

Sukow Ware at Vester Egesborg, Denmark?

The Question of Import, Inspiration or Coincidence in Viking Age Pottery Style

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ABSTRACT

During archaeological excavations at Vester Egesborg, a landing site from the Late Germanic Iron Age and Viking Age was found. The find material at the site was large and varied, providing proof of contacts with other places in the southern Baltic Sea area. This includes a significant number of sherds looking like Early Slavic Sukow pottery, which suggests contacts between Slavs in Mecklenburg and the Scandinavian population in the Early Viking Age. It is difficult to distinguish between Sukow Ware and contemporary South Scandinavian pottery in terms of shape and fabric, but the relatively large portion of rim sherds looking like the Slavic pottery type in the ceramic assemblage from Vester Egesborg posed the question of whether Sukow Ware has been imported to the site. ICP-MA/ES analyses of a sample of ceramic sherds suggest the existence of a network including the regions of Scania, Holstein and Schleswig. Evidence for the production of Sukow Ware at Vester Egesborg or in southern Zealand cannot be provided unambiguously.

ARTICLE HISTORY

Received

22 August 2022;

Accepted

01 February 2023

KEYWORDS

Viking Age; Vester Egesborg; ICP-MA/ES analyses; Baltic Ware; Sukow Ware; South Scandinavia; Cultural exchange

Introduction

In its broadest sense, ‘Baltic Ware’ is a term covering pottery found in Viking Age South Scandinavian context manufactured in shapes and decoration styles originating in the Slavonic territories south of the Baltic Sea. From the 11th century, Baltic Ware of Late Slavonic pottery style played an important role in the ceramic assemblage of the eastern part of the Danish kingdom during the Viking Age and Medieval Period, i.e., Bornholm, Falster, Scania, Lolland, Møn, Zealand, leading some scholars to only use the term for those particular groups of pottery (Naum 2008; Roslund 2001). However, the introduction of Baltic Ware commenced at an earlier point in time. Coil-made and customarily comb-decorated Early and Middle Slavonic pottery types like Feldberg, Fresendorf, and Menken-dorf are occasionally present in burials and settlements of various sorts in Zealand, Denmark, and Scania, Sweden, during the 9th and 10th century (Brorsson 2003a, 2003b; Callmer 1988; Ulriksen 2018, 202-210). Late Slavonic pottery made on a potter’s wheel and decorated with single horizontal

grooves and wavy lines seems to have been introduced in the later part of the 10th century and are far more frequent than Early and Middle Slavonic types (Ulriksen 2018, 209).

Missing a local South Scandinavian chronology for Baltic Ware, the ceramic phases developed in Northeast Germany are used as a rough dating frame in Denmark and Scania (Brorsson 2003a; Larsen 2010; Liebgott 1977, 131-155, 1980, 136-152). According to the development of the Slavonic pottery south of the Baltic, the Early Slavonic types date to the 7th-9th centuries, the Middle Slavonic types primarily belong to the 10th century and the Late Slavonic types are dated to the 11th-14th centuries (overview in Kempke 2010). In Denmark and Scania, the identification of Baltic Ware relies on the decorative elements, the rims made with a template and the use of a cavalet (slow-wheel) or a potter’s wheel. All these elements are contrasting the partly concurrent, local undecorated coiled flat-based South Scandinavian pottery type produced between the 6th century and the early 11th century (Brorsson 2003a; Madsen 1991; Selling 1955; Ulriksen 2018, 188-201) (Figure 1).





Figure 1. Example of a flat-based South Scandinavian ceramic vessel from Vester Egesborg (A2428x32) (Photo: Jens Olsen/Museum Southeast Denmark).

Interestingly, among this poorly dated pottery type are vessels, which have shapes and rim profiles similar to the Early Slavonic Sukow Ware and Undecorated Feldberg Ware (Brorsson 2010, 24; Madsen 1991; Nielsen 1985; Ulriksen 1998, 16 with further references; Wietrzichowski 1990). However, as these sherds are retrieved by excavating various types of settlement sites in Zealand and Scania and as their colour, tempering and firing are not particularly distinctive, they are typically catalogued as locally produced pottery either labelled ‘settlement pottery’ or ‘South Scandinavian pottery’. Accordingly, for years it has been an almost neglected question whether pottery of Sukow Ware and Undecorated Feldberg Ware may have been imported to or produced in Viking Age South Scandinavia. Lately, excavations at a landing site in South Zealand have provided a collection of rim sherds similar to Sukow Ware and Undecorated Feldberg Ware in an unusual quantity, thus posing the question if these pottery styles spread across the Baltic Sea at an earlier date and in larger numbers than previously believed.

Sukow Ware and Undecorated Feldberg Ware

The Sukow Ware and the Undecorated Feldberg Ware have been discussed since the 1960s as regards to their origin, their relative chronological and typological position within the Slavonic pottery types, their date and the question of their interrelations (Donat 1984; Kempke 2010, 235; Schuldt 1964; Wietrzichowski 1990, 37-40 with further references).

In 1990 the German archaeologist Frank Wietrzichowski published an article analysing the Early Slavonic ceramics of the Sukow type and Undecorated Feldberg type. The large assemblage of sherds had been found in settlement pits within the borders of present-day Mecklenburg-Vorpommern, and Wietrzichowski defined four shape-groups based on the profiles of the rims and the bodies of the vessels (Wietrzichowski 1990, 40-44) (Figure 2).

Shape-group 1 is Sukow Ware and is characterised by short everted or vertical rounded rims and a slightly S-shaped body profile with a vaguely pronounced shoulder on the upper third of the body. The sherds have a crude or medium coarse tempering and are relatively poorly fired.

Shape-group 2 is also Sukow Ware looking more or less like Shape-group 1, but the rims are wiped flat and without the use of a template. Both tempering and firing are quite varied.

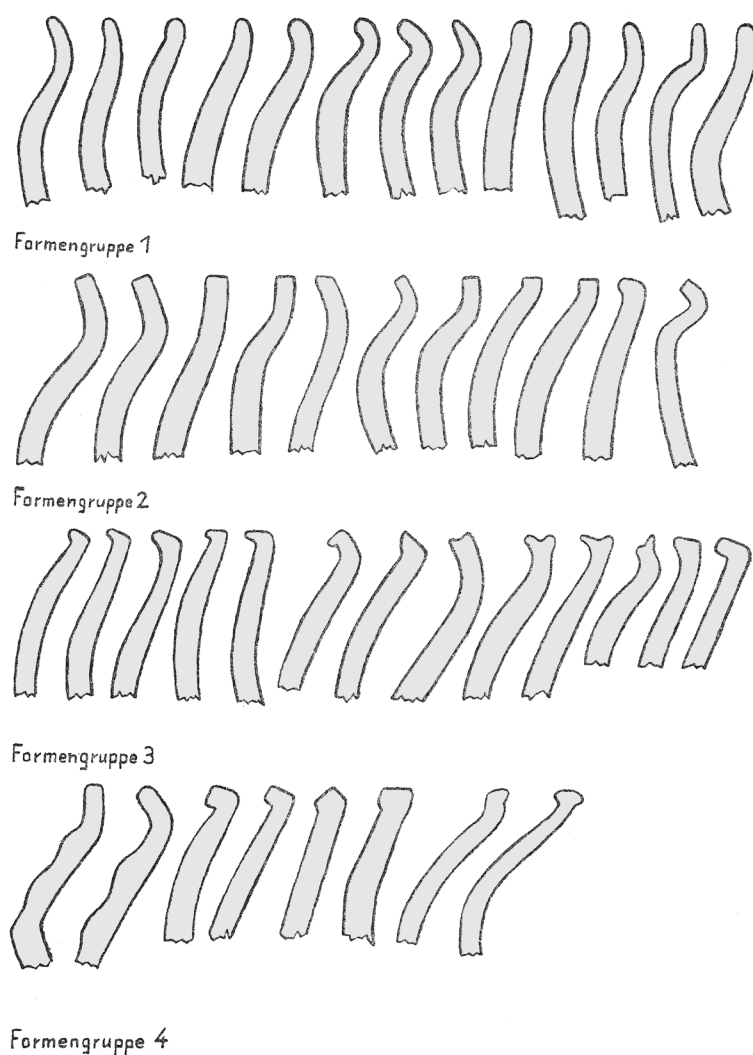
Shape-group 3 is ascribed to the Undecorated Feldberg Ware. The rims are sharply everted, typically with a juted lip. The body is tending towards a biconical shape, while the tempering and firing mostly resemble the Sukow Ware.

Shape-group 4 is also Undecorated Feldberg Ware with short, sharp-profiled and everted rims. The tempering is medium-coarse to fine, while the firing is described as good or very good.

It ought to be added that some Sukow vessels have been decorated with circular stamps or crudely incised lines (Wietrzichowski 1990, 54-59).

According to Frank Wietrzichowski (1990, 77-78), the dating frame of the Sukow pottery in Mecklenburg-Vorpommern is *c.*AD 650-750, mostly relying on the connection between a brooch of Fenno-Scandinavian origin and Sukow sherds in a settlement pit from Benzin (cf. Gralow and Parschau 1984). However, the time of settling of the

Figure 2. *Formengruppe* 1 and 2 are Sukow Ware, and *Formengruppe* 3 and 4 are Undecorated Feldberg Ware. After Wietzichowski 1990, Abb. 1.



Slavonic people along the South Baltic coast of present-day Northeast Germany has more recently been estimated to the last third of the 7th century, even though dendro-chronology of settlement sites do not reach further back in time than the early part of the 8th century (Biermann 2019, 22-23; Biermann et al. 1999, 236-240; Brather 1996, 14-17). Dendro-datings from four locations in Holstein belong to the first half of the 9th century (Brather 1996, 15; Kempke 2010, 247). In Wolin, on the Polish coast, Sukow Ware is scarce and belongs to the period between the end of the 8th century and the beginning of the 9th century (Stanisławski 2012, 153). At Szczecin, on the river Oder, a few sherds of Sukow Ware have been retrieved from the Schloßhügel Phase I, dendro-dated between the early 8th century and the middle of the 9th century (Dworazyk 2003, 258). Located outside the Slavic homelands, Hamburg holds Sukow pottery in a 9th century context (Kempke 2014).

Generally, the chronology of Slavonic pottery types is somewhat imprecise. Counting sherds, the heyday of a particular type can be deduced, but both the time of introduction and the time of fading-out may be blurred for periods of 50-100 years (cf. Gabriel and Kempke 1991, Abb. 14-15; Wietzichowski 1990, 74). The estimated introduction of the Sukow Ware in the decennia shortly before AD 700 appears to be fairly probable, while there seems to be regional differences considering the durability of the type resulting in considerably overlapping sequences between types that basically constitute different chronological phases (Kempke 2001, Abb. 2, Abb. 3; Ulriksen 2018, 202).

It has been suggested that the Undecorated Feldberg Ware was introduced in Mecklenburg-Vorpommern in the second half of the 7th century (Wietzichowski 1990, 77). This date relies on a context where the pottery was found together with a South Scandinavian bird-shaped brooch dating



Figure 3. The location of Vester Egesborg, Denmark, is marked with a red dot.

from *c.*AD 650-725 and the fact that Sukow Ware always is found in layers stratigraphically earlier than the Undecorated Feldberg Ware. Even though dendro-dating of contexts with Feldberg pottery has been published, it is not pointed out if there are Undecorated Feldberg Ware among the sherds (Biermann 2019, 22-23; Brather 1996, 143-144). Nevertheless, an introduction before AD 700 is not likely for this pottery type, and the contextual dating relying on Scandinavian brooches are not in conflict with a date of introduction during the early 8th century. The Undecorated Feldberg Ware develops into the decorated Feldberg type belonging to the 8th and 9th century (Wietzichowski 1990, 38), but it has been found in 10th century contexts too (Brather 1996, 145, Abb. 111).

The Landing Site at Vester Egesborg

The question of the presence of Sukow Ware and Undecorated Feldberg Ware in a South Scandinavian context was re-vitalised when analysing pottery from the landing site of Vester Egesborg in southern Zealand (Ulriksen 2018, 186-215). Here, 151 rim sherds of a total of 1250 rim sherds are comparable to rims of the Sukow type. Hitherto, the possible presence of Undecorated Feldberg

Ware in South Scandinavia has been overlooked, but in the pottery assemblage from Vester Egesborg there are 51 rim sherds comparable to Undecorated Feldberg Ware.

The landing site at Vester Egesborg is situated on the innermost coast of the *c.*5 km long and very shallow Dybsø Fjord (Figure 3). Through a narrow passage with a strong current, the fjord is connected to more open and deeper waters of Smålands-havet and from here, the fairway to The Seven Seas is open. Vester Egesborg was established in the late 6th century AD and abandoned in the second part of the 10th century. It operated as a production site for textile and iron and as an assembly site for mustering ships and crews for expeditions (Ulriksen 2006, 2018). The excavation campaigns have revealed 120 pit houses and 28 three-aisled houses as well as a large number of artefacts – *c.*18,500, dating from the era of the landing place. They were retrieved mainly when excavating the pit houses and the rubbish pits. A cultural layer covering parts of the site proved to contain objects too. Due to limited economic resources, it was not possible to excavate the cultural layer as thoroughly as the features, and only partial dry sieving of selected areas were conducted.

The preservation conditions were good and many artefacts made of bone, antler, iron, copper



Figure 4. Stamp-decorated sherds from Vester Egesborg. a) A1645x2 and b) A3055x25 (Photo: Jens Olsen/Museum Southeast Denmark).

alloy and silver were recovered. However, the overwhelming part of the find material was sherds of pottery with more than *c.* 13,500 individual pieces. Usually, the sherds were rather small but also larger parts of vessels were present.

The Pottery Assemblage

In the regions of Scania, Zealand and the other East Danish islands, the typical flat-based, South Scandinavian pottery type is actually rather uncharacteristic, often with an inaccurately manufactured inverted rim and without any kind of decoration (cf. Figure 1). Consequently, it offers no obvious opportunity for a detailed chronology.

The tempering of the clay, the firing temperature and the look and ‘feel’ of the surface of the South Scandinavian pottery can be very much like that of Early and Middle Slavonic types of pottery. Accordingly, it can be almost impossible to identify an undecorated sherd from the body of a vessel as either South Scandinavian or Baltic Ware of Early/Middle Slavonic types, which has not been worked on a cavallet or a potter’s wheel. At Vester Egesborg, a focus on rim sherds provides a more reasonable representation of the relative number of South Scandinavian pottery (85 %) and Early and Middle Slavonic pottery (15 %). The spatial distribution of the Early and Middle Slavonic pottery types covers most of the site, but 50 % of the 524 sherds were found in only five pit houses of which four were located quite close to each other (Ulriksen 2018, Fig. 357).

Limited in number but easily recognizable are 17 sherds of stamp-decorated pottery. In South Scandinavia stamped decoration is known from the 6th century AD, probably inspired from Anglo-Saxon England, Saxony and Frisia. From the 8th century, however, stamped pottery most likely is either Slavonic or inspired by Slavonic potters (Ulriksen 2018, 210-213 with references). Large, stamped circles on sherds from Vester Egesborg are associated with Sukow Ware and Feldberg Ware while circle-with-cross stamps are found on Middle Slavonic Menkendorf type vessels (Figure 4).

Within the 1,250 rim sherds initially identified as South Scandinavian pottery, inverted rims clearly dominate. Amongst the vertical or short everted rims there are sherds looking very much like Sukow Ware (151 sherds) and Undecorated Feldberg Ware (51 sherds). If these sherds originate from the Slavonic areas or if they belong to vessels manufactured at Vester Egesborg by Slavonic potters, it would prove the presence of Baltic Ware in Denmark at an earlier point in time than previously realised. But as the surfaces, tempering and firing are almost indistinguishable from the South Scandinavian sherds, a sample of 14 rim sherds were chosen to be scrutinized further using the chemical ICP-MA/ES analysis in an attempt to point out the origin of the clays of the sherds (Figure 5).



Figure 5 (previous page). The sampled sherds. South Scandinavian pottery: a) A21x33, b) A21x75, c) A245x41, d) A817x8, e) A1320x5). Sukow-like sherds: f) A4x12, g) A4x13, h) A4x27, i) A2749x116b, j) A2750x9d, k) A3071x18. Undecorated Feldberg-like sherds: l) A2749x114b, m) A3063x43. Feldberg-like sherd: n) A1320x24 (Photo: Jens Olsen/Museum Southeast Denmark).

ICP-MA/ES Analyses of the possible Sukow and Feldberg Sherds

During the last decades, ICP-MA/ES (Inductively Coupled Plasma-Mass Atomic Emission Spectrometry) analysis of pottery sherds have been increasingly used to determine the origin of ceramics (e.g. Brorsson 2013; Little et al. 2004). ICP-MA/ES is a chemical analysis that examines the ceramic sherds' chemical identity by measuring a vast spectrum of elements down to extremely low concentrations (Golitko and Dussubieux 2016).

The trace elements in particular (Al, Ca, Ce, Co, Cr, Ga, La, Mg, Mn, Ma, Sr and V) were measured from the sample of 14 sherds from Vester Egesborg, and the results are used to point out the geographical origin of the clay from which each pot was made. The selection was based on previous experience of reliable discriminating processing (e.g. Thompson and Walsh 1989). It is fundamental to stress that this technique produces data about the frequency of chemical and trace elements from both the clay and the temper that have been used to produce the ceramics; it does not allow specialists to distinguish between the temper and the clay (e.g. Brorsson 2013, 61).

To carry out the analysis, samples of only about 0.3 g of material from the chosen sherd are necessary. Thus, even if the method is destructive it is not particularly intrusive, especially if the studied pieces are from fragmentary and non-diagnostic fragments. In order to perform the analysis, the samples are ground into a powder, which is then screened by mass spectrometry. The ICP-MA/ES analyses provide a large amount of data, which is statistically processed. The data is therefore sorted out in a factor and a cluster analysis, which combine samples of the same chemical composition. Reference data enables interpretations of likely geological and geographical origins (e.g. Little et al. 2004) and the samples from Vester Egesborg

have been compared with clays and ceramics from the Ceramic Studies' proprietary database, which contains information for *c.*14,000 samples from mainly northern Europe. Ceramics of different chemical composition are not made using raw material collected in the same region. Furthermore, it is important to consider that the ICP-MA/ES analysis is not biased by the treatment of the clay. In other words, a coarse or finely worked clay collected from the same place will be placed into the same ICP group, while two fine clays from different places will be separated.

ICP-MA/ES analyses have been carried out on 14 different sherds/vessels of which six are suggested to be of Sukow type, two of suggested Undecorated Feldberg type, while one sherd is of Decorated Feldberg type and five are from South Scandinavian pots (Figure 6). Of primary interest in the study is to determine if the likely Sukow type vessels and the Feldberg type sherd were made locally at Vester Egesborg or at sites in the Slavonic region of the southern Baltic coast. As a reference material for local ceramics, sherds from South Scandinavian-type vessels from Vester Egesborg were also analysed.

The ICP-analyses show that the majority of the vessels are similar to each other (Figure 7), i.e., they are made from raw materials with the same chemical composition. This means that the clays and rocks were collected in the same region, which is most likely within a radius of maximum *c.*20 km from Vester Egesborg. Since 11 out of 14 sherds have been made from similar material, it is also most likely that the vessels were produced by raw materials collected somewhere in the vicinity of the landing site. Theoretically, the vessels may have had another origin, but in that case the 11 vessels of Sukow-like, Undecorated Feldberg-like, and South Scandinavian types would all have been made at another site and subsequently also have been transported to Vester Egesborg. The latter interpretation is rather unlikely since most Viking Age pottery is considered to have been made locally (Brorsson 2010). However, the dendrogram in Figure 7 shows that there are several different ware groups within the Vester Egesborg pottery. Samples nos. 6, 9, 10 and 14 in the upper part of the dendrogram are very similar, and these vessels were most likely made out of raw materials from the

Sample no.	Ceramic type	Feature ID	Context	Date of context
Vegeborg1	Sukow	A4x12	Pit house	8 th -10 th century
Vegeborg2	Sukow	A4x13	Pit house	8 th -10 th century
Vegeborg3	Sukow	A4x27	Pit house	8 th -10 th century
Vegeborg4	Sukow	A2749x116B	Pit house	6 th -10 th century
Vegeborg5	Sukow	A2750x9D	Pit house	9 th -10 th century
Vegeborg6	Sukow	A3071x18	Well	c.AD 1500 *)
Vegeborg7	Feldberg decorated	A1320x24	Pit house	9 th -10 th century
Vegeborg8	Feldberg undecorated	A2749x114B	Pit house	6 th -10 th century
Vegeborg9	Feldberg undecorated	A3063x43	Pit house	8 th -10 th century
Vegeborg10	South Scandinavian	A21x33	Pit house	8 th -10 th century
Vegeborg11	South Scandinavian	A21x75	Pit house	8 th -10 th century
Vegeborg12	South Scandinavian	A245x41	Pit house	8 th -9 th century
Vegeborg13	South Scandinavian	A817x8	Pit house	9 th century
Vegeborg14	South Scandinavian	A1320x5	Pit house	9 th -10 th century

Figure 6. ICP-analyses were carried out on 14 sherds from different vessels found at Vester Egesborg. *) The find material in the fill of the well A3071 were of 6th-10th century types, while the remains of a wooden barrel in the bottom of the well were dendro-dated to c.AD 1500.

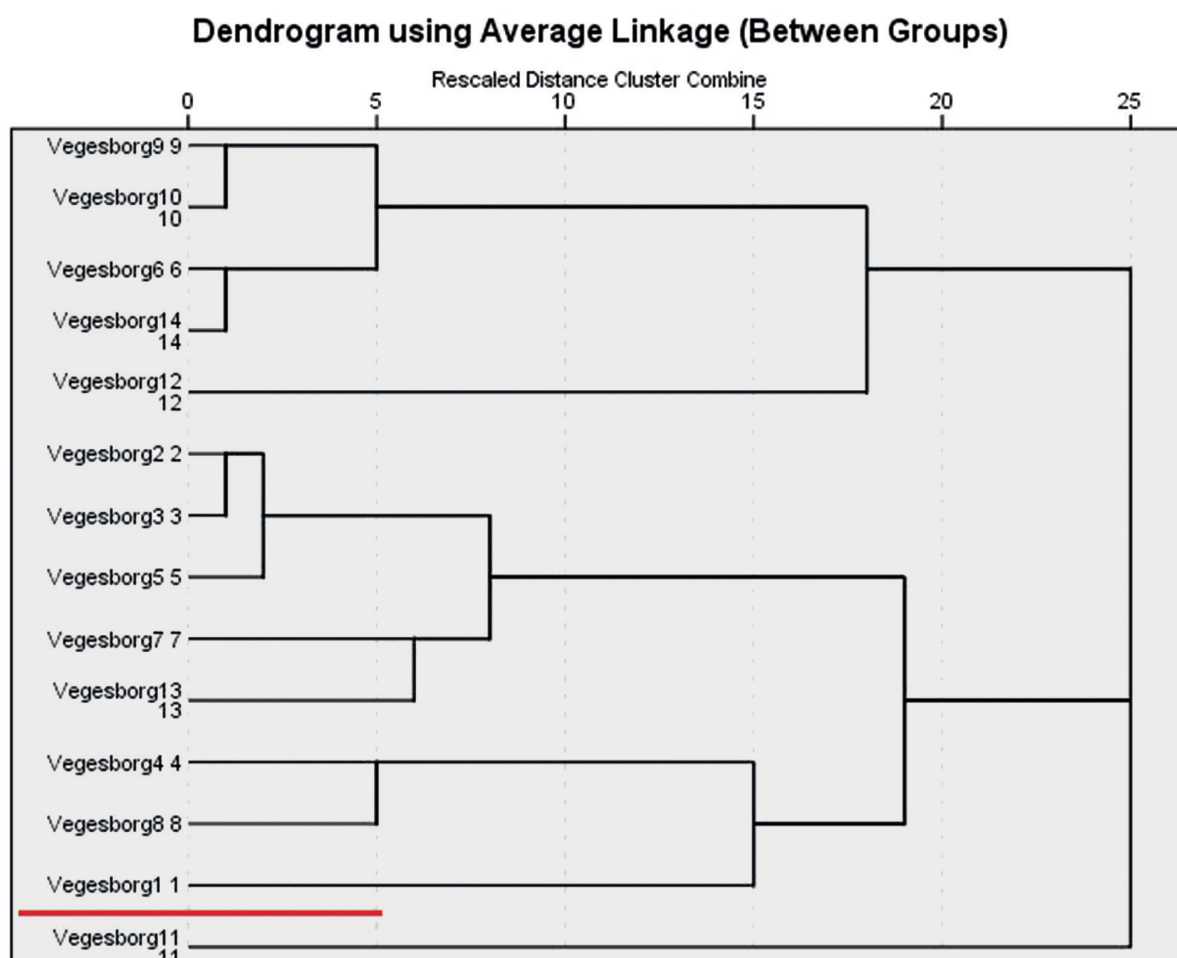


Figure 7. ICP1. The sample that differs most from the others is sample Vegeborg11, a South Scandinavian vessel, which seems to be from Scania, southern Sweden.

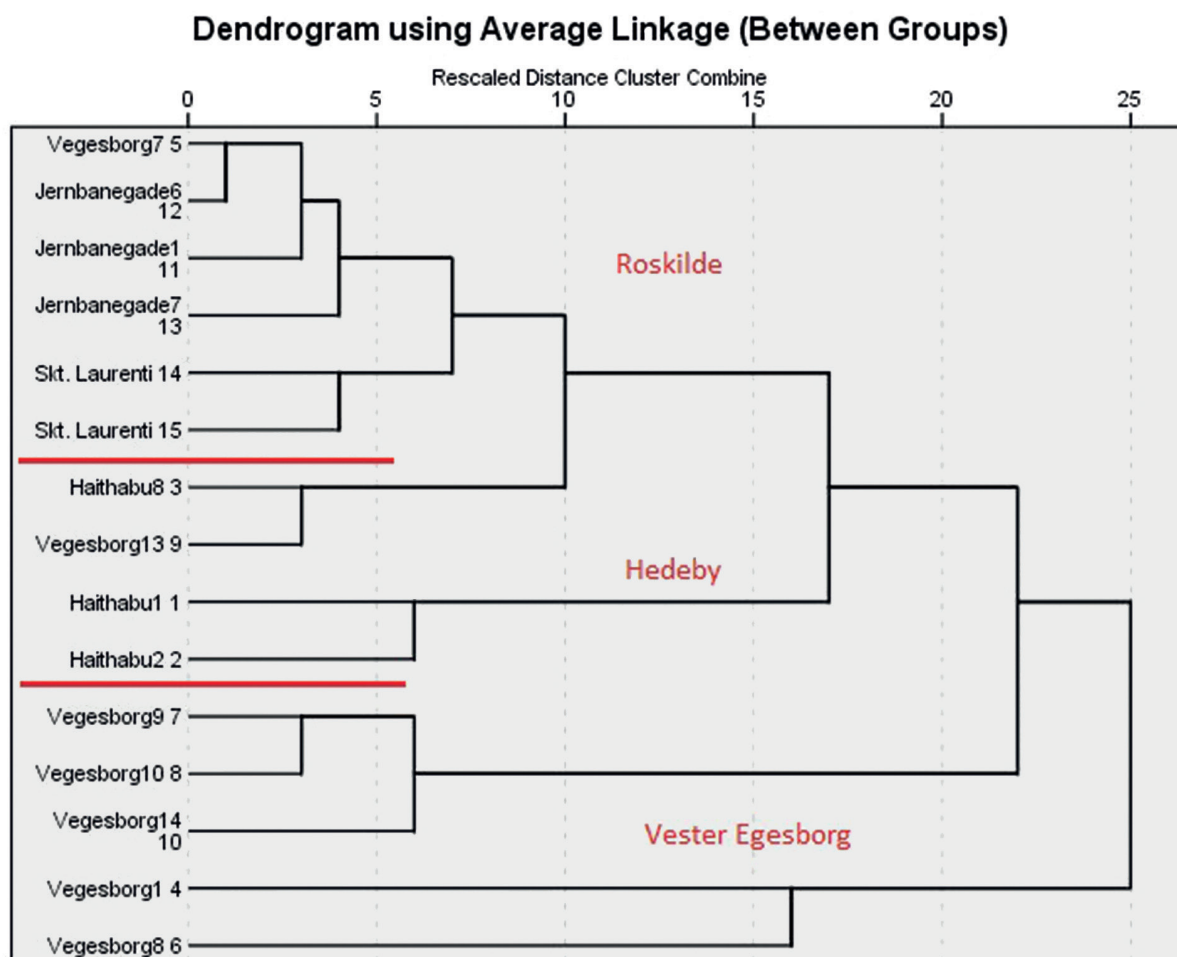


Figure 8. ICP2. A Feldberg vessel from Vester Egesborg (sample Vegesborg 7) is most similar to ceramics from the Roskilde region on Zealand. A Scandinavian pot (sample Vegesborg13) is made of the same fabric as ceramics from Hedeby.

same clay source. Another group consists of samples nos. 2, 3 and 5, indicating that these vessels were made out of clays from another clay source. Thus, the vessels can be regarded as locally made when compared with contemporary vessels from southern Denmark, Bornholm, southern Sweden and northern Germany.

In contrast, three finds are probably non-local. Sample Vegesborg 11, belonging to a South Scandinavian vessel, differs markedly from the other finds with a completely different fabric (cf. Figure 7). Chemically, this pot closely resembles pottery and clays from the Ystad region in southern Scania. Also, a Decorated Feldberg vessel, sample Vegesborg7, has most similarities with pots and brick from the Roskilde area in central Zealand (Figure 8). The distance from here to Vester Egesborg is only 70 km and, during the Viking Age, it is very likely that people from different places on Zealand travelled that distance rather frequently (Ulriksen

et al. 2020, 5-8). The fabric of one of the South Scandinavian vessels, sample Vegesborg13, has more similarities with ceramics found in Hedeby than with the locally made from Vester Egesborg (cf. Figure 8). The distance between the two sites is about 170 km by sea route and, considering the overall find material from Vester Egesborg, contacts between the two during the 9th and 10th century are rather likely (Ulriksen 2018, 409-411).

Discussion

The ICP-MA/ES analyses of the pottery from Vester Egesborg indicate that 11 of the 14 sampled sherds were made of local clay and thus manufactured on site or more likely in one or more settlements in the vicinity. Nevertheless, they do not consist of exactly the same type of clay and they form different groups showing that the local fabrics were

not identical according to its chemical composition. Beforehand, it was expected that the five rims of South Scandinavian type pottery were more or less local. The analyses confirmed this for three of them, while two sherds seem to have different origins: One from the area around Hedeby and one from the Ystad region in southern Scania. The six sherds with Sukow-like rims are all among the apparently local production and so are the two sherds of Undecorated Feldberg type. The only Decorated Feldberg type sherd in the sample was anticipated to come from the Slavonic areas on the southern Baltic coast, but surprisingly it turned out to originate from the Roskilde region on Zealand. It indicates that vessels of Slavonic-type could have been made at a settlement outside the Slavonic core area and transported to another non-Slavonic settlement.

The results raise further questions regarding pottery use and cultural exchange in the Viking Age. The landing site of Vester Egesborg sits in a location with easy access to the Baltic Sea and in a relatively short distance – less than 24 hours of sailing in fair wind – from the Slavonic coastal areas of modern-day north-eastern Germany and western Poland. The proximity and the tradition of cross-Baltic relations through centuries between south-eastern Scandinavia and Eastern Europe do support the possibility of the exchange of goods, ideas and people (Bogucki 2013; Callmer 1992; Hedeager 2011, 191; Lund Hansen 1995, 413, 2011; Näsman 1984, 99; Ulriksen 2018, 385-391). Thus, contacts between the West Slavonic area and Zealand in the 8th and 9th century are very likely, and it is not surprising that connections to the Hedeby area from the 9th century onwards can be witnessed too (Ulriksen 2018, 384-391). Additionally, the sherd of South Scandinavian type, which chemically is comparable to pottery from Scania, indicates an expected regional network during the Viking Age. Scandinavian ships naturally travelled within the Danish kingdom and mustering at the landing site of Vester Egesborg may be one of the reasons why we find pottery from Scania there.

Concerning the overall ceramics assemblage at Vester Egesborg, the identification of the rim sherds of the Sukow-like type and Undecorated Feldberg-like type considerably affects the balance

between the rim sherds of South Scandinavian type and Baltic Ware. Before sorting out the assumed Sukow Ware and Undecorated Feldberg Ware, the South Scandinavian type dominated by 85 % of the identified rims, while the Early and Middle Slavonic types constituted 15 % of the rim sherds. Pottery assemblages from Moesgård, Øm-Foldager, Selsø-Vestby, Gershøj, Gevninge-Nødager and Kirke Hyllinge-Stensgård, which are all Viking Age settlements with pit houses on Zealand comprise between 1 and 9 % of Middle Slavonic-like types. This demonstrates that the amount of Middle Slavonic-type pottery at Vester Egesborg is significant compared to the other sites mentioned (Ulriksen 2018, 209). This is also the case when extracting the rims that may belong to Sukow Ware and Undecorated Feldberg Ware. Together they constitute 16 % of the total assemblage of rim sherds, further reducing the percentage of clearly South Scandinavian rim sherds to 69 %.

To investigate the possible presence of the Sukow type and the Undecorated Feldberg type at other comparable locations, samples of ceramic rim sherds from five Viking Age settlement sites on Zealand have been surveyed visually. The survey includes the residential sites of Tissø and Strøby-Toftegård, the settlement at Gevninge-Nødager, affiliated to the residential site of Lejre, the production site at Kirke Hyllinge-Stensgård and the coastal landing site of Vedbæk-Stationsvej, all being active during the 7th-10th century. At all sites, rim sherds comparable to Sukow Ware and Undecorated Feldberg Ware were present, though in small numbers (Ulriksen 2018, Ch. 6, note 568).

Following the analyses arises the question of whether the size of the apparent Slavonic footprint on the pottery assemblage of the 8th century to the first half of the 10th century may imply the presence of Slavs in South Scandinavia. Such a situation has been proposed relating to Late Slavonic pottery types being introduced to the region during the second part of the 10th century and already in the 11th century constituting a significant portion of the pottery assemblages in all types of settlements in south-eastern Scandinavia (Brorsson 2000, 2003b; Liebgott 1980; Madsen 1991; Ulriksen 2000, 157-163, 2018, 209). It has been suggested that this change reflects that Slavonic potters

moved – freely or forced – from their homelands to South Scandinavia and started a pottery production in Late Slavonic ceramic styles. This may be true in some areas such as Scania (Roslund 2001) and not least on the island of Bornholm in the Baltic Sea where the characteristic pottery was accompanied by jewellery of Slavonic tradition indicating the presence of Slav people (Ingvardson 2019; Naum 2008; Wagnkilde 2001).

Comparing the situation of the 11th century to the 8th, 9th and early 10th century there are some essential differences to consider. Late Slavonic pottery was made on a potter's wheel, it was well-fired and it was decorated, thus quite different from the handmade South Scandinavian ceramics. Consequently, the Late Slavonic pots were more attractive, both from a practical point of view and aesthetically. Regarding the Early Slavonic pottery like the Sukow Ware and Undecorated Feldberg Ware it was manufactured in the same way as the South Scandinavian pottery and was visually similar. As it is difficult to distinguish between the two pottery types in the first place, it is equally difficult to argue that the Sukow Ware and the Undecorated Feldberg Ware should be favoured over the South Scandinavian pots. In the 8th-9th century ceramics had not had any significance as identity markers for several hundred years in South Scandinavia. During the 4th and 5th century AD, some pots were carefully finished and decorated, but since the 6th century the pottery was negligently manufactured and presents itself as more or less uncharacteristic with only the rare stamp decorated vases of the 6th and 7th century as exceptions (Ulriksen 2018, 186-197, 210-213 with further references). The gradually increasing number of decorated Slavonic pottery, beginning with a limited presence of the decorated Early Slavonic Feldberg type typically at coastal settlements (Brorsson 2003a) and growing towards the more frequent occurrence of Middle Slavonic Ware at different types of settlements through the 9th and 10th century, indicates that Slavonic pottery only slowly was adopted by the communities of south-eastern Scandinavia. The desire for Baltic Ware from a broader spectrum of society did not happen until the late 10th or more likely the early 11th century.

Furthermore, it is worth noticing that the rim profiles comparable to those from Sukow Ware

and Undecorated Feldberg Ware are not only a south-eastern Scandinavian issue. Similar rims are known in settlements from south-western Scandinavia, i.e. Funen and Jutland (Henriksen 1997, 32-34; Madsen 1991, 220-222; Madsen, with Sindbæk 2014, 271-273; Steuer 1974). This indicates that the rim shapes are used widely because they are just very easy to form and, thus, they may not be as diagnostic as believed in the first place. This is supported by the ICP-MA/ES analysis reflecting that most of the rims have been produced in South Scandinavia. Rather than indicating a more widespread ceramic influence from the Slavonic area, it is more likely that the rim shapes must be acknowledged as straightforward to make and therefore 'universal' to the potters using the same basic techniques.

Exchange of Pottery or People? – or none of the above

Previously, studies of ceramic vessels from Viking Age graves at several cemeteries across the Baltic region have shown that the cultural origin of the pot was not important. Slavonic, Saxon or Frisian pots were for instance used as grave goods in Scandinavian graves and South Scandinavian vessels have been found in Slavonic graves (Brorsson 2004).

Archaeological excavations carried out at Groß Strömkendorf on the coast of Mecklenburg north of Wismar have revealed a large international trading site and an adjoining cemetery containing nearly 350 graves, dated mainly to the 8th century (Gerds and Wolf 2015). Culturally, the site was established in a West-Slavonic region. Cremation deposits in urns were common, but there were also several other types of cremation graves, as well as inhumation graves, boat graves, a chamber grave and animal burials. The pottery from the graves primarily consisted of West Slavonic and Scandinavian vessels, but also some Frisian and West European pottery from the Eifel and the Rhine area were present (Brorsson 2010). Most of the inhumation graves at Groß Strömkendorf contained only Slavonic vessels and often more than one. Only one grave contained both Slavonic and South Scandinavian pottery.

Of a total of six boat graves at Groß Strömkendorf five of them contained pottery (Brorsson

2010, 11). The structure of the graves is similar to Scandinavian burial tradition, but only one contained Scandinavian pottery. In this particular grave, there was a Slavonic vessel too. One boat grave contained a complete Frisian vessel as well as a complete Slavonic vessel. The remaining boat graves contained only Slavonic pottery. The study of a sample of graves from Groß Strömkendorf shows that there is no apparent correlation between the burial form and type or origin of the pottery.

The example above shows that the cultural interpretation of ceramic pots and the interpretation of the grave types in different parts of South Scandinavia and the Baltic Sea region do not always correlate. Further, it indicates that neither the cultural origin or the shape or decoration of the ceramics had deep rooted influence on the identity of communities in South Scandinavia. This observation is in agreement with the tradition of South Scandinavian pottery from the 6th to the 10th century: Not much effort or cultural markers were invested in the production of pots. This makes way for the possibility that Slavonic potters could have lived in South Scandinavia, manufacturing vessels in Slavonic tradition to the local people. However, the undecorated Early Slavonic Ware did not offer a higher functional quality, or a greater visual value compared to the South Scandinavian pottery. If we assume, for the sake of argument, that Slavonic potters migrated, they have not left any other traces in the archaeological record of the 8th to 10th century South Scandinavia. In the large assemblage of metal objects from the Viking Age retrieved by using metal detectors, Slavonic items are almost non-existing. This may be due to the fact that brooches or pins of metal were not a representative part of Slavonic dress tradition (Gabriel and Kempke 1991, 142), but neither distinctive silver beads, earrings, belt hooks or decorative objects from head dresses occur in any noticeable number despite intensive metal detecting activity on Zealand, Lolland, Falster and Møn. Neither have excavations of settlements identified the typical 'Hausgrube' representing the Slavonic type of house (e.g. Brather 2001, 103-116; Krüger 2011, 51-53; Segschneider 2001), or have typical Slavonic artefacts like a crude bone awl (Corpus 1979, 41/181:43-45 and 41/272:73; Ulriksen 2000,

Fig. 26) or biconical spindle-whorls (Matthey 1991, Fig. 3; Thomsen 2018, 254) been found in numbers that indicate the presence of Slav people carrying a Slavonic material culture with them.

Contrasting this is the evidence from Bornholm in the Baltic Sea. Here, hoards dated to the late 10th century and the 11th century include typical Slavonic jewellery, as well as characteristic cut melt of Slavic/Scandinavian type (Ingvardson 2019, Fig. 2.5, Fig. 2.11). Additionally, inhumation graves from Nordre Grødbygård in south-eastern Bornholm dating from the 11th century contained both Baltic Ware and jewellery of Slavonic origin (Wagnkilde 2001). The evidence from Bornholm is significant but attests a local phenomenon to the island. In the rest of South Scandinavia, however, it is not until the 11th century that (Late) Slavonic type pottery is joined more frequently by other artefacts of Slavonic type.

Conclusion

The study of the ceramic material from Vester Egesborg initially indicated that Early Slavonic pottery of the Sukow type and Undecorated Feldberg type are present in a relatively significant number. The ICP-MA/ES analyses showed that the sherds visually identified as probable Early Slavonic vessels were made from local clay. Regarding pottery of the Sukow type and the Undecorated Feldberg type, it is important to bear in mind that there are no technological differences between the South Scandinavian and Slavonic Sukow vessels and the quality of the fabrics are the same. As mentioned above, the profile of the rims, the shape and size of the body are all rather similar; the design of the rims were used in Funen and Jutland too. Consequently, it is difficult to establish as a fact that Slavonic potters have been producing Sukow-type ceramics in South Scandinavia.

As to the Decorated Feldberg pottery, it has a higher technological quality than both the South Scandinavian and Sukow types, indicating that this type of ceramic most likely was made by Slavonic potters. The analysed Decorated Feldberg sherd from Vester Egesborg originate from the Roskilde area, and contacts across Zealand are likely.

Further, the ICP-MA/ES analyses have pointed in the direction of a Baltic region network including Vester Egesborg. An eastern leg is found in the Ystad-area in southern Scania from where a vessel of South Scandinavian type originates. The distance between Vester Egesborg and the Viking Age landing site of Ystad-Tankbåten is c.190 km by ship. This is more or less the same distance as to Hedeby in a westbound direction, from where the clay of another Scandinavian-type pot originates. It is surprising, though, that the ICP-MA/ES analyses did not establish a knot in the network in the coastal zone of the Slavonic homelands in East Holstein, Mecklenburg-Vorpommern and Poland. In the Viking Age find material from Vester Egesborg, there are indications that connections were established probably involving trading sites

on the Slavonic coast, as well as Menzlin on the Peene River (Ulriksen 2018, 390, 409-412).

With no explicit evidence of any rim sherds from Vester Egesborg made from clays originating in the Slavonic area, it is not possible to conclude that rim sherds comparable to Sukow and Undecorated Feldberg ceramics actually have been produced by Slavonic potters. It is equally likely that the sherds belong to South Scandinavian pots.

Funding

The survey has been funded by Ceramic Studies and Centre for Viking Age Studies at Museum Southeast Denmark.

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