 34:E; Bukowski 1998, 193, 247–249, Fig. 111:A–C, 305, no. 5, 248, Fig. 111:B:1:7:8; Kuśnierz 1998, 62 f. no. 506, 64, no. 525, 93, no. 789; Blajer 2001, 352, no. 174; Gedl 2001, 53, no. 85, pl. 38:85; Höckmann 2012, 121–124 (Hökendorf).

8–9. Witkowo A and B, Smółdzino commune, Słupsk district, Poland (German: *Vietkow, Kr. Stolp*) (Fig. 6:1,2).

Museum: Szczecin, the National Museum in Szczecin, MNS/A-/22121/14, 19

8. Witkowo A (Fig. 6:1)

Fragmented belt-bowl with a flat horizontal rim projecting outward, a conical neck with a rib at mid-height, lugs above a rim, a narrow ascending shoulder with a lightly rounded inflection, and a moderately globular bottom with the centre missing. – Engraved decoration, inner panel: steep hooked-S patterns of unequal width. Outer panel: inverse S-animals with an allusion to symmetrically split ‘tails’. The separator between the panels is engraved, with dot fringes.

9. Witkowo B (Fig. 6:2)

Fragments of a belt-bowl, the inner two thirds of the bottom are not preserved. The outer one indicates a slightly bulbous bottom of moderate height. The slightly rounded inflection passes into a medium-wide shoulder that proceeds rounded into a vertical neck of medium height. High and wide lugs are arranged above the rim; one slit is unsymmetrical. The rim is strengthened and a soft-profiled rib marks the onset of the vertical neck.

²⁵ Höckmann 2012, 102, Fig. 24: Abschn. 17, 119, Spalte 24, 121, Spalte 17, 123, Spalte 52, 124, Spalte 75 (Abschn. 17) (Friedrichsberg).

One panel of engraved pretzel patterns is preserved. Above it toward the inflection five parallel lines have a dot fringe below. Both lines and dots show uneven wear. A defect in the shoulder has been mended by over-casting.

Circumstances of find: near the border of a wet meadow (Schumann), c. 15 cm deep in a big clay vessel that was destroyed, or in a wet spot in a field (Walter), by a big stone. The surrounding of the stone was full of bronze objects (Walter).

Associated objects: one parade axe; one fragment of an Auvernier sword; four normal-size undecorated spearheads; one big undecorated spearhead; four open bracelets; three bracelets with stamp ends; two Nierenring bracelets; fragments of two arm spirals; two ring toggles; one neck-ring; fragments of several fibulae, including two spiral discs; 15 socketed axes; nine palstaves; one socketed knife; two anvil blocks; one socketed chisel; 4.5 kg lumps of bronze-casting waste. – The site and the composition of the find (nb. the socketed chisel, the bronze scrap and objects) establish its character as a foundry where a rich FMT hoard was buried (Walter 1899, 198).

Date of deposition: Per. V²⁶.

Selected literature: Walter 1899; Schumann 1900, pl. 2:3–4; Kunkel 1928, pl. 26, 47:15; Sprockhoff 1956 vol. 1, 66, vol. 2, map 53, no. 289; GBb. 93, no. 307–308, pl. 230; von Brunn 1980, 146, no. 234; Tyniec 1987, 130, 132, no. 93, 126, Fig. 2.37:93a,b; Bukowski 1998, 259–262, 302, no. 6, Tab. II, 259, Fig. 113:B:5; Kuśnierz 1998, 63, no. 509, 77, no. 625, 629–631, 81, no. 659, 83, no. 670–678; Blajer 2001, 353, no. 191; Gedl 2001, 53 f., no. 86–87; Gedl 2004, 54, 57, 75 f., no. 133, 215; Höckmann 2012, 14, note 12, 35, note 69; Kozłowska-Skoczka 2012, 163–165.

Typological observations

At a first glance the shape of these masterpieces of ancient bronze work dominates our understanding of their individuality and dating. This criterion is, however, influenced by such factors as far-flung vogue. Analysis will for this reason benefit from an evaluation of less conspicuous additional features such as the patterns of their decoration and their arrangement. The clockwise or counter-clockwise arrangement of rotary patterns opens the list of such features. It is accompanied by tendencies to arrange directed patterns inversely, i.e. their base lines being placed toward the rim, or eversely when the base line is turned

²⁶ Höckmann 2012 (Vietkow), 119, Spalte 25, 121, Spalte 40/Abschn. 12, 123, Spalten 55.62, 124, Spalte 73/Abschn. 18, 102, Fig. 24, Abschn. 12.

toward the centre of a belt-bowl's bottom. Such patterns and their combinations are helpful in fixing the chronology of a find and identifying connections with other regions of which the bronze-worker had information.

1. Cieszycze (Fig. 2)

The most conspicuous feature of this sophisticated belt-bowl is the combination of four panels of engraved bottom decoration with engraved separators but a raised plaque, a slightly conical neck with a lattice collar, lugs below the rim, and two plastic ribs on its neck.

Some collared belt-bowls present three or more panels of bottom decoration, with a peak in Danish Zealand²⁷. Almost all of them, however, differ from the Cieszycze one by their necks being decorated with engraved patterns interrupted by vertical 'triglyphs', as opposed to two ribs on the Polish find that, in this context, are diagnostic for belt-bowls from Mecklenburg²⁸ where, however, collars pierced by round holes instead of open triangles are common. The belt-bowl Broock A (GBb. no. 319, pl. 236–237) is unique in combining triglyph neck decoration and a round-hole collar with a raised plaque, blending features of the western circle of belt-bowl elements and the eastern one (Sprockhoff 1961, 767; Baudou 1960, 69–71; GBb 19; Höckmann 1981, 85, no. 3), and areas north and south of the Baltic. It will turn up in the argumentation again (*infra*).

Multi-panel decoration is popular in Mecklenburg (n. 28). The cited belt-bowl Broock A has no less than six panels. Three friezes of hooked-S are seen on a bottom fragment from Garfitz (GBb. no. 327, pl. 239) that originally had at least two more panels, but nothing of its upper part is preserved.

²⁷ The main group has engraved bottom separators. Per. V, Zealand: GBb. no. 94, pl. 181 (Årby), no. 145, pl. 188:2, 189 (Havnsø), no. 155, pl. 195 (Holsteinborg), no. 188, pl. 201 (Lille Fuglede), no. 195, pl. 204 (Magleby Nørrekær A), no. 274, pl. 216 (Villingerød); Mecklenburg: GBb. no. 319, pl. 236, 237 (Broock A). Per. VI, Sweden: GBb. no. 45, pl. 28, 29 (Ingelstorp), 82, pl. 42,43 (Stenbro I), 83, pl. 43:2–44 (Stenbro II); Zealand: GBb. no. 251, pl. 212 (Søborg). Six panels are seen on the find Broock A in Mecklenburg (*supra*); Rib separators, Norway: GBb. no. 9, pl. 9, 2 (Vansjø B); Sweden: GBb. no. 89, pl. 48 (Vegestorp); Mecklenburg: GBb. no. 320, pl. 235 (Fig. 9) (Broock B). No collar: Møn island near Funen: GBb. no. 139, pl. 109 (Budsene); Central Germany, Per. VI: GBb. no. 349, pl. 278 (Magdeburg).

²⁸ Two ribs at equal distances as on the Cieszycze find, in Mecklenburg: GBb. no. 312, pl. 233 (Arendsee), no. 325, pl. 235 (Düssin), no. 345, pl. 242, 243:2 (Fig. 10) (Lübbersdorf), no. 354, pl. 252 (Neubrandenburg II), no. 355, pl. 255 (Neubrandenburg III), no. 364, pl. 258, 259:1 (Fig. 11) (Roga), GBb. no. 360, pl. 260 (Plathe). There is to be added the find Neulingen A (GBb. no. 358, pl. 283:1) southwest of Mecklenburg proper. The central-German Saale region has four such finds, and northern and north-western Germany five (see Höckmann 2012, 35).

The four panels of the Cieszyce belt-bowl are decorated with, moving outward from the centre, a wave pattern moving clockwise (A), S-animals with protomes type A moving counter-clockwise (B), a hooked-S panel moving counter-clockwise (C), and a wave pattern with protomes type B running counter-clockwise (D). Two friezes with protomes of standard types are unusual²⁹. Only Mecklenburg has more than one case.

Animal-head protomes that are arranged only in the outermost panel are more numerous. Sweden has three finds³⁰, Jutland one³¹, Funen one³², Mecklenburg three³³, and Poland two³⁴. If non-panelled pictorial belt-bowls are considered under this heading as well (Sweden: eight, Funen: two, Poland: one)³⁵ there rises a conjecture that the panel ornaments are related to pictorial belt-bowls (*infra*).

The regular solution for the outermost panel would be the hooked-S pattern that cannot be pinpointed to a specific region. The situation changes when the direction of the S pattern is considered. In most regions the counter-clockwise run is the rule.

As opposed to it, the clockwise arrangement seen on the Cieszyce belt-bowl is confined to few regions on the Baltic (Mecklenburg-Vorpommern³⁶,

²⁹ GBb. no. 8, pl. 9,1 (Vansjø A/Norway), no. 12, pl. 52 (Billeberga A), no. 74, pl. 39 (Senäte /Sweden), no. 75, pl. 69 (Simris A), no. 142, pl. 92 (Glerup B/Jutland), no. 196, pl. 205 (Magleby Nørrekær B/Zealand), no. 355, pl. 254–255 (Neubrandenburg III/Mecklenburg; the naturalism of the animal-head protomes type G (Fig. 13: 11 G) is unique), no. 317, pl. 268 (Fig. 8) (Biesenbrow [also: Bukowski 1998, 309, Fig. 151]), no. 401, pl. 302 (Hemmeldorf/north Germany).

³⁰ GBb. no. 16, pl. 55 (Billeberga C), no. 25, pl. 16 (Fransborg B/Sweden), no. 50, pl. 64 (Köpinge). Such protomes are common on pictorial belt-bowls (*Bilderbecken*) (GBb. no. 24, pl. 15 (Fransborg A), no. 39, pl. 60 (Hjärnarp A), no. 40, pl. 61 (Hjärnarp B), no. 43, pl. 27 (Hov), no. 68, pl. 38,1 (Rud), no. 75, pl. 69 (Simris A), no. 84, pl. 45 (Stora Dalby), no. 88, pl. 74 (Ullstorp), no. 408, pl. 307 (Maasbüll/north Germany).

³¹ GBb. no. 209, pl. 108 (North Jutland).

³² GBb. no. 137, pl. 147 (Gedesby; pictorial), no. 174, pl. 154 (Kertinge A/Funen), no. 162, pl. 157 (Hyldtofte; pictorial). There can be added one belt-bowl from Zealand (GBb. no. 95, pl. 182 [Årby B]).

³³ GBb. no. 310, pl. 232 (Alt Kentzlin I/Mecklenburg), no. 354, pl. 252 (Neubrandenburg II), no. 378, pl. 265 (Wendorf).

³⁴ GBb. no. 304, pl. 228 (Fig. 2) (Cieszyce), no. 307, pl. 230 (Fig. 6:1) (Witkowo A). (Pictorial: GBb. no. 301, pl. 226 (Fig. 4) (Górzyce A).

³⁵ Sweden: GBb. no. 24, pl. 15 (Fransborg A), no. 39, pl. 60 (Hjärnarp A), no. 40, pl. 61 (Hjärnarp B), no. 43, pl. 27 (Hov), no. 68, pl. 38,1 (Rud), no. 84, pl. 45 (Stora Dalby), no. 75, pl. 69,2 (Simris), no. 88; pl. 74, 75 (Ullstorp); Funen: GBb. no. 137, pl. 147 (Gedesby), no. 162, pl. 151 (Hyldtofte); Poland: GBb. no. 301, pl. 226 (Fig. 4) (Górzyce A).

³⁶ GBb. no. 370, pl. 262 (Sophienhof/Mecklenburg), no. 379, pl. 266 (Wesenberg).

Schleswig-Holstein³⁷, and East-Danish Zealand)³⁸, whereas the highest percentages are seen in inland central³⁹, northern and northwestern Germany⁴⁰. The clockwise arrangement can be added to the features that connect the Cieszyce find with Pomerania's western neighbour, Mecklenburg.

In this region, six belt-bowls combine three panels of bottom decoration with ribs on their necks and thus come close to the Cieszyce find, but none has a lattice collar. The finds Neubrandenburg II (GBb. no. 354, pl. 252) and IV (GBb. no. 356, pl. 253) have collars with round perforations while the others have no collars at all.

It calls for attention that the belt-bowls Neubrandenburg II–III (GBb. nos. 354 and 355, pl. 252, 254–255) of the two-rib group also present the same centre ornament as the Cieszyce belt-bowl, namely an engraved circle with four pendent half-circles in the field ('garland cross', *infra*).

Are there more features connecting Mecklenburg with Pomerania? Let us first look at the combination of ribs on the neck with engraved ribbons separating the panels of bottom decoration and dot fringes to the engraved patterns. The Cieszyce belt-bowl presents such a fringe only in the B panel (the second from the centre) that is formed by inverse S-animals (Fig. 13:8) while panels A, C and D are devoid of any kind of fringe. The dot fringe seems to be in its ancestry associated with S-animals: among five other belt-bowls with S-animals four have dot fringes⁴¹. It becomes apparent that such fringes on S-animals are exclusively distributed south of the Baltic. As to their place in the process of decorating the freshly cast belt-bowl, some finds without any or most of the central lines of linear patterns suggest that the dot fringes

³⁷ GBb. no. 381, pl. 284 (Ahausen/north Germany), no. 382–383, pl. 285, 286 (Albersdorf), no. 385, pl. 288–289 (Bad Oldesloe).

³⁸ GBb. no. 151–152, pl. 190–191 (Højelt/Zealand), no. 157, pl. 195 (Holsteinborg), no. 172, pl. 198 (Kelleklintegård), no. 249, pl. 211 (Smistrup). The region of another Danish find (GBb. no. 278, pl. 218 ['Denmark']) within this country is uncertain (Zealand?). Other finds in Sweden (GBb. no. 19, pl. 56 [Brönnestad], no. 89, pl. 48–49 [Vegestorp]) and Funen (GBb. no. 158, pl. 151 [Horne], no. 259, pl. 176 [Turup]) form trifling minorities within their regions.

³⁹ GBb. no. 315, pl. 267 (Beetzendorf/central Germany), no. 331, pl. 271:1 (Günserode), no. 367, pl. 282–283:1 (Schadeleben), no. 375, pl. 283:2 (Wegeleben).

⁴⁰ GBb. no. 388, pl. 291–293,1 (Deinstedt/north Germany), no. 393, pl. 294:3 (Ebstorf), no. 397, pl. 297 (Gleesen), no. 400, pl. 297 (Helmstedt), no. 414, pl. 311 (Rheda).

⁴¹ GBb. no. 307, pl. 230 (Fig. 6:1) (Witkowo/Poland), no. 345, pl. 242–243 (Fig. 10) (Lübbersdorf/Mecklenburg), no. 364, pl. 258–259 (Fig. 11) (Roga), no. 418, pl. 315 (Teyendorf/northwest Germany). No fringe: GBb. no. 317, pl. 268 (Fig. 8) (Biesembrow/Mecklenburg).

were executed prior to the linear patterns⁴², making wonder if the said cases were in a way ‘unfinished’.

There arises a suspicion that the engraver of the Cieszycze belt-bowl was familiar with northeast German three-panel belt-bowls without fringes, and for reasons unknown added the panel of dot-fringed S-animals that he borrowed from other sources (n. 42).

The no-fringe group consists of seven specimens including Cieszycze, of which five were found in Mecklenburg⁴³. They share with Cieszycze such features as slightly conical necks with one rib or two at equal distances⁴⁴, sharp inflections, engraved separator ribbons between bottom panels⁴⁵, lugs below the rims, a special case of dot fringes, and raised plaques. This points out that these bowls form a group in its own right that will henceforth be called the Blue tradition⁴⁶. The belt-bowl A in the Mecklenburg key-find Broock A (GBb. no. 319, pl. 236–237) forms part of it and testifies to influences on its emergence from Zealand since its neck is richly decorated in a way like on some belt-bowls from that island whereas all other ones south of the Baltic differ in their decoration from the Zealand style⁴⁷.

⁴² GBb. no. 27, pl. 19 (Fransborg/Sweden), no. 43, pl. 27 (Hov), no. 78, pl. 71 (Slimminge), no. 163, pl. 99:1 (Jebjerg/Jutland), no. 194, pl. 104 (Lynderup), no. 226, pl. 117 (Randrup. The case is intriguing since the organic replacement of a broken lug shows that this belt-bowl in spite of its unfinished decoration, had a long life), no. 257, pl. 125 (Thisted), no. 158, pl. 158 (Horne/Funen), no. 178, pl. 158:1 (Kettinge), no. 268, pl. 179 (Veflinge), no. 274, pl. 216 (Villingerød/Zealand), no. 425, pl. 313:2 (Western Schleswig/north Germany), no. 431, pl. 323:1 (Petit Villatte/France).

⁴³ GBb. no. 236 and 237, pl. 236–237 (Fig. 9) (Broock A–B/Mecklenburg), no. 355, pl. 254–255 (Neubrandenburg III), no. 356, pl. 253 (Neubrandenburg IV), no. 310, pl. 232 (Alt Kentzlin I), no. 370, pl. 262 (Sophienhof). South of the River Elbe: GBb. no. 358, pl. 281 (Neulingen B).

⁴⁴ Among ‘Blue’ belt-bowls only Broock A (GBb. no. 319, pl. 236) has a slightly bulging neck without ribs that is richly decorated (supra). A vertical neck is only seen on the belt-bowl from Sophienhof (GBb. no. 370, pl. 262) that also lacks ribs and decoration on its neck.

⁴⁵ Broock A (GBb. no. 319, pl. 236–237) and Neubrandenburg III (GBb. no. 355, pl. 254–255) feature excised separators. The pattern was first applied to early belt boxes (e.g. GBb. no. 144, pl. 94 [Hallum], no. 171, pl. 197 [Kassemosehøj]) and was popular among belt-bowls in Per. IV (GBb. no. 30, pl. 19 [Gotland/Sweden], no. 62, pl. 68 [Öllsjö], no. 79, pl. 72 [Sönnarslöv], no. 189, pl. 103 [Limfjord area/Jutland], no. 206, pl. 107 [Nim]).

⁴⁶ Broock A (n. 43), Neubrandenburg II (GBb. no. 354, pl. 252), Neubrandenburg III (n. 42), Neubrandenburg IV (GBb. no. 356, pl. 253), Alt Kentzlin (GBb. no. 310–311, pl. 232), Cieszycze (no. 304, pl. 228 [Fig. 2]), Sophienhof (GBb. no. 370, pl. 262).

⁴⁷ The only find from Mecklenburg (GBb. no. 353 [Neubrandenburg I]) has a neck panel that is not partitioned by vertical ribbons in the Danish way. Farther west in Schleswig-Holstein the neck decoration of two belt-bowls (GBb. no. 382, pl. 285 [Albersdorf], no. 402, pl. 301 [Iloher Heide]) is less sophisticated than that of no. 353.

The Broock hoard combines this specimen with another belt-bowl B (GBb. no. 320, pl. 235, Fig. 9) that differs from the former by a slightly bulging profile of the neck, a round inflection, ribs decorating the neck and separating the bottom panels, and dot fringes. It can also be included in a group that will be called the Red tradition in this study⁴⁸. Starting earlier it runs parallel to the Blue tradition with which it meets in the Broock hoard. From then on ‘Red’ elements occasionally intrude in the Blue tradition: engraved panel separators with filling lines set at a right or an oblique angle replace some of the ‘Blue’ patterns, and the ancestors of the Cieszce lattice collar are seen on the ‘Red’ belt-bowls from Lübbersdorf and Roga (GBb. no. 345, pl. 242–243:3, Figs 10 and 11) whereas the regular ‘Blue’ type would be round perforations. On the belt-bowl from Roga, the triangular depressions are not open but have at their bottoms thin skin of bronze that is caused by a flaw in preparing the wax model: the artisan did not neatly cut the triangles out of the model and remove the wax (cf. the improper preparation of the core mould, *supra*). The fact that this flaw was reproduced in the cast demonstrates the founder’s mastery in composing the alloy for perfectly filling the mould⁴⁹. The artisan’s reason for modelling the collar of the ‘Blue’ belt-bowl Alt Kentzlin I (GBb. no. 310, pl. 232) without any openings either triangular or round, is not understood.

The individual identities of both traditions are sufficiently clear to suggest that both traditions can be identified with workshops, some features additional to the ones named above, demonstrate that both existed side by side. The prime one is an engraved pattern on some bottom plaques that can be described as a circle into which semicircles hang crosswise (e.g. GBb. no. 345, pl. 242 [Lübbersdorf], Fig. 10)⁵⁰. The author calls it a garland cross.

Similar arrangements exist among encrusted centre patterns on early belt-boxes mainly found in Mecklenburg⁵¹ and Zealand⁵². Among few engraved specimens from Per. IV in Denmark and Sweden the semicircles are mainly

⁴⁸ GBb. no. 345, pl. 242–243 [Fig. 10] (Lübbersdorf), 364, pl. 258–259 (Fig. 11) (Roga), GBb. no. 320, pl. 235 (Fig. 9) (Broock B; no ‘collar’), and GBb. no. 317, pl. 268 (Fig. 8) (Biesenbrow).

⁴⁹ There are parallels from Östra Nöbbelöv in Scania (GBb. no. 64, pl. 66–67) and Stenbro in Sweden (GBb. no. 82, pl. 42–43). Another belt-bowl from Stenbro (GBb. no. 83, pl. 44) has a collar with perfectly round perforations.

⁵⁰ In the Red complex the belt-bowl from Roga (GBb. no. 364, pl. 258–259 [Fig. 11]) has on its plaque an engraved empty circle, as in the Blue complex has the specimen from Alt Kentzlin (GBb. no. 310, pl. 232). Both features are widespread. Whirl patterns are limited to the Blue complex (a triskeles: Neubrandenburg IV [GBb. no. 356, pl. 253]; a tetraskeles: Sophienhof [GBb. no. 370, pl. 262]).

⁵¹ Finds from Mecklenburg: GBb. no. 313, pl. 233 (Barnekow), no. 332, pl. 240 (Güstrow I), no. 351, pl. 249 (Murchin), no. 372, pl. 263 (Vogelsang), no. 380, pl. 265 (Zepelin).

⁵² GBb. no. 171, pl. 198 (Kassemosehøj), no. 182, pl. 199 (Kostræde), no. 220, pl. 207 (Oppe-sundby), no. 264, pl. 215 (Vallensgård).

arranged on the outside of the empty circle on the plaque and there are up to twelve of them⁵³ whereas most flat-bottomed belt-boxes from Mecklenburg (GBb. no. 339–340, pl. 241 [Klüß]) and northwestern Germany (GBb. no. 391, pl. 293 [Dörmte]) already present garland crosses; only one find from the latter group (GBb. no. 421, pl. 316 [Wacken]) has seven semicircles. The evidence suggests that garland crosses emerged in Per. IV south of the Baltic. Per. V specimens in the same area (*supra*) can be understood as going back to this regional tradition.

Two belt-bowls of the Red complex feature separators that are composed of tiny diamond-shaped impressions⁵⁴. Their main distribution is in Per. IV. In Mecklenburg there is one such instance (GBb. no. 318, pl. 233 [Bittersberg]), but most has been found in Scania⁵⁵, Funen⁵⁶, and Zealand⁵⁷. In Per. IV the concentration is highest in Jutland⁵⁸ while in Per. V no finds are known there anymore, whereas it is represented by two finds each from Funen⁵⁹, Zealand⁶⁰, and in Mecklenburg by two Blue tradition belt-bowls from Broock (A: GBb. no. 319, pl. 236–237) and Neubrandenburg III (GBb. no. 355, pl. 254–255). The former has been mentioned for introducing east-Danish features in Mecklenburg that gave rise to the Blue tradition.

Whereas the cited parallels generally connect the Cieszyce belt-bowl with neighbouring Mecklenburg, two of its features deserve closer attention, namely unsymmetric connections of individual panel patterns, and arch ornaments. The former (e.g. GBb. no. 328, pl. 239 [Göhlen]) are rather widespread in Per. V⁶¹. Among Swedish belt-bowls eight clear examples (11% of all Per. V finds)

⁵³ Funen: GBb. no. 132–133, pl. 145 (Føns), no. 200, pl. 163 (Midskov); Jutland: GBb. no. 144, pl. 95 (Hallum).

⁵⁴ GBb. no. 319, pl. 235 (Broock A), no. 355, pl. 254–255 (Neubrandenburg III).

⁵⁵ GBb. no. 62, pl. 68 (Öllsjö), no. 79, pl. 72 (Sönnarslöv).

⁵⁶ GBb. no. 114, pl. 138 (Egebjerg), no. 122–133, pl. 142 (Fænøgård), no. 132, pl. 145 (Føns), no. 147, pl. 149 (Helnæs), no. 168, pl. 152 (Jørgensø), no. 179, pl. 159 (Kirkendrup), no. 200, pl. 163 (Midskov), no. 252, pl. 173 (Søby).

⁵⁷ GBb. no. 276, pl. 217 (Vordingborg), no. 280, pl. 220 ('Denmark').

⁵⁸ GBb. no. 189, pl. 103 (Limfjord area), no. 206, pl. 107 (Nim), no. 212, pl. 109:2 (Nymølle), no. 222, pl. 116,1 (Pedersbjerg, with an odd variety of a garland cross), no. 238, pl. 123,1 (Sæsing), no. 270, pl. 130,4 (Vestbjerg), no. 277, pl. 134 (Vrensted).

⁵⁹ GBb. no. 202, pl. 164 (Nagelsti), no. 232, pl. 168 (Riserup).

⁶⁰ GBb. no. 95, pl. 182 (Årby A), no. 214, pl. 206 (Ølsted).

⁶¹ Sweden has eight unambiguous finds and two where only some lines of a pattern meet unsymmetrically (11%/[5.5% of all Per. V finds]), Jutland: 1/(14) [pattern connections are generally drawn carelessly], Funen: 6/(9) (15%/[23%]), Zealand: 3/(7) (9%/[20%]). Mecklenburg: ('Blue': Neubrandenburg II [GBb. no. 354, pl. 252], Sophienhof [GBb. no. 370, pl. 262]. 'Red': Biesenbrow [GBb. no. 317, pl. 268] (Fig. 9), Broock B [GBb. no. 320, pl. 255] (Fig. 10), Lübbersdorf [GBb. no. 345, pl. 242–243], Roga B [GBb. no. 364,

present the feature while Finnish belt-bowls present 15%, and Zealandish ones 9%. Unsymmetric connections are most popular in Mecklenburg (33%) that will have incited Pomerania's frequency of no less than 40% among Nordic belt-bowls. Non-Nordic ones only feature partial unsymmetry (40%), and the masterpiece among them – the belt-bowl from Dzwonowo (Fig. 3) – has no connections of panel patterns at all. It appears that unsymmetric connections of panel patterns are a Nordic feature.

Arch patterns of some size, not to be confused with 'mini-arches' c. 3 mm long forming fringes, are less frequent than unsymmetric connections. In Pomerania, big ones occur not only on the innermost separator of the Cieszycze belt-bowl (Fig. 2) but also on the non-Nordic specimens from Dzwonowo (Fig. 3) and Górzycze B (Fig. 5:1). Can their prototype eventually be the 'Blue' belt-bowl Broock A in Mecklenburg (GBb. no. 319, pl. 236) that has medium-sized arches accompanying the sides of the vertical 'triglyphs' in its neck panel?

They are typical of a group of belt-bowls in Zealand to which Broock A can be assigned, but it left no other trace in Pomerania⁶². Arch patterns on the bottoms of Nordic finds in Per. V are not too numerous⁶³. In Pomerania, the Nordic belt-bowl from Cieszycze (Fig. 2), likely produced in Mecklenburg, has them on its innermost separator as suggests to connect them with the three finds in that country that all show arches in their centre-fields (n. 64). It calls for attention that this belt-bowl had been kept in use for some generations before being dedicated⁶⁴.

pl. 258–259:1] (Fig. 11); else, Mecklenburg: Altenpleen (GBb. no. 309, pl. 231), Göhlen (GBb. no. 328, pl. 239:2). The frequency of unsymmetric connections in this country (8/[2] = 33%/[8%]) has no parallels in Sweden, Zealand, or Funen. Pomerania has 40% of clear Nordic examples (Szczecin-Kłęskowo [GBb. no. 303, pl. 227:2 (Fig. 5:2)], Witkowo A [no. 307, pl. 230 (Fig. 6:1)]), 20% of partial unsymmetry on a Nordic belt-bowl (Cieszycze [no. 304, pl. 228 (Fig. 2)]) and 40% of partial unsymmetry on non-Nordic specimens (Górzycze A [GBb. no. 301, pl. 226:1 (Fig. 4)], Krzywín [no. 305, pl. 227:3 (Fig. 5:3)]).

⁶² GBb. no. 94, pl. 181 (Årby A), no. 109, pl. 137 (Budsene), no. 145, pl. 189 (Havnsø), no. 152, pl. 191 (Højelt B), no. 188, pl. 201 (Lille Fuglede), no. 195, pl. 204 (Magleby Nørrekær), no. 274, pl. 216 (Villingerød), no. 349, pl. 278:2 (Magdeburg-Salbke, Central Germany; from Denmark). They all present neck panels intersected by vertical 'triglyphs', as opposed to continuous panels.

⁶³ Zealand: GBb. no. 151, pl. 190 (Højelt A), no. 192, pl. 202 (Lundforlund); Funen: GBb. no. 125, pl. 140:6 (Fangel Torp), no. 210, pl. 165 (Norup?), no. 260, pl. 177 (Tybrind Hovedgård I); Mecklenburg: GBb. no. 317, pl. 268 (Fig. 8) (Biesenbrow), no. 354, pl. 252 (Neubrandenburg II), no. 345, pl. 242:1 [Fig. 10] (Lübbersdorf). Jutland has only one peculiar find (GBb. no. 227, pl. 118 [Randrup B]). A bottom panel of juxtaposed big arches (GBb. no. 296, pl. 223) cannot be provenanced within Denmark.

⁶⁴ Seriation puts the Cieszycze find in Per. VI (section 20) as well but the belt-bowl is too closely related to the Broock hoard from section 13 for not dating its production as early. The belt-bowl seems to have been kept in use long before being dedicated.

On two non-Nordic belt-bowls in Pomerania (Górzyce A (Fig. 4) and Dzwonowo (Fig. 3)) arches encircle the whole bottoms. The application is too different from the Nordic one for being connected to it. Instead, it might be related to Lusatian pottery (n. 72).

Summing up, the Cieszyce belt-bowl is closely associated with the 'Blue' complex in Mecklenburg. It seems probable that the dot-fringed S-animals derive from the Red complex in this region where they exist as early as in the Lübbersdorf and Roga finds. They originally derive from Swedish pictorial belt-bowls.

2. Dzwonowo (Fig. 3)

The Dzwonowo belt-bowl differs from the Cieszyce one by being decorated by raised discs formed by concentric ribs⁶⁵. The ornament is borrowed from Per. IV sheet-gold vessels decorated by impressed concentric circles that came to Funen from Central Europe (GBb. 14, 15, Fig. 2.). While they triggered the emergence of all kinds of Nordic belt-bowls, the original version with raised ornaments became conspicuous again in the latest phase of the Bronze Age when some multi-panelled belt-bowls with raised decoration travelled considerable distances.

In principle, the production of such an object differed from that of a belt-bowl with engraved ornaments by the decoration being produced in the cast, having to be laid out in the wax model. It could be thought that the technique was practiced by founders who did not have an assistant engraver, but the idea is disproved by the existence of belt-bowls combining both techniques⁶⁶. On Nordic belt-bowls the decoration is organised in panels separated by ribs, and occupied by single lines of knobs. Additional raised elements are discs formed by either groups of concentric ribs on the surface of the belt-bowl, or plaques into which concentric circles were incised or impressed at the wax-model stage (Drescher 1958, 64 ff.; Idem 1959, 214 ff., 217; GBb. 16. Engraved decoration (n. 66) is confined to few exceptions.

⁶⁵ Sweden: four finds, Scania: one, Jutland: seven (+ a belt-buckle), Funen: one (+ a belt-buckle), Zealand: three, Poland: one, Mecklenburg: two (+ a belt-buckle), central Germany: two, northern Germany: two.

⁶⁶ GBb. no. 88, pl. 74 (Ullstorp/Scania), with an intricate engraved pictorial pattern on its bottom; no. 246, pl. 124 (Sjørup/Jutland), with a hooked-S and a wave panel. Per. VI: GBb. nos. 51 and 52, pl. 32–33 (Långmyra A–B/Sweden, with triglyphs on their necks); no. 67, pl. 37 (Roma Kloster/Zealand), with some string-patterned ribs. GBb. no. 306, pl. 229 (Dzwonowo [Fig. 3]). Per. V, engraved fringes only: GBb. no. 120, pl. 88–89 (Fårdal A/Jutland), no. 242, pl. 210 (Selsing Gård/Zealand), no. 428, pl. 319 (Wintershagen/north Germany).

The Dzwonowo belt-bowl differs from such Nordic ones. Its wreath of eight raised discs is only on its upper side bordered by ribs. Below, it is separated from the big central plaque of concentric circles by a delicately engraved ribbon (*infra*). Moreover, the raised discs are formed by symmetric ridges and grooves next to each other around a central knob, while on most Nordic belt-bowls they consist of circular ribs that are arranged on the bottom's surface, at a distance (e.g. GBb. no. 256, pl. 175 [Tårup]). The Dzwonowo arrangement occurs on a fragmented belt-bowl from Gödestad in Sweden (GBb. no. 28, pl. 18:2) and on two belt-bowls with raised decoration in Mecklenburg⁶⁷, but they differ from the Polish find by having panels bordered by ribs.

It seems possible that the 'Dzwonowo founder' had become induced to produce a belt-bowl with raised decoration by no more than hearsay of such decoration existing in the Nordic world. But such an arrangement of circular patterns around a central one is seen on Lusatian pottery⁶⁸, e.g. big pendent arches⁶⁹, suggesting that the engraver's work was not only non-Nordic but also inspired by Lusatian models.

The silhouette of the Dzwonowo belt-bowl is peculiar as well. The relation of its narrow neck to the inflection diameter is singular when compared with other belt-bowls with raised decoration⁷⁰. While the non-Nordic specimen Górzycze A presents an exceptional ratio as well (*infra*). As opposed to it, the vertical proportions of the Dzwonowo find are close to the range of ratios of Nordic belt-bowls of 0,24–0,25 (Wintershagen: 0,29).

The ratio of diameters shows that the Dzwonowo founder was not familiar with a Nordic canon of proportions but an artisan who followed his own aesthetics when trying to imitate Nordic prototypes. From a founder's point of view, he was an expert: the sides of this belt-bowl are as thin, its circular shape and that of the concentric raised ornaments are as regular as are Nordic products. The founder or an ancestor of his likely had learned the art from a Nordic specialist (Bukowski 1998, 385).

⁶⁷ GBb. no. 314, pl. 234 (Basedow), no. 348, pl. 247 (Lübtheen). The same ornament decorates a belt-buckle from the hoard of Broock (GBb. pl. 235).

⁶⁸ Mikłaszewska-Balcer 1980, 62, pl. II:3,7 (Kunice 1, tomb 18). The only Nordic parallels on belt-bowls are dated to Per. IV where there cannot exist a connection with the Polish finds (GBb. no. 249; pl. 359 [Parchim/Mecklenburg], no. 419–421, pl. 316 [Wacken/north Germany]).

⁶⁹ Miśkiewicz/Węgrzynowicz 1974, 155, pl. VII:18 (Kraśnik II tomb 248); Mikłaszewska-Balcer 1980, 62, pl. II:3,7 (Kunice 1, tomb 18). For Nordic parallels cf. last note.

⁷⁰ Dzwonowo (GBb. no. 306) = 1,66
Ullstorp/Scania (no. 88) = 1,12
Fårdal/Jutland (no.120) = 1,11
Nedergård (no. 204) = 1,12
Wintershagen/north Germany (no. 428) = 1,16

In preparing the wax model the artisan not only followed his own ideas about the layout of the ornaments but he was technically careless so that some wax remained between the core and the outer mould that in the cast was reproduced as a thin ridge above the rim. For reasons best known to himself, he did not clear it after the cast, as a Nordic bronze-worker would have done.

The Dzwonowo belt-bowl is unique for its engraved decoration added to the raised ornaments. There are three kinds of it. To start with, the centre of the bottom is encircled by a narrow separator ribbon not exactly circular that is filled with short lines at a right angle and on both sides accompanied by dot fringes. The only Nordic parallel would be the fragment from Szczecin-Kłęskowo (*infra*).

Furthermore, the innermost of three ribs bordering the bottom is accompanied by a kind of garland of pendent medium-sized arches drawn by a single line that on both sides has dot fringes. A remotely comparable garland recurs on a Jutish belt-bowl from Randrup (GBb. no. 227, pl. 118) that looks strange in its region but cannot be linked to Poland⁷¹. Its arch patterns are considerably bigger than those on the Cieszyce belt-bowl (*infra*).

The third kind of engraved decoration is formed by patterns drawn in just rows of dots. The most intriguing one is a zigzag line on the belt-bowl's shoulder. The only Nordic zigzag in Per. V is found on the neck of a belt-bowl from somewhere in Denmark (GBb. no. 281, pl. 220) while shoulder zigzags are rarely known only from earlier (Per. IV) belt-bowls in Mecklenburg and northern Germany⁷² as well as another one in Per. V deriving from Westphalia's Ems Culture (GBb. no. 414, pl. 311 (Rheda); Höckmann 2012, 12, Fig. 2) indicating that non-Nordic groups not only acquired Nordic types of bronzes but as the 'Lady of Drouwen's' post-funeral treasure suggests a compatible social structure (GBb. no. 434, pl. 324; Höckmann 2012, 41, Fig. 11). Zigzags, however, occur on Lusatian pottery (Woźniak 1959, 64, Fig. 8:c, 74, pl. X:10; Gediga 1963, 144, Fig. 3:d; Mikłaszewska-Balcer 1964, 359, Fig. 8) that is connecting the Dzwonowo evidence with this culture again.

Other dotted patterns on the Dzwonowo belt-bowl decorate its bottom. These are V- or U-shaped centrifugal signs in the centre field that in a modern view seem to emanate from the concentric-circles plaque as a sun, but such an interpretation can be anachronistic. If rays had been meant we expect them to

⁷¹ On the belt-bowl Randrup B (GBb. no. 227, pl. 118) the hooked-S patterns are distorted in a singular way (as to regional styles: Höckmann 2012, 37). Its emphasis on engraved dots can be likened to one find from Flø in Jutland (GBb. no. 131, pl. 91; Höckmann 2012, 26:f) on which concentric circles are produced by massed dots. It is closely related to the Ems culture find from Münster-Gittrup (Höckmann 2012).

⁷² Cf. GBb. no. 359, pl. 249 (Parchim, Mecklenburg), no. 421, pl. 316:3 (Wacken/north Germany).

have been drawn as single lines or groups of lines radiating from a common base. Such patterns are ubiquitous in the encrusted decoration of Nordic belt-bowls in Per. IV but nothing like them is known from Per. V–VI that could have inspired the Dzwonowo patterns. They are not Nordic in the sense that the artisan was not firmly rooted in the artistic traditions of the countries west of the Oder.

3–4. Górzyce A and B (Figs 4 and 5:1)

3. Górzyce A (Fig. 4)

The belt-bowl is intact. Its silhouette is similar to that of the find from Dzwonowo, with a low more or less cylindrical neck, a wide shoulder with a sharp inflection, a low bottom slightly bulbous, and a raised plaque. The ratio of neck/inflection diameters of 1,32 clearly differs from the Nordic ratio of 1,11–1,12. Both lugs are oddly high and narrow. The centre of the bottom is marked by a big plaque of rounded profile.

The engraved decoration differs from Nordic rules by combining linear elements with merely dotted ones. The plaque has a dotted eight-spoked wheel pattern for which no parallel is known among 17 Nordic belt-bowls with dotted plaque decoration⁷³. The plaque is encircled by an engraved narrow ribbon with dot fringes on both sides.

The main pattern is formed by a wreath of eight uneven everse arches or so to speak the base line of a wave pattern that is drawn by three lines with dot fringes. S-shaped protomes clockwise issue from the apexes, ending bluntly, a dotted appendix line enhancing the surmise that birds' heads with long beaks are what the engraver had in mind. Since bird-head protomes are common in Nordic belt-bowl decoration (Fig. 13:11A–C), and real birds are rarely shown either⁷⁴, the inspiration likely goes back to Nordic models. The bottom ornament makes Górzyce A pictorial, but a look at a remotely similar find from Denmark (GBb. no. 137, pl. 147 [Gedesby]) demonstrates that the design of the Górzyce decoration is clumsier than Nordic products. Another item is as indicative of a non-Nordic genesis: both the base line and the protomes are connected with their neighbouring circular lines by radial engraved-dot 'studs'. A similar solution has in the north only been found by the engraver of

⁷³ It is tempting to see a connection to the cross patterns on the lids of Pomeranian face-urns but that is not chronologically feasible.

⁷⁴ Per. IV: GBb. no. 128, pl. 90 (Fiskbæk, Funen, on a belt buckle), no. 116, pl. 139 (Ejlby). Per. V: GBb. no. 8, pl. 9 (Vansjø, Norway), no. 74, pl. 39 (Senäte, Sweden), no. 78, pl. 71 (Slimminge), no. 137 pl. 147, no. 137 (Gedesby, 'Funen'), no. 156, pl. 196 (Holsteinborg, Zealand), no. 214, pl. 206 (Ølsted). GBb. no. 320, pl. 235 (Fig. 9) from Broock, if it is a bird's head, would attest the motif in Mecklenburg's Red tradition.

an early-Per. IV belt-bowl from Allerup in Zealand (GBb. no. 97, pl. 182) who arranged it on the upper surface of a horizontal rim. The experiment found no successor in Nordic belt-bowl decoration.

The Górzyce 'studs' have several generations later been drawn by an engraver who was not embedded in a Nordic tradition but was free to work with isolated elements in a way of his own.

The Górzyce belt-bowl A can be added to the find from Dzwonowo as a non-Nordic product more or less closely imitating Nordic models. Its autochthonous character expresses itself both in the founder's and the engraver's work.

4. Górzyce B (Fig. 5:1)

The silhouette of the second belt-bowl from Górzyce has never been published. What is known is the fairly circular bottom is broken into three pieces, a minor part of the circumference is missing. The bottom seems to be lightly bulbous. Its centre is rendered as flat, not raised as a plaque, without any decoration. No parallel is known in Per. V.

Slightly off-centre there is a single engraved dot, and the whole is surrounded by a dot fringe. The inflection seems to have been sharp as on Górzyce A (no. 3). The diameter of no. 4 is unusually low, only c. $\frac{3}{4}$ that of Górzyce A.

The bottom is encircled by two concentric lines close together and a garland of medium-size arches of the non-Nordic character (*supra*). The bottom field is occupied by five linear patterns fringed by dots that eventually could be inspired by Nordic S-patterns from which they, however, differ as radically as to put in doubt actual connections. The arrangement of the patterns as floating freely in the bottom field has only one Nordic parallel (GBb. no. 137, pl. 147 from Gedesby in southern Denmark). However, it should not be neglected in spite of its isolation since Górzyce A (no. 3) also finds one singular remote parallel in another belt-bowl from Gedesby (*supra*). Since that site possibly was the only major foundry outside of Sweden and Scania, the evidence calls for attention but in view of the non-Nordic character of both Górzyce belt-bowls the situation is not understood.

5. Krzywín (Fig. 5:3)

The size of the patterns in figure 5:3 suggests that the belt-bowl was large. No more than two fragments being contained in the hoard indicate that they were included as scrap metal. For this reason, their characteristics only inform on the region where the belt-bowl was originally produced but not on the formation of the hoard.

Too little is preserved for reconstructing the profile of the Krzywin bowl. The profile of the fragment cannot be original but if it is close to the original one, the bottom was bulbous as on most belt-bowls with features similar to the Krzywin decoration.

In the engraved decoration, the absence of any separation between three panels is a feature known in Zealand⁷⁵ and Mecklenburg⁷⁶. The type I protome in the lower preserved panel, however, has no real parallel anywhere⁷⁷. Also the uneven execution and distribution of the lines filling the ribbons and of the dot fringes would not be found on a Nordic product.

The 'crest' of this wave rolled in as a spiral and ending round has its closest parallel on the find from Staldzene that is not Nordic (infra, Fig. 7). Summing up, the ornaments of the Krzywin fragment can be traced back to a non-Nordic engraver who intended to imitate Mecklenburg's 'Dense style' of later Per. V/earlier Per. VI but did not manage to conceal the non-Nordic traits of his handwriting.

6. Staldzene, Latvia (Fig. 7)

The impressive hoard of 5644 g of intact or fragmented bronzes found in the erosion cliff of a dune on the seashore near Ventspils harbour includes fragments of a belt-bowl about half of which could be reassembled. The author does not know it by autopsy. The Latvian scholars A. Vasks and A. Vijups classified the hoard as technical for mostly containing broken objects unless mere scrap (Vasks/Vijups 2004, 30).

Two fragments show that the neck of the belt-bowl is cylindrical and low. According to the drawing, the rim is not thickened but the meeting of neck and shoulder is marked by a small rib that has no engraved string-marks. Not thickened rims are sparse among Nordic finds, the feature in Per. VI being found in Sweden⁷⁸. One end of a slit-lug arranged in the side of the neck is preserved. The shoulder is moderately narrow and almost horizontal. The latter is rare among Nordic belt-bowls⁷⁹.

⁷⁵ GBb. no. 94, pl. 181 (Årby A), no. 145, pl. 189 (Havnsø), no. 300, pl. 225 (Denmark).

⁷⁶ GBb. no. 319, pl. 237 (Broock A), no. 327, pl. 239 (Garfütz), no. 353, pl. 250 (Neubrandenburg I).

⁷⁷ Distortions of animal heads on the belt-bowl Górzycze A (Fig. 4) and two Nordic ones (GBb no. 243, pl. 169 [Simstedt/Jutland], and no. 320 [Broock A/Mecklenburg, in the Blue tradition]) can only be remotely likened to the Krzywin protome.

⁷⁸ Cf. GBb. no. 22, pl. 13 (Eskelhem/Sweden, Per. VI), no. 194, pl. 104 (Lynderup/Jutland), no. 209, pl. 108 (North Jutland), no. 227, pl. 118 (Randrup), no. 233, pl. 208 (Rørby /Zealand), no. 350, pl. 248 (Morgenitz/Mecklenburg).

⁷⁹ Cf. GBb. no. 84, pl. 45 (Stora Dalby/Sweden), no. 249, pl. 211 (Smistrup/Zealand), GBb. no. 342, pl. 276 (Loburg/central Germany), no. 360, pl. 260 (Plate/Mecklenburg).

The drawing by Vasks/Vijups leaves open if the inflection was sharp or lightly rounded. Large fragments show that the bottom was slightly bulbous and rather low. Its centre is not preserved. The bottom is divided by two narrow engraved string-patterned ribbons into three panels (or two panels and a centre field?). Such a narrow string-patterned ribbon, not a rib, forms separators on the non-Nordic belt-bowls from Dzwonowo (Fig. 3) and Szczecin-Kłęskowo (Fig. 5:2) in Pomerania (*supra*).

Some features of the engraved decoration cannot be linked with any region of the Nordic Bronze Age. The most conspicuous one is that two spirals in the outer panel (Fig. 7) are deformed as there is no space between their neighbouring patterns: the engraver failed in evenly dividing the space for conceiving the wave panel. One such flaw would be extremely rare among works of Nordic engravers. Two occurring side by side disclose that the engraver who decorated the Staldzene belt-bowl was not Nordic. The suspicion is enhanced by the execution of the wave panels. The engraved patterns drawn by three lines are unequally preserved in the outer panel, hardly ever at all in the middle one and absent in the inner panel (or centre field). In places where all three lines are preserved side by side their distances vary.

As opposed to the doubtful quality of the engraved lines, the dot fringes are flawless. It may happen on Nordic belt-bowls that the lines are weakly engraved while the dot fringes are deftly impressed, but it is rare. The inferior quality of the engraver's work seems to be caused by a non-Nordic artisan.

The drawing of the 'crests' in the wave panels not as plain hooks but as spirals is not too rare in Nordic bronze work but being formed by ribbons with ends bluntly rounded or even widened has no parallel among Nordic belt-bowls⁸⁰. It is more significant that the patterns on both belt-bowls from Górzycze connected with the Lusatian culture, and those on the fragment from Krzywín end blunt.

Another non-Nordic feature of the Staldzene decoration might be the everse arrangement of the wave panels. As opposed to it, on Nordic three-panel belt-bowls the wave panels used to be arranged inversely⁸¹.

In summary, some arguments suggest that the Staldzene belt-bowl is not Nordic. It does not imply that it was produced in Latvia where the hoard is exotic. But are the similarities with non-Nordic Pomeranian finds sufficient for deriving the Latvian belt-bowl from Lusatian culture Pomerania, as would imply Lusatian culture people sailing the Baltic?

⁸⁰ The feature seems to have emerged in Per. IV Jutland (GBb. no. 211, pl. 109; no. 213, pl. 110 [Nymølle]) but later is most popular in Sweden (nine finds) and insular Denmark (13 finds). Two Swedish finds (GBb. no. 82–83, pl. 42, 44 [Stenbro I and II]) from Gotland represent the 'classical' (Montelius) expression of Per. VI.

⁸¹ Cf. GBb. no. 17, pl. 11 (Bjurvik/Sweden), no. 45, pl. 29 (Ingelstorp), no. 82, pl. 42 (Stenbro I, 'classic' Per. VI), no. 83, pl. 44 (Stenbro II).

7. Szczecin-Kłęskowo (Fig. 5:2)

One small belt-bowl fragment was found that is formed by the inflection zone where the shoulder and the bottom meet. The analysis of the find is hampered by lack of autopsy. The drawing in GBb. (no. 303, pl. 227) raises the impression that the transition from the lower to the upper part was rounded. The feature presents some varieties and the number of finds is limited. The Szczecin-Kłęskowo variant looks in cross-section as if when the mould was modelled, the inflection had been covered by an extra layer of wax that on its upper side merges with the shoulder profile while on its lower side it ended in a step when meeting the bottom surface. Rounded inflections are sporadically found in several Nordic regions but most conspicuously in Mecklenburg⁸². The Swedish find of Stora Dalby (GBb. no. 84, pl. 45) has a plastic rib close to the inflection, as the Szczecin-Kłęskowo fragment possibly has. If that narrow string pattern is not raised as it seems in the drawing, it has a parallel on the non-Nordic belt-bowl of Dzwonowo (supra). What is preserved of its engraved bottom decoration suggests that the outer panel was formed by a hooked-S panel. If the drawing is accurate, the group of three lines with dot fringes forming the pattern is as neatly drawn as in the ‘Delicate Style’ (German: *feiner Stil*, Polish: *piękny styl*) that in Mecklenburg’s Per. V preceded the ‘Dense Style’ (German: *dichter Stil*, Polish: *zagęszczony styl*) of Per. V b (Höckmann 1981, 123; 2012, 23; Bukowski 1998, 305).

The same pertains to the neatly engraved tiny dots in the dot fringes that accompany the linear patterns. For the Delicate Style standards, it would, however, be unusual that the distances between the lines are not constant.

In view of Szczecin-Kłęskowo’s position on the River Oder, the provenance of the belt-bowl in Mecklenburg would make sense.

8–9. Witkowo A and B (Fig. 6:1,2)

Fragments of two belt-bowls included in a major FMT hoard of intact and broken bronzes and metalworker’s tools form the easternmost find in Poland (c. 200 km east of Szczecin, c. 25 km from the sea). It is situated in the area of the Kashubian group of the Lusatian culture, the eastern neighbour of the Uckermark – West Pomeranian group. Its dating – early Per. V b⁸³ – makes it the earliest of all Polish and Latvian finds.

⁸² GBb. no. 35, pl. 21 (Hallarum I/Sweden), no. 78, pl. 71 (Slimminge), no. 84, pl. 45 (Stora Dalby), no. 142, pl. 93 (Glerup B/Jutland), no. 226, pl. 117 (Randrup A). Four finds from Mecklenburg stand out as a group (GBb. no.320, pl. 235 (Fig. 9, Broock B), no. 345, pl. 245–246 (Lübbersdorf), no. 364, pl. 258–259 (Fig. 11) (Roga), no. 317, pl. 268 (Fig. 8) (Biesebrow).

⁸³ Höckmann 2012, 102, Fig. 24: Abschn. (A.) 12 of 20 for Per. IV–VI (early Per. V b).

8. Witkowo A (Fig. 6:1)

The belt-bowl can be reconstructed from fragments except for the centre of the bottom. Its main features are a flat horizontal rim on the outside of the conical neck with a rib at mid-height, a narrow ascending shoulder, a rounded inflection with two ribs below it, and a moderately bulbous bottom. The belt-bowl likely had no raised plaque. Both ribs at the base and at mid-height of the neck are intermittently string-patterned. On one side of one lug is an irregularity that seems to be intended.

The belt-bowl shares the conical neck with a rib at half height with the specimen from Cieszyce (supra) but its flat rim projecting horizontally from the neck, differs from the latter's collar within its rim. The flat external rim was common in early Per. IV (GBb no. 30, 79, 90–91, 97, 103, 114, 224, 231, 325, 336, 341, 351, 352, 363 and 377). In Per. V, it only survives in Sweden⁸⁴ and Mecklenburg⁸⁵. The belt-bowls from Biesenbrow (Fig. 8), Lübbersdorf (Fig. 10) and Roga (Fig. 11) featuring this shape have already provided parallels for certain details of the Cieszyce bowl (supra). The combination of a conical neck with a narrow steeply ascending shoulder and a rounded inflection lends the Witkowo belt-bowl a clumsy squat silhouette for which few parallels are known⁸⁶.

The unsymmetrical slit in one lug is not limited to both finds from Witkowo. Early examples are a belt-box from Berrelide in Jutland (GBb. no. 102, pl. 80) and a very early belt-bowl from Klüß in Mecklenburg (GBb. no. 339, pl. 241; both lugs). In Per. V parallels are known from all regions of southern Scandinavia, Mecklenburg and central Germany⁸⁷, but only Scania presents as many as three finds. It has to be considered for parallels to both Witkowo belt-bowls, but most similar is the 'Red tradition' bowl from Roga in Mecklenburg (Fig. 11) that has been cited for parallels to the Cieszyce find (supra). The distribution of this feature is as yet not understood.

⁸⁴ GBb. no. 32, pl. 57, 59 (Grönhult B), no. 78, pl. 71 (Slimminge).

⁸⁵ GBb. no. 317, pl. 268 (Fig. 9) (Biesenbrow), no. 325, pl. 238 (Düssin), no. 345, pl. 242–243 (Fig. 10) (Lübbersdorf), no. 364 (Fig. 11) (Roga), no. 369, pl. 261 (Fig. 12) (Schwennenz).

⁸⁶ Among comparable silhouettes (GBb. no. 8–9, 43, 75, 126, 344, 357–8, 365, 412, 418) a belt-bowl from Fransborg (A) in Sweden (GBb. no. 24, pl. 15) stands out in spite of the inflection being sharp and two string-patterned ribs being rendered as engraved ribbons. On another belt-bowl from Simris in Scania (GBb. no. 75, pl. 69) the shoulder rises as steeply as to almost merge with the neck. It is as ugly as the Witkowo bowl but different in detail.

⁸⁷ Sweden: GBb. no. 84, pl. 45 (Stora Dalby); Scania: GBb. no. 47, pl. 63,1 (Käglinge B), no. 50, pl. 64 (Köpinge), 55, pl. 79 ('Scania'); Jutland: GBb. no. 142, pl. 93 (Glerup B); Funen: GBb. no. 185, pl. 162 (Lågerup II); Zealand: GBb. no. 98, pl. 184 (Asnæs), no. 172, pl. 198 (Kelleklintegård); 'Denmark': GBb. no. 299, pl. 124:3; Mecklenburg: GBb. no. 310, pl. 232:2 (Alt Kentzlin I), no. 364, pl. 258 (Fig. 11) (Roga); Central Germany: GBb. no. 319, pl. 267 (Beetzendorf), no. 375, pl. 283:2 (Wegeleben).

The outer panel of the engraved bottom decoration is formed by inverse S-animals with singular long beaks of shape A (Fig. 13:11) and a thinner counter-curve added to their backs. S-animals with fringed bodies and naked heads occur at Cieszycze where parallels to Mecklenburg were pointed out (n. 42).

The split 'tail' is generally confined to Sweden⁸⁸ and Scania⁸⁹ where also the north German find from Maasbüll (GBb. no. 408, pl. 307) was produced. The latter also features a separate treatment of both branches of the 'tail' that else is only seen on one Scanian belt-bowl from Billeberga (GBb. no. 14, pl. 54). The evidence confirms that such 'tails' and a separate treatment of both branches form intentional features in Sweden and Scania. Only the central S-shaped 'body' of the Witkowo S-animals has dot fringes as denotes the naked protomes and counter-curve 'tails' to be separate additions. There may be thought that the addition occurred in the extraordinary foundry of Billeberga in Scania from where the belt-bowl seems to have reached Witkowo either as a finished object (or as scrap bronze?) or in the mind of a Scanian bronze-worker going overseas who produced it in Pomerania. The latter alternative of production in Pomerania by a Scanian founder would be hard to substantiate. The only argument in favour of this concept might be that the motifs of the engraved patterns are regular but their proportions are distorted in a way that could eventually be caused by the isolation of the founder in a foreign surrounding. For approaching a decision, minor details of belt-bowl A offer themselves for being scanned.

The alternating string patterns of the neck ribs find numerous parallels on the one hand, in Sweden (five) and Scania (five [+1])⁹⁰ and on the other, in Jutland (seven)⁹¹. Only lesser numbers came to light in Funen (two), Zealand (two), 'Denmark' (two) and south of the Baltic⁹². The feature suggests the production of belt-bowl A in Scania, Sweden or much less likely, in Jutland.

⁸⁸ GBb. no. 23, pl. 14 (Fårhult?), no. 43, pl. 27 (Hov). Less clear: GBb. no. 18, pl. 12 (Bokenäs), no. 25, pl. 16 (Fransborg B), no. 68, pl. 38:1 (Rud).

⁸⁹ GBb. no. 12, 14–15, pl. 52, 54, 55:1 (Billeberga A.C.D); GBb. no. 75, pl. 69:2 (Simris).

⁹⁰ GBb. no. 26, pl. 17 (Fransborg), no. 42, pl. 26 (Hogstorp), no. 46, pl. 30 (Järpetan), no. 49, pl. 31 (Klättene), no. 84, pl. 45 (Stora Dalby); GBb. no. 12, pl. 52, no. 13, pl. 53, no. 15, pl. 55:1 (Billeberga A,B,D/Scania), no. 31, pl. 58 (Grönhult), no. 93, pl. 75,2 (Tommarp). A belt-bowl found in northwestern Germany (GBb. no. 418, pl. 315 [Teyendorf]) was produced in Scania as well.

⁹¹ GBb. no. 108, pl. 83 (Brøndum Mose), no. 161, pl. 98 (Hyldal), no. 164, pl. 99:2 (Jebjerg), no. 204, pl. 105 (Nedergård A), no. 235, pl. 120,2 (Rostrup Mølle), no. 257, pl. 125 (Thisted).

⁹² GBb. no. 317, pl. 268 (Fig. 8) (Biesenbrow, Mecklenburg), no. 320, pl. 235 (Fig. 9) (Broock), no. 345, pl. 242–243 (Fig. 10) (Lübbersdorf); GBb. no. 343, pl. 277 (Löwenberg I /central Germany), no. 357, pl. 280 (Neulingen A), no. 367, pl. 283:1 (Schadeleben), no. 423, pl. 318 (Watenstedt B).

Within the engraved decoration the inner panel is formed by a hooked-S frieze running clockwise as is dominant in east Scandinavia. Summing up, several features of the belt-bowl Witkowo A suggest trans-Baltic connections with Sweden and/or Scania.

9. Witkowo B (Fig. 6:2)

The overall shape of the belt-bowl with its low slightly bulbous bottom, sharp inflection, medium-wide shoulder and cylindrical neck is inconspicuous but for two details: the slit of one lug is unsymmetrical, and the transition from shoulder to neck is on the inside softly rounded. The irregularity in one lug differs from the low one in one lug of belt-bowl A by being high and marked. The irregularities are not sufficient for implying that both belt-bowls go back to the same foundry.

A rounded transition from the shoulder to the neck on the inner side of the belt-bowl is most numerous on belt-bowls from Sweden (six)⁹³, Scania (four)⁹⁴, Jutland (10)⁹⁵ and Funen (six)⁹⁶. South of the Baltic, Mecklenburg produced four finds⁹⁷ but northwestern Germany has five finds as well⁹⁸, not to forget that the Polish belt-bowl Górzycze A shares the feature. It is too widespread for precisely tracing external connections of an individual belt-bowl.

Most of the engraved decoration is lost but for the uppermost panel next to the inflection. It is formed by a frieze of everse pretzel patterns from the sharp meeting point of both sides of which two dots hang down.

Pretzel patterns (Fig. 13:5) are not too popular but widespread. Often the closing point is topped by a tiny circle⁹⁹ whereas the Witkowo variant with a line of pendent dots is not known from Scandinavia but only in variants

⁹³ GBb. no. 17, pl. 11 (Bjurvik), no. 22, pl. 13:3 (Eskelhem), no. 35–36, pl. 21–22 (Hallarum A,B), no. 57, pl. 35 (Nya Åsle B), no. 84, pl. 45 (Stora Dalby).

⁹⁴ GBb. no. 31, pl. 58 (Grönhult A), no. 48, pl. 62:4 (Käglinge B), no. 78, pl. 71 (Slimminge), no. 80, pl. 73 (Sövestad).

⁹⁵ GBb. no. 121, pl. 88:3 (Fårdal), no. 130–131, pl. 90:2, 91 (Flø A,B), no. 141–142, pl. 92–93 (Glerup A,B), no. 143, pl. 94 (Gundestrup), no. 215, pl. 111 (Ømarkgårde), no. 238, pl. 121:1 (Sæsing A), no. 265, pl. 128:3 (Valsgård), no. 273, pl. 133 (Viborg).

⁹⁶ GBb. no. 113, pl. 138:1 (Dyreborg), no. 162, pl. 151:2 (Hyldtofte), no. 176, pl. 156 (Kertinge II), no. 203, pl. 164:3 (Nakkebøl), no. 248, pl. 171 (Skydebjerg), no. 253, pl. 173:2 (Søbygård Mark).

⁹⁷ GBb. no. 317 (Fig. 8) (Biesenbrow), no. 328, pl. 239:2 (Göhlen), no. 348, pl. 247 (Lübtheen [from Jutland?]), no. 365, pl. 259:2 (Ruthen).

⁹⁸ GBb. no. 397, pl. 297 (Gleesen/Ems culture), no. 414, pl. 311 (Rheda), GBb. no. 401, pl. 302 (Hemmelsdorf/north Germany), no. 408, pl. 307 (Maasbüll), no. 410, pl. 306 (Mönkhof).

⁹⁹ GBb. no. 2, pl. 3 (Kamfjord/Norway), no. 20, pl. 13 (Burs/Sweden), no. 78, pl. 71 (Slimminge), no. 128, pl. 90 (Fiskbæk/Jutland, belt-buckle, Per. IV), no. 211, pl. 109:1 (Nymølle, Per. IV), no. 253, pl. 173 (Søbygård/Funen), no. 317, pl. 268 (Fig. 8) (Biesenbrow/Mecklenburg), no. 369, pl. 261 (Fig. 12) (Schwennenz), no. 343, pl. 277 (Löwenberg I/central Germany).

on two belt-bowls from Germany (Katerbow/Mecklenburg, GBb. no. 337, pl. 274, and Watenstedt/northwest-central Germany no. 423, pl. 318). Since they are the only common feature, it is uncertain if they are sufficient for connecting Witkowo B with one of those regions or if the occurrence in Poland should be understood as coincident.

Witkowo A is unambiguously oriented toward Sweden or Scania. Are there such arguments for Witkowo B as well? Among belt-bowls with pretzel patterns two in northeastern Germany stand out by Swedish/Scanian elements blended with Mecklenburgish ones (Biesenbrow, GBb. no. 317, pl. 268 [Fig. 8], Schwennenz, GBb. 369, pl. 261 [Fig. 12]) (supra) but they differ from Witkowo B by the pretzel patterns being inverse. So, no diagnostic feature is common to both Witkowo belt-bowls that would assign them to the same foundry or even the same region. They possibly became associated only when being scrapped.

The pretzel panel is bordered toward the inflection by a wide group of parallel lines. The feature was common among early belt-boxes¹⁰⁰ and survives in Per. V in the same regions, excluding Funen¹⁰¹. Three such belt-bowls (GBb. no. 188, pl. 201 [Lille Fuglede], no. 274, pl. 216 [Villingerød], no. 279, pl. 219 ['Denmark']) were found in Zealand but none in Sweden where the parallels of belt-bowl A cluster, further suggesting that both belt-bowls from Witkowo do not go back to the same foundry. But the affinities of both touch eastern regions of Scandinavia, be it Sweden, Scania or Zealand.

Interpreting the evidence

In the Late Bronze Age Pomerania received 'imports' of Nordic prestige objects. Three swords from the hoards of Płoty (two) and Bielin II (one) address themselves to men (Gedl 2004, 10; Blajer 2013, 181) while a high number of Nordic fibulae, bracelets and needles leave no doubt that Nordic female outfit was cherished by women of the Lusatian culture, implying that the contacts eventually concerned women more directly than men. A similar situation is demonstrated by the belt-bowls of the Ems culture of northwest Germany that came there as status symbols of 'immigrating' Nordic females and later were locally copied by Ems bronze workers (Bukowski 1998, 383; Höckmann 2012, 48).

¹⁰⁰ GBb. no. 90, pl. 76:1 (Vemmerlöv/Sweden), no. 100, pl. 135 (Billesløj/Funen), no. 252, pl. 173 (Søby), no. 159, pl. 197 (Hvedshøj, Zealand), no. 264, pl. 215 (Vallensgård), no. 341, pl. 244 (Kritzmow/Mecklenburg), no. 380, pl. 265 (Zepelin), no. 352, pl. 279 (Nennhausen/central Germany).

¹⁰¹ GBb. no. 70, pl. 78 ('Scania'), no. 188, pl. 201 (Lille Fuglede/Zealand), no. 274, pl. 216 (Villingerød), no. 279, pl. 219 ('Denmark'), no. 300, pl. 225 ('Denmark'), no. 347, pl. 246 (Lübberstorf B/Mecklenburg), no. 353, pl. 250–251 (Neubrandenburg I), GBb. no. 337, pl. 274 (Katerbow, central Germany), 343, pl. 277 (Löwenberg I), no. 429, pl. 320–321 (Winzlar/northwest Germany).

The Dzwonowo belt-bowl was in this situation produced by a non-Nordic founder. He somehow learned about such Nordic objects at a time when a few raised-decoration belt-bowls travelled considerable distances to where they were found¹⁰². The Dzwonowo find differs from Nordic bowls of this type but the cast meets Nordic standards so the founder was familiar with the Nordic art of casting thin-walled objects. He may have learned it from a Nordic bronze-worker. He also managed to reproduce the raised circles and added some engraved decoration independent from Nordic models, and his product satisfied a non-Nordic person of rank who had had that belt-bowl made. Both belt-bowls from Górzyce came into being this way as well. In all cases the engraved decoration differs from Nordic models while the founders' work complies with them. All cases attest to a situation in which Lusatian women of rank wanted to possess a type of Nordic woman-bound status bronzes that they could not obtain from Nordic sources for reasons not known.

Belt-bowls or their fragments in Poland form part of collective finds (hoards) of tools, weapons and ornaments many of which are broken and incomplete. The hoards seem to form the stock of metal traders, so to speak raw metal for founders even if some objects are intact. Foundry waste (Szczecin-Kłęskowo, Krzywín, Witkowo) and a socketed chisel (Dzwonowo) suggest that the metal traders were founders and engravers themselves. The hoards of Dzwonowo, Szczecin-Kłęskowo and Witkowo had been hidden near big stones that may have served as markers for finding them again. It does not conflict with the ruling tendency to attribute big stones a sacred character. At Górzyce a 'little hillock' (a barrow?) may have served as a marker.

The belt-bowl fragment from Szczecin-Kłęskowo was contained in an 'urn' in or near an urn cemetery. Its association with many other bronzes, mostly fragmented, would make the find a FMT one unless the 'urn' had also held cremated bones. They are not mentioned in the report but the neighbourhood of an urn cemetery could eventually imply that the find was a cremation burial. Its containing numerous bronzes would be rare in the Nordic Bronze Age¹⁰³. The term 'urn', however, was in 1831 applied to all kinds of prehistoric clay vessels of some size independent from containing human remains or not: the 'urn' may have contained a FMT hoard.

¹⁰² At the same time belt-bowls with plain engraved decoration or none at all were 'exported' from Gotland e.g. to Staldzene (supra).

¹⁰³ A rich hoard including technical elements was found in the ditch around a Bronze Age woman's burial at Drouwen in the Netherlands (Butler 1965; GBb. 115 ff.; Höckmann 2012, 40–42). Although the hoard included many Nordic bronzes the burial is not Nordic but follows the ritual of the Ems culture.

The outcome of our study is twofold. On the one hand it sheds new light on the theory that the multitude of Nordic bronzes in Pomerania is not indicative of the Nordic character of its Bronze Age population (Fogel 1988, 222–227; Bukowski 1998, 385; Żychlińska 2008, 222, 225) but rather would imply that it attests to a special character of metal ‘supply’ to Pomerania. It has to be seen against the background that all of northern Central Europe and South Scandinavia depended on the permanent import of bronze from the Southwest i.e. the Urnfield culture, or Bronze Age cultures of Hungary and Rumania.

The Cieszyce find forms a special case. It goes back to a Nordic woman of rank who came to Pomerania. The evidence does not specify if she had gotten there as the spouse of a non-Nordic chieftain, or been exiled by a Nordic community for reasons known beyond archaeology. The high quality of the belt-bowl that seems to have been produced in Mecklenburg, under strong Swedish influence, would suggest the second possibility. The way of giving the belt-bowl to the wetland, in place of a bog, is Nordic.

As opposed to the evidence at Cieszyce, both Nordic belt-bowls from Witkowo are in a damaged state included in a rich FMT hoard that came to light in the coastal zone of the Baltic. Both were produced in Sweden and likely reached Pomerania as scrap metal, through an itinerant bronze worker from Sweden, across the sea. They do not testify to the predilections of the indigenous population of Pomerania but to, so to speak, commercial connections with the Nordic world. However, it can be considered that the high percentage of pictorial elements in the decoration of Nordic belt-bowls in Pomerania appeals to the predilections of the non-Nordic indigenous population.

As opposed to these intrusive finds, a regional trend in Pomerania as represented by the finds from Dzwonowo, Górzyce, Szczecin-Klęskowo and Krzywín is connected with women likely of non-Nordic stock who had belt-bowls produced by non-Nordic founders for demonstrating status by Nordic means.

It calls for attention that the Górzyce and Witkowo finds contain remains of two belt-bowls each: four out of eight specimens in Pomerania (50%) were included in multiple finds. In its Nordic neighbouring region of Mecklenburg the percentage is 13.7%. The difference seems meaningful¹⁰⁴, as calls for an analysis of multiple hoards in view of the belt-bowls’ sizes, preservation, dating, involvement of one or more founders, and the ritual or technical character of the individual find.

Associated finds of two or more belt-bowls used to be taken for granted without a look at such aspects as both bowls’ going back to the same founder or not, their state of preservation when buried, eventual differences between chronological or regional units, the ritual or technical character of the find, and eventual differences in their aesthetic quality. The following table attempts to sketch the situation (Tab. 1).

¹⁰⁴ In Sweden and Denmark, the ratios are 30.3–39.4%, and 42% in Scania.

The total number of multiple finds of belt-bowls in the Nordic Bronze Age is 42 of which 13 are by the presence of founder's waste, tools, the combination of women's ornaments with men's weapons or tools or the presence of scrap bronze defined as technical i.e. related to a founder who likely acted as a metal trader/FMT as well (Tab. 1). In Pomerania the Witkowo hoard forms part of this group. At Górzycze the belt-bowl B might be scrap metal but the general character of the find can also be taken to suggest a ritual rather than a technical connotation. Even so the 50% share of technical finds in Pomerania is extraordinary as against ratios of 28.6% in Sweden, 40% in Scania, 12.5% in Jutland, 25% in Zealand or 33.3% in Mecklenburg but is only matched by Funen where four out of seven multiple finds (57%) are FMT.

Table 1 shows that ten out of 13 finds contain one or more belt-bowls in damaged condition that can be as extreme as to leave only single fragments. There can be associated intact belt-bowls but it is regular that one is fragmented. One single find from Fårdal in Jutland combines two intact ones with leftover bronze from a crucible, lumps of resin and an awl but also singular bronze statuettes. The hoard does not fit any common type of deposition and so does not affect the general rules for technical finds in the Nordic Bronze Age. The other two finds with two intact belt-bowls (Swastorp in Sweden and Lundforlund in Zealand) are regular FMT associations.

Since Funen with its adjacent south-Danish islands was an active production centre the high percentage of technical finds need not have the same reason as in Pomerania where few single finds suffice to alter the balance. For a counter-check technical finds with a single belt-bowl are surveyed (Tab. 2).

In Jutland multiple finds outnumber single ones as against Funen (nine single finds, against four multiple finds), Poland (three) and central Germany (eight) where one multiple find meets six single finds (Tab. 1). It becomes apparent that the founders' trade was organised in different regional ways¹⁰⁵. However, there is one feature common to multiple and single finds, namely that the majority of belt-bowls in FMT finds of any kind came to light in damaged condition. Now and then a belt-bowl would have suffered when being found by peasants but generally the impression that the scrap condition of many belt-bowls is ancient seems certain.

¹⁰⁵ This is obvious in Sweden and Scania where the finds of Billeberga (GBb. no. 12–16) and Nya Åsle (GBb. no. 56–59) combine several intact belt-bowls with fragmentary ones, and mould fragments of two or more bowls came to light at Skälby in Uppland (Sweden) in foundry context (Oldeberg 1943, 166; Oldeberg 1960, 15 Fig. 32, 1–6): production in supra-local centres (a big foundry at Hallunda near Stockholm: Jaanusson 1981) and distribution by some sort of 'trade' come to mind. Else, only the hoard of Gedesby on the island of Falster in Denmark (GBb. no. 137–139) may eventually represent this 'supra-local' type of find. It deserves attention in view of remote similarities between two belt-bowls (GBb. no. 137, pl.147 and no. 139, pl. 148:2) and both finds from Górzycze.

So, the Witkowo hoard is a FMT find of Nordic standing that demonstrates how the apparent ‘nordification’ of Pomerania actually worked¹⁰⁶, viz. by the activities of traders of whose ways and places of acquiring Nordic bronze scrap nothing is known. The bronze scrap in the Pomeranian FMT hoards may in theory have been acquired in Mecklenburg or Scandinavia.

If the multiple non-Nordic hoard from Górzyce should be not technical but ritual, a different reason for the presence of two belt-bowls is to be expected. There is one peculiarity that sets both off from the bulk of such finds, namely their small and uneven sizes.

When scanning the sizes of Per. V–VI belt-bowls it turns out that some have less than 160 mm diameter whereas the vast majority measure more than 180 mm. Both Górzyce finds fall in the small category and B is even smaller (80%) than A. Elsewhere some belt-bowls are in multiple finds associated with big ones (Tab. 3) raising a question if they eventually formed a kind of sets. It is generally thought that belt-bowls formed sets with belt-buckles, as it is reasonable¹⁰⁷. Are there finds of small belt-bowls associated with big ones that also contain belt-buckles? There are a few, namely seven out of 46 finds. Their distribution in the Nordic regions is unequal (Tab. 3). The association is unknown in Norway, Sweden, Scania, Mecklenburg and central Germany whereas in Jutland the relation is two out of five, in Funen three out of nine, in Zealand one out of five and in northern Germany one out of four: leaving out Zealand – this type of find is confined to the western province of the Nordic area. In Poland there is no such find. Small belt-bowls having formed sets with big ones instead of belt-buckles could be, if at all, considered possible in the east rather than in the west where buckles occur together with small belt-bowls, demonstrating that small ones served the same purpose as big ones but not the same one as belt-buckles.

¹⁰⁶ Bukowski 1998, 383 emphasizes the importance of founders for the spreading of bronze types. He thinks that many founders were foreigners from the ‘west’ and ‘southwest’. But most belt-bowl founders were indigenous Nordic. The art of casting thin-walled bronze ‘vessels’ is limited to the Nordic Bronze Age whereas elsewhere such objects were hammered. Some itinerant urnfield bronze workers seem to have cooperated with local specialists in the Weser-Elbe area for some time (GBb. 23; Höckmann 1974; 1976; 2012, 20, n. 29, 98) but when one of them came home to Switzerland and produced the belt-bowl of Corcelettes his work was thick-walled and differed in its decoration from Nordic originals (Höckmann 1973; 2012 loc. cit.).

¹⁰⁷ In a number of cases among which the lost Zealand find from Smistrup (GBb. no. 249, pl. 211) was most impressive (Thrane 2008, 15. 83 + 84, Fig. 21) a belt-bowl was found associated with a belt-buckle of matching size and execution that were produced as a set. Often, however, the belt-buckles differ from the associated belt-bowls, leaving open if they were included into the find by a merging of heirlooms or somehow else.

As opposed to this finding, another peculiarity is distributed in all Nordic regions. In the west (eight finds)¹⁰⁸ as well as in the east (one case in Norway and Sweden, two in Scania and three in Zealand)¹⁰⁹ at least one lug of a small belt-bowl is damaged in a way that seems intentional for making the bowl useless. On the Zealand find Årby B (GBb. no. 95, pl. 182:2) the bottom has additionally been crushed. No damaged lugs are known from Mecklenburg but intentional damage is seen on the bottom of one find (Lübberstorf A, GBb. no. 346, pl. 245). A Jutish bowl from Gundestrup (GBb. no. 143, pl. 94) demonstrates that the damage was inflicted against the will of its owner: one lug was broken off together with part of the neck. She later had the damage repaired by overcasting the defect in the neck, and two holes in the patch permitted the insertion of a narrow leather strap serving as a makeshift 'lug'. The method is well known in Jutland where on one belt-bowl (Randrup, GBb. no. 226, pl. 117) the leather strap is preserved. The other missing lug of the Gundestrup bowl was replaced the Jutland way by cutting holes into the neck left and right of a defect that had not been overcast after the intentional damage of the belt-bowl.

Remarkably, only in Funen damaged small belt-bowls are found in FMT finds (five out of nine finds)¹¹⁰, and the same is seen on damaged big bowls (three out of five finds)¹¹¹. Instead of being mended they were given to the metal traders as scrap bronze. An explanation might be that the founder's art was particularly active in Funen: a damaged belt-bowl could more easily (and cheaply?) be replaced with a new one than in other regions.

Broken lugs tend to be associated with big belt-bowls of >180 mm diameter. The most striking feature in the distribution of 44 cases is that they almost do not occur in Mecklenburg (only GBb. no. 314, pl. 234 [Basedow]). The latter explains their absence in Poland.

In all other regions except Norway five to ten big belt-bowls with damaged lugs came to light. Regional differences, however, exist in the numbers of such pieces in FMT finds (Sweden: two out of five finds; Jutland: one out of ten;

¹⁰⁸ Flø (GBb. no.131, pl. 91), Vester Doense I (no. 271, pl. 131), Gedesby (GBb. no. 138, pl. 148,1), Lågerup II (GBb. no. 185, pl. 162:2), Lolland (GBb. no. 191, pl. 163:2), Albersdorf A (GBb. no. 382, pl. 285), Gleesen (397, pl. 297; Ems culture), Kronshagen A (GBb. no. 404, pl. 303:2).

¹⁰⁹ Sweden: Anderslöv (GBb. no. 11, pl. 51), Billeberga E (no. 16, pl. 55:2), Fransborg C (no. 26, pl. 17); Zealand: Årby B (GBb. no. 95, pl. 182:2), Bregninge (107, pl. 186:1), Holsteinborg (155, pl. 195:1).

¹¹⁰ Femø (GBb. no. 126, pl. 143:1), Gedesby (GBb. no. 137–139, pl. 147–148:2), Lågerup II (GBb. no. 185, pl. 162:2), Lolland (GBb. no. 191, pl. 163:2).

¹¹¹ Kettinge (GBb. no. 178, pl. 158), Lågerup I (GBb. no. 183, pl. 161), Nagelsti (GBb. no. 202, pl. 164:1).

central Germany: one out of seven; northern Germany: two out of seven). A peak of six out of eight finds in Funen parallels the situation with small belt-bowls (Tab. 3). In Jutland four finds out of ten, none in a technical find, are mended by replacing broken lugs by leather straps slung through drilled holes, and one belt-bowl (Gundestrup: GBb. no. 143, pl. 94) has been repaired by over-casting a missing part of the neck for drilling two holes into the patch, as on a small one in Norway. The owners did not accept the disabling of the belt-bowls but had them repaired for being used again. The reason for damaging them could have been warfare. Potlatch-like acts of intentional damaging would be hard to reconcile with the repairs.

The identical treatment of big and small belt-bowls suggests that they served the same purpose: different size may indicate the rank (Höckmann 2012, 54–66) or the wealth of the owner, but it should be noticed that the artistic quality of two Swedish and one Funish intact small bowls matches that of opulent big ones¹¹². Nothing implies that the small belt-bowl B from Górzycze served as the belt-buckle in a set together with bowl A. It cannot have been worn on the same belt as the bigger bowl since the width of the lugs of both is different.

Spiritual aspects

The wheeled Trundholm sun-image¹¹³ leaves no doubt that the sun was revered in the Nordic Bronze Age. Rock drawings in Sweden and Norway show boats carrying a round sign likely meaning the sun¹¹⁴. The heraldically stylised ‘sun-bark’ is a central motif in the imagery of the Urnfield culture in Central Europe that was the Nordic Late Bronze Age’s contact partner (Wachsmann 1998, 180, Fig. 8:30A–D). Beyond Scandinavian rock drawings, the earliest sun-bark is an engraving on a rock stela in the pre-Thracian Bronze Age sanctuary of Razlog in Bulgaria where it is associated with engravings of two paddled longboats (Höckmann 1998). The latter motif from Bulgaria did not reach the Urnfield culture but is attested in Pomerania on a bronze object imported from southeastern Europe where such boats carry a little sun¹¹⁵.

¹¹² Fransborg B (GBb. no. 25, pl. 16), Klättene (GBb. no. 49, pl. 31); Gedesby (GBb. no. 137, pl. 147).

¹¹³ Sommerfeld 2010. Other chariot images: Gelling/Davidson 1969, 15, Fig. 6:b–g, 18, Fig. 7:a, 21, Fig. 8, 98 Fig. 46:7.

¹¹⁴ Gelling/Davidson 1969, 11, Fig. 3:a, 12, Fig. 4:a–h, 15, Fig. 5, 15, Fig. 6:a, 28, Fig. 12:g, 37, Fig. 17:g, 47, Fig. 21:f, 54, Fig. 23, 66, Fig. 30:a, 75, Fig. 36, 118, Fig. 53:a (bronze cauldron from Pomerania), 124, Fig. 55:b, 125, Fig. 56:g, 133, Fig. 18:c; Göttlicher 1992, 157, Fig. 80.

¹¹⁵ Longboats serving as sun-barks on a belt plate in a hoard from Radolinek in Pomerania: Szafranski 1955, 190, pl. XIX:239; Bukowski 1998, 342, Fig. 170.

The raised concentric circles on some belt-bowls and lures (e.g. Kunkel 1928, pl. 54; Sprockhoff 1956 II, pl. 70:1,2) have exact parallels on Villanovan bronze shields in Italy (e.g. Bartoloni 2017, 54).

Coming back to belt-bowls, a big round body ornament might be less inconvenient to wear than an angular one. The shape does not necessarily enforce a religious interpretation but permits it. The common hooked-S (German: Wellenband) panels ‘rotate’ round the belt-bowl bottoms (Figs 2 and 6:1). That sense of motion was unknown prior to Per. V, when it outnumbered static patterns as prevailed in Per. IV. Opposing directions on the same bottom only prevail in Zealand and in northwestern Germany whereas identical ones dramatically dominate in Sweden and Scania and more moderately in Mecklenburg and central Germany. In the same regions both belt-bowls of multiple finds show the same direction of rotation. Exceptions limit themselves to one find each in Norway (Vansjø, GBb. no. 8, pl. 9), Jutland (Hyldal, GBb. no. 160, pl. 97) and two in the same find in northern Germany (Kronshagen, GBb. no. 404, 406, pl. 303, 305).

The sense of rotation is diagnostic for belt-bowl decoration in Per. V when it ruled in all regions of the Nordic Bronze Age. In its distribution itinerant artisans can be thought to have played a crucial role. At the same time ornaments of the Urnfield culture and to a lesser degree, of southeastern origin enriched the Nordic stock of subjects (Hundt 1978, 146–159, Figs 13 and 15–20), merging with indigenous traditions.

The widespread animal head protomes certainly carried a meaning, and even more so the images in the small class of ‘pictorial belt-bowls’ (German: Bilderbecken, n. 17). Few of these present remote similarities with rock-drawing boats, and a belt-bowl from Nedergård in Jutland (GBb. no. 205, pl. 106) bears the fine image of a longboat of a type possibly influenced by Urnfield culture (or Pre-Thracian) imagery. Similar ones are seen on Nordic razors. The Nedergård boat, however, is not a sun-bark¹¹⁶. Taken together the motives of water-fowl (Fig. 13:11A,B) and horse (Fig. 13:11G) (and in Sweden, elk [Fig. 13:11F]) heads and of boats are reality. They seem to be rooted in some Nordic mythology that was orally transmitted and thus is not accessible to us. Ours is to admire the perfectly circular shape of the belt-bowls that calls for a stencil applied like a compass (unless a real potter’s wheel) for modelling the core mould, and the equal distribution of the individual patterns along a circular panel. On some late bowls in Zealand and Mecklenburg the individual hooked-S are executed with unparalleled perfection. That masterly level of the founder’s and the engraver’s art in northwestern Germany (Winzlar) survived until the very end of the Nordic Bronze Age when it adapted the southern technique of glass inlays.

¹¹⁶ This belt-bowl GBb. no. 205 (pl. 106) is decorated with non-directed raised circles.

Conclusions

The Bronze Age of Pomerania is a field of discussion as to its forming part of the Lusatian culture, the Nordic culture or another unit. Many bronze types are shared with the Nordic Bronze Age while the pottery is not diagnostic (Jaanusson 1988) and many features of settlement and burial connect Pomerania with the Lusatian culture. Can belt-bowls contribute to find a solution?

No find is known from Per. IV–Va. When belt-bowls turn up in Pomerania, at the turn of Per. Va–b, their distribution shows a light concentration near the lower Oder. The finds of Szczecin-Kłęskowo and Krzywlin cling to the river's right bank while the one of Schwennenz is few kilometres away on the German side of the border within the area of the same Uckermark – West Pomeranian group of the Lusatian culture¹¹⁷. The river did not form a border. The Schwennenz belt-bowl (Fig. 12) matches the Witkowo finds (Fig. 6:1,2) farther east in being connected with Sweden, in being located in the area of the Lusatian culture, and in its early date that makes both the first belt-bowls east of central Mecklenburg¹¹⁸. Imported belt-bowls like the Schwennenz one seem to have transmitted Swedish elements to the local production in Nordic Mecklenburg that in the end triggered the Lusatian culture imitations.

Farther east the finds of the Uckermark – West Pomeranian group of the Lusatian culture peter out until the hoards of the Kashubian group start to cluster. The easternmost find of Nordic belt-bowls in Poland, from Witkowo lies in the Kashubian area but falls in the turn of Per. Va/b whereas all other Polish belt-bowls were deposited later¹¹⁹, eventually at a time when they had gotten out of fashion in the Nordic world. Only the Dzwonowo find (Fig. 3) follows the modern Per. VI trends that revolutionise both the Nordic and the Lusatian culture (Bukowski 1998, 385).

Four out of five finds in Poland go back to founders who seem to have been identical with metal traders (FMT finds), as eventually explains the 'cosmopolitan' character of the Late Bronze Age in Pomerania by suggesting the 'nordification' to have been not an ethnical but a commercial event (Bukowski 1998, 382–383).

¹¹⁷ GBb. no. 369, pl. 261 (Fig. 12); Bukowski 1998, 245, Fig. 110.

¹¹⁸ In Per. III two belt-boxes from Rynica (Kersten 1958, pl. 59:605 [Roderbeck]; Bukowski 1998, 176, Fig. 73:a; Żychlińska 2008, pl. V:7) and Swochowo (Kersten 1958, pl. 69:675 [Schwochow]; Bukowski 1998, 177, Fig. 74:a) have no Swedish elements.

¹¹⁹ For seriation data cf. Höckmann 2012, 101, Fig. 23; 117 ff. Cieszyce: p. 125, *Spalte* (column) 77, *Abschnitt* (= 1 equal section of 20): 20; Dzwonowo: 119, col. 28, 122, col. 49, 123, col. 62 (sect. 20); Górzycy: 119, col. 24, 121, col. 40, 123, col. 52, 124, col. 75 (sect. 20); Krzywlin: 122, col. 51, 124, col. 75 (sect. 18); Szczecin-Kłęskowo: 120, col. 35, 121, col. 40, 122, col. 44, 47, 123, col. 62, 124, col. 64, 68, 71 (sect. 19), 75 (sect. 18); Witkowo: 119, col. 25, 121, col. 40, 123, col. 55, 62, (sect. 12), 124, col. 73 (sect. 18).

The placing of Szczecin-Kłęskowo, Krzywín, Schwennenz and Witkowo suggests that itinerant founders / metal traders travelled by boat¹²⁰. The model seems more likely than production of belt-bowls by stationary settlement foundries as e.g. one at Dębica, Trzebnica district (Kaletyn 1964). In the Nordic world, a stationary foundry at Skälby in Sweden produced shards of belt-bowl moulds¹²¹, while the context of two chance-finds of unfinished belt-bowls still on their core moulds from Hjørup and Sandager in Funen (GBb. nos. 150 and 241, pls. 150, 166) is lost. Had they been hidden by itinerant founders when their isolated makeshift workshops were attacked by robbers, or had the workshops been included in settlements that had not been recognised when the belt-bowls came to light in the 19th century?

The belt-bowls from Cieszyce (Fig. 2) and Witkowo (Fig. 6:1,2) and the fragment from Szczecin-Kłęskowo (Fig. 5:2) are products of founders embedded in the Nordic tradition. The first was produced by a founder close to the Blue tradition of Mecklenburg at the turn of Per. V a/b¹²². It is unique in being connected with a Nordic woman of rank who expropriated herself of it in the Nordic ritual of giving something to the bog or wetland. Since the deposition occurred in Per. VIa, the precious belt-bowl had been handed down by three (?) generations of a Nordic family.

The Szczecin-Kłęskowo fragment's style connects it with Mecklenburg's Delicate Style. Since its deposition is dated to Per. VI (Höckmann 2012, Abschn. 19) it was old but there is no information on when and where it became scrap metal.

The Witkowo belt-bowls' features are Nordic but the style of the protomes of Witkowo A (Fig. 6:1) is somewhat exaggerated as might be caused by isolation of the founder in an oversea setting¹²³. While the Cieszyce and Szczecin-Kłęskowo finds are rooted in Nordic Mecklenburg, the Witkowo and the Schwennenz belt-bowls go back to traditions in Sweden/Scania or less likely in Zealand. As opposed to this situation, the belt-bowls from Dzwonowo and Górzycy differ from Nordic ones both in their shape and their decoration,

¹²⁰ The same phenomenon in the Ems culture of NW Germany: Höckmann 2012, 49–52. The Oder a prime alley for long-distance connections: Bukowski 1998, 354, Fig. 176; 359, Fig. 178; 360, Fig. 176; 383.

¹²¹ Oldeberg 1960, 15, Fig. 29: 1–6 (Skälby). Another LBA foundry at Hallunda (Stockholm) comprises built installations for mass-production (Jaanusson 1981).

¹²² Seriation dates: Höckmann 2012, 123, 102, Fig. 24 (Lübbersdorf GBb. no. 345 (Fig. 10): Abschn. 9 = Per. Va), 119–120, 123 (Roga GBb. no. 364 (Fig. 11): Abschn. 11 = early Per. Vb); 119–120, 123 (Broock GBb. no. 319–320 [Fig. 9]: Abschn. 13 = mid-Per. Vb). Later: Höckmann 2012, 119, 122 (Biesenbrow GBb. no. 317 [Fig. 8]: Abschn. 17 = early Per. VI).

¹²³ A similar distortion is seen on the belt-bowl from Helmstedt (GBb. no. 355, pl. 300), in a peripheral situation as well.

and are interpreted as imitations of Nordic belt-bowls by Lusatian culture bronze workers. The decoration of the scrap fragment from Krzywín also imitates prototypes in Mecklenburg but a second look leaves no doubt that the decoration has a non-Nordic handwriting. All finds are dated to Per. VI (Höckmann 2012, Abschn. 20, 17, 18). The finds demonstrate that Nordic belt-bowls were looked after by Lusatian women of rank (Żychlińska 2008, 241). For reasons unknown the demand was not met by the 'import' of Nordic originals, as caused the imitation by local bronze workers. In contrast to the situation in the non-Nordic Ems culture in northwestern Germany where belt-bowls seem to have been introduced by intermarriage among chieftains' families controlling the trade of bronzes from the Urnfield culture to Denmark by establishing tribal alliances that were sealed by marriages¹²⁴, in Pomerania intermarriage among Nordic and leading families of the Lusatian culture seems not to have been as common, meaning for contact among tribes of both civilisations. The owner of the Nordic Cieszyce belt-bowl may, however, have come to the area of the Lusatian culture this way.

J. Żychlińska (2008) proposes that in Pomerania existed a civilisation transitional between the Nordic and the Lusatian culture one whereas Z. Bukowski (1998, 385) emphasises that the Bronze Age was formed by the Lusatian culture. In every case the dominant position of non-Nordic belt-bowls implies that the most affluent élite group of the local population was not Nordic but wanted Nordic status symbols. It is yet to be learned how Lusatian culture females learned about belt-bowls being enviable prestige objects in the Nordic society and how Lusatian culture bronze workers received information about them that made them attempt to imitate them. Founders likely had to learn the art of casting thin-walled 'vessels' from a Nordic master but the engravers' knowledge of Nordic patterns seems to have been superficial, implying that both were not identical. As to chronology, the belt-bowl Witkowo A (Fig. 6:1) was produced at the turn of Per. Va/b possibly south of the Baltic where in Per. VIa it was included in an exceptionally rich FMT hoard in the area of the Kashubian hoards while Witkowo B (Fig. 6:2) may have been produced in a later context. Both belt-bowls are preserved as scrap metal going back to founders from Sweden/Scania (or Zealand?). The Swedish belt-bowl from Schwennenz (Fig. 12) reached the area of the Lusatian culture as early. The east-Scandinavian component of the belt-bowls of Mecklenburg might go back to such models. Later the Swedish belt-bowl from Biesenbrow (Fig. 8) demonstrates that contacts between Sweden and the western Lusatian culture were long-lived. Lusatian culture pottery in Sweden's Mälaren area

¹²⁴ Höckmann 2012, 47 f. In the context of the Lusatian culture: Bukowski 1998, 387.

as e.g. Hallunda and such elements in Denmark indicate the presence of Lusatian female potters in Nordic Scandinavia (Thrane 1975, 178. 182; Jaanusson 1981, 124; Bukowski 1998, 384; Höckmann 2012, 46). Shipping on the Baltic and the rivers seems to have been active¹²⁵.

The distribution of Per. V–VIa hoards reveals a bias between the generally seacoast-bound spread of the bulk of the hoards (Bukowski 1998, 383) and that of the finds of Lusatian culture belt-bowl imitations insofar as the latter tend to keep to the inland. The only seacoast-bound hoard of belt-bowls, Witkowo, is connected with Sweden. The place of production of the other Nordic belt-bowl, Cieszyce, is not known but may be located in Mecklenburg. That country passed on to Pomerania the bulk of Swedish elements.

The state of preservation of belt-bowls, though, is different in both countries. In Mecklenburg among seven finds in the relevant period only one can be interpreted as scrap metal (Ruthen: GBb. no. 365 and 366, pl. 259:2,3) while in Pomerania among eight finds at all, six are scrap among which three Nordic objects (Szczecin-Kłęskowo, Witkowo A,B) are balanced by three imitations (Górzyce A,B and Krzywín). The same relation rules among two intact belt-bowls of which one is Nordic (Cieszyce) and the other (Dzwonowo) a rather free imitation of Nordic models.

According to their seriation dates (*supra*), most Pomeranian belt-bowls independent of their date of production have been deposited at the very end of the Bronze Age, later than their prototypes in Mecklenburg. Then, they had lost their former esteem as costly ornaments and formed no more than raw metal, as might invite to understand belt-bowls as a short-lived intrusive vogue. At the same time, however, the non-Nordic belt-bowl from Dzwonowo was produced and interred intact, and so was the Nordic belt-bowl from Cieszyce that seems to have been kept for generations, a valued heirloom in a Nordic family.

The Latvian find from Staldzene (Fig. 7) came to light on the seashore far east of Witkowo. It shares some features with the non-Nordic Polish find of Dzwonowo but leaves open if it is a product of Lusatian culture Pomerania or a region that cannot be localised yet. What seems certain is that the belt-bowl or its producer arrived at Staldzene by boat. The belt-bowl does not exactly match the Gotland Per. VI ones. A comparable case is formed by a find from Magdeburg-Salbke in central Germany (GBb. no. 349, pl. 278) that is also in a way related to Gotland Per. VI belt-bowls, demonstrating that in the final phase of the Bronze Age direct connections still extended over remarkable distances (cf. also a sumptuous belt-bowl from Klein Oschersleben in eastern Germany (GBb. no. 338, pl. 275) that likely came there from northern Jutland).

¹²⁵ Bukowski 1998, 383 (starting in Per. V), 385–386; Blajer 2013, 137 no. 16 (three celts from the bed of the Vistula at Korczyn may go back to a shipping accident). For north-western Germany: Höckmann 2000; Höckmann 2006; Höckmann 2012, 49–52.

In northwestern and central Germany, France and Switzerland¹²⁶ belt-bowls turned up in non-Nordic contexts, starting the emergence of local foundries that preserved Nordic traditions more or less well. In Pomerania, the belt-bowls from Dzwonowo (Fig. 3) and Górzycy (Figs 4 and 5:1) clearly differing from Nordic ones demonstrate that Nordic influence reached the Lusatian culture area in a weakened and so to speak alienated condition. The evidence suggests that some Lusatian culture élite women wanted to possess belt-bowls as Nordic status symbols, but for unknown reasons had no access to Nordic originals, as gave rise to the emergence of a limited production of local imitations. The situation presents a fresh aspect of Nordic/Lusatian culture intercourse and adds to the notion that the presence of Nordic types of bronzework in contact zones with other civilisations testifies to commercial contact rather than the presence of an ‘ethnically Nordic’ population whatever that may have been.

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¹²⁶ A belt-bowl from Corcelettes (GBb. no. 435, pl. 324) in Switzerland seems to be the work of an itinerant urnfield bronze-worker who for some time had in northwest Germany collaborated with a local founder and learned the technical know-how of casting belt-bowls that he later applied in his Swiss home (Höckmann 1975; 2012, 20).

Abbreviations

Abschnitt	(Abschn.) in Seriation charts: one of 20 equal sections into which 357 datable finds were set (Höckmann 2012)
BU	belt-buckle
col.	column
d.sygn.	(Polish: <i>dawna sygnatura</i>) former inventory number
F	(Danish: Fyn) Funen
fr.	fragmented
FMT	bronze founder, likely identical with metal trader
GBb.	E. Sprockhoff, O. Höckmann 1979. <i>Die gegossenen Bronzebecken der jüngeren nordischen Bronzezeit</i> . Mainz.
gm.	(Polish: <i>gmina</i>) commune
Gd.	(German: <i>Gemeinde</i>) community
id.	identical, same
infra	below
int.	intact
J	(Danish: <i>Jylland</i>) Jutland
Kr.	(German: <i>Kreis</i>) German medium administrative district (former name)
Ldkr.	(German: <i>Landkreis</i>) German medium administrative district (present official name, excluding bigger cities)
M	(Germany) Mecklenburg and Uckermark
med.	medium
N	Norway
n.	footnote
PL	Poland
pow.	(Polish: <i>powiat</i>) Polish medium administrative unit similar to Lkr.
S	Sweden
Sa	Saale area
Sj	(Danish: <i>Sjælland</i>) Zealand
Sk	(Swedish: <i>Skåne</i>) Scania
Spalte	in Seriation charts: column (Höckmann 2012)
supra	above
WG	West Germany

Table 1. Features of multiple finds in Per. V–VI; after: catalogue GBb.
Tabela 1. Cechy znalezisk gromadnych z okresów V i VI; za: katalog GBb.

Find Znalezisko	Number of founders Liczba brązowników	Status Status	Type/find Typ/znalezisko	Date Datowanie	Quality Stan zachowania
Kamfjord 2* and 3	1(?)	2 int.**	dedication	id.	2 fine
Lislebyfjellet 5 and 6	2(?)	2 int.	dedication	id.	2 med.
Vansjø 8 and 9	1	2 int.	ded.	id.	2 excellent
Billeberga 12–16	A–D/E***	4 int./1 fr.	FMT	id.	A+B>C–E
Burs 20 and 21	2	1 int./1 fr.		id.	1 med., 1 raised
Fransborg 24–27	2/2	4 int.	ded.	id.	various
Grönhult 31 and 32	2	1/1	FMT	IV/V	2 med.
Hallarum II 36 and 37	2(?)	2 int.	ded.	id.	1 fine/1 med.
Hjärnarp 39 and 40	1	2 int.	ded.	id.	2 med.
Käglinge 47 and 48	2(?)	2 int.	ded.	id.	2 med.
Långmyra 51 and 52	1	2 int.		id.	2 med.
Nya Åsle 56–59	A–C/D	2 int./2 fr.	FMT	id.	various
Senäte 73 and 74	2	2 int.	ded.	id.	2 fine
Simris 75 and 76	2	2 fg.	ded.	id.	B>A
Senäte 73 and 74	2	2 int.	ded.	id.	2 fine
Svartarp 85 and 86	2	2 int.	FMT	id.	2 med.
Årby 94 and 95	2	1 int./1 fr.	ded.	id.	2 med.
Budsene 109 and 110	2	2 int.	ded.	id.	2 med.
Fårdal 120 and 121	2	2 int.	FMT	id.	A>B
Fangel Torp 124 and 125	2	1 int./1 fr.	FMT(?)	id.	B>A?
Flø 131 and 132	2	2 int.	ded.(?)	IV/V	B>A
Gedesby 137 and 138	1	2 int./1 fr.	FMT	id.	2 fine, 1 med.
Glerup 141 and 142	1(?)	2 int.	ded.	id.	2 med.
Holsteinborg 155–157	2	3 fr.	ded.	id.	3 med.
Hyldal 160 and 161	2(?)	2 int.	ded.	id.	2 med.
Jebjerg 163 and 164	3	3 fr.	FMT	id.	C>A–B
Kertinge I 173 and 174	1(?)	2 int.	ded.	id.	2 med.
Kertinge II 175 and 176	1(?)	1 int./1 fr.	ded.	id.	1/1
Kettinge 177 and 178	1	2 fr.	FMT	id.	2 med.
Lundforlund 192 and 193	2	2 int.	FMT	id.	2 med.
Magleby Nørrekær 195–197	2	2 int./1 fr.	FMT	id.	A>B–C
Nedergård 204 and 205	1	2 int.	ded.	id.	2 fine
Randrup 226 and 227	2	2 int.	ded.	id.	2 med.

Sjørup 245 and 246	1	1/1	ded.	id.	2 med.
Górzycze 301 and 302	2(?)	1/1	ded.	id.	2 med.
Witkowo 307 and 308	2	2 fr.	FMT	id.	2 med.
Albersdorf 382 and 383, burial					
Bad Oldesloe 384 and 385	2	1/1	ded.	id.	2 med.
Broock 319 and 320	2	2 int.	ded.	id.	1 fine/1 med.
Deinstedt 388 and 389	1	1/1	ded.	id.	2 med.
Kronshagen 404–406	2	1/1	ded.	id.	3 med.
Lübberstorf 346 and 347	2	1/1	ded.	id.	2 med.
Neubrandenburg 233–236, (number of finds unknown)					
Neulingen 357 and 358, burial					
Oerel 411 and 412	1(?)	2 fr.	burial(?)	id.	A>B
Watenstedt 422 and 423	2(?)	1/1	FMT	id.	2 med.
Petit Villatte 431 and 433 in Urnfield culture context					

* GBb. catalogue number / Nr znalezisk w katalogu GBb.

** See Abbreviations / Patrz wykaz skrótów

*** Vessels A–D were cast by the same founder, vessel E by another / Naczynia A–D zostały odlane przez tego samego rzemieślnika, naczynie E przez innego

Table 2. Technical finds of single belt-bowls
 Tabela 2. Znaleźiska techniczne związane z misami

Find Znalezisko	Quality Stan zachowania	Technical find Znalezisko techniczne
Gödestad 28*	fragment	(?)
Härnevi 34	fragment	+
Hogstorp 42	intact	+
Järpetan 46	intact	+
Rud 68	fragment	+
Spelvik 81	fragment	+
Vegestorp 89	fragment	+
Ignaberga 44	fragment	+
Bindeballe 101	fragment	+
Brøndum Mose 108	fragment	(?)
Helleved 146	fragment	+
Kalstruplund 170	fragment	+
Hjærup 150	on mould	+
Horne 158	fragment	(?)
Hyltofte 162	fragment	+
Nagelsti 202	fragment	+
Sandager 241	on mould	+
Skydebjerg 248	fragment	(?)
Tårup 256	fragment	+
Veflinge 268	fragment	+
Voldtofte 275	intact	+
Ejby 115	fragment	+
Holbæk Ladegård 154	fragment	+
Kelleklintegård 172	fragment	+
Dzwonowo 306	intact	+
Krzywin 305	fragment	+
Szczecin-Kłęskowo 303	fragment	+

Swennenz 369	intact	+
Wendorf 378	fragment	+
Beetendorf 315	fragment	(?)
Darsekau 322	fragment	+
Günserode 331	fragment	+
Hindenburg 334	fragment	+
Hödingen 335	fragment	+
Klein Oschersleben 338	intact	+
Quenstedt 362	fragment	(?)
Wandlitz 374	fragment	+
Hamburg-Volksdorf 399	intact	(?)
Pohnsdorf 413	fragment	+

* GBb. catalogue numer / Nr znalezisk w katalogu GBb.

Table 3. Finds of belt-bowls of less than 16 cm in diameter; italic – technical find, [no.] – associated belt-bowl of more than 16 cm in diameter. See Abbreviations, after: GBb.

Tabela 3. Znaleziska mis o średnicy poniżej 16 cm: kursywa – znalezisko techniczne, [numer] – misa towarzysząca o średnicy powyżej 16 cm. Zob. wykaz skrótów, za: GBb.

	Finds Znaleziska
Norway	no. 6[5]+ BU Lislebyfjellet
Sweden	14–16[12,13]+ BU <i>Billeberga</i> , 25,27[24,26]+ BU Fransborg, 29 Goentorp, 37[36] Hallarum II, 39[40] Hjärnarp, 47[48] Käglinge, 49 Klättene, 65 Östra Torp, 69 Sätaröd, 72 ‘Scania’ ¹
Jutland	130[131]+ BU Flø, 271+ BU Vester Doense I
Funen	110[109]+ BU Budsene, <i>137–139 Gedesby</i> , 162+ BU <i>Hyldtofte</i> , 173[174]+ BU Kertinge I, <i>184[183] Lågerup I</i> , 185+ BU Lågerup II, 191 Lolland
Zealand	95[94] Årby, 107 Bregninge, 156[155,157]+ BU Holsteinborg, 196[195,197] <i>Magleby Nørrekær</i>
Poland	301–302 Górzycy
Germany	328 Göhlen, 346[347]+ BU Lübberstorf, 357–358 Neulingen, 397 Gleesen, 404[405,406]+ BU Kronshagen, 425 Western Schleswig

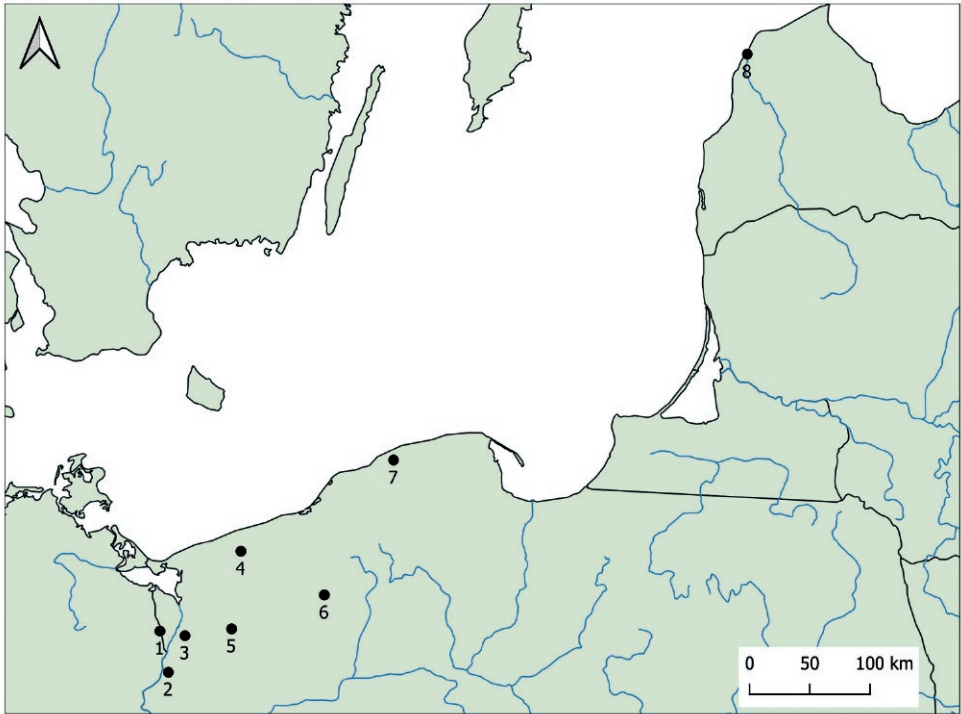


Fig. 1. Distribution of belt-bowls in Germany, Poland and Latvia: 1 – Schwennenz (cat. no. 6); 2 – Krzywin (cat. no. 5); 3 – Szczecin-Kłeskowo (cat. no. 7); 4 – Cieszyce (cat. no. 1); 5 – Dzwonowo (cat. no. 2); 6 – Górzyce (cat. no. 3–4), 7 – Witkowo (cat. no. 8–9), 8 – Staldzene (cat. no. 6)

Ryc. 1. Rozmieszczenie mis w Niemczech, Polsce i na Łotwie: 1 – Schwennenz (nr kat. 6); 2 – Krzywin (nr kat. 5); 3 – Szczecin-Kłeskowo (nr kat. 7); 4 – Cieszyce (nr kat. 1); 5 – Dzwonowo (nr kat. 2); 6 – Górzyce (nr kat. 3–4); 7 – Witkowo (nr kat. 8–9); 8 – Staldzene (nr kat. 6)



Fig. 2. Belt-bowl from Cieszyc, Stargard district, Poland; diameter 26,4 cm (after: Höckmann 1981, Fig. 1)

Ryc. 2. Misa z Cieszyc, pow. stargardzki, Polska; średnica 26,4 cm (za: Höckmann 1981, Fig. 1)

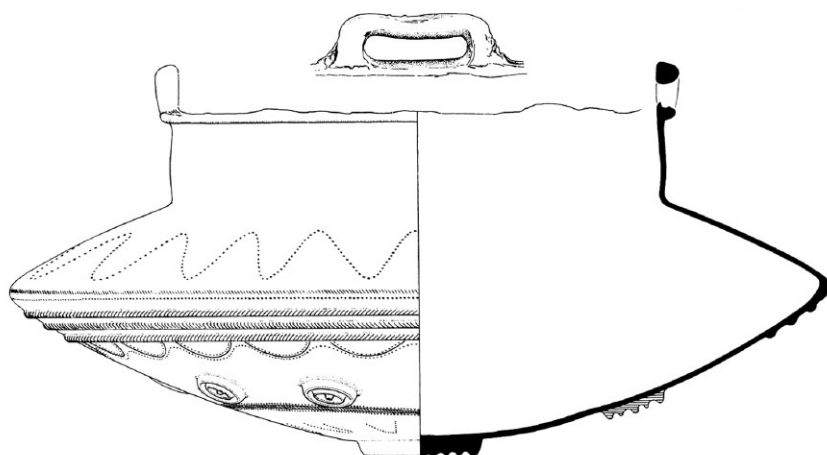


Fig. 3. Belt-bowl from Dzwonowo, Stargard district, Poland; diam. 20,3 cm (after: GBb., pl. 229)
Ryc. 3. Misa z Dzwonowa, pow. stargardzki, Polska; śr. 20,3 cm (za: GBb., pl. 229)



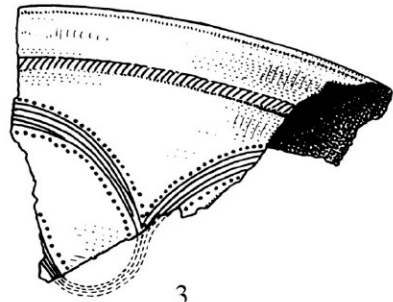
Fig. 4. Belt-bowl A from Górzyc, Szczecinek district, Poland; diam. 14,2 cm (after: GBb., pl. 226)
Ryc. 4. Misa A z Górzyc, pow. szczecinecki, Polska; śr. 14,2 cm (za: GBb., pl. 226)



1



2



3

Fig. 5: 1. Belt-bowl B from Górzycze, Szczecinek district, Poland; diam. 11,3 cm (after: GBb., pl. 227:1). 2. Belt-bowl fragment from Szczecin-Klęskowo, Poland; 6,0 × 5,7 cm (after: GBb., pl. 227:2). 3. Belt-bowl fragment from Krzywin, Gryfino district, Poland; 6,3 × 4,0 cm (after: GBb., pl. 227:3)

Ryc. 5: 1. Misa B z Górzyc, pow. szczecinecki, Polska; śr. 11,3 (za: GBb., pl. 227:1). 2. Fragment misy do pasa ze Szczecina-Klęskowa, Polska; 6,0 × 5,7 cm (za: GBb., pl. 227:2). 3. Fragment misy do pasa z Krzywina, pow. gryfiński, Polska; 6,3 × 4,0 cm (za: GBb., pl. 227:3)

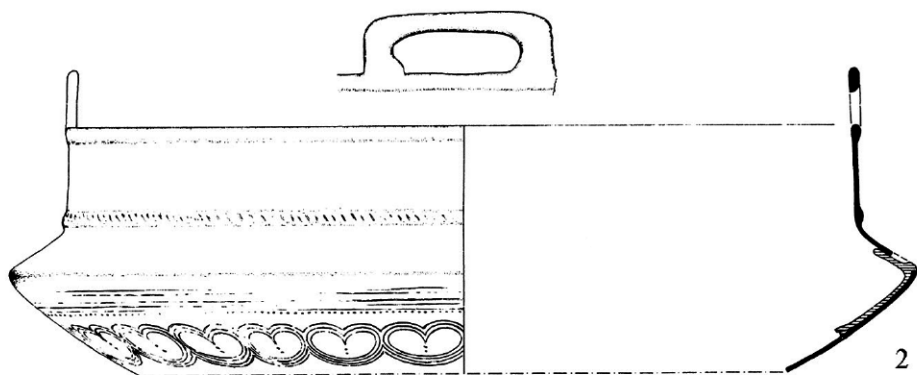
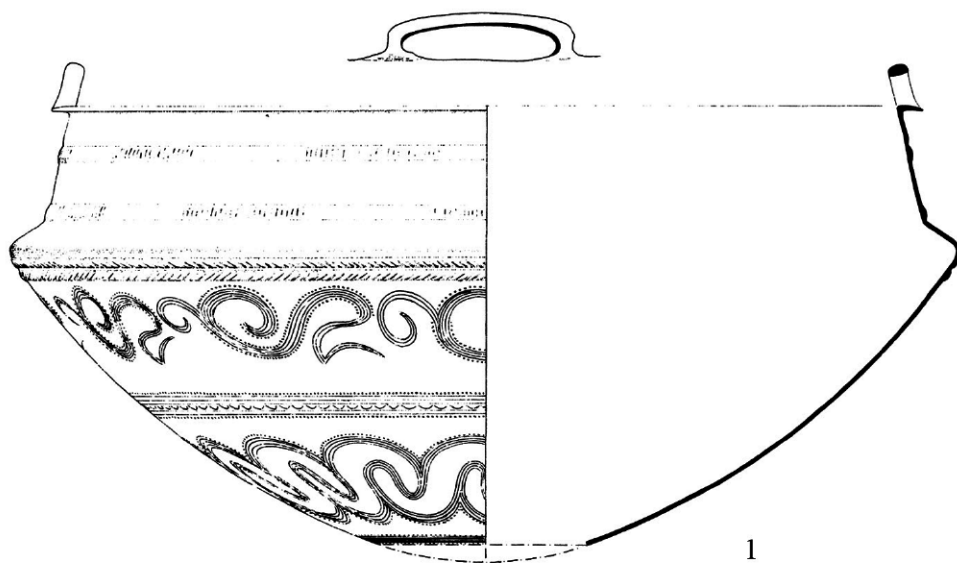


Fig. 6: 1. Belt-bowl A from Witkowo, Słupsk district, Poland; diam. 21,9 cm (after: GBb., pl. 230,1).
 2. Belt-bowl B from Witkowo; diam. 20,9 cm (after: GBb., pl. 230:3)
 Ryc. 6: 1. Misa A z Witkowa, pow. słupski, Polska; śr. 21,9 cm (za: GBb., pl. 230:1). 2. Misa do
 pasa B z Witkowa; śr. 20,9 cm (za: GBb., pl. 230:3)

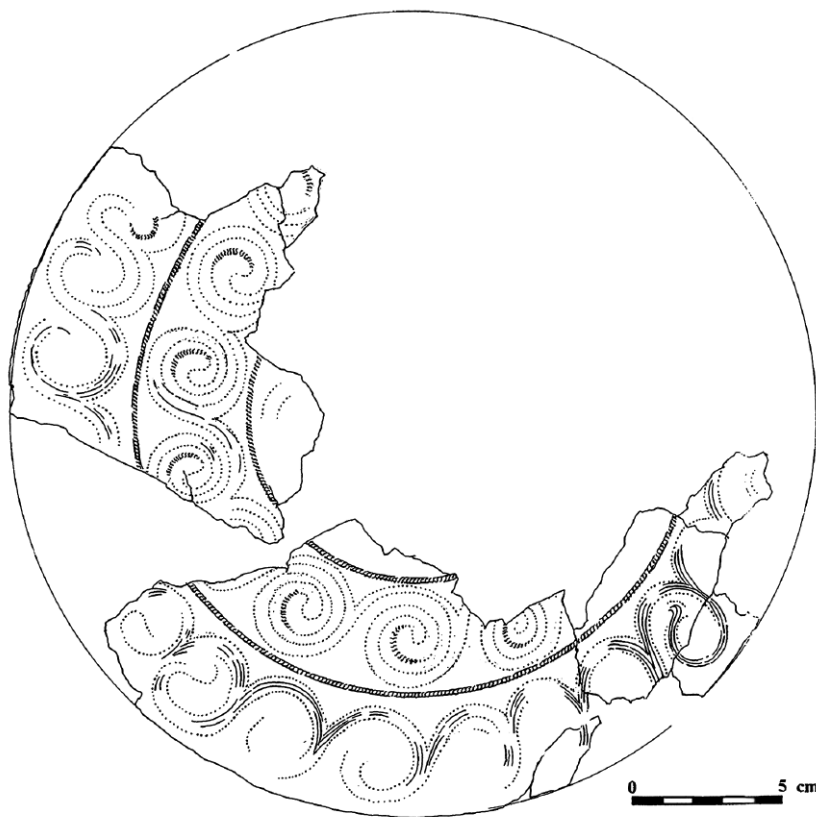
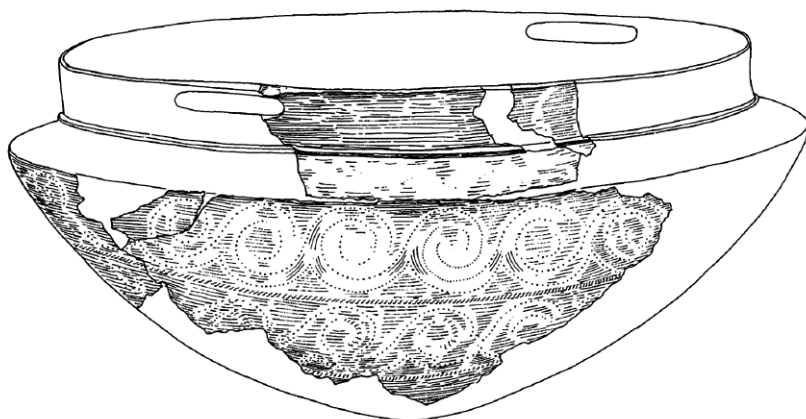


Fig. 7. Belt-bowl from Staldzene, distr. Ventspils, Latvia; diam. c. 27,3 cm (after: Vasks, Vijups 2004, Fig. XX)

Ryc. 7. Misa ze Staldzene, okręg Ventspils, Łotwa; śr. ok. 27,3 cm (za: Vasks, Vijups 2004, Fig. XX)

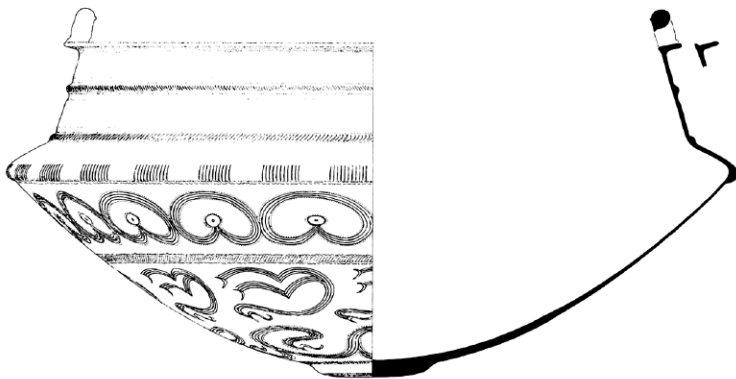
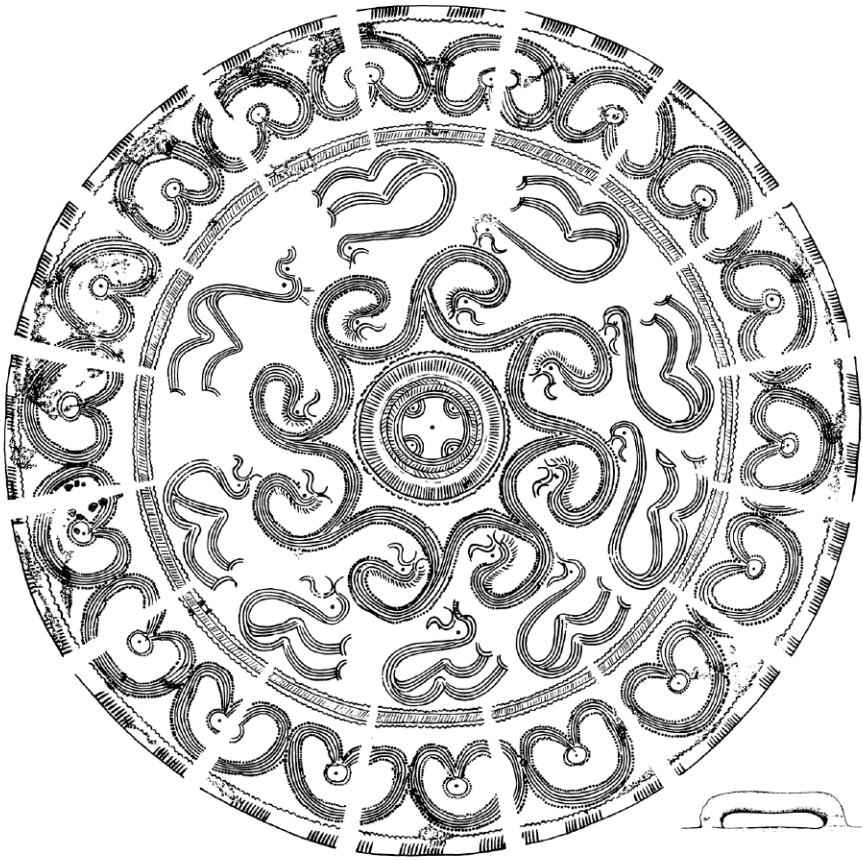


Fig. 8. Belt-bowl from Biesenbrow, Lkr. Uckermark, Germany; diam. 20,2 cm (after: GBb., pl. 258)
Ryc. 8. Misa z Biesenbrow, Lkr. Uckermark, Niemcy; śr. 20,2 cm (za: GBb., pl. 258)

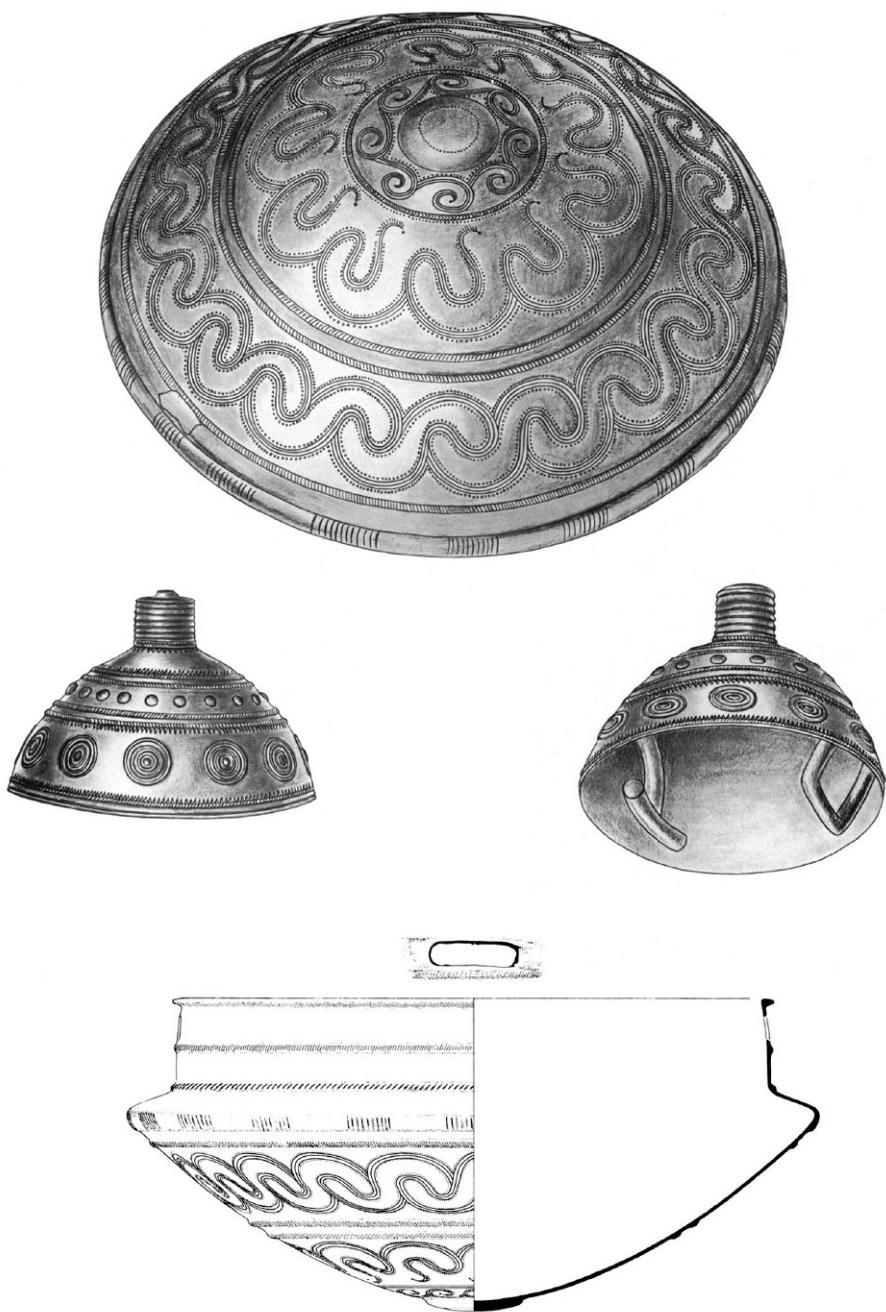


Fig. 9. Belt-bowl B from Broock, Gd. Alt Tellin, Lkr. Vorpommern-Greifswald, Germany; diam. 20,1 cm (after: GBB., pl. 235)

Ryc. 9. Misa B z Broock, Gd. Alt Tellin, Lkr. Vorpommern-Greifswald, Niemcy; śr. 20,1 cm (za: GBB., pl. 235)



Fig. 10. Belt-bowl from Lübbersdorf, Gd. Galenbeck, Lkr. Mecklenburgische Seenplatte (after: GBb., pl. 242)

Ryc. 10. Misa z Lübbersdorf, Gd. Galenbeck, Lkr. Mecklenburgische Seenplatte, Niemcy (za: GBb., pl. 242)

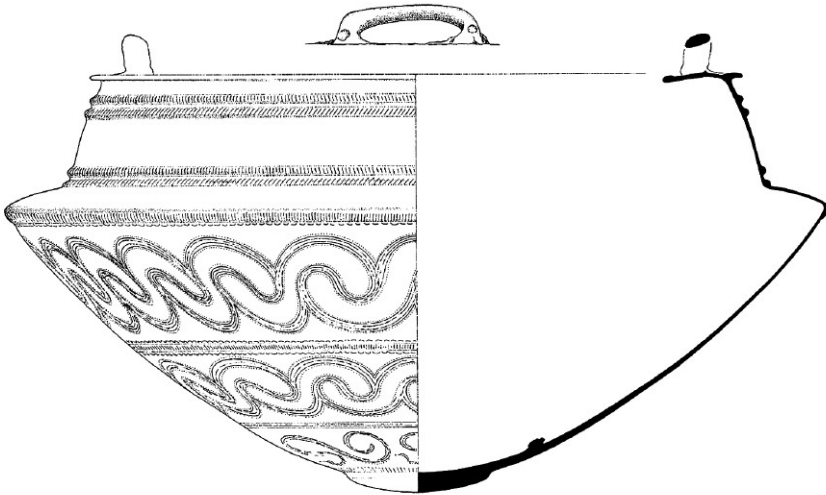


Fig. 11. Belt-bowl from Roga, Gd. Datzetal, Lkr. Mecklenburgische Seenplatte, Germany; diam. 22,1 cm (after: GBb., pl. 258)

Ryc. 11. Misa z Roga, Gd. Datzetal, Lkr. Mecklenburgische Seenplatte, Niemcy; śr. 22,1 cm (za: GBb., pl. 258)



Fig. 12. belt-bowl from Schwennenz, Lkr. Uecker-Randow, Germany; diam. 16,5 cm (after: GBb., pl. 261)

Ryc. 12. Misa ze Schwennenz, Lkr. Uecker-Randow, Niemcy; śr. 16,5 cm (za: GBb., pl. 261)

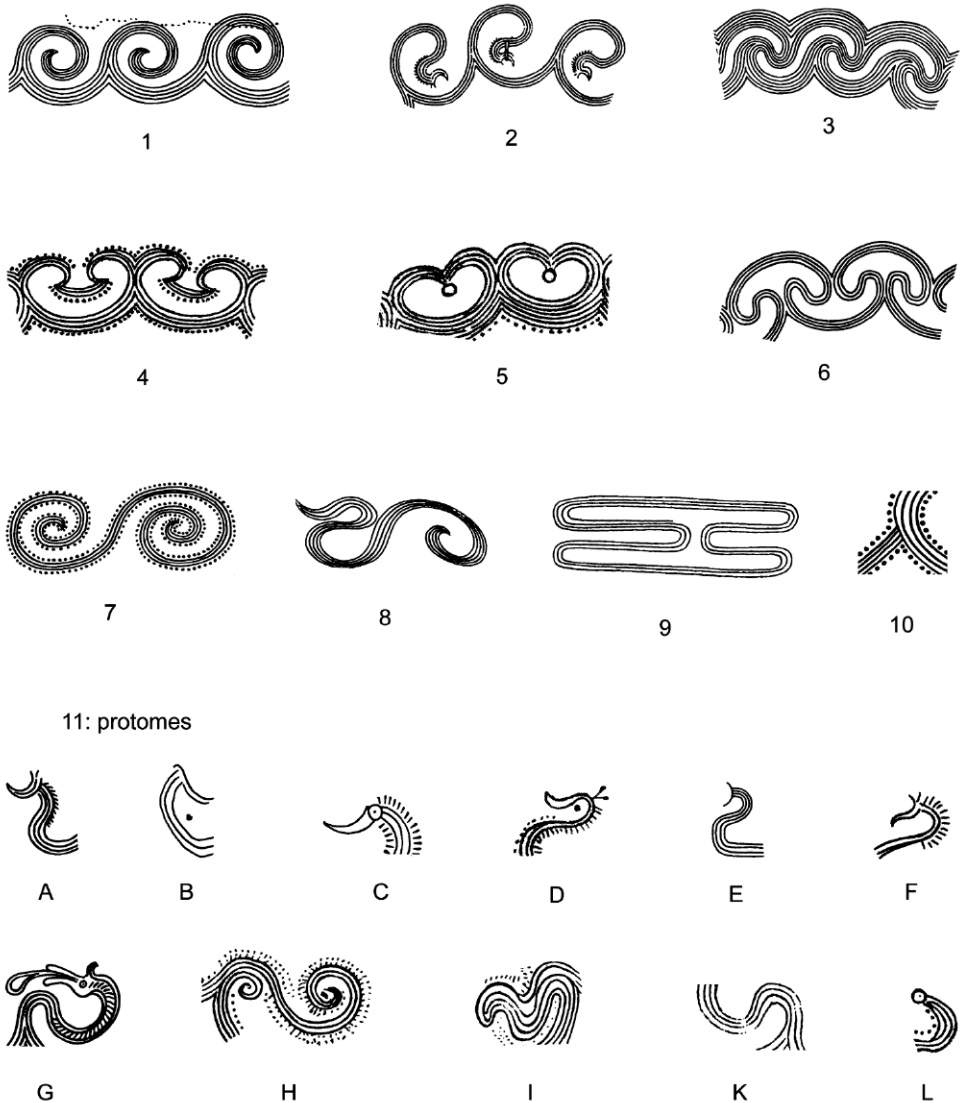


Fig. 13. Panel patterns (1–10) and types of protomes (A–K): 1 – Wave (Vitruvian scroll); 2 – Wave, with protomes; 3 – Hooked-S; 4 – Barge; 5 – Pretzel; 6 – Mushroom; 7 – Reclining S; 8 – S-animal; 9 – Double T; 10 – Unsymmetric connections; A – Animal head; B – Same, with dot ‘eye’; C – Same, with round eye; D – Loop, with dot ‘eye’; E – Crescent; F – Elk; G – Horse (?), with tongue; H – Rolled-in above; I – Rolled-in below; K – Cut-off blunt; L – pointed

Ryc. 13. Wzory z paneli (1–10) i typy protomów (A–K): 1 – fala (zwój witruwiański); 2 – fala z protomami; 3 – wzór haczykowany/esowaty; 4 – wzór barki; 5 – precel; 6 – grzybek; 7 – leżące S; 8 – esowaty motyw zwierzęcy; 9 – podwójne T; 10 – asymetryczne połączenia; A – głowa zwierzęca; B – głowa zwierzęca z okiem punktowym; C – głowa zwierzęca z okiem okrągłym; D – pętla z okiem punktowym; E – półksiężyc; F – łos; G – koń (?) z językiem; H – podwinięta do góry; I – podwinięta w dół; K – ścięta tępo; L – zakończona punktowo

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Bronze Age Belt-Bowls in Poland and Latvia

Summary

Belt-bowls are women's ornaments intrinsically Nordic. Their production was as costly as to confine ownership to leading élites. No belt-bowl of Per. IV–Va is known from Pomerania or the Baltic countries. The earliest examples in the area of the Lusatian culture (Cieszycze and Schwennenz, west of Szczecin) arrived there from Sweden at the turn of Per. Va/Vb. Swedish FMT bronze workers also reached Mecklenburg, giving rise to a production that developed a character of its own. Some features of the Cieszycze belt-bowl turn up in the 'Blue tradition' of Mecklenburg in Per. Vb.

The Cieszycze find is unique for its high quality, intact preservation, and for being dedicated in wetland according to a Nordic ritual. It is interpreted as a property of a Nordic woman living in the Lusatian culture area.

As opposed to this special case, most belt-bowls in Pomerania are damaged, or no more than fragments are preserved that are contained in FMT finds. The earliest ones are the damaged belt-bowls from Witkowo originating from Scandinavia (Sweden) and a fragment from Szczecin-Kłęskowo that features the Delicate Style of Mecklenburg.

Later, Lusatian culture bronzeworkers produced imitations of Nordic belt-bowls. While three of them are damaged (Górzyce A and B) or represented by a single fragment (Krzywin), the belt-bowl of Dzwonowo is intact. It is the only one in Pomerania to show raised decoration that imitates Nordic models while engraved ornaments follow Lusatian culture patterns, in which the find is singular.

The Staldzene find in Latvia has been connected with a migrant group of Nordic priestesses but has features of a FMT find as well. The belt-bowl is broken and incomplete, and seems to be oriented towards Gotland.

The local imitations of Nordic belt-bowls that can be identified by the style of their engraved decoration, demonstrate how strong the attraction of Nordic bronze ornaments was to Lusatian culture élite women. The finding can probably be extended to the multitudes of less significant Nordic bronzes in Pomerania, identifying its 'nordification' as a commercial process.

Misy do pasa z epoki brązu w Polsce i na Łotwie

Streszczenie

Misy do zawieszania przy pasie związane z kręgiem nordyjskim uznaje się za atrybut kobiecego stroju. Ich produkcja była na tyle kosztowna, że mogły je posiadać jedynie przedstawicielki elit. Zabytki tego typu nie są znane na Pomorzu i w krajach bałtyckich z epoki brązu, z okresów IV–Va. Najwcześniejsze okazy w kulturze łużyckiej (Cieszycze i Schwennenz, na zachód od Szczecina) wywodzą się z terenu Szwecji i są datowane na przełom okresów Va i Vb. Szwedzcy odlewnicy dotarli także na obszar dzisiejszej Meklemburgii, dając początek ośrodkowi, który rozwinął własny styl. Niektóre cechy misy z Cieszyc zbliżają ją do tzw. tradycji niebieskiej, typowej dla okresu Vb w Meklemburgii.

Znalezisko z Cieszyc jest wyjątkowe z uwagi na wysoką jakość, bardzo dobry stan zachowania oraz bagienną depozycję, zgodną z typowym rytuałem kręgu nordyjskiego. Jest interpretowane jako własność nordyjskiej kobiety żyjącej na obszarze zajmowanym przez ludność kultury łużyckiej.

W odróżnieniu od znaleziska z Cieszyc większość mis z terenu Pomorza jest uszkodzona lub zachowana jedynie we fragmentach; były tu odkrywane wśród znalezisk interpretowanych jako depozyty metalurgów. Najwcześniejsza jest uszkodzona misa z Witkowa (pochodzenia skandynawskiego – Szwecja) oraz fragment misy ze Szczecina-Kłęskowa, reprezentującej tzw. styl delikatny, charakterystyczny dla obszaru Meklemburgii.

W okresie późniejszym imitacje nordyjskich mis do zawieszania przy pasie produkowane były przez brązowników kultury łużyckiej. Trzy z nich są uszkodzone (Górzyce A i B) lub reprezentowane przez pojedynczy fragment (Krzywin), ale misa z Dzwonowa zachowała się w stanie nienaruszonym. Jest to unikatowy okaz na Pomorzu ze względu na dekoracje plastyczne imitujące wzorce nordyjskie oraz dekoracje ryte reprezentujące zestaw typowy dla kultury łużyckiej.

Naczynie ze Staldzene na Łotwie łączone jest z grupą migrantów skupionych wokół nordyjskiej kapłanki, ale ma także cechy typowe dla znalezisk związanych z brązownikami. Misa do pasa jest zniszczona i niekompletna, a jako miejsce pochodzenia wskazuje się Gotlandię.

Lokalne imitacje nordyjskich mis mogą być identyfikowane na podstawie stylistyki zdobień rytych, co pokazuje, jak atrakcyjne z punktu widzenia kobiet z łużyckich elit były nordyjskie wyroby zdobione. To stwierdzenie prawdopodobnie może być rozszerzone na wiele z mniej okazałych nordyjskich przedmiotów z brązu, co pozwala zidentyfikować „nordyzację” jako proces związany z handlem.

Olaf Höckmann

retired (1997) from Römisch-Germanisches Zentralmuseum, Mainz