A conical bronze boss and Hedeby's eastern connection
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In late summer of the year 1949 the Schleswig lawyer and enthusiast Otto von Wahl (1914–84) was surveying along the waterfront of Hedeby (von Wahl 1950). In 1933 Herbert Jankuhn had directed a first survey of the harbour parallel to his ongoing settlement excavations. A professional diver from Kiel detected “several pile remains” near the shore, indicating a harbour. At the time however Jankuhn concluded that the harbour basin would be too deeply silted-up to permit any appropriate underwater investigations (cf. Kalmring 2010, p. 63). Sixteen years later and with bare hands, the Schleswig lawyer dug two trial pits among the trampled-down reeds along the shallow underwater terrace right in the central harbour area (ibid. p. 61, fig. 31).

The pits on the terrace were situated approximately 30 meters apart. In a short announcement published the following year, von Wahl mentions not only “antler and bone finds as well as pile remains” (1950, p. 87). He adds a fairly detailed report alluding to jaws and teeth of pigs, horses, cattle, goats, game and carnivore as well as other leftovers such as hazelnut shells, wild cherry stones, fish bones, bird bones and a tortoise shell. He lists stone objects including a steatite bowl, schist whetstones, basalt millstone fragments, mica schist, flint and echinates besides numerous glass and metal slags in addition to comb parts, antler pins, an antler wedge and raw deer antler pieces. Among his finds are pale green, blue and dark green/blackish glass fragments and beads including one of a rock crystal and one of amber. He found rough and fine potsherds including Slavonic pots, Badorf and Pingsdorf ware plus a green-glazed sherd, metal artefacts including an arrowhead, boat rivets, a lead spindle whorl, a bronze brooch pin and a worked swan bone – the latter interpreted as a tool for doubling threads (von Wahl 1950, p. 88 f).

Highlighted by a photograph are a penannular bronze brooch, a necklace of c. 120 black beads.
(made from jet?) and a small pyramidal bronze object (cf. Kalmring 2010, p. 64, fig. 33). The brooch (Capelle 1968, p. 106 [no. 87], pl. 26:2) has an ogival cross-section that identifies it as deriving from south-western Finland or the Åland islands (Müller-Wille 1988, p. 759, fig 4:2). But apart from the brooch the objects stayed with their proud finder and remain in the possession of the family von Wahl.

Otto von Wahl (1950, p. 89) describes the pyramidal object as “a 2.5 cm high hexagonal bronze cone, at its vertex six small ‘feet’, inside hollow (compare figure, but now cleaned), use unknown”. It can be added that the bronze cone in its unrestored condition does not reveal any remains of decoration on its six sides. Yet towards the basis of the triangular frames there may be traces of a worn framing line. The tip of the cone seems to once have ended in a terminal, but now only shows a weathered-down fracture (fig. 1).

Parallels
A similar cone measuring 2.2 cm has been found in the hall building of Birka’s Garrison (cf. Holmquist Olausson & Kitzler Åhfeldt 2002). During metal detecting at the royal manor site of Tisso on Zealand (cf. Jørgensen 2003) two similar but as yet unpublished cones have been found. The Birka piece is a cast cylindrical cone with a circular base of two centimeters, a flat top with three ornamental rims and a beadlet-like terminal on top (fig. 2:1). At right angles at its base are three semicircular pierced plates, of which two still contained fragments of iron rivets when it was found (Holmquist Olausson & Petrovski 2007, p. 233). The hall was built some time in the period AD 950–1000, and the finds have a distinct martial character (Hedenstierna-Jonson 2006). The same appears to be true also for the Birka cone. That cone, and two gilded arched mounts with Byzantine and Byzantine-inspired ornamentation – a paradiaze motif – seem to belong to one or more conical helmets of the Kievan Rus’ or low-domed Byzantine helmets (Holmquist Olausson & Petrovski 2007).

A representation of Jaroslav the Wise (c. 978–1054) on a lead seal found at Novgorod shows the Grand Prince of Kiev with a conical helmet and knobbled top (Janin & Gajdukow 1998, p. 259 pl. 1:2a). Such pointed tips on helmets are typical of the so-called sphericoconical helmets of Kirpichnikov’s type II. Their definition is “riveted 4-part dome, no nasal, spike on the top usually hollow to attach the plume [or Sultan] as well as bronze or copper sheathing on the surface, as well as distinctive embellishments” (Kirpichnikov 1971).
Fine examples of this type are the 10th century Gul’bishe and Černaya Mogila helmets (fig. 2:2), named for two barrows at Černigov in northern Ukraine. The pointed Gnězdovo-2 helmet belongs to the subgroup IIa and differs somewhat in details such as an openwork gilded metal band and a nasal. It was found in a 10th century barrow, burial no. 41 at Gnězdovo on the Upper Dnepr near Smolensk.

Byzantine helmets of this era, on the other hand, are believed to hark back to “Romano-Sasanid” origins, but also show influences from the Steppe and Sarmatian culture (Stephenson 2011, p. 13). According to written sources, the Byzantine army used two types of helmet: one hemispherical in the Roman tradition and one pointed and conical (Kolias 1988, p. 76). Helmets of the pointed conical type are depicted in the richly illustrated Madrid Skylitzes, a 12th century copy of the Synopsis historiarum (Σύνοψις ἱστοριῶν), written in the 1070s by the historian Ioannes Skylitzes (Berger 2001). One good example is the depiction of the Varangian guard (fol. 26va) during the laying-out of Emperor Leo V the Armenian (775–820) in the hippodrome of Constantinople after his assassination (fig. 2:3). Note though that the Bulgars (fol. 82ra) and the Mula-di Muslims (fol. 38v) are depicted with similar helmets.

Both the cones from Hedeby and Birka may belong to helmets. But there are differences between them. The bases have different shapes, the main difference is how they were mounted. The Birka piece was riveted onto an object. The Hedeby piece is designed to be inserted into a base with its little feet.

A somewhat closer parallel to the Hedeby piece is a similarly sized decorative boss from Gnězdovo, recently imaged in the catalogue of a Viking exhibition in Leoben, Austria. There it is erroneously described as a “pyramidal belt fitting” (Minasian 2008, p. 113). It was found in the major barrow no. 24 of the Ol’sanskaja mound group at Gnězdovo, excavated by I.S. Abramov in 1925 (Spicyn 1906, 191f., fig. 17; cf. Bulkin 1975, fig. p. 141). This mound group was related to a settlement complex consisting of the Ol’sanskoe gorodišče and the adjacent Ol’ša settlement, located two
kilometres downstream from the core settlement of Centralnoe gorodišče at present-day Gnězdovo (cf. Duczko 2004, p. 155 ff; Pushkina et al. 2012). Barrow no. 24 measured c. 35.5 meters in diameter and 6.5 meters in height and contained an extensive cremation layer. In it was found a bronze cauldron and three pots holding burnt bones. Additional unburnt animal bones point to a funeral feast subsequent to the cremation. No less than 1070 iron rivets and 50 iron nails from the cremation layer reveals the burial as a boat grave (Stalsberg 2001). Among the grave goods were a horse harness, a chain mail hauber k, remains of gold-thread decorated textiles, a penannular brooch, a ring pendant plus carnelian and glass beads. Furthermore there were gaming pieces, a comb, a key, a whetstone, a knife and the decorative boss itself, described as a solid “spherical bronze button” with Scandinavian pattern (Shirinskii 1999, p. 123f.; Duczko 2004, p. 170).

The solid bronze boss from barrow no. 24 (fig. 3:1) is 2.8 cm high and has a square base with four bent mandrels of which one today is broken apart. The four-sided cone narrows pyramidally towards the top and is terminated by a trapezoid knob crowned by a small disk. The decorative panels show a poorly understood bird-of-prey motif (Spicyn 1906, fig. 17) with striking parallels in the decoration of a couple of bronzed keys from Birka’s Garrison which depict superimposed falcons (fig. 3:2; Hedenstierna-Jonsson 2006, p. 12 ff). The schematic falcon motif – also often occurring in altered variants on Scandinavian-Varangian sword chapels (Müller-Wille & Klein-gärtn er 2011, fig. 8) – has been termed the “Birka falcon”, apparently representing a leading family or Birka’s entire warrior elite. Such stylised falcons also can be linked to the Rurikid falcon, the heraldic symbol of the princes of the Rus’ occurring on early Russian coinage (Hedenstierna-Jonsson 2006; Ambrosiani 2001; Lindeberger 2001).
Bird-of-prey ornaments are not entirely alien to Hedeby and its hinterland either. One bird chape with interlace decoration (Jankuhn 1934, p. 114, pl. 45:4; Paulsen 1953, 17 f [no. 12], fig. 7) belongs to the Scandinavian type or rather – following Mårta Strömberg (1951, p. 99) – the Valleberga type of Peter Paulsen’s “Germanic bird motif” group. There are also two poorly preserved falcon chapes of the Scandinavian-Varangian type (Paulsen 1953, 28 ff [nos 27–28]). Only one of them (no. 28) has been discussed in any detail (fig. 41): Jankuhn describes it as a heavily damaged bronze chape of 5.4 cm remaining height that is too poorly preserved to allow typological classification (1943, p. 122, pl. 2:g). Strömberg (1951, p. 237, fig. 6) however points to its resemblance to a mould from Birka (Sörling’s catalogue, SHM 5208:2497).

At the cemetery of Thumby-Bienebek on the southern shore of the Middle Schlei fjord – famous for its richly equipped chamber graves with wagon bodies – a drinking horn was found among the grave gifts of chamber grave 7. Its rim is decorated with sheet silver with an openwork step pattern and two falcon fittings mounted below (fig. 42a–b; Müller-Wille 1976, p. 41 f, pl. 32:8e, 8i, pl. 32:5, pl. 33:1). In 1976 Michael Müller-Wille (ibid. p. 42) related the falcons on this drinking horn to the bird depictions on openwork 10th century sword chapes mainly distributed in Eastern Scandinavia and Eastern Europe. Meanwhile, two types of bird-shaped pendant in the famous Hedeby die set seem to represent an eagle as an heraldic symbol of power that also has religious connotations to resurrection and ascension, being part of the Christian so-called Hiddensee art (Kleingärtner 2007, p. 87 f, p. 164 ff, pl. 28:1a–b).

Baroque brooches
The aforementioned decorative boss from barrow no. 24 in Gnězdovo’s Ol’anskaja mound group is not from a helmet. It is from a circular brooch with sculptural elements – one of the so-called Baroque brooches – as seen in the famous Gnězdovo hoard from 950–1000. It was found in 1867 at Centralene gorodišče (fig. 3:3a). According to the first report on the hoard by D.I. Prozorovskii (1869), it contained 106 silver and bronze objects and about twelve coins, most of them converted into pendants, of which the latest was struck in 953/954 (Pushkina 1998; 2004; Eniosova 2012, tab. 1). The hoard is an assortment of Scandinavian, Slavonic and Oriental artefacts (Gusčin 1936, p. 53 ff, fig. 11–15, pl. I–IV; Davidan & Jansson 1992; Duczkó 2004, p. 180 ff).

The hoard’s two baroque brooches have recently been studied by Michael Neiß (Neiß et al. 2013, p. 5 ff). Neiß demonstrates that the brooches consist of separate pieces: a circular brooch as base plate, a medial boss and four or six surrounding proximal bosses in the form of quadruped animals. These pieces are of different age, where some have been used and reworked until they were finally merged into this characteristic kind of patchwork jewellery. There are also abundant traces of repairs. While both the circular base brooch and the quadruped animals can be regarded as spoils, the medial bosses seem to have been made particularly for application onto baroque brooches. Neiß concludes that in the Scandinavian diaspora, these pieces of jewellery constituted valuable heirlooms and were important symbols of a Scandinavian identity in an otherwise alien environment.

As to the central bosses of the two brooches, they are quite different (Duczkó 2004, p. 184 f). The boss of brooch 994/92 is a cylindrical openwork structure decorated with four snake-like creatures and a round knob terminal. The boss from brooch 994/93 is more similar to the boss from barrow no. 24, and thus also to the piece from Hedeby under discussion here (fig. 3:3b). The central boss of brooch 994/93 is 2.5 cm high and has a round base. The cone is divided into four fields by framed, niello-filled ribbons with dotted décor. The fields each show a triquetra motif of which the arms pointing upwards have been elongated in order to reach up to the sculpted top of the boss. The top itself terminates in a convex central knob decorated with a circle filled with a cross and dots. According to observations by Ingmar Jansson at the Eremitage in St. Petersburg, the boss is fastened to the centre of the circular brooch by four attached rivets: a larger rivet at the centre and three at the edges. One of the latter has broken off and the remaining hole has clearly been sealed with filler metal in modern times.

Fornvännewen 109 (2014)
**Eastern connections**

It is currently not possible to determine if the Hedeby boss is from a helmet or a brooch. Either way, it indicates a connection with Eastern Europe.

Hedeby’s Eastern connections are in no way comparable in their extent to those of Birka after its distinct Eastward re-alignment about 850 (Ambrosiani 2002, p. 342). But the boss discussed here joins a small but distinct find horizon of artefacts from Rus’ and of Oriental proven-ance (fig. 4; Jansson 1988; Müller-Wille 1988, p. 774 ff).

Oriental textiles and garments include silk, tablet woven bands and passementerie (Hägg 1991). In *Nyåls saga* (chapter 31) King Harald Bluetooth gives a *gerzkan hatr* – a hat from Garðariki or a “Russian hat” – to Gunnar of Hlíðarendi when the latter leaves Hedeby (Falk 1919, p. 92f.; Toplak 2011, p. 66). Such hats are known from grave Bj. 581 and Bj. 644 at Birka (Arbman 1942, p. 94; 1943, p. 188 ff, 221 ff; Geijer 1938, p. 146 f, fig. 42) and from Shetovytysya in Chernihiv’ska oblast, Ukraine (Androshchuk & Zotsenko 2012 p. 335 fig. 18). From Hedeby’s harbour come crêpes-like fabrics that once belonged to bicoloured baggy breeches or harem pants which – if not Arabic – may have a Varangian “south-east European background” (Hägg 1984, p. 34 ff, fig. 17–21, p. 164 ff, note 48). (A derivation for these breeches from Celtic *bracae* via Scythian trousers or Parthian riding-breeches used in the Roman army may also be conceivable; Hägg 1984, p. 166 ff.).

The Oriental textiles and garments are accompanied by three buttons belonging to caftans or pendant belt pouches (Jansson 1988, p. 666; Anspach 2010, p. 58 ff), a belt pouch fitting (Anspach 2010, p. 61) and a few Oriental belt fittings (Janson 1986, p. 83; 1988, p. 612; Maixner 2010, p. 148, fig. 170). Hedeby has also yielded a Kievan resurrection pottery egg (Müller-Wille 1988, fig. 63) and an Old Bulgarian or Khazar runic inscription on an Irish triangular bronze bowl (Harmatt 1984; Laur 1993). Four spindle whorls made of red Ovruč pyrophyllite schist point to the area north-west of Kiev (Gabriel 1988, p. 199 ff, note 363; Maixner 2010, fig. 162), while a red-orange sherd with engraved horizontal lines comes from a Byzantine amphora (Kelm 1997, fig. 1). A Byzantine lead seal of the *patrikios* Theodosius, head of the imperial *vestiarion* – the public wardrobe – attests to diplomatic contacts with Byzantium, while a donative dirham of Caliph al-Mu’tamid reveals official contacts with Abbasid Baghdad (Hilberg 2009, p. 92). If nothing else the carnelian beads may also point to the eastern parts of the Caliphate in the Caucasus or Gujarat in Western India (Hepp 2007) whereas both mercury and two thick-walled mercury flask fragments point to Central Asia (Janssen 1987, pl. 28:6–7; Schietzel 2002; Steuer et al. 2002, p. 159 ff). Addi-
tional relevant but as yet unpublished finds have been made during comprehensive metal detecting surveys from 2003 onwards (von Carnap-Bornheim & Hilberg 2007, p. 210 ff).

Finally a KG 4 Hedebey coin (c. 825) is an alien component in the otherwise pure dirham hoard from Kislaiia west of Gnězdovo. It illustrates a very early connection from the Eastern viewpoint (Suchodolski 1989, p. 425 ff). Based on the Bavarian Geographer’s table of nations, H.-W. Haus-sig (1987, p. 530 f) assumes an almost equally old trade route leading from Hedebey to Kiev. With the land of the Danes as a point of departure, the mid-9th century document *Descrptio civitatum et regionum ad septentrionalem plagam Danubi* lists tribes and strongholds east of the Frankish Realm (cf. Lübke 2004, p. 22). Following the southern and eastern coast of the Baltic Sea towards the Volga it traces a course down to the Caspian Sea and the foothills of the Caucasus, including the Steppe north of the Black Sea and on to the Danube’s delta. Thence the compilation follows the eastern border of the Frankish Realm along Rivers Saale and Elbe and back to its point of departure (ibid. p. 24; cf. Herrmann 1986, fig. 1). Haus-sig suggests a trade route from Hedebey and the West Slavonic tribes of the Obotrites and Veleti to Bohemia and Moravia and via the Dukla pass to the tribes of the Khazar-controlled Polanes, Rad-michians and Viatychians (Haus-sig 1987, note 16).

**Continued High Medieval contacts**

Hedebey’s Eastern connections survived the move of the town from the Haddebeyr Noor to Medie-val Schleswig at the northern shore of the Schle fjord (Hilberg et al 2012). From Schleswig there are for instance shoes embroidered with silver thread (Schnack 1992, p. 77), a miniature axe amulet, a wooden saddle frame, another Kievan resurrection egg and spindle whorls of Ovruč schist, all pointing towards the Rus’ (Vogel 2002, p. 369 ff). A pagan anthropomorphic “household god” from the latest excavation at Schleswig-Hafenstrasse 11 has close parallels from Medieval Novgorod (Radtke 2010). And again, amphora sherds testify to prevailing contacts with Byzantium (Vogel 2002, p. 373), as do fragments from luxury vessels of blue glass with golden décor (Steppuhn 2002, p. 27 ff, fig. 9:4–6, colour pl. 1:1–3).

Written sources seem to confirm this connection, in particular with the town of Novgorod. Adam of Bremen, in his *Gesta Hammaburgensis Ecclesiae Pontificum* written around the year 1076, describes a sea route leading from *Slaeswig* [Schleswig] or else *Aldinburg* [Oldenburg] via *Jumne* [Wolin] to *Ostrogaard Razzie* [the Rus’] with its capital *Chive* [Kiev] (Adam II: 22). In his description of the Nordic islands Adam informs us that from the harbour of *Slaeswig* – which is also called *Heidiba* [Hedebey] – ships are being sent to Scclavania [the Slavonic coast], *Suedia* [Sweden], *Semlant* [the Sambian peninsula] and *Gracia* [Russia] (Adam IV: 1). These Ostrogaard journeys, probably starting out from Schleswig, took about one month given fortunate winds (Adam IV: 11).

The importance of Schleswig’s economic interests in the Novgorod area during the 11th and 12th centuries are clearly illustrated by the double wedding around 1120 of the Danish prince Canute Lavard, Duke of Schleswig, and his half-brother Eric II the Memorable, later a Danish king, with Ingeborg and Malmfrid, daughters of the Nov-gorod Duke Mstislav I Vladimirovich the Great (Radtke 2002, p. 395).

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**References**


Forværen 109 (2014)
Summary

In 1949 the Schleswig lawyer Otto von Wahl dug some trial pits along the shoreline of Hedeby harbour, finding not only pile remains but also quite a substantial assemblage of artefacts. In an article published the following year he reports on the outcome of his work quite thoroughly. While most of the finds were only described, three exceptional ones were pictured, too. The figure shows a penannular bronze brooch, a bead necklace and a small conical bronze boss. Only the brooch came into the collections of a museum and entered the scientific debate. The bronze boss has not previously been discussed.

A somewhat smaller bronze cone has been found at Birka’s Garrison and convincingly interpreted as the top spike of a conical helmet. Pointed tips on helmets are a characteristic feature of the so-called spherical helmets as known from Černigov and Gnězdovo, but are also depicted in Byzantine contexts. However, there are also differences between the Hedeby and the Birka cones, not least concerning how they were attached.

The Hedeby piece has another parallel in a decorative bronze boss from Gnězdovo, found in the large barrow no. 24 of the Ol’šanskaja mound group excavated in 1905. On its sides the Gnězdovo boss is decorated with stylised falcons. As the Birka falcon this motif is well known and has been connected to leading family or warrior elite of Birka. But it can also be linked to the Rurikid dynasty of the Rus’. On a sword chape of the Scandinavian-Varangian type and drinking-horn fittings, this Eastern falcon iconography occurs at Hedeby and its hinterland.

Both bronze bosses belong to baroque brooches similar to two specimens from the famous Gnězdovo hoard of the period 950–1000. These round brooches with sculptural elements in shape of quadruped animals surrounding a medial boss are patchwork-like jewellery that merges parts of different age and origin. While the boss of brooch 994/92 is of a different type, the one on brooch 994/93 shows closer similarities to the bronze objects from barrow no. 24 and Hedeby. The silver cone has a round base that is divided into four fields with a triquetra motif.

Though Hedeby’s Eastern connections are not comparable in extent to those of Birka, the conical bronze boss from the harbour seems to belong to a small but distinct find horizon of Eastern artefacts. The finds from the Rus’ and of Oriental provenance presented and a mid-9th century trading route from Hedeby to Kiev discussed. The trade connections survived the move to High Medieval Schleswig, where – apart from Eastern artefacts found there – political marriages with the Rurikid dynasty also clearly illustrate the importance of the Novgorod area for Schleswig during the 11th and 12th centuries.